

KOREA HYDRO & NUCLEAR POWER CO., LTD

About This Report

KHNP aims to become a leading global energy business by gaining the public's trust. KHNP publishes the sustainability report every year to share our values, commitments, sustainable management objectives, and performances. As of our 12th sustainability report, we focused on reporting main ESG management and performances since 2020.

Reporting Criteria

GRI (Global Reporting Initiative) Standards, TCFD (Task force on Climate-related Financial Disclosures), SASB (Sustainability Accounting Standards Board)

Reporting Scope

Head office and all domestic and overseas offices of KHNP

Reporting Period

1/1/2020 - 12/31/2020

(Main performances in the first half of 2021 partially included)

Reporting Cycle

Annual (last report published in Oct. 2020)

Assurance

Independent third-party assurance

Inquiry

Department in charge: KHNP's Corporate Planning Department in Planning Office

Phone: +0082-54-704-4127
Fax: +0082-54-704-4198
Homepage: www.khnp.co.kr
E-mail: wonderboy@khnp.co.kr

Promotion Channels



Facebook



Instagram



Youtube



Blog



Post

ntroduction	CEO Message	00
	About KHNP	08
	Business Overview	1:
New Wave:	KHNP ESG Key Performance	18
ESG	KHNP ESG Management Interview with ESG Committee Members	20 24
ESG	Transparent Governance	30
undamental	Risk Management Materiality Test	3: 3:
Creating Value	Coexistence of nuclear power & new and renewable energy	40
hrough CLEAN ESG	Enhancing Competitiveness in Future GrowthExpansion into Global Markets	4:
	Leading to Net Zero	48
	Minimizing Environmental Impact	4
	Enhanced human rights & safety	58
	 Realizing an Ethical Corporate Culture Human Rights Management 	5 ⁻
	• Realizing a Safe Workplace	6
	 Coping with Disasters and Occupational Risks Reinforcing Information Security 	6 7
	Assisting partners & communities	74
	· Win-Win Collaboration with SMEs	7
	· Contributing Development of Local Communities	7
	Networking with stakeholders	84
	· Competent Employees with Job Satisfaction	8
Appendix	ESG Data Center	90
	GRI Content Index	102
	TCFD Index	10'
	SASB Index	108
	K-ESG Index Independeny Assurance Statement	110 110
	UNGC Advanced Level	114
	Awards & Memberships	11!



CEO Message



December 2021

Jae-Hoon Chung, President & CEO of KHNP



KHNP aims to be a business playing a leading role in the sector of nuclear power and new and renewable energy in waves of changes.

To our stakeholders,

The KHNP is the country's largest power generation business that produces about a quarter the country's electric power by nuclear power, hydropower, pumped storage power, and new and renewable. We have been contributing to richer lives of the public by providing stable power supply.

To accelerate the advent of the hydrogen economy, nuclear power and renewable energy need to coexist. In response, we are committed to create new growth engines, thereby becoming a global energy business that copes with waves of changes.

Safety of nuclear power plant is our top priority.

Safety of nuclear power plant can be ensured by fostering an atmosphere where anyone can raise an issue with safety freely, while observing on the basics and principles. We do our utmost to raise the ratio of the use of NPPs by improving operating systems including prevention of human error. By developing the facility management process, we aim to fundamentally solve technical issues and further strengthen safety of nuclear by preventing safety accidents in advance.

We aim to stay ahead in the Green New Deal in the era of carbon neutrality.

KHNP intends to reformulate our objectives for each power source and carry out large-scale projects based on our inherent business model. We are developing a business

model for the commercialization of hydrogen energy's life cycle and and intend to construct hydrogen power plants nationwide, thereby playing a leading role in the business. Also, KHNP has been making daring attempt to develop innovative SMR technology, engage in NPP decommissioning, and explore in earnest new projects in new and renewable energy sector.

We do our utmost for the development of local communities and NPP circle.

As KHNP is in the same boat with the local communities, we strive to reinvigorate the local economy slowed down due to COVID-19 by providing social contribution to the underprivileged neighbors. We are also doing our utmost for development of nuclear power circle, helping SMEs make forays into overseas.

Upholding our core value, we aim to make KHNP a business in pursuit of positive changes and basic principles, thereby remaining resolute in any difficulties. Also we will be upright all the time with a strong ethical consciousness.

KHNP strongly aims to be a global energy business that leads others in the nuclear power and new and renewable energy sector with a firm sense of Passion & Pride and make all the public ultimately be satisfied.

Thank you.

About KHNP

As the largest power supplier in South Korea, Korea Hydro & Nuclear Power Co., Ltd. (KHNP) accounts for 29.8% of Korea's power supply. We operate our business under the mission of "enriching people's lives and laying the foundation for the national economy through the stable supply of electricity."

Overview of KHNP



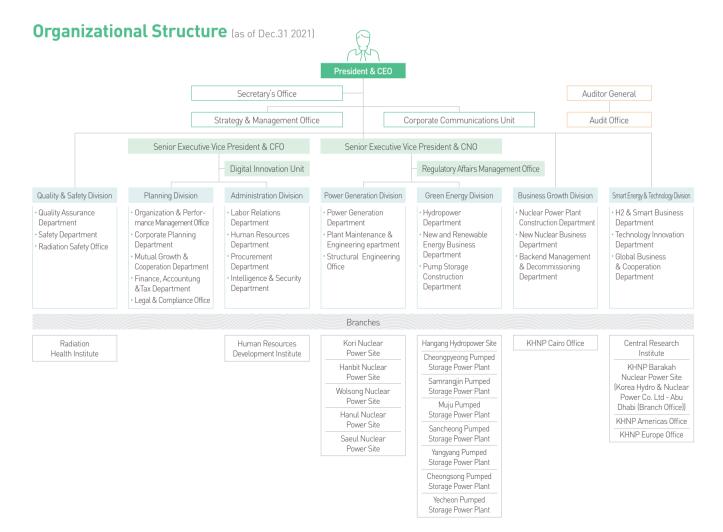
Capital Stock

KRW **1,212.2** billion



No. of Employees 12,588

Name	Korea Hydro & Nuclear Power Co.,Ltd. (KHNP)	Ministry Aligned with KHNP	Ministry of Trade, Industry & Energy (MOTIE)
Date of Establishment	April 2, 2001	Institution Type	A for-profit public corporation
Chairman and President	Jae-Hoon Chung	Location of Head Office	1655 Bulguk-ro, Munmudaewang-myeon, Gyeongju-si, yeongsangbuk-do, Korea
Organization	[HQ] 7 divisions and 28 offices [Offices] 6 divisions, 7 pumped storage hydropower plants, and 7 other offices	Main Functions	Development of power resources/ Power generation/ R&D and incidental business/ Overseas operation



Main Business

As the largest for-profit public corporation in South Korea, we operate 24 nuclear power plants, 21 hydropower plants (excluding small-scale ones), and 16 pumped storage hydropower plants across the country. Our total facility capacity and power generation stand at 28,607MW and 164,610GWh, respectively. We strive to become a comprehensive energy business that provides consulting on every business in general by operating nuclear power plants safely and supplying sustainable hydropower, pumped storage power and new and renewable energy.



10



⅓ ~1990

- '78 Kori-1 Nuclear Power Plant (NPP) commenced commercial operations (thus, becoming the 21st country to operate a nuclear power plant)
- '83 Wolsong-1 NPP, Kori-2 NPP commenced commercial operations
- '85 Kori-3 NPP- commenced commercial operations
- '86 Kori-4 NPP, Hanbit-1 NPP commenced commercial operations
- '87 Hanbit-2 NPP commenced commercial operations
- '88 Hanul-1 NPP commenced commercial operations
- '89 Hanul-2 NPP commenced commercial operations

~2000

- '95 Hanbit-3 NPP commenced commercial operations
- '96 Hanbit-4 NPP commenced commercial operations
- '97 Wolsong-2 NPP- commenced commercial operations
- '98 Wolsong-3 NPP- commenced commercial operations/ the first Korea Standard Nuclear Power Plant (OPR1000). Hanul-3 NPP - commenced commercial operations
- '99 Hanul-4 NPP, Wolsong-4 NPP commenced commercial operations

~2010

- '01 KHNP launched (split off from KEPCO)
- '02 Hanbit-5/6 NPP commenced commercial operations/ Developed new next-generation light water reactor (APR1400)
- '04 Established ERP system/ Launched KHNP Local Community Social Service Corps
- '05 Completed the work for new and renewable energy power plants (Kori Wind Power, Yeonggwang Solar Park) Completed the work for Hanul-5/6 NPP
- '07 Received approval for continuous operation of Kori-1 NPP
- '09 Signed an export contract of UAE-4 NPP
- '10 Installed nuclear reactor at Shin-Kori-3 NPP (with first application of APR1400)



'11 Shin-Kori-1 NPP - commenced commercial operations (with first application of OPR1000) / Nuclear Safety & Security Commission (NSSC) launched

INTRODUCTION NEW WAVE FUNDAMENTAL CLEAN ESG APPENDIX

- '12 Shin-Kori-2 NPP / Shin-Wolsong-1 NPP commenced commercial operations
- '13 Obtained approval and authorization related to Nuclear Safety Analysis for heavy water reactor NPP
- '14 Obtained the country's inherent furnacetype APR+ standard design authorization
- '15 Received approval for continuous operation of Wolsong-1 NPP / Shin Wolsong-2 NPP- commenced commercial operations
- '16 Completed relocation of the HQ to Gyeongju
- '17 Completed the work for Noeul Fuel Cell Power Plant / Permanently suspended to operate Kori-1 Nuclear Power Plant, the country's fist NPP / Completed the work for Gori PV Power Plant
- '18 Completed the work for Chameliya Hydropower Plant, Nepal
- '19 Completed the work for Samnangjin Pumped Storage Hydropower Plant and PV Power Plant / Shin-Kori-4 NPP commenced commercial operations



- Feb. KHNP signed an agreement with Gyeongju City for public interest PV project
- Feb. Received approval for operation of Barakah-1 NPP
- May. Created the Energy Innovation Growth Fund to stimulate nuclear power businesses
- Aug. Confirmed additional construction of storage facility of spent nuclear
- Nov. Signed an MOU for fuel cell business in Chuncheon
- Dec. Signed an MOU for floating-type offshore wind power plant, the largest in the world



Jan. Signed an agreement to establish Green Hydrogen Production Cluster in Saemangeum, the largest of kind in S. Korea/ Signed an MOU for Pohang Fuel Cell Project

11

- Mar. Signed an MOU with the Emirates Nuclear Energy Corporation for R&D cooperation
- Apr. Completed 4.4MW photovoltaic power plant in Korea's first power generating reservoir
- Apr. Modernized Samnangjin Pumped Storage Hydropower Plant
- May. Hanul-1 NPP received TIP (Top Innovative Practice) from the Nuclear Energy Institute (NEI) of the United States
- Jul. Obtained approval for operation of Shin-Hanul-1 NPP

Business Overview

29%



Nuclear Power Generation

Nuclear power plants generate steam using an enormous amount of heat released from the nuclear fission of uranium in reactors and produce electricity by operating turbines using this energy. Nuclear energy is essential in countries with high energy dependency rate like Korea. Although the initial cost of building a nuclear power plant may be high, the fuel cost is low and nuclear energy does not emit greenhouse gas [GHG] and particulate matter, which are generated when fossil fuel is burned. Therefore, nuclear energy draws attention as an eco-friendly energy source. In 2020, KHNP generated a total of 160,184 GWh of electricity through nuclear power generation. Nuclear power is a key power generation source that accounts for approximately 29% of electricity generated in Korea.

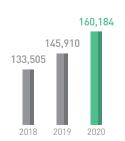


Shin-Hanul-1,2 NPPs

Nuclear Power Plants

	Kori	Shin- Kori	Wolsong	Shin- Wolsong	Hanbit	Hanul	Total
Units Operating	3	4	3	2	6	6	24
Facility Capacity (MW)	2,550	4,800	2,100	2,000	5,900	5,900	23,250

Power Generation by NPPs



Permanent Suspension of NPPs





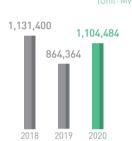
679MW

Stopped permanently on 12/24/2019

15

hydropower and pumped storage power plants are being operated

Power Generation by Hydropower



Hydropower & Pumped Storage Power Generation

Hydropower and pumped storage power generation, which converts water's potential energy into electricity, are one of our core businesses in power generation. We aim to enhance the operation of power supply system by sharing real-time information between power plants and improving relevant facilities. KHNP is making strides into the overseas hydropower generation business based on our sufficient experience accumulated in construction, operation, and maintenance of hydropower plants, while domestically developing hydropower plants (including small hydropower) in lockstep with the increase in demand for new and renewable energy.



Hwacheon Hydropower Plant

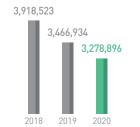
Operation of Pumped Storage Power Plant Pumped storage power generation is one of the methods of hydropower generation. A pumped storage plant pumps up water from the lower reservoir to the upper reservoir at night when the electricity usage is relatively lower. Then it drops water to generate electricity during high-demand hours.







Power Generation by Pumped Storage Power



Business Overview

Level of RPS fulfillment in 2020

120%



at the 2020 Korea Energy Awards

New and Renewable Energy Projects in Korea in 2020



Secured additional business rights for offshore photovoltaic power plant (300MW) at Saemangeum



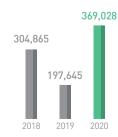
Signed an agreement on developing an offshore photovoltaic power plant at Korea's the 1st new and renewable energy integration complex



Signed an agreement for a photovoltaic power plant in Sinan-Bigeum, whose profit is to be shared with locals

Power Generation by New and Renewable Energy Plants

(Unit: MWh



New and Renewable Energy Business

KHNP is committed to the fulfillment of statutory objectives of the Renewable Portfolio Standard (RPS) by diversifying business portfolio including new and renewable energy. Thus, KHNP has set up a medium and long term strategy, which includes specific operating objectives related to facilities of each new and power source until 2031 and is aiming for conversion to low carbon economy and society through developing relevant technologies. Recently, KHNP is striving to secure sustainable growth engines through the exploration of biogas-based hydrogen convergence business sectors.



A photovoltaic power plant installed on the roof of the Daeseong Metal's Gyeongju factory at the Cheonbuk Industrial Complex in Gyeongju

New and Renewable Energy Power Plants (Unit: MW)



79.95Wind Power







2034 KHNP's Goal of Capacity by New and Renewable Energy Plants (Unit: GW)









Overseas Business

Sales of overseas business in 2020

KRW 374.7 billion



KHNP is leading the business of overseas nuclear power and new and renewable energy under the plan to increase overseas operations accounting for 14% of the entire business by 2034. In 2020, KHNP created tangible results in the overseas nuclear power through diversification of ways to win orders including strategic alliance, 0&M and the launch of organizations dedicated to specific countries. We also succeeded in gaining a foothold in new and renewable markets in the Americas, and are expecting to secure advanced operating technologies and create stable income. We will aim to grow as a global energy business by completing export portfolios in all business sectors.

Overseas Projects in 2020

Projects on Overseas Nuclear Power

- KHNP's supply model selected as a new NPP model in the Czech Republic
- · Winning 3 orders for the 0&M projects in Romania and Slovenia, jointly with other Korean businesses

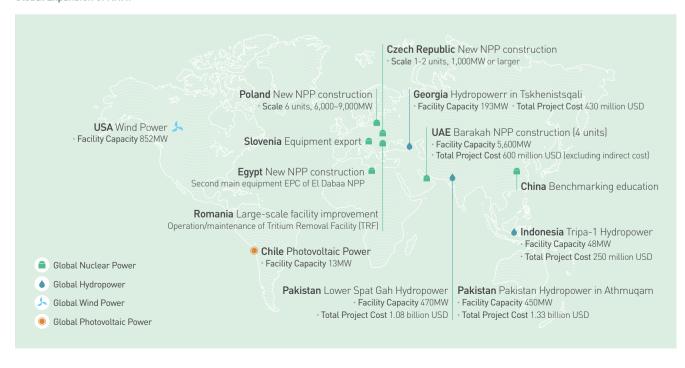
Projects on Overseas New and Renewable Energy

- Signing a shareholder agreement and takeover of equities in an onshore wind power project in the U.S.
- Signing a shareholder agreement on a photovoltaic power plant in Chile; commencement of work for a project in Guadalupe, Chile



Bishop Hill Wind Energy Center, USA

Global Expansion of KHNP



ANAMA ESC. ESC. New Wave: ESG KHNP ESG Key Performance 18 KHNP ESG Management 20 Interview with ESG Committee Members 24

KHNP ESG Key Performance

Environment

Reached 99.68% in Environmental Performance Index, 609.9 Points in Green Management Index

2019

Ratio of NPPs in use

Reached 104%

New and renewable energy facility capacity

Reached 101% of Target



Completed Work for Floating Photovoltaic

using a hydroelectric dam, attempted for the 1st time in the country

Succeeded in Localizing
a Thin Film Photovoltaic
Production Module

for the 1^{st} time in the country

Governance

Evaluation of anti-corruption steps

Achieved 91.82 Points

No. of female executive officers appointed

Exceeded the Target (2 People Appointed)



Selected as
an Exemplary
Business

in anti-corruption by UNGC Korea

Announced the New Ethics Charter





Operation of the ESG Committee and ESG Working Group

Voluntary contribution of KHNP

Voluntary Service Corps



Social

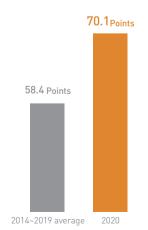
S

Local receptivity of local communities near NPPs

Reached 100% of Target

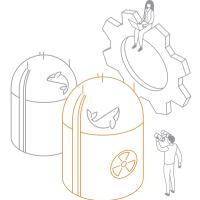


2020



NO. of unplanned auto-stops per NPP **0.25** Cases, accomplished **100%** of Goal





Human rights impact assessment



Business operation score pro

97.6 Points

99.4 Points

Grade of accompanied growth evaluation

Reached the Highest Score



project score

0.4

in the

private sector



Created 422 Jobs



Achieved Grade 'A' for 4 Consecutive Years

Evaluation of Core National

Infrastructure Disaster

Management sponsored

by the Nuclear Safety and Security Commission (NSSC)



Accumulated
No. of participants

9,457 People

KHNP's

voluntary activities

1.544 Times



Accumulated hours of voluntary service **26,900** Hours



KHNP's ESG Management

ESG Management Strategy

To promote our business value centered on CLEAN energy and establish an ESG management system creating social values, KHNP has devised a system for more transparent communication with stakeholders by linking the value of ESG efforts to our ESG management platform. We disseminate our corporate values including even non-financial results to stakeholders and use them as the engine for attracting investments and making an entry into new markets. In addition, we will enhance our status as a future-oriented comprehensive energy business by playing leading role in the sustainable energy industry beyond focusing on short-term results, while establishing an ESG based performance management system.

KHNP's ESG Strategic Map

Mission

Enriching people's lives with sustainable energy

Vision

ESG Management Tagline

ESG Management Objectives

Major Strategic Agendas

KHNP, a global energy leader trusted by the public

KHNP leading sustainable future with CLEAN Energy



Early attainment of our goal of carbon neutrality



Creation of social values that positively impacts people



The world's highest level in integrity/ transparency



Areas of Strategic Pursuits

Environment

- Play a leading role to cope with carbon neutrality centered on low-carbon energy
- Proactive efforts to make forays into new sustainable markets concerning SMR, hydrogen, and e-convergence
- Supplement the system for coping with climate change and conserve environment

ent

 Mutual growth designed to strengthen competitiveness of nuclear power ecosystem

Social

- Develop economic cooperation programs to secure local competitiveness
- · Build human-centered, safe workplace

Governance

- Supplement operation of the ESG Committee and supporting system for prudent decision-making
- Internalize ethical management and enhance transparency in management
- Reinforce public disclosure on ESG and use customized networking with stakeholders

Periodic session held

On a quarterly basis





Main Functions



- ① Establish a system for close cooperation for management of potential risks from an ESG perspective
- Explore tasks linked with K-ESG indicators in each area, carries out the agendas, and checks the results
- Firmly grasp controversial issues in relevant areas and share them with others
- Submit the promotion plan for each area and reports the results of initiatives to the ESG Committee

ESG Management Organization

The ESG Committee

Our Highest ESG Decision-Making Body Operating With a Top-Down Approach

In order to manage ESG risks, a decision-making body, the ESG Committee including external experts reviews the overall direction of sustainable management and audits the results. It also reviews affairs / matters submitted to them for deliberation and the members present their opinions on business plans for ESG strategies and how to carry out the strategies. Moreover, its chairman is elected among the external members. A periodic session is held once a quarter and its extraordinary session on occasion as required. Each convocation schedule is communicated to the members at least 3 days in advance.

Composition of BOD & Term of Office







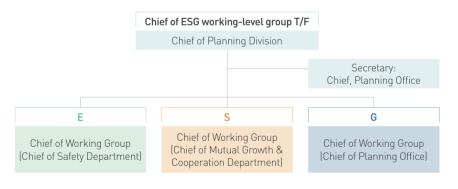
Spanning the incumbency of the position

For up to one or two years; eligible to serve only two additional consecutive terms

ESG Management Working Group

A Working-Level ESG Organization Operating With a Bottom-Up Approach

In order to create a system that preemptively respond to K-ESG, we have formed a T/F of related departments that comprehensively manage ESG tasks across the company.



Operation of a ESG Managing Department

Corporate Planning Department in Planning Office is in charge of ESG management and it takes on the role of enhancing the level of recognition of our ESG efforts by internal & external stakeholders and working closely with working-level departments to maximize our performance.



- Establish a company-wide ESG operating system (improve relevant systems and performance management)
- Operate the ESG Committee
- Expand the consensus for ESG management guidelines as part of the effort for internalization of ESG management



Take part in global initiatives and expand external communication

KHNP's ESG Management



ESG Card New

Internalization of ESG management

KHNP plows forward with ESG internalization through participation and communication. We have carried out ESG Action Days programs to encourage employees to understand value of company's ESG management by participating and provided opportunities where they have hands-on experience about ESG efforts aliqning with the creation of better value.

ESG Communication with Employees

We provide ESG education to employees enabling them to take an interest and understand ESG-management better, while also publishing newsletters including card news to periodically provide information related to ESG and climate change. Moreover, for newly hired employees to internalize KHNP's CLEAN ESG value from day one, we have included a course for understanding "the Company's ESG management" in onboarding sessions.

Improvement in External Recognition

We use diverse media including YouTube, blogs, etc. to enhance external recognition of what we do in ESG management. Also, we hold special events such as the Corporate Image Contest to disseminate our ESG value through external stakeholders' participation.





ESG contest

ESG Action Days

Promoting Direction

KHNP employees putting ESG into practice in their daily lives



Reduce carbon; Empathize with sustainability and preservation of the environment



Share your love with others; Make commitment for marginalized people in your neighborhood to realize social values



Specify your action to put ethical management into practice

Employees' Rally for Putting ESG into Practice

Our employees held a rally for putting ESG into practice and making ESG management part of their basic value. We announced amendments to our Ethics Charter including our strategy for pursuing CLEAN ESG management, vision, and core values and established the foundation of ESG practice of employees. We also held sessions for experts' lectures on ESG management to empower employees to better realize and appreciate the need for ESG.



Employees' Rally for Putting ESG into Practice



FSG Action Days

Donation per the Amount of Food Waste Reduced

(LI=:4- IZDW/ M:II:==)



Encouraging Employees to Join Carbon Point Campaign

We encourage employees to actively take part in the campaign for reduction of 1 ton of GHGs per person in order to cope with climate change. The campaign provides incentive points based on the results of reduction in energy use, such as electricity, water, and gas.

Participation in Clean Dish Campaign

KHNP engaged in a company-wide Clean Dish campaign designed to reduce food waste as part of our effort for environmental protection rooted in everyday lives. We donated the remaining amount of food waste that decreased during the campaign to the welfare foundation and used it for children's environmental education.

Creation of Jobs through Donation of Second-Hand Goods

KHNP participated in second-hand goods donating program to help the marginalized neighbors and encourage employees to realize social values by participating in sharing. We were able to create jobs for people with disabilities by donating items to Goodwill Store*.

*Goodwill Store: a philanthropic organization working to provide jobs to those with disabilities and help them build experience in retail through collecting and commercializing donated goods





Carbon Point Campaign

Interview with ESG Committee Members

We launched the ESG Committee in August 2021 to cope with ESG risks proactively and help top management make adequate ESG decisions. The biggest advantage of our ESG Committee is our CEO's direct participation to invigorate its activities and having an outside expert serve as its chairman to ensure that it secures expertise and independently makes decisions.



What role do you play as a member of the KHNP's ESG Committee?



Gwang-H

As a member of the Board of Directors, I do my utmost to reformulate the Company's philosophy on the occasion of its 20th anniversary and have our ESG management attain substantial results. In order to combine our core capability and social value into one, I also strive to provide support for top management's decisions and spread our commitment to social responsibility internally and externally through communication and cooperation with external stakeholders including those in political/academic arenas. I hope that such efforts will serve as the engine that pulls our sustainable growth in an era of unprecedented certainty due to COVID-19 and amid people's heightened interest in ESG.

What role do you play as a member of the KHNP's ESG Committee?



Ji-Yun Lee

According to the Davos Manifesto 2020, the purpose of a business is to have all stakeholders take part in its creation of sustainable value. In its value creation process, a business should consider all stakeholders in society including employees, customers, other businesses, and the local community. As an expert specializing in communication who has had experience as the CEO of a public enterprise, I am familiar with the roles and responsibilities of public enterprise, and also communication method with stakeholders. I think that my role as a member of KHNP's ESG Committee is to bolster stakeholders' trust by understanding and communicating about shareholders' complicated demands and expectations accurately.

What do you think is the main environmental issue that we need to consider in order to grow as a sustainable business?



Hui-Jip Kim

We should concentrate on expansion of new and renewable energy for achieving net zero in electricity market and establishment of operating strategy of nuclear power generation.

It is important to stably operate nuclear power generation by formulating adequate operation strategy after analyzing changes such as adopting real-time market, market separation by each power source or market separation by each base or peak load.

Finally, it is also important to develop new renewable energy-related business such as hydrogen technology and P2X (sector coupling), etc.



eung-Ho

The unequaled main business of KHNP in environmental sector is "nuclear decommissioning," which is the ultimate destination of nuclear power plant operations.

At this stage, safely decommissioning and restoration of nuclear power plants is the key to securing people's trust even further. If nuclear decommissioning technological process is secured and relevant human resources are developed, people's opposition to nuclear power plants will weaken amid the safety of nuclear power plants extending throughout the entire cycle of their operation.



Ji-Yun

The heightened interest in the environment and the government's policy support can be viewed as an opportunity.

KHNP has made all-out efforts for expanding new and renewable

energy business, securing relevant technologies, and bolstering the overseas network. The business is expected to accelerate on the back of the government's supportive policy including Green New Deal. In this management setting, KHNP's abilities to swiftly react and locate the optimal balance point between nuclear power plants, which are its core business, and new and renewable energy, which presents a growth sector, is inevitably warranted. Thus, KHNP should continue to strive to reach consensus with stakeholders.

What do you think is a social issue that we need to consider in order to grow as a sustainable business?



Hui-Jip

One thing that power plants should consider in social sector is safety. Especially, special preparations should be made not to violate the Severe Accident Punishment Act and adequate organizational culture needs to be fostered through periodic safety/health education of employees.



Gwang-H

After all, the most important thing is the safety of employees including those of subcontractors.

No one will dispute that you cannot overemphasize the importance of safety in dealing with nuclear energy. Heinrich law states that for every accident causing a major injury, there are 29 accidents that cause minor injuries and 300 minor signs.

It tells us that we need to proactively deal with even small issues with interest before the event accidents occur.

We need to strive to prevent accidents and establish a management system that sets safety as top-priority value.

KHNP has accumulated knowhow in communication based on years of collaboration with local communities.

We need to strive to persuade people that nuclear energy is safe, sustainable energy, and we will also do our best to support it.



Nam-Gun

We need to turn our effort to publicize the superbness of nuclear power plants' ecosystem to something of the local people, by the local people, and for the local people, which represents locals' protection of nuclear power plants' eco-system.

It includes customized nuclear power plant education for local elementary/secondary students and selection of nuclear power plant representatives out of locals for PR of nuclear power plants.

It would be a good idea to share a plan for reuse of the sites of nuclear power plants after their decommissioning with locals.

What do you think are
main issue that we need
to consider to grow as a
sustainable business based
on ESG management?



Ji-Yun

The four leading factors for successful ESG management are 1) strategy, 2) getting a grasp of stakeholders' expectation and demand, 3) effective communication, and 4) attaining and measuring results. It is a prerequisite to adequately define and understand stakeholders. The energy sector boasts a level of professionalism above other sector and the public displays an unmatched close interest and involvement compared to other sectors. We need to be in adequate and strategic communication with stakeholders including the public, whose level of knowledge is ever advancing.

What do you think is
governance/business issue
that we need to consider
in order to grow as a
sustainable business?



Gwang-Hu

We are living in the world, where information spreads so fast and a tiny hole made by an employee's corruption can collapse the entire company.

We also have a painful memory about dark practices, but have accomplished an amazing result of ranking No.1 in integrity after a painstaking effort.

It was a result of efforts for ethical management jointly made by the entire company from the top management down to young employees highly sensitive to fairness and social value.

As a public institution, KHNP's owners are people.

Their solid trust in us will provide us with competitiveness for our sustainable management and driving force to grow as a world-class public institution in integrity.



Ji-Yun Lee

With the rise in stakeholders' interest and level of expectation about businesses' way of operation, the demand for ESG-related disclosure, transparency, and communication is also being heightened.

As ESG management permeates throughout society, there have been diverse cases of success and failure in ESG management, and public disclosure criteria and guidelines are being established.

As KHNP is a energy business integral to the country's future, our ESG management should be checked in depth and proactively put into practice in a manner that fits our responsibility and role. It is an auspicious move that KHNP promptly composed its ESG Committee of internal/external experts.

Accordingly, we will proactively grasp ESG risks and opportunities and cope with external environment with the ESG Committee taking on a leading role to play.

The ESG Committee needs to have its ESG-related perspectives

The ESG Committee needs to have its ESG-related perspectives reflected in its management decisions in close communication with the Board of Directors.

What do you think are
main issue that we need
to consider to grow as a
sustainable business based
on ESG management?



lam-Gung

In the past, we used to think that a competitive business is one that yield more profit for a long time than rivals.

However, whether a business is 'wise and kind-hearted' or not is added to become a competitive business.

Now, we have new tasks to preserve the Earth and humankind. If we make a good start, we can be a business that saves the global village.



Transparent Governance

Ratio of Non-Executive Director in BOD

54%



Composition of the Board of Directors

The Board of Directors is KHNP's supreme decision-making body with the basic policy of company management, voting rights, and supervisory authority over the overall business operation. As of November 2021, the BOD consists of a total of 13 members, of which 6 are executive directors and 7 are non-executive directors. Among them, 1 executive auditor and 2 non-executive auditors is compromised in the Audit Committee. To ensure transparency of BOD, KHNP composed the Executive Recommendation Committee with non-executive directors and external members. The Committee selects professionals from relevant fields who have no conflicts of interest with KHNP and recommends them as candidates for the positions of CEO, executive auditor, and non-executive directors. The BOD guarantees a three-year term for the CEO and a two-year term for other directors, while allowing them to serve consecutive terms on a yearly basis to encourage responsible decision-making. KHNP ensures the independence of the BOD by electing the chairperson among non-executive directors and the non-executive directors, which are appointed by the Minister of Economy and Finance, make up a majority of the BOD in accordance with pertinent regulations.

Board of Directors

Classification	Name	Position and Post	Term
	Jae-Hoon Chung	Standing head of organization (President & CEO)	4/4/2022
	Seok-Jin Park	Executive Auditor	5/14/2022
Executive	Sang-Hyeong Park	Director of Administration Division / Executive Vice President of Business	11/25/2022
Director	Nam-Woo Choi	Director of Power Generation Division / Executive Vice President of Technology	5/25/2022
	Seung-Chul Lee	Director of Quality and Safety Division	9/26/2023
	Yoh-Shik Nam	Director of Business Growth Division	8/18/2022
	Chang-Ho Lee	Chairperson / Former President of Korea national university of Welfare	8/11/2022
	Yu-Chang Kim	Professor of Human · System Design Engineering of Dongeui University	8/3/2023
Non-	Yoon-Suk Kim	Adjunct professor of electrical engineering in Yonsei University	8/11/2022
Executive Director	Hee-Kyung Kim	Lawyer at Doyeong Law Firm / Non-executive Auditor	6/24/2022
Director	Goang-Hee Lee	Former Non-executive Director from Korea Institute for Advancement of Technology (KIAT)	8/11/2022
	Ju-Sik Lee	Director of the Sunil Accounting Firm / Non-executive Auditor	8/11/2022
	Ji-Yoon Lee	Executive Advisor of Fleishman Hillard Seoul	8/3/2023

Operations of BOD (Unit: cases)

Classification	2018	2019	2020
No. of Meetings Held	12	9	9
Agendas Resolved	50	52	47
Agendas Reported	22	11	19
Amendment Agendas Resolved	0	4	2
Preliminary Deliberation Rate	100%	100%	100%
Participation Rate of Non-Executive Directors	90%	91%	100%
Participation Rate of BOD	91%	89%	96%

Remuneration and Compensation for Directors

The BOD remuneration limit complies with the Executive Wage Guideline of the Ministry of Economy and Finance through resolution by the General Shareholders' Meeting. The total remuneration of the directors in 2020 was approximately KRW 1.448 billion and the remuneration for each director is dependent on a regular executive performance evaluation. For executive directors who receive remuneration above the standard level, the type, basis and total amount of remuneration are disclosed separately to ensure transparency.

Renumeration by Directors (Unit: KRW 10,000)

	Standing Head of Organization 1 People	Executive Directors 5 People	Non-Executive Directors 7 People
Total Remuneration	26,771	98,565	19,425
Average Remuneration per Person	26,771	19,713	2,428
Remarks	Including bonus	Including bonus	KRW 2.5 million per month as duties allowance

Composition and Key Activities of Subcommittees

KHNP operates subcommittees dedicated to the implementation of government policies and social value realization. Each subcommittee is deliberating on the agenda by dividing specialized fields, focusing on the majors and social experiences of executive and non-executive directors. Subcommittees are contributing to the revitalization of the BOD by expanding the role of policy suggestions and management advice of nonexecutive directors.

Main Subcommittees



 Composition: 1 executive member, 2 non-executive members

· Role/Field: Audits on accounting

 Main Activity in 2020: Audited on corporate operations and accounting



Committee

Role/Field: Recommendation of candidates for executives Recommendation

members

 Main Activity in 2020: Recommended candidates for executive members

· Composition: 3 non-executive

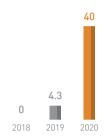
members, 3 external

Strengthening Expertise of and Communication of Non-executive Directors

KHNP receives consultation on main issues relating to the corporate operation from 7 nonexecutive directors who possess seasoned experience in various fields. We have been conducting on-site inspections and workshops at power plants every year, strengthening the job performance capabilities of non-executive directors and supporting management suggestions to be reflected in policies.

Transparent Governance

Ratio of Female Applicants for the Position of Non-Standing Director



Promoting Well-Balanced Personnel Affairs in Both Gender

KHNP has established a 5-year plan for the appointment of executive officers with the goal of well-balanced personnel affairs in both gender. To improve the low rate of applicants for the positions of non-standing female officers, KHNP has adopted open recruitment and recommendation of candidates, using the MOGEF's relevant database. We also diversified the channels of notices by adding social network platforms such as Facebook to the existing channels including ALIO and dailies. In addition, we launched the committee for recommending executive officer candidates, thereby expanding the share of females to 20 percent. As a result, the percentage of female candidates for the positions of non-standing directors has risen by 35.7%p over 2019 and 2 female executive officers were appointed, a true milestone in our corporate history.

Establishment of a 5 Year Plan for Appointing Executive Officers for Well-Balanced Personnel Affairs in Both Gender

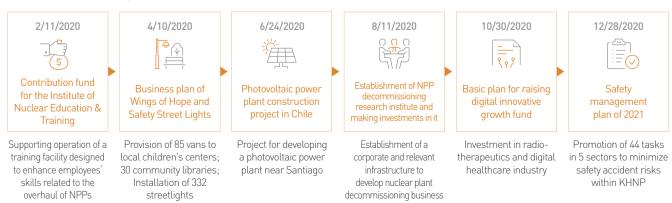
Target 20% increase in female executives in total of 13 executive officers **2** (15.4%) 2020 2022 2021 2023 2024 Promotion © □ Strengthen recruitment of Improve the system for female candidates for non-Executive Recommendation standing director positions Committee Expand the way to recruit candidates · Convene the committee whenever there

- for executives
- Diversify channels for notices including Increase the No. of female members SNS and card news
- is an opening for executive officers
 - in the committee

Sustainable Decision-Making

BOD presents issues and makes decisions considering sustainability of the agendas. In 2020, KHNP promoted projects on institutional safety management, social contribution projects, and various new and renewable energy projects at home and abroad by decision of agenda items from BOD.

Main Decisions Concerning Sustainability



Risk **Management**

Risk Management System

With a goal to preemptively manage main risks that can exert significant impacts on the organization, KHNP selected 7 key risk indicators, and manages them by digitalizing each stage of risk signs. For the key risk indicators, the result of monitoring conducted on a monthly basis is shared with the risk management team. As for significant risks, the status and response plan are reported to the management for swift decision-making.

Diagnosis on Risk Level / Handling Actions



KHNP's 7 Key Risk Indicators

Classification	Key Risk Indicator	Safety (Goal of 2020)	Attention	Caution	Alert	Serious
	Ratio of NPPs in use	71.9% or more	71.9%	71.2%	70.6%	70.0% or less
Enhanced	Secure appropriate sales revenue	9,561.3 billion	KRW 57.7 / kWh or less	KRW 56.7 / kWh or less	KRW 55.7 / kWh or less	KRW 54.7 / kWh or less
profitability	Compliance with air quality for power plant construction	Obtain permit for operating New Hanul-1 NPP	Delay for 1 months	Delay for 2 months	Delay for 4 months	Unable to obtain the permit within the year
	Sales Attainment of UAE planned business	100%	100% or less	90% or less	80% or less	70% or less
Cost reduction	Expenses executed	KRW 9,486.6 billion	71.4% ≦Percentage <71.9%	70.9% ≤ Percentage <71.4%	70.4% ≤ Percentage <70.9%	<70.4%
	Percentage of economical procurement of nuclear power fuels	90%	90% ≦범위 <91%	91% ≦Percentage <92%	92% ≦Percentage <95%	95% <percentage< td=""></percentage<>
	Post processing expenses of NPPs	KRW 1,468.8 billion	Less than 110%	Less than 120%	Less than 130%	Above 130%

Risk Management

Financial Risk Management

In order to maintain stability and integrity of its financial structure, KHNP reestablished the governance for financial risk management with the Financial Risk Management Committee, Exchange Risk Management Committee, and Investment Company Management Committee, and is operating a contingency plan by stage when a risk situation occurs. In 2020, with a goal to improve cost management system and enhance financial integrity, KHNP analyzed the cost structure according to the characteristics of each plant, and thus increased price competitiveness. It also saved labor cost by increasing efficiency of the organizational management. As a result of such efforts, cost and expense reduction was achieved in excess of the original goal, resulting in the net profit of KRW 617.9 billion compared to the profit of KRW 246.5 billion in 2019.

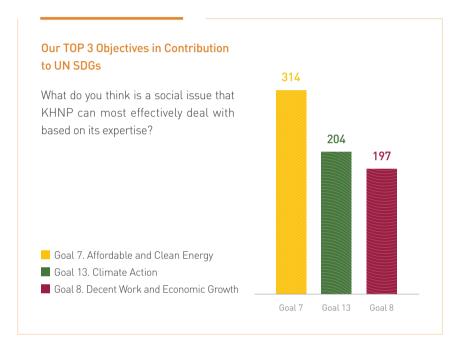
Non-Financial Risk Management

KHNP manages financial and non-financial risk factors altogether by establishing an integrated risk management system to minimize the negative impact on environment and communities. KHNP tries to win the public's trust by enhancing NPPs' quality amid the government's tightening grip on NPPs and people's intensifying voice of concern for their reliability. We also have focused on oversea business by capturing the global trend of decarbonization and demand for overseas nuclear power industries. In addition, KHNP has provided emergency funds to help subcontractors to overcome their cash liquidity crisis caused by the pandemic, supplied quarantine goods, and carried out KHNP 1339 campaign to reinvigorate Korean NPP circle and the local economy. Furthermore, KHNP makes effort to improve our management system and train employees dedicated to information/cyber security and personal information protection.

Materiality Test

Survey on Awareness of ESG Management

We conducted a survey of KHNP's sustainable management and its goal of achieving the UN SDGs in order to evaluate stakeholders' awareness of our sustainable management efforts and reflect the findings in our future ESG management. The survey was done in 2021 targeting a total 366 employees and external stakeholders.



UN SDGs

In 2016, the UN announced sustainable development goals (SDGs) that the international community should jointly attain by 2030 to deal with economic, environmental, and social problems on a global basis. KHNP proactively takes part in the effort to attain the 10 goals by pursuing our ESG management strategy.























Materiality Test

Selection of Material Issues

KHNP has conducted a materiality test to identify material issues that require intensive future management and decided on the contents of the 2021 Sustainable Management Report. In the process of materiality test, we conducted a questionnaire-based survey of major stakeholders, i.e. our employees, subcontractors, media businesses, local communities, and local governments, while holding interviews with 5 members of our ESG Committee to listen to their opinions on ESG issues that KHNP should deal with. The 2021 Sustainability Management Report provides information on our activities and performances on ESG issues that may have an impact on KHNP. With regards to 11 Material issues out of them, we made a detailed report linking with our approach, main activities, performances, and objectives.

Process of Selecting Material Issues



Materiality Assessment Matrix



Material Issues

	Ranking of			F	Report Boundary			
	Important Issues (Change from 2019)	Important Issue	Employee	Subcontractor	Government · National Assembly	Media ·NG0	Local Community • Public	Reporting Page
	2(new issue)	Expanding New and Renewable Energy Business	•	•	•		•	45-47
Е	3(▲3)	Coping with Climate Change	•		•	•	•	54-57
	8(-)	Managing Waste and Wastewater	•		•	•	•	52
S	1(▲1)	Strengthening Safety / Health	•	•	•			64-67
	5(▲10)	Recruiting and Developing Human Resources	•					84-86
	6(▲19)	Contributing Development of Local Communities			•	•	•	79-83
	4(▼3)	Ethics and Anti-Corruption	•	•	•			58-63, 72-73
	7(▼4)	Securing Technological Competitiveness	•	•	•			40-42
G	9(▼5)	Stable Operation of Power Plants	•	•	•			68-71
	10(new issue)	Creating Economic Value	•	•	•			40
	11(new issue)	Sound Governance Structure	•		•			30-32

Creating Value Through CT EAST ESC.

Creating Value Through CLEAN ESG

Coexistence of nuclear power & new and renewable ener	rgy 4 1
Leading to Net Zero	4
Enhanced human rights & safety	5
Assisting partners & communities	7
Networking with stakeholders	8.



Material Issues



- Expansion of New and Renewable Energy
 Rusiness
- 7. Securing Technological Competitiveness
- 9. Stable Operation of Power Plants

UN SDGs Linkage

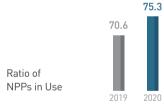


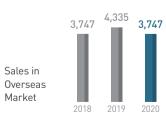




Kev Performance

(Unit: %, KRW billion)





Sales in renewable energy business

KRW 69.3 billion



Coexistence of nuclear power & new and renewable energy

KHNP will pave the way as a comprehensive energy business through the stable operation of NPPs and expansion into new growth business sectors such as the new and renewable energy business and Small Modular Reactor (SMR), etc.

KHNP aims to engage in R&D designed to secure future growth engines in lockstep with government energy policy. In addition, we need to strengthen our on-site technical support capabilities to support safe and stable operation of power plants.

In response, KHNP has built smart plants for entire cycle of nuclear power to strengthen its technological capabilities for NPP safety and are focusing on R&D for securing future growth engines such as, decommissioning technology and new and renewable energy technology. KHNP is also creating visible economic results by winning 6 overseas operational NPP projects and entering the overseas new and renewable market for the first time in 2021.

KHNP Strategy



Create sustainable "carefree" value by strengthening the safety of NPPs and enhancing operational efficiency

- Prevent occurrence of technological pending issues related to core equipment by improving turnover process of the construction and operation
- Improve operational efficiency in NPPs by preventing abrupt stoppages of operation with the establishment of SMART plants
- Enhance reliability in operation by exploring safetyrelated potential pending issues and proactive coping



Promote hydrogen convergence business, Establish a system for green hydrogen production

- Establish smart infrastructure that will ensure self-reliance on energy, expand energy solution service
- Demonstrate, construct, and operate a water electrolysis clean hydrogen production system using Saemangeum, hydropower, etc



Expand green energy such new and renewable energy and hydropower

- Promote strategic expansion of new and renewable energy business through formulating our own inherent business model
- Strengthen our ability to cope with changes in new and renewable energy by timely constructing new pumped storage power in 3 areas including Yeongdong region



Timely development of innovative SMR technology, Commercialization based on domestic/overseas demonstrative basis

- Acquire approvals/authorizations both at home and abroad through developing/ verifying innovative SMR technology
- Lay the basis for SMR export through developing models of commercialization for gaining footholds in overseas markets, such as optimizing designs customized to target export countries

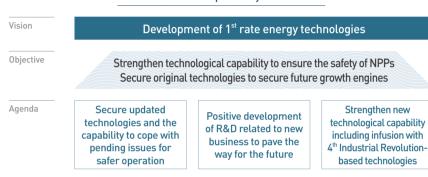
INTRODUCTION NEW WAVE FUNDAMENTAL CLEAN ESG APPENDIX

Enhancing Competitiveness in Future Growth

R&D Development System

With the R&D vision of "Development of 1st-rate energy technologies" KHNP is pushing for R&D to strengthen its technology capabilities to improve nuclear power plant safety and secure original technologies to secure future growth engines. KHNP will strengthen its technological capability and competitiveness with a focus on safety in overall operations by developing leading technologies in new business sectors, expanding applications of 4th Industrial Revolution-based technologies, and supplementing advancement of new and renewable energy business.

R&D Development System



Developing leading

such as dispersed

energy and non-

power generation

technologies,

for new

businesses

Securing technolo-

gical capability for

businesses in export,

new and renewable

decommissioning.

advancement of

4th Industrial

technologies

Revolution-based

technologies and

securing relevant

Securing NPP Decommissioning Technologies

safety; Improving

technologies to

enhance the rate

operational

of NPP use

Establishment of a NPP Decommissioning Research Institute

KHNP has established a NPP decommissioning research institute to foster safe and efficient decommissioning industries, thereby providing a key base for supporting Korean corporates. In 2020, KHNP has secured the relevant funds through CEO centered active communication, finalized the business model, and established a corporate in August, 2020. We have also commenced our work on design technology services for radiation management facilities, ordered construction of general facilities, and started construction of the facilities in 2021.

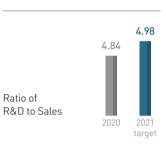
Developing Core Technologies of NPP Decommissioning

KHNP has become the country's 1st business to secure the core technology for cutting radioactive waste and processing radioactive concrete. In 2020, KHNP developed 3 decommissioning technologies and 4 decommissioning equipment, and also held a demonstration session on remote cutting and signed contracts on technological transfer with universities and research institutes. To occupy the global markets for NPP decommissioning, KHNP aims to achieve K-DT* using 4th Industrial Revolution-based technology, which goes beyond traditional, labor-intensive decommissioning technology. *K-DT: Korean Decommissioning Technology

R&D



41



Coexistence of nuclear power & new and renewable energy

Grand Prize for IT Service Innovation



by Ministry of Science and ICT

Preventing power generation from being stopped



Pre-detection of defects in facilities





KRW 180.0 billion

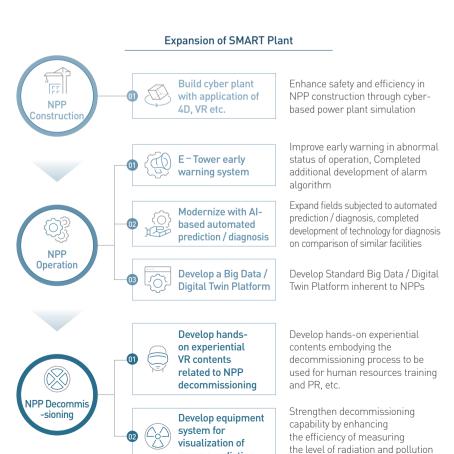


KHNP is automating the NPP decommissioning work to minimize relevant workers' radiation exposure. We are preventing workers from radiation exposure by means of unmanned radiation measurement, using a robot in extreme working conditions associated with high radioactivity, noise, and darkness. In 2020, KHNP solidified a plan for developing a ground robot and superlight flight vehicle equipped with the capability to recognize obstacles and autonomously operate. In response, we will complete its development by 2024 to be applied to worksites.

Disseminating Digital Innovative Technology

Enhancing Safety and Efficiency with SMART Plant Expansion throughout the Entire NPP Cycle

KHNP has continuously advanced the convergence of digital technology of 4th industrial revolution and applied it throughout the entire cycle of NPP to improve safety and efficiency of power plants. Cyber plants using virtual reality technology were developed to streamline the construction process of nuclear power plants, and the artificial intelligence prediction center was piloted to remotely monitor/diagnose power plant facilities and prevent power plant emergency. In addition, the introduction of the digital twin system pilot project laid the foundation for improving power plant safety in the same environment as the actual power plant.



gamma radiation

in NPP decommissioning

Expansion into Global Markets

Overseas Business Strategy

KHNP is performing with results by winning orders in overseas business related to nuclear power and new and renewable energy. KHNP underwent an organizational reshuffle including the setting up of departments dedicated to business in Egypt, the Czech Republic, and Romania under the control of the Office for Export of NPPs to strengthen our capability to win orders. In 2021, KHNP reaped substantial results in the overseas business of nuclear power from the preceding year and made strides into the overseas new and renewable energy market for the first time.

Overseas Business Strategy

Agenda



Additional orders won in overseas nuclear power business

Promotion Task

- Winning orders for new NPPs construction
- Winning orders for operation of overseas NPPs
- Support for Korean SMEs making forays into overseas markets



Successful execution of nuclear power business in UAE

- Profit maximization by taking part in all business(construction/ operation/maintenance) of NPPs in UAE
- Preparation for successful commercial operation



Exploration of overseas new and renewable energy business

- Taking part in overseas wind power and photovoltaic power business
- Phased execution of overseas hydropower business and exploration of new businesses

Winning Extra Orders in Overseas NPP Business

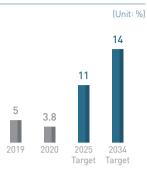
Winning an Order for Eldava NPP in Egypt by Verifying Our Technological Capabilities

KHNP is carrying out strategic activities for winning orders in main countries like Egypt and the Czech Republic. We are working on winning orders for construction of Eldaba's building except nuclear reaction and expects to achieve the largest overseas nuclear power related sales in Korea since the export of the UAE NPP in 2009. KHNP duly submitted our national security-related appraisal in accordance with the country's internal policy, and KHNP plans to carry out differentiated activities for winning orders in 2022.

Winning Overseas Orders for Operating NPPs

KHNP has won 3 overseas orders for NPP operation in 2020, and also won 6 additional orders in Romania, Slovenia, and China in 2021. Subsequently, KHNP plans to secure the basis for winning large-volume orders in the countries. In addition, KHNP plans to expand the number of countries in which KHNP operates NPPs and diversify our export commodities, while helping domestic SMEs gain a foothold in overseas markets.

Objective for Proportion of Overseas Business in Entire Operations



43

44

Coexistence of nuclear power & new and renewable energy

Entering Overseas New and Renewable Energy Market

In 2020, KHNP achieved the first success in entering the overseas new and renewable energy market. In 2021, we also gained a foothold into the new and renewable energy market in an industrialized country by conducting a photovoltaic power development project successfully in Spain.

Stable Operation of Wind Power Generation Projects in U.S.

In 2020, KHNP succeeded in acquiring equity stakes in 4 onshore wind power generation projects (852MW in total). KHNP has established the local affiliate in the U.S. and is taking part in stable joint business operations, together with Brookfield by dispatching our employees, starting in March 2021. We plan to expand investment in overseas new and renewable energy projects in cooperation with our business partners, the U.S. Electric Power Research Institute (EPRI) and Korea's SMEs and Startups Agency (KOSME).

Completion of Constructing Photovoltaic Power Plant in Chile

In October 2020, KHNP had commenced construction of a photovoltaic power plant in Chile, which KHNP jointly won with SMEs. As of December 2021, after completing the entire system connection of 6.6MW and conducting comprehensive test drive, KHNP has partially constructed the power plant. We plan to expand Southern American new and renewable market through continuous project development.

Making First Inroads into EU Market

KHNP has succeeded in making inroads into the European new and renewable energy market by winning 5 projects for photovoltaic power development projects in Spain. These projects involve the construction of photovoltaic power plants (total capacity: 143MW) in Valencia, Toledo and Seville, Spain and overseeing their ongoing operations for 35 years. For these projects, KHNP secured operation fund by signing the 'Global Green Energy Partnership Agreements' with financial institutions in April 2021. As a strategic investor, KHNP attained the role of preferential bidder for the Korean consortium and played a core role in winning the projects. KHNP aims to expand our overseas new and renewable energy projects by establishing KHNP's local affiliate in Spain.

Highlight | Expansion in Green Energy Business

KHNP pays attention to the importance of coping with climate changes and the need for expansion and acceleration of sustainable, low-carbon energy business. KHNP has set up a medium to long term strategic objective of accomplishing a total of 12.1GW of power generation capacity in new and renewable plants by 2034 as a energy business promoting transformation to CLEAN energy.

KHNP's Green New Deal Strategy

Obiective

Steps to be

Engage in aggressive business operation to lead a low carbon economy & Secure profitability



Promote large-scale business (using offshore wind power projects/idle land) which encourages locals' participation and minimizes damages to environment



Aggressive expansion of business models of new and renewable energy

- Active promotion of Saemangeum Photovoltaic Power Project
- · Promotion of projects, using idle land owned by KHNP
- Foster foundation for largescale wind power projects • Launch an organization
- photovoltaic power module business



Secure core Stack technology and O&M capability, Active expansion of business that enables win-win cooperation with locals



Strengthening our leading role in hydrogen fuel cell power generation

Develop O&M technology

- of fuel cell Develop smart industrial
- complex
- Expand business portfolio for hydrogen
- Develop new technology for dedicated to hydrogen



Continue husiness on efficient water management using smart technology (e.g. construction of hydropower/pumped storage power plants)



pumped storage power

projects both at home

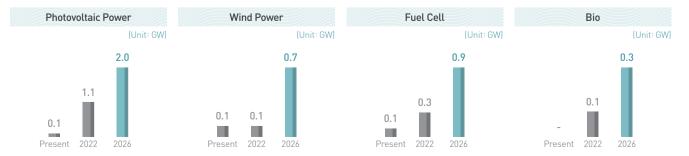
- and abroad Replace dilapidated pumped
- storage power facilities
- Localize water wheel generators
- · Establish the operating system based on the 4^t industrial revolution
- Adopt technology for stable operation of pumped storage power generation



KHNP is fully committed to meeting our responsibilities as a public institution by expanding investment in new and renewable energy sources and will strive to become a global energy business.

Jae-Hoon Chung, President & CEO of KHNP

Operation Objective of New and Renewable Energy Plants by 2026





Ceremony for Cheongsong Offshore Photovoltaic Power Plant



Wind Power Generation Complex at Noraesan Mountain, Cheongsong



CIGS Thin-Film Photovoltaic Power Module

Photovoltaic Power / Wind Power

The First Offshore Photovoltaic Power Plant Using Hydroelectric Dam

KHNP constructed a 4.4MW offshore photovoltaic power plant in a reservoir near Cheongsong Pumped Storage Power Plant in March, 2021. The plant is the first offshore photovoltaic power plant in Korea using hydroelectric dam. Photovoltaic power modules are installed in 29,000 m, about 5.7% of the entire reservoir area to generate 5,560MWh a year, which is equivalent to a power consumption by 2,800 local households. It is also the first facility to comply guideline for new and renewable energy facilities of the Korea Energy Agency (KEA), thus applied sustainable offshore photovoltaic power modules. Accordingly, it will be a power plant that can be operated safely in highly hot or humid offshore conditions without the risk of water pollution.

Completed Construction of 19.2MW Wind Power Generation Complex

In September 2020, KHNP completed the construction work for a large-scale wind power generation complex at the Mount Noraesan, Cheongsong close to Cheongsong Pumped Storage Power Plant. The 19.2MW complex will produce 37,000MWh of electricity a year, which is equivalent to power consumption by 16,000 households, which accounts for 115% of power consumption for the entire Cheongsong area.

Localizing CIGS Thin-Film Photovoltaic Power Module for the First Time Nationwide

KHNP has succeeded in localizing a technology for CIGS (compound semiconductor solar cell composed of copper, indium, gallium, and selenium) thin-film photovoltaic power modules* for the first time nationwide. KHNP carried out the project jointly with the Korea Institute of Energy Research (KIER) and Soland, and has won the Korean Industrial Standards (KS) certification. The development led by us is acclaimed as a feat that laid the basis for building SMEs' technological competitiveness and developing photovoltaic power circle.

*CIGS thin-film photovoltaic power modules: Next-generation goods that can be installed in diverse locations, being light and flexible, although they display power generation efficiency about 15% lower than that of existing silicon photovoltaic power modules

Awarded the presidential commendation for taking a leading role in developing technology on materials, parts, equipment



On December 23, 2020, KHNP was awarded the presidential commendation at a ceremony held by the Ministry of Trade, Industry & Energy (MOTIE). We have received the Presidential Award for four consecutive years in the field of winwin cooperation for its contribution to the expansion of private investment by establishing policies on materials, parts and equipment development. Toward the end of 2019, KHNP selected 100 tasks and launched T/F for localizing parts and equipment, therefore are carrying out a relevant R&D projects, spending KRW 100 billion. As a result, KHNP signed agreements with SMEs cooperating with us to carry out 26 tasks, spending KRW 26 billion. In 2021, KHNP is continuing to make effort to promote localization of parts and equipment, while upgrading the ongoing programs for accompanied growth with subcontractors and developing projects that meet their needs.

Hydrogen Fuel Cell

Securing Core Capability on O&M to Promote Fuel Cell Business

KHNP has secured technology on Operation and Maintenance(0&M) to secure core capability amid the changing regulations in fuel cell business. KHNP took part in the establishment of the Gyeongbuk Province Hydrogen Fuel Cell Power Generation Cluster and signed an MOU for developing relevant 0&M. KHNP also developed a project for association of university, research institution and industry, using idle land of Uiduk University in Gyeongju. KHNP expects to be able to secure 0&M technology through participation in such a government-initiated project linking businesses, universities, and research institutes for win-win cooperation.

Exploring an Ecosystem for Hydrogen Cycle and Market Occupation

To play a leading role in creating an ecosystem for hydrogen cycle, KHNP promotes strategic tasks in each stage of production, storage and use of hydrogen. We have fulfilled our part of the MOUs for corporation in Jeonju Recycling Town Bio Gas Business, for establishing the Saemangeum Green Hydrogen Production Cluster, and for jointly developing the new and renewable energy-based Data Center Park. In addition, we are developing on various hydrogen convergence business model by creating digital energy solution and ecosystem for hydrogen cycle. At most, KHNP tries to continually promote stability of hydrogen fuel cell using various communication channels to relieve the public anxiety about hydrogen, an energy source of fuel cells.

Hydropower / Pumped Storage Power

Integrated Operation of Hydropower Plants

KHNP is the first-ever in the world to adopt 5G business communications network to our hydropower generation for stable supply of electricity in lockstep with the age of the 4^{th} Industrial Revolution. In 2020, KHNP developed a mobile-based system for real-time sharing of the current situation and started the pilot operation of it in 15 hydropower and pumped storage power plants. KHNP expects that the system will enhance the stability of power supply nationwide with the adoption of the 4^{th} Industrial Revolution-related technologies (prediction/diagnosis system, etc.).

Establishing AI Infrastructure for Managing Water Resource

KHNP operates AI water resources management model to optimize the use of water resources. Hydropower energy has its inherent problem of unstable supply due to imbalance of water resources. In this regard, KHNP has developed software for the integrated operation of hydropower to calculate the balance point between the use of water and the control of water. With the application of the system, KHNP has newly secured a volume of 800 million min water that can be used for agriculture, industries, and households. KHNP has also signed an agreement on "multi-purpose use of hydroelectric dams. with the Ministry of Environment, thereby laying the basis of public policy for stable operation of the power supply system.

Branches Installed with Communication Network



0 offices 0% 2019

20

^{*}The use of water: the supply of water, power generation

^{**}The control of water: flood control, environment



Leading to Net Zero

Material Issues



- 3. Coping with Climate Change
- 3. Managing Waste and Wastewater

UN SDGs Linkage

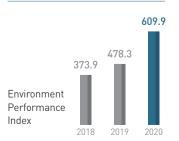






Key Performance





KHNP aims to contribute to the government's carbon neutrality goals as a leader in Clean & Green energy.

The international community engages in the grand conversion to the sustainable, lowcarbon society and the national government is also strengthening its environment policy under the "2050 Carbon Neutrality Promotion Strategy." Although KHNP is expanding the share of the sustainable energy businesses such as photovoltaic and wind power, we need to develop a countermeasure against the increase in waste from business operation. In response, KHNP has established countermeasures against the climate crisis to realize a low-carbon society and are strengthening the measures to preserve the environment linked to businesses.

KHNP Strategy



Sophisticate the system to mitigate climate change according to the legislation of carbon neutrality (Sept. 2021)

- Set KHNP's GHG reduction target in lockstep with the government's medium to long term objective (2030)
- Promote development of overseas GHG reduction projects to secure shortage of emission allowances and certification on GHG reduction
- Formulate measures to cope with climate changes to minimize climate crisis-related damages to facilities and personnel



- · Increase sustainable, highly efficient buildings and vehicles such as EVs
- Promote reduction of water polluting substances through development and demonstration of technology for wastewater
- Explore businesses for restoration of ecological system by preserving biodiversity and revamping of economy through

INTRODUCTION NEW WAVE FUNDAMENTAL CLEAN ESG APPENDIX

Minimizing Environmental Impact

Environmental Management System

KHNP has established environmental management system (ISO14001) for systematic environment management. KHNP continues to enhance environmental results by exploring matters to be improved through annual internal and follow-up assessments by expert institutions. In addition, KHNP developed and implements environmental performance and green management indexes to enhance the company-wide environmental management capability. In this way, KHNP will leap forward as an sustainable business trusted by the public through ongoing improvement in green management performances.

Environmental Management System

Objective

Global green energy business enabling coexistence of the public and environment

Agenda

Promotion Task



Enhance environment's sustainability

- Turn marine waste into fertilizer
- Recycle rechargeable battery from car
- Secure technology for reducing pollutants from wastewater
- reducing radiation waste



Establish environmental management

- · Continuous improvements on
- · Maintain ISO 14001
- · Secure technology for



- environmental performances
- Invigorate resource circulation
- (international certification on environmental management) and designation of corporate as a green business
- Increase purchase of green products



Proactively coping with climate crisis

- · Secure alternative water resources in preparation for abnormal climate
- Expand programs for reducing
- Enhance supply of sustainable vehicles and LED lights
- Enhance inspection perspective in extreme climate changes



Managing safety of radioactive waste

49

- · Timely disposal of radioactive
- Improve criteria for taking over radioactive waste
- · Secure adequacy of disposal of waste from business operation
- Prepare for timely disposal of waste from decommissioning
- Establish radioactive waste managing infrastructure

Operation in Environmental Management & PDCA System

- Set environmental guidelines and medium to long term environment management plan
- Set up plans for environmental education
- Assess environmental damage
- · Feedback on environmental inspection results
- · Carry out environmental improvement activities
- · Reflect environmental objectives in the action plan



- CHECK
- Optimal operation of environmental facilities
- Environmental education &Emergency training
- Draw up environmental manual and guidelines
- Execute environmental management plans
- · Environmental inspection and survey
- · Operate environmental evaluation programs Ask for remedial measures for
- environmental managment

Leading to Net Zero

KHNP's Green Management Organization

KHNP operates the green management organization including top managers, green managers, and agents to manage in a systematic way. Green managers in each unit establish objective in accordance with operation procedure of environmental management system, and engage in periodic monitoring and green management performance evaluation. In addition, the organization also set communication system between top management and working-level divisions as the green managers submit occasional reports and an annual report to senior management.

Green Management Organization President & CEO Secretary's Office Strategy & Management Office Corporate Communications Unit Senior Executive Vice President & CFO Senior Executive Vice President & CNO Regulatory Affairs Management Office Quality & Safety Division Power Generation Division Green Energy Division Quality Assurance Department Power Generation Division · Hydropower Department Safety Department · Plant Maintenance & Engineering New and Renewable Energy Business Department Department Radiation Safety Office · Structural Engineering Offic Pump Storage Construction Department · Radiation Health Institute Branches

Kori Nuclear Power Site Hanbit Nuclear Power Site Wolsong Nuclear Power Site Hanul Wolsong Nuclear Power Site Saeul Wolsong Nuclear Power Site

Hangang Hydropower Site Cheongpyeong Pumped Storage Power Plant Samnangjin Pumped Storage Power Plant Muju Pumped Storage Power Plant Sancheong Pumped Storage Power Plant Yangyang Pumped Storage Power Plant Cheongsong Pumped Storage Power Plant Yecheon Pumped Storage Power Plant

Establishment of Communication System

KHNP has established communication system to readily and openly share environmental information. Our environmental management information system (EMIS) is operated in a way to check the execution status of green management within the organization and empower branches to manage and share environmental information. KHNP ensures service users' accessibility and convenience on information by providing standardized web-based environmental information including relevant accounting or greenhouse gases. Besides, KHNP firmly enforces our rule of following the stipulations in our environmental management manual on the scope of communication issues and media channels when communicating on material issues regarding environment with internal and external stakeholder.

EMIS System



GHG Inventory

Quantitatively

calculate

GHG emissions to cope

with UNFCCC

Environmental Accounting

Calculate all our expenses made concerning environment and make relevant reports

- Management in master
- Management in facility

Outline

- Management in input Management in reduction /
- objective Management in emissions and making relevant report
- Management in work

- Outline
- Registration of environmental cost
- Tabulation of environmental cost
- Retrieving of environmental cost
- Management in master data
- Information to service users

Environmental Radioactivity

Collect environmental radioactivity samples, Pre-treatment, Measurement, Management in analysis statistics

- Master data
- · Management in sample collection
- · Pre-treatment
- · Measurement
- · Approval management
- · Analysis statistics

Training and Campaign on Green Management

KHNP has conducted annual employee training programs and sessions on green management based on medium to long term management objectives, arranging trainees based on their competency and positions. Training courses for subcontractors' employees are also conducted to support the green management of subcontractors.

Green Management Trainings

Courses	Subjects	Session Hours	No. of trainees in 2020	No. of trainees in 2021
Environmental management system for working level	Gr. 2~4	Once (3 hrs.)	12	82
	Gr. 1~4	Ordinary course (3 hrs. per year)	9,688	9479
Safety measures on toxic substances	Gr.2~4	Expert course (4 hrs. per 2 years)	57	38
	Subcontractors	Ordinary course (3 hrs. per year)	7,564	7163
Environmental impact assessment and follow-up management for working level	Gr. 1~4	13 hrs. per year	35	29
Climate change and adapting	Gr. 2~4	3 hrs. per year	136	139
to climate changes	Subcontractors	3 hrs. per year	12	0*
Training course for environmental management internal examiner	Gr. 1~4	Once per year	21	25

*Not carried out in

Campaign on Green Management



Survey on stakeholders for publishing sustainability report



Application of Green CIP



Development & Application of image for promoting sustainability



Encouragement of participation in personal Carbon Point



Program reducing use of disposable items (No paper cups, less plastic uses)



Program reducing food waste (Clean dish campaign)

Leading to Net Zero

Marine waste to be buried underground

190 Tons Reduced

→ Used for production of sustainable fertilizer (38 tons)

Recycling for EV batteries



Expected Amount of Reduced Radioactive Waste



Expected Annual Wastewater from Each Power Plant





Managing Waste and Wastewater

Enabling Resource Circulation by Turing Marine Waste into a Resource

KHNP is reducing marine waste and turning them into resources as part of our effort to enhance environmental sustainability. We have reduced animal/ vegetable marine waste occurring at the time of cooling turbine steam at power plants by installing devices blocking the inflow of external substances into the turbine steam intakes. We are also contributing to the prevention of environmental pollution through resource circulation by solving the problem of degradation in compost quality caused by mixing non-living waste through analysis of selected waste properties and discovery of recycling companies capable of treating marine life.

Participating in Rechargeable Battery Recycling

KHNP is taking part in the Energy Storage System (ESS*) business for recycling used EV batteries, thus maximizing resource circulation efficiency. Lithium-ion batteries used in EVs can cause environmental pollution, if simply disposed of, but can be used as ESS since they still retain 70-80% of their initial capacity even after their full life cycle as EV batteries. In this regard, KHNP is cooperating with Hyundai Motor in the ESS in order to contribute to resource circulation.

*ESS: an energy restorage system where surplus power is stored and supplied later.

Reducing Radioactive Pollutants

KHNP aims to develop technology that can reduce radioactive pollutants. It is difficult to get rid of radioactive nuclides from filter media even with the use of a purification device. Thus, KHNP has been developing technology for reducing radioactivity, and intends to use it on a trial basis after reviewing the possibility of commercialization of the technology. Through this commercialization, KHNP expects that radioactive waste will be reduced by 95%.

Reducing Wastewater from Power Plants

KHNP is developing technology for reducing wastewater from power plants. The increase in the amount of chemicals used to prevent the corrosion of facilities in the water pollutant removal facilities led to the increase in wastewater volume. In response, KHNP has been developing technology for extending the lifespan of the corrosion-proof facilities, and it is expected that the wastewater volume used will be reduced by 96% with the commercialization of this technology.

Managing Water Resource

Securing Sources of Water Supply through Desalination* Facility

Shortage in water resources has increased along with the construction of new NPPs and climate change. Our Hanul NPP has secured sources of water supply (capacity: 10,000 tons) by installing a reverse osmosis-type facility which doesn't have thermal discharge effect. As a result, the power plant had reduced its production cost by 55% and prevented depletion of local streams by providing the same amount of fresh water. *Desalination: Process of removing salt from seawater to use it as potable water for households and industries

Securing Biodiversity

Activities to Minimize Environment Impacts

KHNP cooperates with locals living close to NPPs in their effort to clean up their surroundings. Saeul Wolsong Nuclear Power Site, for one, has engaged in removing other weeds from beach rocks to help seaweed, which is a national favorite food, grow well in cooperation with locals in Ulju-gun since 2017. Also employees had made full effort to clean the port area whenever natural disasters occur, therefore collected a total 25 tons of waste including discarded fishing gear/ net from the nearby beach in 2020.

Renewal of Marine Ecosystem

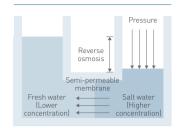
Each year, KHNP carries out the campaign of releasing fish and clams cultivated in warm water discharged from NPPs and improving local fishing grounds in order to invigorate marine ecosystem. Hanbit Nuclear Power Site, for one, has released a total of about 867,000 fish and clams worth KRW 1.29 billion in the local fishing grounds near its NPPs. KHNP expects that the released fish and clams will help local fishing housholds who have trouble managing the local fishery resources. We intend to continue the program to help locals improve their livelihood income and bring public awareness on the utility of warm water discharged from NPPs.

Sustainable Procurement

Establishing Inter-Business Cooperation Guideline

To raise the ratio of subcontractors' procurement of green products, KHNP operates guidelines for 'Special Conditions for Purchasing Green Products'. In the evaluation and qualification of service providers, KHNP gives bonus points if they purchase, use, and supply green products or possess new sustainable technology under the 'Development of and Support for Environmental Technology Act' in order to incentivize subcontractor's use of green products.

Desalination Facility



55 % of Production Cost Was Saved

with adoption of desalination facilities at Hanul NPP



KHNP's Saeul Wolsong NPP Engaging in the work of removing other weeds from beach rocks

Purchase of Green Products in 2020

Amount of Green
Products Purchased



Ratio of Green Products Purchase from The Total Purchase Amount

KRW 25.845.744



96.7%

thousand





Highlight | Strategy for Coping with Climate Change Response to Achieve Carbon Neutrality

In accordance with the TCFD recommendations, KHNP will actively report its efforts and current status in responding to climate changes starting from 2021 so that it could contribute to the achievement of the climate change information disclosure goals advocated by the international community. The TCFD recommendations include the four key areas of governance, management strategy, risk management, and indicators & goals as the aims of climate-related information disclosure.

Role of Top Management in Climate Change

Director of Corporate Planning Department

To deal with climate change issues proactively, KHNP has created a T/F organization that comprehensively manages the ESG-related agendas across the entire company. The T/F organization is composed of a steering group (Chairperson, Head of Department) that is responsible for making decisions on important climate change agendas and a working group (Secretary, Manager) that is responsible for implementing the decisions, executing detailed tasks, and checking the performance. In addition, the Corporate Planning Department of the Planning Division checks the performance at the end of every 6 months, and each department establishes and implements a detailed plan for each agenda. In the case of important policies on climate change response, each department reports to the top management and periodically analyzes government policy trends, and then shares the findings with the entire company.

Working group

Practical affairs

Early realization of KHNP's carbon neutrality objective General Business Division

- Hydropower Department
- Overseas Hydropower Department
- Overseas Financial Department
- · Corporate Planning Department Structural Engineering
- Department
- Facility Construction Department
- · General Affairs Department

- Contributing to national GHG emission reduction
- · Corporate Planning Department
- Disaster & Environment Department
- Power Generation Division
- Business Planning Division
- Fuel Cell Development Department

Developing new projects & technologies

- Research & Strategy Department
- SMR Development Center
- New and renewable Energy
- Hydro Technology Department · Hydro Business Department
- Hydrogen Business Department Hydrogen Technology Department
- · Smart Business Department Management PI Department
- · Digital Innovation Department

Building relevant infrastructure & Cooperation

· Corporate Planning

Assistant administrator Head of Corporate Planning Department *Chairperson of Working Group

- General Budget Department Disaster & Environment
- Department
- PR Department
- Local Cooperation Department

KHNP's Strategy to Cope with Climate Change

KHNP has set up the second medium and long term comprehensive plan to mitigate climate change, following in the government's footstep in the 2050 carbon neutral strategy. According to the government's top-three relevant policy directions, KHNP has established strategy with 4 priority agendas, and intends to update it every 5 years. In 2016, KHNP set up the first plan and followed it with the second plan in 2021.

Government



Strategy for Pursuing 2050 Carbon Neutrality



- 3 Policy **Directions**
- · Low carbonization of economic structure
- Creation of a new promising low-carbon industry ecosystem
 - Processing transition to a carbon-neutral society



Medium and Long Term Comprehensive Plan to Mitigate Climate Change



- Early realization of KHNP's carbon neutrality objective
 - Contributing to national GHG reduction
 - Developing new projects & technologies
 - Building relevant infrastructure & Cooperation

Strategy for Coping with Climate Change

Vision

A leader in Clean & Green energy prioritizing the environment

Objective

Aims to contribute to the government's carbon neutral objective, going beyond our plan to achieve 2033 carbon neutral objective

Agenda



Early realization of KHNP's carbon neutrality objective

Promotion Task

- · Accelerate energy conversion through expanding new and renewable energy projects both at home and abroad
- Strive for internal GHG reduction; provide support for GHG reduction among developing countries

Contributing to national GHG emission reduction

- Provide support for the government's establishment of energy plan; engage in policy research to contribute to carbon neutral initiatives
- GHG reduction on the national level through nuclear and fuel cell power generation
- Construct new pumped storage power plants to complement volatility in new and renewable energy



Developing new projects & technologies

- Develop new innovative energy sectors such as SMR. virtual power plants, etc
- · Early activation of hydrogen economy by demonstrating technology of hydrogen life cvcle
- Adopt innovative low-carbon industry such as smart city & green industrial complex



Building relevant infrastructure & Cooperation

- Enhance our corporate image by publicizing our activities to CLEAN energy
- Supplement relevant capability by cooperating with relevant institutions
- Enhance our corporate image by engaging in programs designed to support local communities and SMEs

Climate Change Risk Management

KHNP has established strategies for each risk items on climate change to minimize the negative impact of business on the environment. We are collaborating with the R&D Power Group to carry out systematic research on green hydrogen to mitigate technology-related risks. Furthermore, to preemptively deal with legal risks, we have introduced a system for evaluating the reduced effects of business risk related to overcoming climate crisis.

Meanwhile, proactive climate change response activities can create opportunities for discovering new businesses. Activities we pursue to build a low-carbon industrial ecosystem (e.g. developing nuclear and new and renewable coexistence technologies, stimulating the growth of the hydrogen industry, and developing smart convergence technologies) could become opportunities for expanding to new businesses and increasing overseas business contracts.

Risks and Opportunities Related to Climate Change

Туре

Transition Risk Factors

Physical Risk Factors

Opportunity Factor









Failure to meet





Long-term



Description

Need to respond to the demand for additional power sector in order to achieve carbon neutrality by 2050

Increasing R&D costs and additional financial burden in the event of failure, as a result of developing technology, to respond to climate change, such as for GHG emissions reduction and

Any lawsuits related to the environment, such as those relating to climate change, not only have a financial impact but also have a negative effect on corporate reputation

the demands of stakeholders who view climate change response performance and information disclosure efforts as important factors may have a negative impact on business activities, such as the ability to raise capital

changes in the physical environment such as global warming, may affect the operation of power facilities, causing an additional increase in costs

in demand for eco-friendly businesses in accordance with rising investments related to climate change by financial institutions and policies in order to achieve carbon neutrality by 2050

KHNP's Responses



In 2020, KHNP and its subsidiaries reduced GHG emissions by 74,460,603 tons through nuclear, hydroelectric, photovoltaic, and wind power generation. (Excluding nuclear power generation, GHG emissions were reduced by 596,562 tons)



reduction

technologies.

expanding new and

renewable energy

KHNP is carrying KHNP has set out methodical up a system for evaluating the technology development and reduced effects research on areas of business like fuel cells and risk related to green hydrogen overcoming the to mitigate climate crisis. climate change and is developing GHG emissions



KHNP has improved the transparency of GHG emission information by adopting the TCFD recommendations starting from

2021.



KHNP has

established the 2nd medium and long term comprehensive plan for mitigating climate change in order to implement the government's 2050 carbon

neutrality policy.



KHNP is creating

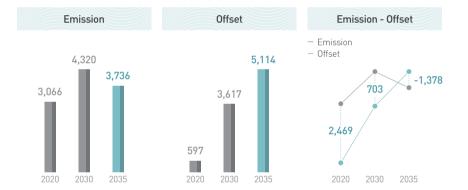
a low-carbon industrial ecosystem. (developing nuclear and new and renewable coexistence technologies, stimulating the growth of the hydrogen industry, and developing smart convergence technologies)

GHG Emission Reduction Goal

In the GHG emission reduction agenda finalized by the government, the national GHG emission reduction target (NDC) for 2030 is set at 40% reduction of the total GHG emission recorded in 2018. The 2050 Carbon Neutral Committee has also decided to raise the target from the previous 26.3% reduction. KHNP and its subsidiaries set the goal of achieving carbon neutrality early by 2033 in keeping with the government's commitment to transforming the country's industrial and energy structure into a lowcarbon economic system.

To raise the level of carbon neutrality, KHNP plans to not only develop technologies on SMR, hydrogen convergence and smart city, but also take leading role in green hydrogen and new and renewable energy business. In addition, based on the upwardly adjusted 2030 national GHG emission reduction goals (NDC) and the "2050 Carbon Neutral Promotion Strategy" declared in 2021 by the government, KHNP will revise the GHG emission target and detailed strategies for each stage.

Current and Forecast Levels of KHNP's Carbon Neutrality (Unit: 1,000 Tons)





Enhanced human rights & safety

Material Issues



- . Strengthening Safety / Health
- . Ethics and Anti-Corruption

UN SDGs Linkage









Key Performance

(Unit: Points) ■ General Operation ■ Major Business Humar Rights Impact

KHNP aims in earnest to realize honest and ethical corporate culture, ensure human-centered safe workplaces, and realize social values that inspire and uplift people.

As social criteria for transparent government environment and organizational culture has increased, the government is promoting respect for people's human rights as a national political agenda. In response, KHNP has discovered improvements from diagnosis on the level of human rights and is trying to upgrade our human rights management. In addition, KHNP has established the following objectives: becoming the leading business in terms of integrity and ethics; realizing social values by playing the leading role in human rights management.

KHNP must cope with various risks including occupational risks, natural disasters, and fire in high-risk workplaces. To operate safe power plants is not only important to employees but also to the external stakeholders.

KHNP Strategy



Realizing a corporate culture that prioritizes people by upgrading human rights management

- Developing KHNP's exclusive human rights management index to objectively measure results and detect human rights-related blind spots
- Come up with a system that provides supports for subcontractors' human rights management and due diligence of human rights
- Improving our personnel system to internalize equal corporate culture, where diversity and difference are respected



Enhancing the capability of responding to disasters & Protecting employees' health

- Establishing a system for coping with disasters; supplement the ability to mitigate a radiation emergency or natural disasters
- Fostering a disease-free environment by promoting health management for employees (including subcontractors)



Fostering working environment, where workers' safety comes first

- · Upgrading safety management system by improving safety training and adopting the safety/ health management system
- Minimizing work-related risk factors by improving the innovative technology-based industrial safety infrastructure
- · Improving the safety level and prevent serious accidents by exploring safety-related vulnerable points

Realizing an Ethical Corporate Culture

INTRODUCTION NEW WAVE FUNDAMENTAL CLEAN ESG APPENDIX

Ethical Management System

As the largest power generation business in the country, KHNP aims to strengthen our ethical management system for sustainable growth. In 2020, KHNP has put our goal of ethical management into practice with a focus on the following: supplement activities to prevent unfairness, foster transparent corporate management culture, and disseminate an ethical culture.

Ethical Management System

Objective

KHNP aiming to be the Global T.O.P.* ethical business

Agenda

Promotion



strengthen relevant





*T.O.P.: Transparency Obligation Partnership

Upgrade internal accounting

measure to prevent the abuse of authority

Foster transparent management culture

D. Execute

management system Establish/Implement

internally and externally Expand channels for whistleblowing on unfair

Disseminate an

Reinforce an ethical culture

ethical culture

System for Execution & Feedback

- Monitoring: done by civil auditor of integrity and director of monitoring Code of Conduct
- Assessment: Survey on level of integrity, assess meaures taken to prevent corruption
- · Feedback: amending regulations complementing systmems Compensation:
- result reflected in internal evaluations, awarding prizes, opportunities for outside training, etc.



00

C. Find points to

be improved

Management system: ISO37001 certification and operation

Reflecting feedback:

vulnerable points;

from employees, etc.

Set up a plan to improve

Idea: collaboration with other

institutions collecting opinions

Support for execution: protection for integrity, consisting T/F for anti-corruption

Ethical Norms and Action Guidelines

KHNP has set action criterias to be observed by businesses to foster a culture of anticorruption and transparency including "Employee Code of Conduct & Ethics and Code of Conduct for Subcontractors. KHNP also presents anti-corruption policies for each business field using "Anti-Corruption Management Manual," and puts our policies through an effectiveness evaluation each year to ensure their validity. In 2020, KHNP adopted a system of demotion concerning deputy department manager-level employees involved in a serious offense or misconduct (i.e. sexual scandal or bribery accepting money or valuables) and opened a channel for a whistleblowing as part of our support for ethical management. KHNP has also improved vulnerable points in ethical norms such as criteria for punishing offenses.

IS037001 Renewed til

Dec. 2023



59

Selected as an exemplary business in anti-corruption



by UNGC Korea

Enhanced human rights & safety

Obtained "Appropriate Opinions"



Index on Improving Abuse of Authority



Activities to Disseminate an Ethical Corporate Culture

Mitigating Blind Sports in Procurement by Establishing Fair Trade Models

KHNP has improved unfairness in our contracting system to foster an environment for fair trade. This step includes prohibition of an act of asking for a treat and a job position or imputting the contract-related burden to a contractor. In addition, KHNP has improved our E-Commerce system (K-Pro) which eliminates the possibility of insufficient verification or corrupt ties in small-scale contracts, thereby ensuring transparent process of selecting suppliers.

Enhancing Management Transparency through Operating Internal Accounting Management System

As the level of certification of internal accounting management system increased following an amendment to the Act on External Audit of Stock Companies, a need for enhancing the control system for prevention of deceit and error has arisen. In response, KHNP has enacted the "Internal Accounting Management System Operation Guidelines in lockstep with an amendment to the 'Act on External Audit of Stock Companies' and 'revisions of exemplary criteria', while securing independence and expertise through launching a department dedicated to internal accounting. In addition, we have proactively improved 22 vulnerable points in main control activies, including setting up a database for the entire process of accounting control activities.

Establishing to Prevent the Abuse of Authority

KHNP emphasizes carrying out comprehensive measures for abuse of authority to enhance fairness and transparency in work process. We abolished unfair practices that limits the rights of the contracting partners, and held educational sessions empowering employees including subcontractors to prevent and root out abusing of authority.

Operating a System for Whistleblowing on Unfair Acts

KHNP is operating channels encouraging all stakeholders to whistle blow on unfair acts to support ethical practices and operation of business. To prevent and respond quickly to unfair practices, we have activated various channels such as Red Whistle, an external reporting channel and an internal whistleblowing center, its own newspaper, and a reporting phone, internal reporting channels.

Human Rights Management

Human Rights Management System

KHNP aims to uphold social values through promoting human rights of all stakeholders including employees, subcontractors, and locals. We have announced our Human Rights Management Charter as a guideline for our human rights management to take root in and disseminate human rights. We also identify and manage potential human risks by carrying out human rights impact assessment and internal checklist.

Human Rights Management System

Realizing social value through promoting human rights for all stakeholders in our business activities

Realizing social value by playing a leading role

in human rights management

Promotion

Vision

Objective



Enhancing human rights management system

- · Operating internal checklist
- Strengthening process of damage relief



Expanding activities to guarantee human rights

- Ensuring safe working environment
- · Securing right of health amid COVID- 19



Disseminating human rights respecting culture

- Supporting human rights management of subcontractors
- Developing human rights contents to communicate with locals

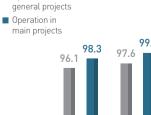
Practices of Human Right Management

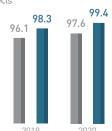
Human Rights Impact Assessment

Starting in 2018, KHNP has been engaging in human rights impact assessment each year to find potential human rights risks, evaluate, and discover improvements. The assessment is evaluated by dividing the management activities into operation in general and major projects. The department in charge (i.e. Compliance Management Office) carries out assessment of indicators based on the result of checks done for each department, and then the Human Rights Management Committee deliberates the assessment result. KHNP emphasizes taking complementary steps for items pointed out as insufficient to continually improve the situation related to human rights risks. In 2020, KHNP carried out the human rights impact assessment concerning a total of 128 indicators in 9 sectors (including 67 indicators in 4 sectors in major projects). As a result, the points in our operation in general and major projects showed a rise by 1.5%p and 1.1%p respectively from those of last year.

Human Rights Impact Assessment

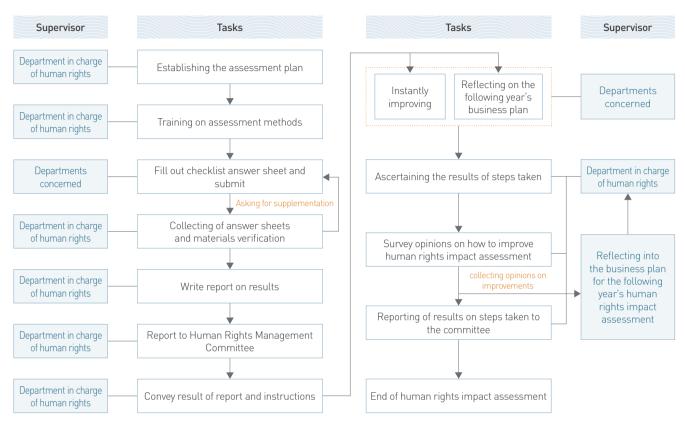
Operation in





(Unit: Point)

Procedure for Assessing Operations in General and Major Projects



Human Rights Impact Assessment Results on Operation in General Projects



Protecting and Advancing Stakeholders' Human Rights

KHNP has been carrying out diverse human rights-related activities to respect and protect all stakeholders' human rights according to our Human Rights Management Charter. To put accountable supply network management into practice, we signed pledges for respecting human rights with a total of 11,525 subcontractors and carried out a campaign for eradicating the abuse of authority. In addition, in order to spread human rights to locals, we had held an open contest for human rightsrelated short poems.

Activities for Promoting Stakeholders' Human Rights

Classification

Accom-





- plishments
- Signed pledges for respecting human rights with a total of 11,525 subcontractors
 - · Announced a charter for protecting businesses from civil complaints
 - · Held an informal meeting with 46 subcontractors to eradicate the abuse of authority and minimize occupational disaster into
 - Improved clauses infringing on labor right in subcontract documents (13 cases), banning unfair acts on authority abuse (July)
 - Set up a plan for execution of welfare funds for subcontractors, dispatched workers, thereby securing welfare budget (KRW 5.5 billion)



Local community

- · Distributed human rights-related media content (animation) to middle & high school students
- · Held an open contest for human rights-related short poems for locals (near HQ and Gyeongju); displayed outstanding works



Employee

- Broadcasted a web drama to deliver the message of eradicating abuse of authority (through YouTube)
- Held a non-contact book talk concert on human

Enhanced human rights & safety

Realizing a Safe Workplace

Safety Management System

KHNP has renewed our safety and health management manual to accomplish our motto of 'Safety First' and engaged in safety management by setting industrial disaster and safety accident target at zero for past 3 years based on public institutions' safety management guidelines.

Safety Management Strategy

Objective

"Zero" industrial disaster /safety accidents

Agenda



Disseminating safety culture to subcontractors



Systematic safety management



Utilizing innovative

- Supplement safety-related Promotion Task communication with subcontractors
 - · Use non-contact kiosks for safety
- Update certification of safety management procedure, etc.
- Operate open recommendation-sharing
- · Empower employees to make safetyrelated recommendations

technology and equipment

- · Expand use of protective gear in high-
- Bolster capability to cope with fire

Safety Organization

To carry out a company-wide safety program, KHNP operates safety organization at each workplace including headquarters. The chief of Quality & Safety Division has been appointed as company-wide safety manager and chiefs of work offices as office safety manager. We always strive to make safe workplaces through the following efforts: development of industrial safety/ health policies, prevention of safety accidents, operation of safety/health management system, setting up a plan for and execution of national infrastructure facility disaster management.

Organization Chart Dedicated to Safety at HQ







Periodic Risk Assessment

After detecting hazards / risk factors in workplaces based on the Industrial Safety and Health Act, KHNP carries out risk assessment, which includes estimation of hazards' likelihood and frequency and designing measures for reduction of them. In addition, a third-party institutions' audits of steps are taken as followed. In 2020, we carried out risk assessment of 24 offices including headquarters and duly took steps for all 728 cases of measures that we devised as a result. Moreover, we amended the Safety/ Health-1002, which is our risk assessment guidelines, as part of our effort to minimize hazards/ risk factors in workplaces.

Systematic Safety Management

Acquired Certifications in Safety/ Health Management Systems

KHNP has won KOSHA MS and KOSHA 18001 certifications, which are the most recent domestic safety/health standards, and ISO45001 certification, which is international standards for safety/health management system, for 15 of our workplaces. We manage industrial safety/health-related risks and take remedial steps based on recommendations made through internal/follow-up reviews.

Operating an Open Recommendation-Sharing System for Improved Measures

KHNP is operating systems for freely sharing safety-related recommendations in an effort to spread the safety culture among employees. Green Whistle, which is a system for employees' (including subcontractors' employees) recommendations for improvements in potential safety hazards, allows employees to submit recommendations, using various channels, including phone and fax. In 2020, we have received a total of 870 recommendations and we duly took steps for 99% of them. We also operate Safety Call, which allows employees to refuse to continue to work and ask the safety manager for improvement where a risk factor was found, thus we duly took steps for the 65 cases of relevant requests under this system.

Disseminating Safety Culture among Subcontractors

Safety Management through Support for & Cooperation with Subcontractors

We provide diverse support for subcontractors' work safety. We support establishment of our subcontractors' systematic management of safety and health by paying expenses spent to acquire safety/health management system and certification for reducing disasters. We also hold a joint workshop for safety training and guidance with subcontractors taking part and encourage them to engage in safety management. In addition, in order to resolve the problem of subcontractors failing to report industrial disaster cases due to current special condition of a safety agreement, we have devised our agreement by including a clause about imposing penalty points as to only a case of injury taking not less than three months of recuperation.

Innovation in Safety Training for Onsite Workers by Adopting a "Positive Danger Prediction System"

We adopted the "positive danger prediction system," which uses a kiosk, for more efficient safety training for onsite workers amid the COVID-19 pandemic. Under this system, only the workers getting right answers to 69 questions about diverse onsite working environment provided through the screen in a kiosk are issued a safety work pass. The process is repeated every other week in an effort to have relevant worker pay attention to safety.



KOSHA-MS Certification of KHNP HQ

Obtained Grade A



in MOEL's safety/health symbiotic cooperation program



A Kiosk-Based Positive Danger Prediction

Risk Assessment in 2020





Enhanced human rights & safety



of accident from electric shock, suffocation, fire, collision with heavy equipment or being stuck in a component of heavy equipment



Use of Safety Protective Gear Best Suited for Worksites

KHNP has adopted various safety protective gears to ensure safe workplace for onsite employees, using non-contact voltage detector and powered air-purifying respirator to prevent electric shock and suffocation which can cause a serious disaster. Among others, we have adopted IT-convergence breathing apparatus used in a fire occurring power plants and sensors attached to heavy equipment in order to prevent workers' collision with heavy equipment or being stuck in a component of heavy equipment. As a result, we succeeded in attaining our goal of zero accidents.

Adoption of Safety Equipment/Protective Gear



Protective safety gear for high-risk work

Non-contact voltage detector and powered air-purifying respirator introduced

Procedure for work in a closed space and work related to electrical safety (July)



firefighting capability

IT-convergence breathing apparatus (Company-wide adoption after trial application at Wolsong HQ)

Development of Standard Guidelines for Hazardous Objects (June)



System for warning collision with heavy equipment

Installed in 28 forklifts and 8 excavators in worksites for Shin-Kori-5/6 Power Plants

Prevention of accidents through vibration alarm of sensor

Enhancing Level of Safety Training

Improvement Concentrated on Nuclear Power Plant Jobsite Safety Management

We meet what is expected of us for safety management by stepping up onsite monitoring and training of employees and launching the 'Safety Corps' composed of retirees specializing in safety. We also installed emergency call devices in 70 major locations in an effort to strengthen onsite watch. Besides, we use the training certification card, safety identification tag, etc. to prevent those who have not completed a safety training course from accessing the worksites.

Safety Training Program



- culture
- Launch a program for safety culture training (E-Learning) for employees (including those of subcontractors) (13,238 employees)
- Launch a course designed to enhance power plant managers' observing capability and improve their work practice (161 managers)



to cope with accidents

- · Launch a training program for improvement in human errors for operators and subcontractors (10,413 people)
 - · Develop simulator practice scenario against serious accidents and set up a plan for training



capability

- courses; a roadmap for training for each stage of development in capability Develop textbook and launch maintenance
 - a new courses for 4 core facilities in instrumentation and control (61 people in 4 courses)

Select 30 essential training

Supplementing Safety Leadership

We strive to enhance the level of statutory employee training in order to develop safetyrelated knowledge of site managers who are responsible for work safety. As regards those equal to or higher than manager supervisor-level employees, we have made it obligatory for them to attend a training session for 16 hours a year (cf. legal requirement: 8 hours). As for deputy department head-level employees, we included questions about industrial safety/ health and disaster safety in the exam they should pass to become an executive.

Safety/ Health Management in the COVID-19 Era

Adoption of a System of Non-Contact Training for Coping with a Disaster

With the need to prevent the spread of infectious diseases including COVID-19, KHNP has instated a shift in the paradigm of employee training, avoiding the assembly of people in one area. We reduced the number of employees who should attend a session of training to a necessary minimum and designated an anti-epidemic supervisor for each session as a precaution against infection. We also held a national disaster safety-related communications network video meeting participated in by the CEO, the chairman of the NSSC, and heads of the local governments to have top managers exercise their discretionary capability to deal with radioactivity disaster and verify each institution's capability to carry out their business.

Establishment of a System to Cope with Emergency Due to COVID-19

KHNP has established the manual of acts to be taken onsite in an emergency due to an infectious disease, the content of which is stricter than criteria set by the government. We have organized the COVID-19 Task Force Situation Room and Help Desk operating on a 24/7 basis and optimized E-Tower (Center for Comprehensive Operation of Power Generation) monitoring to take a prompt step in case of infection of employees. We have spent KRW 1 billion in anti-epidemic goods and KRW 100 million in expenses for disease inspection. As a result, the number of essential employees for power generation infected with a disease came to zero in 2020. We also set BCP* standards to use in case of a disaster due to an infectious disease.

*BCP (Business Continuity Plan): This plan specifies how an organization copes with an emergency crisis due to an infectious disease including how to operate human resources and how to carry out the husiness

Expansion of Medical Service to Protect Employees' Right to Health

We strive to expand medical service for employees' physical/ mental health and have started operating a clinic affiliated with us to help employees get medical treatment and other related services. We also provide EAP* consulting service designed to prevent employees' psychological hazards. The medical service that we provide to employees includes follow-up management such as appraisal of continued symptoms as part of the effort for protection of employees' right to health.

*EAP (Employee Assistance Program): A program that provides professional consulting so that employees themselves can solve the problem when they need help due to self-development, personal and work-related problems

Process of Emergency Psychological Support Program





Awarded as a winner of the crisis actional manual contest

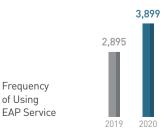
Zero

infection of essential power plant personnel in 2020



Medical Service Result

(Unit: Points, Cases) 92.1 87.9 Satisfaction with Health Survey



Enhanced human rights & safety

Grade "A" for 5 consecutive years

Objective

in national core infrastructure disaster management appraisal led by the NSSC

Disaster Management Strategy and Agenda

Coping with Disasters and Occupational Risks

Disaster Management System

KHNP has operated a well-organized disaster management system to safely operate power plants and is striving to minimize damages from disasters by introducing prevention strategies per each disasters.

Agenda Supplement the capability to cope

Promotion Task

· Establish a system for coping with a crisis due to COVID-19

with disasters in

each sector

 Supplement the capability to cope with different types of disasters



Protect people's lives/assets

Secure the level of health/

safety aligned to people's

· Cope with disasters in a way

that locals can feel safe



Protection of employees and the public from pandemic, fire, natural disaster and radioactive disaster

Strive to prevent industrial disaster



system to foster a safe work

environment • Establish a solid, safe system through improvement in concepts.

systems, and infrastructure

Enhance the capability to cope with NPP-related extreme disasters

Supplem manager facility

· Secure the safety of hvdroelectric dams through proactive safety management

Supplement safety

management in

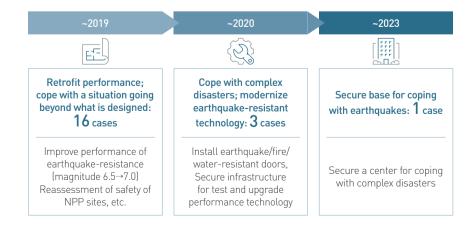
Supplementation of Capabilities to Prevent and Cope with Disasters

Securing Technological Infrastructure to Cope with Earthquakes

KHNP has secured the technological infrastructure for coping with earthquakes. We have also reinforced the earthquake resisting ability of NPPs designed to withstand earthquakes of a 6.5 (0.2g) magnitude to a level equal to or higher than 7.0 (0.3g). In addition, we have installed earthquake/fire/water-resistant doors in all NPPs, the first of the attempts of its kind ever made in the world on the assumption of occurrence of a complex disaster.* Furthermore, we established infrastructure for earthquakeresistance test so that quick verification test is possible. We will safely deal with earthquake by our technological capabilities and most recent level of technology.

*complex disaster: an earthquake followed by fire and tsunami

Preemptive Measures for Coping with Earthquakes



Prevention of Complex Disasters with the Installation of Earthquake, Fire, Water-**Resistant Doors**

We have installed earthquake, fire, water-resistant doors in all NPPS to prevent complex disasters for the first time ever in the world. They were developed in response to an increase in people's concern about complex disasters/accidents and in international demand following the Fukushima accident in 2011. Based on the design of resistant doors, they can withstand tsunamis (up to 13m high) and fire (for up to three hours) that may follow an earthquake (magnitude: 7.0).

Standardized Safety Management System Linked with Dam Safety Checks and Repairs

We have established a new safety management system for dams and reduced the diagnosis cycle for dams to 4.5 years, thereby enhancing the reliability of diagnosis, and engaged in the mid/long-term work for repair of aged dams based on the result of the diagnosis. As we have completed related work for 1 of the 6 aged dams, the overall safety grade of the dams has been raised from "C" to "B". We have secured safety of dam by establishing the real-time observation system of concrete dams for the first time ever in S. Korea.

Prevention of Damage from Storm & Flood through Safe Dam Operations

There has arisen the need to strengthen the dam operation system due to an increase in the possibility of large-scale damage from storm and flood. Therefore, we have devised a system in which we can share the status and result of operation of floodgates with the institutions responsible for operation of the dams to adjust the water level and cope with the disaster situation in cooperation with the institutions. Moreover, we have updated our manual to prevent the collapse of dams and cope with any damage from storm and flood, and also re-checked vulnerable spots in May/ June in preparation for the rainy season, i.e. July/ August to ensure the safety of dam operation.

Establishment of a System to Cope with Radioactivity Emergency Situation

We strive to enhance our capability to cope with an emergency due to radioactivity. To improve employees' coping capability, we reformulated the operation standards procedural document for radiation emergency training and the standards for earthquake-related radiation emergency declaration. In addition, we plan to build base isolation facilities for protection of relevant employees and adequate control by 2023.

Improving Firefighting Facilities and Securing High-Tech Equipment

To cope with fire accident which can occur due to radiation leakage, we have reinforced firefighting equipment, IT-convergence breathing apparatus, and thyroid protection medicine which can prevent penetration of radiation into body for the first time in Asia. In addition, to prevent fires, we carried out special winter drills and follow-up inspection of fire in Icheon warehouse. We have also improved the warning and operation procedures to prevent suffocation caused by CO2 injection, and as a fundamental solution, we are considering of conversion of CO₂ alternative fire extinguishing facilities.

Earthquake/Fire/ Water-Resistant Doors

Installation of Resistant Doors for Complex Disasters







sea water level EL. 8.4m

EL. 10m

doors EL. 13m

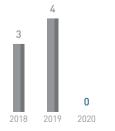
Zero

damage in water system of Hangang River



Occurrence on Fire in KHNP

[Unit: Cases]



Enhanced human rights & safety

The number of cybersecurity, personal information leaks minimized to

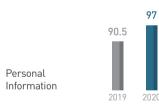


Zero

Security Score by Government Institutions







Obtained Full Score

obtained in the NIS's information security management status evaluation 20901 factor

Reinforcing Information Security

Information Security System

Cyberattacks attempts on KHNP have increased, while the points KHNP obtained from the National Intelligence Service (NIS)'s evaluation on the status of our information security management have continued to drop for 2 consecutive years. In response, KHNP has reinforced our information security management system to attain our goal of 'minimizing the cyber security breaches to zero'. As a result, in 2020, the number of cybersecurity breaches and personal information leaks was minimized to zero, and KHNP obtained improved scores in security evaluation by institutions in charge of information.

Information Security Strategy



Sophisticating Information Security

Adopting User Certification in Work System, Using Bio Information

KHNP has adopted a method of user certification in work system, using bio information, thereby securing the safety of work settings. KHNP's previous business system used ID, secret access code, and verification for access and was exposed to high risk of leakage. However, the method of verification, using cell phone-based bio information like fingerprints or facial features has significantly reduced the possibility of theft, loss or forgery of verified information. In addition, KHNP adopted bio verification system in the remote work system, thereby strengthening the security of the remote work setting.

Establishing Quantum Cryptography Network

KHNP plans to build quantum cryptography communication-based smart plant for 5G mobile telecom to strengthen the security of power plants, attempted for the 1st time in the country. Quantum cryptography communications is the best next-generation security technology that improves security by blocking eavesdropping and hacking within the communication section at the source. At present, KHNP is applying the infrastructure facilities on a trial basis with SK Telecom and plans to realize full-fledged smart plants based on quantum cryptography network.

Mitigating Attacks on Supply Network of Infrastructure Control System

As the cyberattacks on national infrastructure supply network have increased, KHNP has established the system to cope with the attacks. The system is carrying out functions such as vaccine tests, checking for any forgery or manipulation of software for supplier control, and detection of malware codes in document files.

Improving Level of Personal Information Protection Management

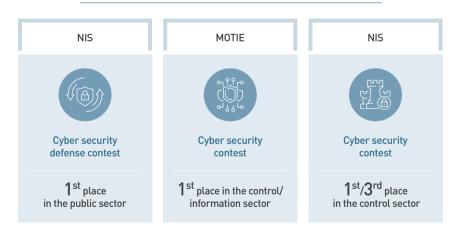
KHNP aims to upgrade management system for protecting personal information. In the entire process from generating to discarding personal information, compliance with the Personal Information Protection Act is periodically checked, and improvement measures are taken against insufficient systems. We also won PIMS* certification on our homepage, integrated access management, and E-Commerce system. As for overseas business, we check to see whether GDPR is observed through experts' examination and strive to improve it.

*PIMS: Personal Information Management System

Training on Information Security

KHNP aims to improve cyber security training to enhance the capability of relevant professionals & specialists. In 2020, KHNP's educational institution have started a control & security-related regular training course and increased special training sessions for information security personnel from once a year to 3 times a year. Apparently as a result, KHNP won 1st place in 3 cyber security contests sponsored by the NIS and MOTIE, thereby proving the capability of our information security specialists externally.

Scores in Cyber Security Contests Sponsored by the NIS and the MOTIE



Obtained Highest Score (94.5)



obtained in the NIS's infrastructure evaluation

Grand Prize



in K-ICT information protection (Prize from the Minster of Science & ICT)

Highest Grade for 6 consecutive years

in diagnosis of the level of personal information protection



Highlight | **Disseminating Culture of Integrity**

In surveys* carried out in 2020 and 2021 on the level of integrity, respondents have pointed out 'irrational systems/practices' and 'the level of employees' ethics' as main improvements for dissemination and internalization of integrity culture. Thus, KHNP announced New Ethics Charter and established the system for ethics education in 2021. As a result, employees' perception on ethical conduct has been increased shown by series of relevant indicators including increase in willingness to whistle-blow on acts of corruption and reinforcement in ethical education effects.

*ACRC (Anti-corruption and Civil Rights Commission) evaluation in 2020; KHNP's in-house diagnosis of its capability in 2021

Revision of KHNP's Ethic Norm

Announcement of New Ethics Charter

KHNP has announced our Ethics Charter to internalize fair, transparent, ethical, and law-abiding culture in KHNP. In 2021, the Charter of Ethics was completely revised to 5 categories, including employees and subcontractors, and we are strictly complying with the norm. Also, in order to empower employees to comply with the Ethic Charter, we held sessions on ethics guiz contest and recitation of new Ethics Charter as parts of the ESG Action Days program.

Article 4

Article 1

- We shall always carry out our assignments fairly and observe the laws and regulation.
- We shall always act in good faith and ethically and work to maintain & develop individuals' and KHNP's honor and prestige.
- [®] We shall continually establish solid partnership between labor and management based on mutual trust and conciliation.

Article 2



 We shall supply goodquality electricity stably to the public.

102 We shall continually

- enhance the safety of NPPs and our technological process and shall disclose our operation-related information promptly and transparently.
- We shall build the public's trust on our financial information through adequate operation of our internal accounting system and disclose our financial information transparently.



- We shall positively prevent environmental pollution and cope with climate change to disseminate our CLEAN Energy and protect the environment.
- @ We shall positively engage in social contribution activities and creation of social values to realize a sustainable society.
- We shall contribute to reviving the local economy as a member of the local community and provide support for activities designed to coexistwith the local community.

Article 3



- We shall provide all individuals and organizations with equal opportunity in biddings or contracts for contractual work, services, procurement of goods.
- We shall recognize subcontractors as those equal to us and shall not engage in an unjust, unethical acts or conduct, using our dominant position.
- We shall provide subcontractors with safety working environment and pursue win-win growth with them

Article 5



- We shall respect. employees' human rights and shall not discriminate against and be favor of any employee based on gender, academic background, religion, age, region, or physical condition, etc.
- We shall provide employees with equal opportunity based on their personal ability and quality.
- 1 We shall foster a safe, caring workplace environment.

Activities to Internalize Integrity

Customized Education on Integrity

In 2020, KHNP held a total of 210 sessions of customized training on ethics for 2,800 employees selected per their ranks and jobs to internalize ethics management. The sessions were focused on providing information on cases of audits that may occur in diverse positions. 'Attitudes of public officials according to job life cycle' was included in training sessions for newly hired employees and promoted employees.

Contents of Customized Education on Integrity



cases and relevant experiences that may occur in various jobs (office work, field work etc.)

180 Occasions 1.680 Persons



Diversification of education contents by ranks including

significance of integrity & ethics, attitude of public of officials, reinforcement in ethical leadership capability, etc.

16 Occasions

279 Persons 704 Persons



Customized training concerning blind spots

KHNP's basic operation of integrity & ethics including integrity policy, internal/external integrity activities, etc.

3 Occasions

Training for those in positions vulnerable to corruption

Prevention of corruption through cases, such as influence peddling, leaks of information on contracts, forgery of documents, etc.

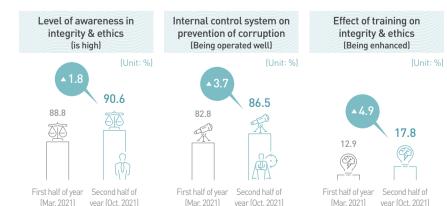
11 Occasions

137 Persons

Enhancing Stakeholders' Sense of Integrity

To enhance employees' awareness in integrity, KHNP has carried out integrity tour education for each major business establishment and integrity education organized by the head of the organization. In addition, to mark the 5th anniversary of the enforcement of the Anti-Solicitation Act in 2021, we implemented an integrity activity program shared with family members, partners, etc. on 'KHNP Ethical Culture Week'. We also held a concert-type training program and Integrity Quiz Contest on relevant laws and cases in an effort to internalize integrity in stakeholders.

Result of Survey on Competence of Corporate Members in 2021





Integrity Tour Education



Integrity Education Organized by the Head of the Organization





'Integrity Live' Program

KHNP's Level of Ethics Evaluated by ACRC

 Overall rate of integrityðics

Score in anticorruption policy



Assisting partners & communities

Material Issues



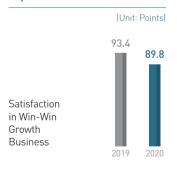
. Contributing Development of Local Communities

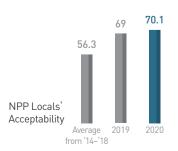
UN SDGs Linkage





Key Performance





KHNP supports development of NPP circle and revitalization of local communities.

As the number of NPPs is being reduced due to current government's policy for energy conversion and subcontractors suffer from COVID-19 crisis, their financial difficulties are getting worsened. Under these circumstances, subcontractors need to supplement their technological competitiveness, lay the groundwork for continued growth, and explore new markets. Therefore, KHNP strives to stabilize NPP industry circles through diverse measures designed to help them cope with the current difficulties, including COVID-19 crisis.

Local communities in areas where power plants are located suffer from the shortage of safety/health infrastructure with which to cope with COVID-19 restrictions. Also, as aged population of local communities intensifies, the capacity to overcome the crisis is insufficient due to the lack of manpower resources. Therefore, KHNP recognized the need for customized support for the vulnerable overcome local economy suffered from COVID-19. We are striving to develop local communities and overcome COVID-19 crisis through win-win collaboration with SMEs and residents near NPP.

KHNP Strategy



Assist subcontractors to build solid conditions for growth

- Support SMEs to enhance their competitiveness through continued collaboration in R&D and raise the ratio of domestically produced goods in parts/equipment
- Support subcontractors to enhance their sustainable capability and risk management



Stimulate the local economy through paradigm shift in local collaboration

- Establish systematic supporting policy by formulating medium and long term strategy of local collaboration
- Create a foundation for self-reliance of local communities by discovering programs designed to raise income level of locals around the NPP



Assist SMEs in industrial circles to find a road to sustainable growth through liquidity support

- Develop SMEs/venture businesses with good potential specializing in NPP by supporting the Energy Innovative
- Provide ESG-based financial support programs to motivate subcontractors to strengthen their ESG capability



Establishment of the basis for sustainable local development

- · Activate the local economy by providing support for local commercial districts and traditional markets
- · Explore programs that can create goodquality jobs through talent sharing and social
- Raise people's awareness of our support programs through diversification of PR channels including infographics

Win-Win Collaboration with SMEs

System for Pursuing Win-Win Growth

As the share of NPP in the entire energy sector is expected to gradually reduce due to the current government's policy for energy conversion, the entire NPP circle is facing difficulties. Thus, KHNP engages in various activities for win-win collaboration with SMEs to help them recover from the current difficulties.

Strategic Agenda for Pursuing Win-Win Growth

Objective

Establish a virtuous circle by win-win collaboration with NPP industry

Agenda



· Develop new markets /

· Maintain Supply Chain

• Provide COVID-19

emergency support



Improve subcontractors' management conditions





 Provide customized funding



- Attract investment in subcontractors
- · Raise the ratio of domestically produced parts; engage in R&D for new technology
- · Commercialize innovative technology

Advancement in Win-Win Growth System

industries

Maintaining the NPPs supply network is an essential factor for safe operation of NPPs, but stability of NPP supply network is being concerned due to the energy conservation policy. (The majority of NPP supply network is consisted of about 84% of SMEs.) In this regard, KHNP unified the distributed operating departments into the 'Win-Win Cooperation Office', and are also exploring policies reflecting subcontractors' needs by operating T/F which subcontractors and external experts can take part in.

Main Performances of Win-Win Growth

	2019	2020
Amount of orders for SMEs specializing in NPP Decommissioning	KRW 4.9 billion	KRW 11.9 billion
Amount of exports made by businesses taking part in our export support program	USD 139 million	USD 199 million
No. of agreements /contracts on raising ratio of domestically produced parts /equipment	10 cases	23 cases
Sales of SMEs participated in 'Talks on Purchases'	KRW 34.5 billion	KRW 42.3 billion

Maintaining NPP Circles

Supplementing SMEs in NPP Decommissioning Industry

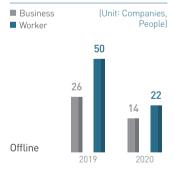
Despite a decrease in construction and operation of NPP due to the government' policy, the sector of NPP decommissioning has emerged as a new future business. Accordingly, KHNP has transferred our decommissioning technology to subcontractors and expanded education for professional decommission personnel by opening non-contact online training courses and signing an agreement to dispatch overseas personnel. In addition, we are striving to conduct separational and early orders for SMEs to encourage their participation in NPP decommissioning.

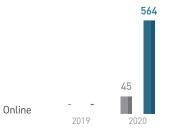
Orders for SMEs Specializing in NPP Decommissioning





Training Provided to Subcontractors Engaging in NPP Decommissioning





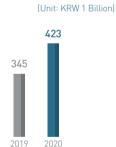
*the number of workers and businesses expanded due to operation of E-Learning course in COVID-19 response

Assisting partners & communities

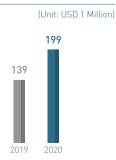
Actions Taken for 115 Cases (87.8%)

out of 131 recommendations

Sales by Business Taking Part in Talks on Purchasing



Amount of Exports by Businesses Taking Part in Export Supporting Program



Total-Directional Communication with Subcontractors

KHNP is operating a CEO-led communication channel to help subcontractors' managerial challenges due to the government's energy conversion. Examples of such a channel include informal meetings held at subcontractors' offices or special informal meetings with subcontractors. We strive to develop win-win growth business that reflects substantial needs of subcontractors. In 2020, we have received a total of 131 recommendations through communication channel and took a necessary step for 115 cases.

Efforts of Active Communication with Cooperative SMEs



SMEs' issues

resolved

by KHNP's

involvement

- Exemption from late compensation for NPP construction
- Early payment of contract termination fee
- Launch of the Korea Hydropower Industry Association (KHA)
- Giving extra consideration to businesses led by a woman in bidding

Supporting SMEs' Exploration in Domestic Market

Conference with representatives

of businesses in the nuclear

power generation sector

(on 4 occasions in all)

KHNP has held sessions "talks on purchasing" to help SMEs publicize their good-quality goods and explore the domestic market. A total of 60 SMEs were given chances to promote their products to working-level employees in relevant offices and CEO. We also held 'non-contact talks on purchasing' to help SMEs to explore their market amid the COVID-19 pandemic.

Supporting SMEs' Exploration in Overseas Market

In order to support SMEs specializing in NPPs to make forays into new markets, KHNP operates Total Care system which manages overall management including development of good-quality goods, their commercialization and export. In 2020, we have introduced a total of 27 products by SMEs to overseas NPP corporates selected by basic materials and commodity survey, thus helping them entry into new markets. Such an effort led to the signing of contracts for the supply of nuclear power equipment/ devices worth USD 1.08 million to Rumania and Slovenia.

Process of Total Care System



Improvement of Subcontractors' Management Conditions

Fund Raising for Win-Win cooperation

We signed a business agreement on win-win collaboration of large/small businesses and raised a total of KRW 11.5 billion to the 'Win-Win Collaboration Fund'. This fund is used as a resource for our subcontractors' win-win growth activities including construction of their smart factories and cooperation for their development of overseas markets.

Main Performances of Win-Win Collaboration Fund in 2020



Disseminating Culture of Profit-Sharing / Mutual Benefits

We operate a win-win profit-sharing system in which our subcontractors can benefit from profit-sharing policy and mutual benefits policy. Under these policies, large businesses and their subcontractors share the profits created from their joint efforts under the agreement made between them. We provide our subcontractors with incentives to participate, linking the programs of mutual growth with incentives aligned with attaining results or win-win profit-sharing. A total of 133 cases (in 4 sectors) and 12 cases (in 1 sector) were registered in profit-sharing policy and mutual benefits policy, respectively.



Fund Raising for Win-Win Cooperation

Results of Profit-Sharing / Mutual Benefit Policies

Profit-Sharing Policy

133 Cases



Mutual Benefit Policy

12 Cases



Achievement in Profit-Sharing / Mutual Benefits Policies

Profit-Sharing Policy			Mutual Benefit Policy		
	Joint R&D	Productivity Enhancement	Export Promotion	Quality Certification	Naeil Chaeum Gongje
Incentives	Guaranteeing marketing opportunity through a three-year private contract upon selection of good-quality goods	Cash compensation for a subcontractor that has attained target task set.	Discover new client, Cash compensation for producing prototype	Reimburse expenses spent for winning/renewing quality certifications	Cash compensation for maintaining employment for outstanding of subcontractors
Results	7 successful R&D cases designated as goods to be developed	KRW 3.23 billion in financial performance including reduction of defective goods	Provide expenses for R&D (for raising the ratio of domestically produced materials/parts/equipment)	4 cases of domestic certifications including eligibility rule of KHNP	Providing incentives to 30 employees in 12 corporates to encourage long-term employment
	Private contract amount: KRW 4.3 bil	Incentive: KRW 25.6 million	Incentive: KRW 13.30 million	Maintenance expenses: KRW 104 million	Incentives: KRW 3 million
No. of relevant tasks registered	14 cases	32 cases	19 cases	68 cases	12 cases

78 Introduction new wave fundamental **clean esg** appendix 79

Assisting partners & communities

Status of Using Win-Win Payment System



Status of using PMS*



*PSM: payment made by primary subcontractor to secondary subcontractor; made by KHNP to primary subcontractor

Received

Presidential Commendation

for technological development in MOTIE-designated parts/equipment

Received

Commendation from Minister of SMEs and Startups

on win-win collaboration between large businesses and their smaller counterparts

Efforts to Improve Payment Conditions of Subcontractors

KHNP has expanded the application of the win-win payment system and PMS in order to build safe payment system in NPP circle. We have expanded the obligation subject for win-win payment to subcontractors and encouraged the participation of secondary subcontractors by including 'participation rate of win-win payment of secondary subcontractors' as subcontractors' evaluation factor. In addition, by improving the system to apply PMS on deposit, we prevented delays in payment to secondary subcontractors and enabled the monitoring on deposits spending status at all times.

*Win-Win payment system: a system of guaranteeing phased payment/collection of what is owed to/from a client and primary/secondary/tertiary subcontractors

**PMS: KHNP's system for checking the details of payment of construction work and labor expense

Supplementation of Future Capability of NPP Circle

Launch of the Energy Innovative Growth Fund

We have formed the first-ever Energy Innovative Growth Fund, in S. Korea, amounting to KRW 44.5 billion for investment in NPP circle and decommissioning sector. This fund was launched to create the future growth engine for SMEs by providing fund support for technical development. It has been arranged to be invested in NPP-related businesses at least half of the investment amount, thus we have invested KRW 3 billion in engineering and KRW 1 billion in robot businesses specializing in decommissioning in 2020. We are truly supporting the future of SMEs in NPP circle with technical competitiveness.

Promoting Domestically Produced Parts/Equipment

We engage in the program for raising the ratio of domestically produced parts/ equipment in order to develop well-performing SMEs partnering. The program is designed to be prepared against a possibility of the stoppage of foreign-made parts/ equipment and keep the soundness of NPP-related supply network by expanding the domestic market. We have established a roadmap to promote the production of domestic parts/equipment and is prompting individual projects with each SMEs. By expanding SMEs' opportunity to participate through improvements of discovering outstanding projects in 2020, our subcontractors made 194 recommendations, and we selected and made agreement of 23 cases out of them.

Accomplishment of improving ratio of domestically produced parts/equipment



Contributing Development of Local Communities

Strategic System for Social Contribution

We have established a social contribution system under our vision of 'a world where all of us are safe and happy'. We operate the KHNP Voluntary Service Corps with all employees participating, with the Dandelion Seed Fund's support, which is combined by 'Love Fund' formed with employees' voluntary contribution and 'Matching Grant' fund provided by the Company. In 2020, we have done social contribution activities in various sectors including education and volunteering using a total of KRW 11.66 billion donated (KRW 0.95 billion from the 'Love Fund' + KRW 10.17 billion from 'Matching Grant').

Strategic System of KHNP's Social Contribution



Supporting Happy and Safe Life for The Public

"Wings of Hope" Program to Improve Social Welfare in Local Communities

To improve educational environment of local children's center near power plant, we are carrying out "Wings of Hope" Program, providing school vehicles and libraries to children. Since the program started in 2012, we had built a total of 264 libraries and 579 school vehicles for children in welfare blind spots. In addition, we are providing online English lessons to 28 local children's centers in Gyeongju, where our HQ is located, thus enhancing their learning environment.

"Safety Street Lights" Program

KHNP is expanding our "Safety Street Lights" program nationwide, installing new and renewable energy LED streetlights in areas vulnerable to safety. In 2020, we have installed a total of 422 street lights (322 PV lights + ten hybrid lights), spending KRW 3 billion. According to our survey of locals' satisfaction with Safety Street Lights, the point stood at 91.4/100, displaying an improvement over the preceding year. Apparently as a result of such efforts, we won Presidential Citation in the sector of crime prevention activities in 2017.

Voluntary Service Corps' Supports in 2020

[Period: 1/1/2020~12/31/2020]

No. of voluntary activities



No. of participating employees

1.554 cases



9,457 people

Hours spent

26,900 man-hours



Supports of "Wings of Hope" Program in 2020

85



27 Libraries



Supports Amounting KRW 40 billion





Areas where Safety Street Lights Are Installed

Assisting partners & communities

No. of Students Participated in Programs for Developing Talented Youths in 2020

389
in Finstein Class



2,248in Atom
Engineering Class





Einstein Class



Atom Engineering Class

Awarded Gold Prize



Development of Talented Youths

'Einstein Class' Providing Learning / Career Mentoring to Local Youth

To narrow the educational gap of teenagers around the power plant, we are running Einstein Class, a mentoring program from university students. The leading university student selected as mentors are providing learning guidance and career counseling to elementary, middle, and high school students in rural areas around nuclear power plants. In addition, in 2021, we have conducted online training to continue educational mentoring despite the COVID-19 situation.

'Atom Engineering Class' to Support Promising Youths for Science

We are running Atom engineering class for elementary / middle schoolers in marginalized areas to give them opportunity to learn science and engineering. Employees from our HQs serve as one-day teachers in a hands-on science class and taught principles of science to elementary pupils in a way that could effectively draw their attention. Jointly with the Discovery Center for Science and Technology for Young Scientists at Hanyang University, we have provided middle schoolers sessions of science/technology lectures and experiments. In 2021, we also held a non-contact Ethernet session in response to COVID-19 restrictions.

Stimulating Local Economy

Developing Local Attractions by Improving the Landscape of Paldang Dam

We have carried out the work to improve the landscape of age-old Paldang Dam and its surroundings to invigorate the local economy. As local demands for public institution's social contribution have increased, we improved the landscape of hydropower plants and their surroundings to promote local attraction to the local community. To reflect the public's idea on our policy, we held the 'National Idea Contest' and selected 37 ideas were reflected in the construction of the actual design. The number of visitors to the area has increased due to the lights and lookouts newly installed to improve the landscape. Thus, Paldang Dam has become known as a new local landmark and is contributing to activate the local economy.

Ethical Consumerism Campaign

In 2020, we held a variety of company-wide events to activate traditional market. One of the events was shopping at traditional markets on a total of 112 occasions, using gift certificates purchased with Love Fund formed with employees' voluntary participation, and the purchased goods were donated to local centers for children. We also held a special event for selling local specialties to employees on a total of 19 occasions to provide support for small and medium enterprises suffering from COVID-19 situation. We spent a total of KRW 4.66 billion for ramping up traditional markets.

Protecting Locals' Safety

Strengthening The Public's Capability to Cope with Nuclear Disasters

We are providing locals living near NPPs with internet-based system which offers evacuation information when a nuclear disaster occurs. We have established the website specializing in disclosure of information based on the opinions of the 'Innovative Corps of People's Participation'. In the event of emergency declaration, this website will provide locals with information on the nearest place of first aid, anti-disaster drill and how to evacuate depending on the situation.

Establishment of a System for Natural Disaster Prevention

To respond effectively on natural disasters, we are operating a system for preventing and coping with natural disasters. We have distributed an action guideline against typhoons to locals, while holding sessions on professional meteorological education. We also have checked the operating status of resources against natural disasters and improved a total of 103 items. Moreover, we have enhanced our operational efficiency based on ISO22301 BCMS* through internal cross examination and integration certification. We are striving to foster an environment where locals can feel safe about the NPP by proactively preventing natural disasters.

*BCMS (Business Continuity Management System): a system designed to cope with the stoppage of a process in a disaster

Ensuring a Safe Living Environment

Safety is KHNP's top-priority value. We link safety, which is our core value, to our social contribution programs and build safe local communities by installing street lights in crime-prone areas, providing school vehicles to local children, and providing walking aid apparatus to the people with visual and hearing disabilities.

"0" case

of fatalities in natural disaster

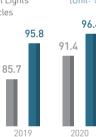


Awarded Certification as Outstanding Business in Disaster Reduction

from MOIS

Satisfaction with Social Contribution Programs

■ Safety Street Lights
■ School vehicles



KHNP's 'Safety' Programs



Safety Street Lights

Ensure safe living conditions for people in crime-prone areas

Install 322 PV lights and 10 hybrid lights; Provide daily life information with help of IoT technology



Safety School Vehicles

Improve educational environment in local centers for children

Provide 574 buses and 5 EVs to local centers for children



Walking Aid Apparatus

Remove threatening factors for people with visual and hearing disabilities; Help them expand their scope of social activities

Provide 100 canes attached with ultrasonic sensor to the people with visual disabilities; Provide 100 neckband sensing nearby sounds to the people with hearing disabilities



Safety Bus Stops

Help people using public transportation live in healthier conditions

Provide bus stops equipped with air cleaner, heater, air-conditioner and CCTV cameras using the 4th industrial revolution



Highlight | Coping with COVID-19

In March 2020, the World Health Organization (WHO) declared COVID-19 outbreak, a global pandemic. The world is experiencing an unprecedented crisis socially and economically due to the pandemic. As a leading business in the power generation sector, KHNP is doing its utmost to help employees, subcontractors, and the locals. We are striving to minimize the damages caused by COVID-19 and overcome the difficulties in cooperation with those concerned

Supporting Subcontractors to Get Over the COVID-19 Crisis

Strategy to Help Subcontractors Overcome the COVID-19 Situation

Providing groundwork to minimize damages incurred in NPP

circle and overcome COVID-19 sooner

Promoting

Steps To Be Taken



- · Support for contactless informatization
- · Supply of quarantine supplies



- Exempt liquidated damages Extending the

- Exploration of overseas market Exploration of
- time for payment Korean market

KRW 9.06 billion loaned to 13 subcontractors



interest payment



Providing Emergency Relief Loans to Subcontractors

Providing

emergency

resources

Early execution

of relief funds

KHNP is providing emergency loans to the subcontractors to help them overcome the difficult situation due to COVID-19. KHNP has signed an agreement with the Industrial Bank of Korea (IBK) to form emergency relief loans amounting to KRW 40 billion (up to a billion each) and exempted the interest for six-month loans. We also have executed the KRW 4.4 trillion investment fund set for the construction of NPPs and reinforcement of existing facilities to contribute to the invigoration of the economy. In addition, KHNP reduced the time limit for payment by 9 days and raised the percentage of advance payment by 10% in order to help SMEs secure operating funds timely.

Support for Subcontractors' Contactless Business Environment

KHNP is providing customized solutions for informatization to help subcontractors establish a contactless work environment. We analyzed business environment for each of 9 subcontractors and helped them newly establish or improve their existing information management system, security system, and company-wide resource management system (ERP). Moreover, KHNP have strived to help SMEs enhance their operational efficiency by providing conditions for contactless work options such as mobile, video conferencing, and telecommuting. KHNP will expand the assistance to SMEs for their contactless business conditions in line with the government's Digital New Deal policy.

Supporting Local Communities to Overcome COVID-19 Crisis

Campaign for Distributing Masks, 'Saengsu'

As part of our effort to reinvigorate the local economy and protect our health, KHNP started a campaign of distributing masks in exchange for receipts people received from local commercial establishments. Encouraged by people's eagerness in participation, all NPP HQ have adopted this campaign. A total of 22,000 locals have taken part and a total of KRW 1.7 billion worth of goods has been consumed. As a result, the campaign received the Prime Minister's commendation as an exemplary case of innovation.

'Labor-Management Joint Campaign 1339' for Creation of Consumption

KHNP carried out the Labor-Management Joint Campaign 1339 in an effort to rejuvenate the local economy affected by COVID-19. The main idea of the campaign is as follows: 1 person uses 3 local commercial establishments, designates 3 people to do likewise to bring about 9-fold results (9). The campaign has been ongoing on a voluntary and individual basis even after the official campaign, thereby keeping contribution to the local economy.

Provision of Support for Locals Living Near Power Plants

In the initial stage of COVID-19, KHNP has provided support for areas designated as special disaster areas to help them build the infrastructure for initial reaction to COVID-19, and provided guarantine goods to the vulnerable and guarantine institutions. In addition, KHNP helped startups develop markets as part of our effort to invigorate the local economy amid the COVID-19, and all employees of KHNP voluntarily returned their wages and donated a total of KRW 69.1 billion to the vulnerable and small and medium enterprises. Moreover, we have helped secure stable sales by supporting the online market for local specialties and the market development of youth start-ups.

Honored Prime Minister's **Commendation** as an exemplary case of innovation

Participation of 22.000 locals



Creation of consumption worth KRW 1.7 billion



57,000 masks distributed



Voluntarily donating wages amounting to KRW 6.91 billion (with 9.877 participants)





Providing Donated Goods to Cope With COVID-19

Activities to Support Locals Amid COVID-19

Promoted Activities

Stens Taken



· 840.000 masks and 14.000 hand sanitizers distributed to sister villages local seniors and welfare facilities



Preventing Spread of Infectious Diseases

· Provision of 12.000 protective gear to medical / quarantine facilities, educational institutions and military units



· Continuous guarantine activities targeting community centers traditional markets, and schools

Voluntary Social Contributions



 Voluntary consumption using wages donated by employees

 Donation to the vulnerable of KRW 750 million; Supporting KRW 6.160 million for traditional market / small and medium enterprises



 Donation of KRW 800 million to Daegu / Gyeongbuk designated as special disaster area affected by COVID-19

Amount Spent

KRW 680 million

KRW 470 million

KRW 230 million

KRW 6.910 million

KRW 800 million



Networking with stakeholders

Material Issues



. Recruiting and Developing Human Resources

UN SDGs Linkage







Key Performance



Creation of jobs in the private sector

24,698



for 11 straight years



To actively communicate with our internal and external stakeholders, KHNP has strengthened public disclosure on ESG, and provided a workplace that supports employees' growth.

As a national business in the interest of the public, KHNP aims to engage in transparent and positive communication with out stakeholder, and also enhance the level of disclosure on ESG management-related information, thereby improving the public's awareness on them.

KHNP views the employees as our core stakeholders helping us supplement our core competitiveness and consider it our priority to foster an atmosphere in which they can carry out their work with satisfaction. Thus, KHNP has fostered a corporate culture putting emphasis on enhancing employees' capability and fairness in evaluation of performances. Beyond the conventional discrimination, KHNP will consider more elements of discrimination including unfavored operation sites, etc. and also place importance on disseminating a culture based on gender equality and improving relevant policies.

KHNP Strategy



Transparent information disclosure of KHNP's ESG management activities

- Disclosing strategic information including performance indexes related to ESG evaluation items
- Enhancing the public's trust through a system of disclosing environmental information and integrity in public



activities through customized communication with stakeholders Enabling employees to develop a sense of

- participation by periodically providing them with information on ESG-related major
- · Enhancing stakeholder's awareness of our ESG management activities, using social media and information-sharing channels

INTRODUCTION NEW WAVE FUNDAMENTAL CLEAN ESG APPENDIX

Competent Employees with Job Satisfaction

Creation of Jobs

To pursue KHNP's vision of 'A business at the forefront of job creation', KHNP has reestablished our 5-year job creation plan and is implementing strategy which is aligned with our businesses. As a result, KHNP has created 24,978 jobs in the private sector and 422 jobs in the public sector despite the difficulties caused by COVID-19 restrictions.

Honored Commendation in Recognition of Our Feat on Job Creation

85

from City of Gyeongju

Strategy for Job Creation

Ohiective A business at the forefront of job creation Agenda 자자 A proactive effort to create jobs in the public sector · Reinforce competitive advantage to hire Promotion Task

more human resources

COVID-19 pandemic

Create jobs with diverse types of work

Create non-contact jobs to overcome



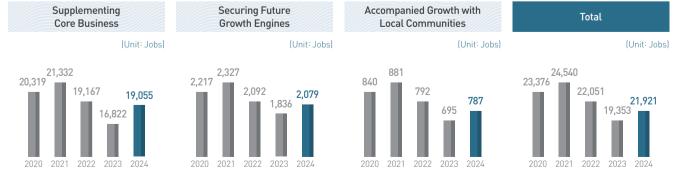
- Formulate and manage principles for operating temporary employees Establish a system of operating
- subsidiaries Foster a culture of horizontal relationship in contracts: improvement
- Pursue mutual growth in both core and growing husinesses
- Systematically promote the core
- Explore sustainable future growth businesses in overseas and new and renewable energy sector
- · Establish innovative system, i.e., new job creation platform, etc.

Direct /Indirect Performance in Job Creation (as of 12/31/2020)

Activity	Description	Direct /Indirect Performanc on Job Creation	
Core business	Construction /operation of NPPs, hydropower, pumped storage power plants, etc.	22,663 persons	
Secure future growth engines	Overseas business, venture, NPP decommissioning, etc.	1,768 persons	
Stronger support for accompanied growth	Provision of emergency support for COVID-19-affected SMEs to maintain employment	547 persons	
Hiring in the public sector	Large-scale hiring to get over COVID-19 crisis	422 persons	

in service contract

5-Year Job Creation Plan



^{*} It is expected that job creation will decrease on a medium to long term basis due to the government's policy for energy conversion including suspension in construction of new NPPs

Networking with stakeholders

Support for Local Social Economic Enterprises

KHNP has provided support for social economic enterprises and created 216 jobs for locals. By conducting bottom-up exploration of project which locals and experts can participate altogether, we have supported a total of 12 enterprises. KHNP also carries out full-time support policy (e.g. employee training and consulting) to help social economic enterprises to succeed on their own and explores markets online and offline for enterprises' entrance.

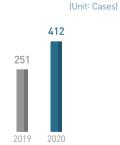
Exploring Process of Local Social Economic Enterprises



Supports Provided to Social Economic Enterprises



Cases of Using Flexible Work Hour for Temporary Employees



Establishing a Guideline for Operating Temporary Employees

KHNP has refrained from hiring temporary employees recklessly and improved their labor conditions by establishing an adequate operating guideline. We have inspected on the adequacy of process when hiring permanent workers, temporary workers and subcontracted workers in advance, thereby improving the reasonableness in recruitment. In addition, to improve temporary employees' working conditions, KHNP has also adopted flexible work hours system and improved the payment monitoring system(PMS) for subcontracted work.

Fostering Internal / External Ventures to Explore a System for Innovative Future Job

KHNP has established a venture start-up platform to support in-house and social ventures to explore future innovative jobs. Selected in-house venture team receives maximum support from the Ministry of SMEs and KHNP, therefore they can have environment where they can only focus on R&D. With systematic support such as funds and networks, personnel and compensation systems, and start-up education, the 1st spin-off company succeeded in starting a business in 2020, creating 2 new jobs. In addition, as a result of establishing a supporting system for 5 social ventures, 15 new employees were hired in 2020.

Recruiting Human Resources

KHNP aims to hire 'the talented sticking to the basics', 'people caring for others', and 'global-minded professionals', based on our core value 'TRUST'. In order to select customized talents that meet the corporate's need, KHNP is promoting various tasks by establishing 'a fair and transparent recruitment process' as a goal of recruitment strategy. In 2020, KHNP did our utmost to fulfill our social responsibilities as a public institution by hiring more employees than the target set by the government.



Timely Recruitment while Coping with the COVID-19 Crises

KHNP has done the utmost to prevent infection with COVID-19 and the decline in the number of people newly hired. KHNP has complied with the government's antipandemic guidelines and reduced the number of applicants who needed to be assembled at one place by adopting video interview, etc. Thus, there has been not a case of infection with COVID-19 or relevant complaints in our recruitment. KHNP has mitigated the employment shock caused by COVID-19 by providing an opportunity for an another job interview to those who could not apply due to self-isolation and infection with COVID-19. As a result, KHNP hired a total of 422 new employees in 2020.

Improvement of Policy for Fairness and Transparency in Recruitment

KHNP has improved the policy to ensure fairness in the entire process of recruitment. We have developed job specifications in all sectors to help applicants enhance understanding on work they applied in the pre-hiring stage. Also, checking whether a member of the hiring committee is subjected to exclusion and whether any interest exist between an applicant and a member of the committee were thoroughly checked in the hiring stage. In addition, KHNP has complied also complies with the government's quidelines in disclosing scores won by individual applicants and the cutoff line for successful application in order to enhance transparency in hiring.

Managing Differences between Fixed and Current Number of Employees

KHNP has enhanced the employee recruitment rate, considering the difference between fixed number and current number of employees based on systematic HR analysis. In 2020, KHNP hired a total number of 422 employees to make up for the shortage in the current number of employees through day-to-day monitoring.

Cases of infection with COVID-19 in our recruitment process "n"



Networking with

Appraised again as

an Outstanding Public Institution in **HR** Development

by the Ministry of Education in 2020

Criteria for Gathering Education



Gathering(statutory/essential) and remote training in



Remote training (Approval of regulational ements on basic training Gathering → Remote training)

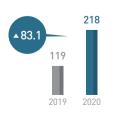
Developing Expertises in Each **Growing Business Sectors**







Pool of New and Renewable Energy **Business**



Developing Human Resources

Development in human resources is what a business must do to ensure its future competitiveness. KHNP aims to provide more opportunities for training to employees under the objective of "Development of employees' capabilities and strengthening of their expertise in linkage with management strategies". KHNP also seeks to reinforce employees' self-development, thus fostering foundation for corporates' sustainable growth.

HR Development Strategy

Objective

Development of employees' capabilities and strengthening of their expertise in linkage with management strategies (Minimizing the period of training interruption)

Agenda

Promotion



Sophisticate infrastructure in preparation against the prolonged COVID-19 situation

Set operating

Establish remote

training system

· Realize Cloud

Learning*

criteria for

training



(4)



personnel maintenance Train experts

Enhance language skills Secure a pool of decommissionina

> on new and renewable energy

{(17)

Train experts

specializing

in growing

business

sectors

Develop leaders to enhance our internal capabilities Coordinate

Develon

leaders;

improve

training

system

training functions

*Learning Cloud: learning system using integrated management and integrated search of e-learning and additional content in the e-learning system

Establishing a Training Infrastructure amid the Prolonged COVID-19

capability

To continue to carry out employee training amid COVID-19 restriction, KHNP has introduced a remote video training system and Learning Cloud. KHNP has established gathering criteria for employee group training set for each stage of anti-epidemic measures, and is carrying out remote training of employees, using different networks accounting for the number of trainees and security level. KHNP is also providing customized learning contents to employees through Learning Cloud. As a result, KHNP has accomplished 72.5% (11,332 employees) of the original plan for employee group

Training Experts Specializing in Growing Business Sectors

KHNP carries out education on professionals specializing in our top 3 growing business sectors, i.e., overseas business, NPP decommissioning, and new and renewable energy. For those specializing in overseas business, KHNP provides 12 online and offline training courses including IELTS Speaking remote training to help them enhance their foreign language skills. As for those engaging in NPP decommissioning, introductory training and opportunities to be dispatched to overseas worksites is offered. In addition, for those engaging in the new and renewable energy sector, KHNP provides them education on working-level knowledge.

Developing Organizational Leader through Leadership Training

KHNP is providing employees with leadership training to develop organizational leaders equipped with a sense of high safety and communication skills. According to their position level, we provide customized safety-related leadership education. Also, communication leadership education is not compromised of one-session training, but a six-month-long communication training course designed to help future organizational leaders build their communication skills.

Leadership Training Focused on Safety & Communication

Safety Leadership



Operating leadership course with working-level knowledge course (6 times / 133 employees)

Development of professional

lecturers

Recruit safety leadership professionals and reinforce capability through WANO MSM

Communication Leadership



Adopt Learning Journey Iconsisted of 4 stages in 6 months)



Include how to work together with millennials (Generation Z)

Improving Organizational Culture

High-level

Increase hours of training

[13 hours→ 23 hours]

anagers of NPP

Promoting 3 Innovative Tasks to Establish Performance-Based HR Management

To foster performance-based culture, KHNP has engaged in special promotion, personnel exchange, and open positions, the 3 top innovative tasks for public institutions. In 2020, a total of 9 employees received special promotion through examination based on capability and performance. KHNP has also adopted a system for exchanging human resources between public institutions to enhance the openness and expertise of the organization. In addition, KHNP has scouted talented experts in the private sector through expanded recruitment of open positions.

Operation of Personnel Ombudsman to Report Disruptions on HR Management

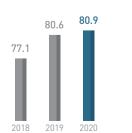
KHNP operates the "Personnel Ombudsman," a communication channel used by employees to establish a fair corporate culture. KHNP seeks to empower employees to submit their opinions on what they deem unfair or in need of a remedial step in personnel matters/ affairs through this channel. In 2020, a total of 47 opinions were submitted, and KHNP duly took corrective measures as to 4 cases. We will continue to make progress with employees' opinion to establish a fair corporate culture.

Improvement in Performance Indexes to Build Performance-Based Culture

KHNP has improved performance indexes to foster a corporate culture based on performance. KHNP used to have each branch develops its own indexes and checks its performance based on them. But now, each branch develops its performance indexes in linkage with the Headquarters' KPI* and the HQ takes part in evaluation of each branch's performances. In addition, KHNP has developed a 5-level integrated index for relative evaluation on adequate employee compensation.

*KPI: Key Performance Indicator

Overall Satisfaction with Organizational Evaluation

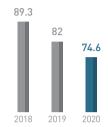


(Unit: Points)

Networking with stakeholders

Average Overtime Work Hours Per Employee





Balance between Work and Life

Promoting Balance between Work and Life by Guaranteeing the Right to Rest

KHNP aims to guarantee balance between work and life for employees by putting an end to the past practice of continued intensive work for hours. In response, KHNP has established a standard for letting employees take a weekday off for working on the weekend, provided compensation leave in the event of inevitable overtime work and conducted total overtime system. In addition, by hiring TSOs at pumped storage power plants, we are ensuring that shift workers do not work for more than 54 hours a week.

Encouraging Use of Family-Friendly Policy

KHNP is reinforcing the use of family-friendly policies to foster a culture with work-life balance. To alleviate employees' burden of using childcare leave, KHNP has improved the relevant system, recognizing the period of such leave in calculation of years of service for KHNP and adopting 2-hour leave. Besides, KHNP has increased workplace daycare/ emergency childcare service and proactively encouraged employees to use the system of reduced work hours during childcare period.

Usage Rate of Family-Friendly Policies

Number of Employees Using Male Employees Using Childcare Leave Family Care Leave (Unit: People) (Unit: %) 2,941 41.9 2,675 33.4 M.C. 2019 2019 2020 2020 Number of Employees Using Number of Employees Using Daytime Baby Care Hours Flex-Time Policy (Unit: People) (Unit: People) 641 5,312 4,935 \$ \bigcirc \bigcirc 2019 2020 2019 2020

Female Manager of High-Level (Gr. 2 or higher)



Diversity & Equal Opportunity

Develop a Medium and Long Term Roadmap for Gender Equality

KHNP has developed a mid-to-long-term roadmap for gender equality in workplace. KHNP has set 3 medium and long term directions of progress (i.e., strengthening women's representation, support for women's career development, and gender equality in the organizational culture), based on issues identified by the result of diagnosis by experts and internal employees. We are carrying out various activities designed to secure inter-gender balance in hiring, promotions, and delegation of duties.

Recruitment Target for Gender Equality Ratio of Female Managers (Gr. 3 or higher) Appointment of Women as Executive Officers 6.0% 3 or more

Medium and Long Term Objectives



Promoting a Culture of Gender Equality and Improving Relevant Policies



Promoting

a culture of

gender

equality

- Operating Gender Equality Week (the first week of September of each year)
- * Broadcast on female manager over in-house PA system and PR outside of KHNP
- "Awareness of gender sensitivity" adopted as a required course in training for manager-level employees (2H/ 5 times)
- Human Resources Development Institute E-Campus operates a course on 'Understanding Gender Equality' (July/ trainees: 893)



Improving

relevant

policies

- Prohibiting discrimination against women in delegating duties
 Entire period of childcare leave recognized in calculation
- of years of service for promotion of junior officers
- In selection of those to be promoted to Gr. 2, additional selection of those in the list of women employee candidates for promotions equal to the percentage of women qualified
- Establishing recommendation that those of either gender shall not account for more than 60% of external members of a committee

Customized Program for Supporting Women Employees' Career Development

KHNP operates a customized program to support women employees' career development, considering different work environments between the HQ and branches. To support women manager-level employees in HQ, KHNP has launched WiN-KHNP* and provided mentoring for women managers. In addition, KHNP has provided customized career coaching to help those at local branches get over the geographical limitations. 'WiN-KHNP: An association of KHNP employees belonging to Women in Nuclear-Korea (WiN-Korea)

Increasing Recruitment in People with Disabilities and of National Merit

KHNP has improved recruitment policy to expand opportunities for those with disabilities and those of national merit. KHNP has abolished foreign language proficiency in requirements for applying, and adopted a separate screening process for those of national merit when recruiting for security guards. KHNP has also established a system where people with disabilities and of national merit can register to join the pool for recruitment, and is providing customized information on recruitment to over 440 people in the pool. As a result, there was an increase of 21 and 23 from 2019 in the number of those with disabilities and those of national merit hired in 2020.

Increasing Recruitment in People with Disabilities and of National Merit









Highlight | Strengthening Communication with Stakeholders

Communication with Stakeholders

Communication Channels for Stakeholders

KHNP has classified those who are able to affect our decision-making or business activities as major stakeholders. KHNP is striving to invigorate stakeholders' participation by establishing strategic communication channels with different groups of stakeholders and listening to their expectations.

Stakeholders

Key Interests



Presenting future

power phase-out

childcare burden;

work-life balance

temporary employees

their conversion to

full-time employees

· Improving labor

conditions for

Alleviating the

strategies in connection

with the trend of nuclear





- How to secure essential human resources / power
- Technological support to strengther competitiveness
- Placing priority on income creation
- programs for locals Carrying out programs for providing support for locals Demanding for positive
- local governments Disclosing online information on NPP in an easy, interesting way

· Gyeongju Win-Win

(2 times): 10 items

Development Council

communication with



Expanding communication between our top management and the National Assembly about pending issues Expanding disclosure

Provided face-to-face

(94 times)

HQ (7 times)

Submitted relevant

explanations to members

of the National Assembly

Onsite visits of NPPs of

materials to the National

Assembly in response to

requests: 3,999 cases (2,532

cases to the Trade, Industry,

&Energy/SME committee;

788 cases to the Science/

NPPs Providing prompt and accurate information on pending issues

Timely distribution of

good-quality press

releases (132 cases);

providing objective

expected issues in

Correcting inaccurate

explanatory materials

(48 cases), correction

of wrong information

(106 cases), referring

to the Press Arbitration

Commission (3 cases)

information on

media reports:

advance

Providina

information to

enhance the public's

understanding in

Communication

- Issue the interactive newsletter Love Yourself (47 times)
- Operate Personnel Ombudsman policy (exploring 27 cases to be improved)
- · Labor-Management Council (4 sessions: 135 items discussed)
- Operate the Labor-Management TF (operated 8 items including Labor Expense Management TF)
- KHNP Mutual Growth Council (3 times)
 - Meeting of representatives of nuclear power institutions (4 times) CEO's informal
 - meetings with relevant businesses at their locations (28 times) Special informal
 - meetings with subcontractors (4 times)

131 complaints

submitted

115 cases

- including collection/ recycling of discarded bikes Disclose operating information on
- NPP: 268 cases are registered including report on survey/evaluation of radioactivity in areas close to NPPs
- Satisfaction level of information disclosure

Defense Committee: 679 cases to etc.) Satisfaction level expressed by the aides

to the members of the National Assembly

Decrease in rate of negative media reports

7.2%











Reestablishing Core Values through Stakeholder Participation

KHNP has reestablished our TRUST value system, listening to the opinions of internal/ external stakeholders. To review validity of our value system amid changes in management conditions, KHNP has conducted a questionnaire-based survey toward employees, and also checked what subcontractors and locals expect from us. In response, KHNP has overhauled our entire value system based on the opinions of stakeholders collected and enacted specific code of conduct in an effort to bring our value system up to date.

Operating Various Communication Channels for Building Labor-Management Consensus

KHNP operates diverse communication channels to build labor-management consensus. By conducting a survey on labor environment, KHNP has discovered that continuous issues between labor and management is occurring due to shortage in labor-management consensus. Thus, KHNP has found that we need to take a drastic step to address employees' complaints about workplace practices or conflicts between labor and management.

Communication Channels for Building Labor-Management Consensus



CEO-Led Communication Channels

- Activities for spreading CEO Initiative (core value-sharing campaign, etc.) -Corporate culture/brand-sharing; Smart
- CEO's site management (61 times), Talk concert
- (10 times)
- Management-related newsletters (46 times). CEO SNS communication



Site-Centered Communication Channels

- Informational sessions held at worksites concerning labor-related pending issues (15 occasion)
- Launch E-Learning lecture on duties allowance (for all employees)
- Online conference explaining the results of wage-related negotiation (December)
- · Video meeting between the HQ and worksites for sharing information on labor-related matters (16 times)

Communication Channels Participated by Employees

- Launch of Change Agent (200 leaders engaging in improvement of corporate culture)
- Dangchan Dudrim (employees' feedback); online questionnaire survey (147 times)
- Future Policy Group (500 employees); Personnel Ombudsman; Anonymous bulletin
- Committee by each organizations



Horizontal Communication Channels for Labor-Management

- · A meeting of labor-management representatives of power group (September)
- Timely wage-related collective bargaining: operating cooperation system of labormanagement
- Joint effort to realize social value (Action agreement, Labor-management 1339 campaign)
- · Operation of joint labor-management TF concerning major pending issues (8 T/Fs, 23 times)

Meeting of 'Representatives of Nuclear Power-Related Institutions for Mutual Communication'

KHNP had held the 3rd meeting of representatives of nuclear power-related institutions in 2020, for the successful export of NPPs. The participants included a total of 12 top managers and relevant experts including top manager of KHNP, KPS, and state-run research institutes. Complying the quarantine guideline, the participants had shared information by online conference on results of activities they carried out, pending issues related to nuclear power, and discussed how to gain a foothold in overseas NPP markets.

Level of Satisfaction in Labor-

Management Communication



The 3rd meeting of representative of nuclear power-related institutions

Achievement in

Satisfaction level of labormanagement relations

65.1 Points



2020

solved

16 cases

73%

2019

2020

2019

Appendix



Appendix

ESG Data Center	9
GRI Content Index	10
TCFD Index	10'
SASB Index	108
K-ESG Index	11
Independeny Assurance Statement	11:
UNGC Advanced Level	11
Awards & Memberships	11

ESG Data Center Economy

Main Financial Performances (Consolidated)

Main Economic Performan	ices	(Unit: KRV	V 100 million)
Division	2018	2019	2020
Sales	89,552	89,826	99,997
Operating Income	11,456	7,831	13,158
Net income	-1,020	2,465	6,179
Overseas sales	3,454	4,335	3,743

Financial Position

(Unit: KRW 100 million)

Division	2018	2019	2020
Assets			
Current assets	66,377	65,633	73,270
Non-current assets	493,978	531,794	549,574
Total assets	560,355	597,427	622,844
Current liabilities	25,396	28,546	40,029
Non-current liabilities	281,134	312,222	320,755
Total liabilities	306,530	340,768	360,784
Equity			
Paid-in capital	107,045	107,045	107,045
Retained earnings	146,637	149,727	155,188
Other equity	143	-113	-173
Total equity	253,825	256,659	262,060

Distribution of Economic Value

Division	Unit	2018	2019	2020
Government - Corporate tax payment	KRW 100 million	1,888	2,710	3,470
Employees - Average compensation per employee	KRW 1,000	89,055	90,650	95,818
Local communities - Social contribution expenses: Dandelion Spore Fund	KRW 100 million	74.8	122.6	117
Suppliers - Subsidies for SMEs	KRW 10 million	682	906	1,060

Financial Stability

Financial Information

Division	Unit	2018	2019	2020
Interest coverage rate	Multiples	2.24	1.51	2.56
Total borrowings and bonds payable to sales	%	17.27	17.5	17.96
Liabilities rate	%	120.8	132.8	137.7
Total assets turnover rate	%	16.1	15.52	16.39

Credit Rating

Division		2018	2019	2020
Inter-	Moody's	Aa2	Aa2	Aa2
national credit	S&P	AA	AA	AA
rating	Fitch	AA-	AA-	AA-
Domestic credit rating	Korea Ratings			
	Korea Investors Service	AAA	AAA	AAA
	NICE Investors Service			

Main Operating Performances

Division	Unit	2018	2019	2020
NPP usage	%	65.9	70.6	75.3
No. of unplanned auto- stops	Cases (Cases/ unit)	3(0.13)	2(0.08)	3(0.13)
Power sales*	100 million kWh	1321.35	1431.57	1,569.97
Investment in NPP construction	KRW 100 million	17,722	22,110	18,537

^{*}Including pilot operation

Investment in R&D

Division	Unit	2018	2019	2020
Investment in R&D	KRW 100 million	4,543	4,605	4,320
R&D against net sales	%	5.1	5.5	4.57

Main Environmental Performances

Energy Consumption by Business Site*

(Unit: 10 TJ)

Division	2018	2019	2020
Nuclear power sites	1,785	1,837	1,670
Pumped-storage plants	4,911	4,415	4,189
General hydropower plants	5	7	7
Other special business units	23	24	24
Total	6,724	6,283	5,889

^{*}Source: National Greenhouse gas Management System, 2020 Greenhouse

Energy Consumption by Energy Source*

(Unit: 10 TJ)

Division	2018	2019	2020
Fuel	64	42	33
Electricity	6,660	6,241	5,855
Steam	0	0	1
Total	6,724	6,283	5,889

^{*}Source: National Greenhouse gas Management System, 2020 Greenhouse Gas Bill

Water Consumption

(Unit: 1.000 Tons)

Division	2018°	2019	2020
Underground water	11	11	17
Industrial water	2,731	2,004	2,048
Tap water	1,321	1,066	898
Surface water	4,827	4,497	4,028
Total water consumption	8,890	7,578	6,991

^{*2018} Data revised for unification of Public announce data

Greenhouse Emissions by Business Site*

(Unit: 1,000 tCO₂eq)

Division	2018	2019	2020
Nuclear power sites	931	952	867
Pumped-storage plants	2,387	2,146	2,035
General hydropower plants	3	3	3
Other special business units	12	12	12
Total	3,333	3,113	2,917

^{*}Source: National Greenhouse gas Management System, 2020 Greenhouse Gas Bill

Direct/Indirect GHG Emissions*

(Unit: 1,000 tCO2eq)

Environment

Division	2018	2019	2020
Scope 1	97	81	73
Scope 2	3,236	3,032	2,844
Total emissions	3,333	3,113	2,917

^{*}Source: National Greenhouse gas Management System, 2020 Greenhouse Gas Bill

Wastewater Discharge and Recycling

(Unit: 1,000 m)

Division		2018	2019	2020
Nuclear	Wastewater discharge	3,612	3,315	3,702
Power sites	Recycled amount	582	624	466
	Recycling rate (%)	16.1	18.8	12.6

Emission of Water Pollutants

(Unit: kg*)

Division		2018	2019	2020
	Chemical Oxygen Demand (COD)	22,215	19,591	22,294
Nuclear Power sites	Suspended Solids (SS)	3,869	3,963	5,087
	Total Nitrogen (T-N)	39,488	37,885	38,436

^{*}Discharge concentration x Amount of discharge

Disposal of General Waste*

(Unit: Tons)

Division	2018	2019	2020
Recycle	6,345	5,322	7,323.6
Incineration	768	477.4	253.3
Landfill	3,199	3,332.2	3,192.7
Others	12	424	0.2
Total waste	10,324	9,555.6	10,769.8

^{*}Source: Allbaro System

ESG Data Center

Disposal of Designated Waste*

(Unit: Tons)

Division	2018	2019	2020
Recycle	1,261	1,724.60	517.9
Incineration	265	289.60	200.1
Landfill	0	0.36	0.4
Others	323	132.60	5.8
Total waste	1,849	2,147.16	724.2

^{*}Source: Allbaro System

Harmful Chemical Discharge

Division	Unit	2018	2019	2020
Chemical usage by nuclear power site*	Tons	5,883	5,586	5,806
No. of harmful chemical discharges**	Cases	0	0	0

^{*}Source: Collected result of Chemical substances management register by each office

Emission of air pollutant*

(Unit: Tons)

Division	2018	2019	2020
NOx Emission	0	0	0
S0x Emission	0	0	0
Dust Emission	0	0	0

^{*}Using facilities which are subject of exemption for self-assessment on emission of air pollutant

Green Product Purchase*

(Unit: KRW 1,000)

Division	2018	2019	2020
Total purchase	22,057,152	20,932,378	26,708,126
Purchase of green product	20,734,589	20,087,248	25,845,746
Green product purchase ratio(%)	94.0	95.96	96.8

^{*}Source: Green Purchase Information System

Sustainable Power Generation Plan

(Unit: 1.000 rec)

Division		2018	2019	2020
Mandatory supply [A]		3,448	3,743	5,458
Transferred Ar	nount [B]	444	753	-
Early impleme	ntation [C]	-	-	1,091
	Photovoltaic	863	1,979	4,015
	Hydropower	970	737	394
Implemen- tation	Fuel Cell	914	747	968
	Wind	31	29	158
performance	Biomass	737	981	948
	Others	6	23	66
	Total [D]	3,521	4,496	6,549
Implementation performance on each year [E=D-(B+C)]		3,077	3,743	5,458
Implementation rate [F=E/A](%)		89.2	100	100

Employees

Human Resources and Recruitment

(Unit: People)

Division		2018	2019	2020
Total ¹⁾		12,068	12,178	12,244
Gender				
Male		10,600	10,659	10,643
Female		1,468	1,519	1,601
Female employee	ratio (%)	14	14	15
Age 20-29 years		2,033	1,994	1,926
Age 30-39 years		4,034	3,973	3,94
Age 40-49 years		3,368	3,502	3,52
Age 50 years or ol	der	2,633	2,709	2,85
Region				
Korea		11,021	11,121	11,25
Overseas ^{3]}		1,047	1,057	988
Business site ⁴⁾				
Headquarters ⁵⁾		1,370	1,373	1,412
Nuclear power site	es -	8,009	8,082	8,073
Hydropower & Pump	oed-storage	784	797	782
Others sites		1,905	1,926	1,975
Rank ^{6]}				
	Total	6	6	6
Executive	Male	6	6	ć
	Female	-	-	-
	Total	196	181	179
1 st level position	Male	194	179	177
	Female	2	2	2
	Total	781	776	779
2 nd level position	Male	765	758	760
	Female	16	18	19
	Total	2,850	2,948	2,959
3 rd level position	Male	2,736	2,818	2,830
	Female	114	130	129
	Total	6,751	6,781	6,945
4 th level position		5,745	5,763	5,858
1	Female	1,006	1,018	1,087
	Total	1,484	1,486	1,376
Others ⁷⁾	Male	1,154	1,135	1,012
	Female	330	351	364

¹⁾ Total number of regular employees (excluding unlimited contract employment) / 2) Based on Korean age system / 3) Overseas dispatch / 4) Based on subclassification of Employment / 5) Including UAE Business center / 6) Researching positions are included in each class / 7) includes 5th level position, senior, private security officer, and contract worker

Division		2018	2019	2020
Regular ^{1]}	Total	12,062	12,172	12,238
Unlimited contract	Total	77	114	117
Non-regular	Total	162	167	190
No. of employees wit	h disabilities	417	418	430
Rate of employees with disabilities (%)		3.31	3.33	3.41
	Total	424	413.5	422
New employees ^{3]}	Male	334	323.5	317
employees	Female	90	90	105
Regular retirement	Total	213	228	239
Voluntary retirement	Total	22	19	17
	Total	2	6	5
Turnover and retirement ⁴⁾	Male	2	6	5
retirettietti	Female			-

¹⁾ Executives are excluded / 2) Based on Status report by KEAD /

Flexible Work Hours

(Unit: People)

Social

Division		2018	2019	2020
Alternative work schedule system		162	162	195
Flex time type		3,147	3,033	2,974
Flexible select working Com	Working hours selection type	3,894	4,935	5,312
	Compressed work time	83	54	27
Total no. o	f employees	7,286	8,184	8,508

Parental Leave

(Unit: People)

Division		2018	2019	2020
Parental leave	Male	108	146	209
users*	Female	270	290	289
Employees returned	Male	63	69	97
from parental leave	Female	99	113	100
Employees employed for more than 12	Male	63	69	96
months since the end of parental leave	Female	97	113	98

^{*}Based on Management Assessment Data (Parental support system of Family-friendly Management

[&]quot;cases of life/environmental damage / Source: National Institute of Chemical Safety in Chemical Safety Information Sharing System

³⁾ Source: ALIO (Executives are excluded) / 4) Retired employees among the newly hired in the same year (voluntary retire)

100 Introduction New Wave Fundamental Clean ESG APPENDIX 101

ESG Data Center

Employee Training

(Unit: People)

Division		Unit	2018	2019	2020
	Total	people	22,332	26,546	17,068
Total no. of Trainees	Male	people	20,136	23,232	14,604
	Female	people	2,196	3,314	2,464
Total	Total	hours	1,272,186	956,271	1,258,883
education	Male	hours	1,154,604	849,778	1,063,213
hours	Female	hours	117,582	106,493	195,671
Total training expenditure	Total	KRW 100 million	564	491	497
(Distribution based upon proportions of	Male	KRW 100 million	509	427	425
male and female employees)	Female	KRW 100 million	55	64	72
Average education	Internal training	KRW million	2.29	1.05	2.91
expenditure per person	External training	KRW million	1.75	0.8	0.29
	Male	hours	57	36.6	72.8
	Female	hours	54	32.1	79.4
	Executive	hours	43	7.75	22.5
Average Training	1 st level position	hours	69	14.9	17.4
hours per person	2 nd level position	hours	107	19.2	24.4
	3 rd level position	hours	98	24.3	42.5
	4 th level position	hours	129	44.3	106.7
No. and ratio	Executive	people(%)	6(100%)	6(100%)	6(100%)
of people completed integrity	Employees	people(%)	10,393 (95.2%)	11,727 (95%)	11,316 (95.9%)
training*	Subcontractors	people(%)	-	-	-
No. and ratio of people completed	Education on sexual harassment	people(%)	12,201 (100%)	12,153 (100%)	12,366 (100%)
human rights training	Education on the disabled	people(%)	12,201 (100%)	12,153 (100%)	12,366 (100%)

^{*}Source: Ethics Audit Report

Labor Unit Registration*

(Unit: People)

Division	Unit	2018	2019	2020
No, of employees who have joined the labor union	People	7,386	8,329	8,318
Ratio of employees who have joined the labor union	%	61	68	68

^{*}Any changes in collective agreements are announced within 14 days from the date on which the grounds occur

Performance Assessment*

(Unit: %)

Division		2018	2019	2020
Ratio of performance	Male	87.8	87.6	87.1
assessment by gender	Female	12.2	12.4	12.9
	1 st level position	1.7	1.6	1.6
	2 nd level position	6.8	6.7	6.7
Ratio of performance	3 rd level position	24.5	25.3	25.1
	4 th level position	53.5	53.9	53.8
assessment	5 th level position	4.1	3.8	3.8
by position	Public services	0.7	0.7	1.0
	Senior specialists	3.4	3.0	2.6
	Private security officers	5.3	5.1	5.5

^{*}The ratio of people who received regular performance assessment

Subcontractors

Support for SMEs and Social Enterprises (Unit: KRW 100 million)

Division	2018	2019	2020
Purchase of products from SMEs	10,278	10,951	13,722
Purchase of products from social enterprises*	243	261	368
Financial support for SMEs	1,139	1,333	1,552

^{*}Rate of items purchased from organizations which are approved by the Ministry of Employment which pursues social purposes

Win-Win Growth

(Unit: Points)

Division	2018	2019	2020
Win-Win index	93.9	93.4	89.8

Local Community

Used Amount of Sharing Fund

(Unit: KRW 100 million)

Division	2018	2019	2020
Love Fund	10.83	10.03	9.54
Matching Grant	63.99	112.53	107.06
Total	74.82	122.56	116.60

Blindness Prevention Project*

(Unit: People)

Division	2018	2019	2020
Free eye examination	2,033	1,783	-
No. of patients who received surgery	153	374	-

^{*}This business was for 2016~2019 and was finished by 2019.

Hopeful Wings Project

Division	Unit	2018	2019	2020
No. of vans	Vehicles	84	85	85
No. of libraries	Libraries	30	30	27
No. of participants in cultural experience program*	People	480	467	-

^{*}Culture experience activity was not available in 2020 since the outbreak of COVID-19

Social Contribution of Employees

Division	Unit	2018	2019	2020
Time of employee's social contribution	Hours	68,776	59,204	26,900
No. of employees participated in social contribution	People	23,006	19,151	9,457

Ethics and Human Rights Management

Human Rights Impact Assessment

Division	Unit	2018	2019	2020
No. of business sites received Human Rights Impact Assessment	Sites	1	1	1
Ratio of implementing Human Rights Impact Assessment	%	100	100	100

Safety & Health

Safety Accident

Division	Unit	2018	2019	2020
Rate of KHNP's industrial disaster*	%	-	-	-
No. of death**	People	0	0	0
No. of injury	People	3	7	5

^{*}For construction workers whose job type and working hours are not strictly fixed, converted disaster rate can be calculated by dividing total construction cost by average wage, but no such data is available for workers in electricity generation or other field

Occupational Accidents of Partners

Division	Unit	2018	2019	2020
Major industrial accident	People	24	40	42
Accidents causing death	Cases	0	0	1

^{**}No. of employees died from occupational disease or injury

102 Introduction New Wave Fundamental Clean esg **appendix** 103

GRI Content Index

Universal Standards

GRI Standard			Disclosure	ISO 26000	UN SDGs	Page
	102-1	Name of the organization	Korea Hydro & Nuclear Power Co., Ltd.			8
	102-2	Activities, brands, products, and services	Development of electric power resources/ Power generation businesses / R&D and affiliated businesses / Overseas businesses			12-15
	102-3	Location of headquarters	1655, Bulguk-ro, Munmu Daewang- myeon, GyeongJu-si, Gyeongsangbuk-do, Korea			8
	102-4	Location of operations	[Headquarters] 7 Headquarters, 31 sites [Offices] 6 Headquarters, 7 Pumped storage plants, 7 other business sites			8
	102-5	Ownership and legal form	A public enterprise under the Ministry of Trade, Industry and Energy			8
	102-6	Markets served	Power generation and electricity business [nuclear power, new and renewable energy]	6.3.10/6.4.1		8
Organizational Profile	102-7	Scale of the organization	No. of Employees: 12,588 Sales: KRW 9,999,713 million	/6.4.2/6.4.3/ 6.4.4/6.4.5/ 7.8		8
	102-8	Information on employees and other workers	Refers to 'Human Resources and Recruitment' table from ESG Data		8 DECENTINGENERATE	99
	102-9	Supply chain	Conducts win-win growth projects to establish a healthy nuclear supply chain			75-78
	102-10	Significant changes to the organization and its supply chain	No significant change			-
	102-11	Precautionary Principle or approach	Establishes countermeasures to cope with possible disasters caused by climate change			55
	102-12	External initiatives	Support UN Global Compact and UN SDGs		17 PARTNERSHPS FOR THE COLLS	35
	102-13	Membership of associations	Refers to Memberships		*	102
Strategy	102-14	Statement from senior decision-maker	Refers to CEO's Message	4.7/6.2/7.4.2		6-7
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	Refers to Ethics Management System	4.4/6.6.3	16 PEAZ, ASSIDE AND STRONG POSITIONINS	59
Governance	102-18	Governance structure	Operates the Board of Directors, the supreme decision-making body	6.2/7.4.3/ 7.7.5		30

GRI Standard		Disclosure			UN SDGs	Page			
	102-40	List of stakeholder groups	Employees, labor union, non-regular workers, subcontractors, local communities, government/national assembly, press/NGO			92			
	102-41	Collective bargaining agreements	Union membership rate: 68%, Coolective agreements apply to 100% of the total employees			-			
Participation of Stakeholders	102-42	Identifying and selecting stakeholders	Refers to Communication with Stakeholders	5.3		92			
	102-43	Approach to stakeholder engagement	Refers to Communication with Stakeholders			92			
	102-44	Key topics and concerns raised	Refers to Sustainability Material Topic			37			
	102-45	Entities included in the consolidated financial statements	Refers to 3p of 2020 KHNP Business Report						_
	102-46	Defining report content and topic Boundaries	Refers to Sustainability Material Topic			36-37			
	102-47	List of material topics	Refers to Sustainability Material Topic	5.2/7.3.2/ 7.3.3/7.3.4		37			
	102-48	Restatements of information	N/A			-			
	102-49	Changes in reporting	Refers to Sustainability Material Topic			36-37			
D	102-50	Reporting period	1/1/2020~12/31/2020 [Main performances of 2021 are included]			About this report			
Reporting Practices	102-51	Date of most recent report	December 2020			About this report			
	102-52	Reporting cycle	January 2021, 12th report			About this report			
	102-53	Contact point for questions regarding the report	Corporate Planning Department in Planning Office, KHNP (Tel. 054-704-4127)	7.5.3/7.6.2		About this report			
	102-54	Claims of reporting in accordance with the GRI Standards	Complying with GRI Standards Core option			About this report			
	102-55	GRI Content Index	Reports core indicator of general disclosures and topic-specific disclosures of material topics			108-112			
	102-56	External assurance	A third-party assurance conducted by Control Union			114-115			

104 Introduction New Wave Fundamental Clean esg **appendix** 105

GRI Content Index

Topic-Specific Standards

GRI Standard	Disclosure		ISO 26000	UN SDGs	Page
Material Topic 1: Str	engthening	Safety / Health			
	103-1	Explanation of the material topic and its Boundary			
GRI 103: Management Approach 2016	103-2	The management approach and its components		3 GEOD REALTH ON BOARD OF THE SHOP ON BOARD ON B	58
	103-3	Evaluation of the management approach	6.4.6/6.8.8	8 GEGERT MISEN AND ECONOMIC SOMMTH	
GRI 403: Occupational Health and Safety 2018	403-2	Hazard identification, risk assessment, and incident investigation		~	101
Material Topic 2։ Exp	anding Nev	v and Renewable Energy Business			
	103-1	Explanation of the material topic and its Boundary			
GRI 103: Management Approach 2016	103-2	The management approach and its components	+		40
	103-3	Evaluation of the management approach			
Material Topic 3։ Cop	oing with Cli	imate Change			
	103-1	Explanation of the material topic and its Boundary		7 CHINALE AND COLOR OF THE PARTY OF T	
GRI 103: Management Approach 2016	103-2	The management approach and its components			48
	103-3	Evaluation of the management approach	/ - / //		
GRI 302: Energy 2016	302-1	Energy consumption within the organization	6.5.4/6.5.5		97
GRI 305:	305-1	Direct (Scope 1) GHG emissions			97
Emissions 2016	305-2	Energy indirect (Scope 2) GHG emissions			97
Material Topic 4: Eth	ics and Anti	i-Corruption			
	103-1	Explanation of the material topic and its Boundary		4 CUALITY EDUCATION	
GRI 103: Management Approach 2016	103-2	The management approach and its components	6.6.1-6.6.2/ 6.6.3	16 Austrone 16 Austrone	58
	103-3	Evaluation of the management approach			
GRI 205: Anti- corruption 016	205-2	Communication and training about anti-corruption policies	-		59-60

GRI Standard	Disclosure		ISO 26000	UN SDGs	Page
Material Topic 5: Re	cruiting and	Developing Human Resources			
	103-1	Explanation of the material topic and its Boundary		4 COLLIFY EQUATION	
GRI 103: Management Approach 2016	103-2	The management approach and its components	6.4.7	5 cours	84
	103-3	Evaluation of the management approach		8 DECONTINUOR AND EDIMONE DROWTH	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	-		100
Material Topic 6: Co	ntributing D	evelopment of Local Communities			
	103-1	Explanation of the material topic and its Boundary		4 QUALITY FROMOTOR	
GRI 103: Management Approach 2016	103-2	The management approach and its components	6.3.9/ 6.5.1-6.5.2/ 6.5.3/6.8	10 REGISTS 4 \$\Rightarrow\$ 11 SERVICE STATES A \$\Rightarrow\$ A \$\Right	74
	103-3	Evaluation of the management approach			
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs			101
Material Topic 7: Se	curing Tech	nological Competitiveness			
	103-1	Explanation of the material topic and its Boundary		9 MODITY-INVASION	
GRI 103: Management Approach 2016	103-2	The management approach and its components	-		40
	103-3	Evaluation of the management approach			
Material Topic 8: Ma	naging Was	te and Wastewater			
	103-1	Explanation of the material topic and its Boundary		12 REPONDER AND PRODUCTION AND PRODU	
GRI 103: Management Approach 2016	103-2	The management approach and its components	6.5.3/6.5.4	14 LUE BELOWANTER	48
	103-3	Evaluation of the management approach		15 orus	

106 Introduction new wave fundamental clean esg <u>appendix</u>

GRI Content Index

Topic-Specific Standards

GRI Standard		Disclosure	ISO 26000	UN SDGs	Page
Material Topic 8: Ma	naging Was	te and Wastewater			
	306-1	Waste generation and significant waste-related impacts		12 Hardward Comments	52
GRI 306: Waste 2020	306-2	Management of significant waste-related impacts	6.5.3/6.5.4	14 HEROWAUE	52
	306-3	Waste generated	-		98
	306-4	Waste diverted from disposal	-		97-98
Material Topic 9: Sta	ble Operation	on of Power Plants			
	103-1	Explanation of the material topic and its Boundary			
GRI 103: Management Approach 2016	103-2	The management approach and its components		9 MAINTENENDE DE LA CONTRACTOR DE LA CON	40
7 pprodei 2010	103-3	Evaluation of the management approach	-		
	-	No. of unplanned auto-stops			96
Material Topic 10: Cr	eating Ecor	omic Value			
	103-1	Explanation of the material topic and its Boundary			
GRI 103: Management Approach 2016	103-2	The management approach and its components			40
7.pp10de11.2010	103-3	Evaluation of the management approach	-		
	-	Sales			96
Material Topic 11: So	ound Goverr	nance Structure			
	103-1	Explanation of the material topic and its Boundary			
GRI 103: Management Approach 2016	103-2	The management approach and its components	-		30-32
· FL - 100 50 10	103-3	Evaluation of the management approach			
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	-		32

TCFD Index

KHNP reports our countermeasure on climate change in accordance with TCFD recommendation to participate in disclosure of climate change information according to the goal of global society. To enhance communication with stakeholders, KHNP will transparently open the countermeasure on climate change based on TCFD recommendation.

107

	TCFD Recommendations	Page
Governance	a) describe the board's oversight of climate-related risks and opportunities.	21
Governance	b) Describe management's role in assessing and managing climate-related risks and opportuni	54
	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	56
Strategy	b) Describe the impact of climaterelated risks and opportunities on the organization's businesses, strategy, and financial planning.	55
	c) Describe the resilience of the organization's strategy, taking into consideration of different climaterelated scenarios.	55
	a) Describe the organization's processes for identifying and assessing climate-related risk	56
Risk management	b) Describe the organization's processes for managing climate-related risks	56
J	c) Describe how processes for identifying, assessing, and managing climaterelated risks are integrated into the organization's overall risk management	56
	a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process	57
Metrics and targets	b) Disclose Scope 1, Scope 2, and, if applicable, Scope 3 greenhouse gas (GHG) emissions, and the related risks	97
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	57

SASB Index

KHNP aims to provide transparent information to stakeholders according to Sustainability Accounting Standards Board (SASB) standard. As KHNP's core businesses focus on development and enhancement of electricity, this report is based on Electric Unities & Power Generators industrial standard.

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Accounting metric	Unit of measure	KHNP
		Gross global Scope 1 emissions, percentage covered under	1000 tCO ₂ eq	2,917
	IF-EU-110a.1	emissions-limiting regulations	%	100
		emissions-reporting regulations	%	100
Greenhouse Gas Emissions &	IF-EU-110a.2	Greenhouse gas (GHG) emissions associated with power deliveries	1000 tCO₂eq	n/a
Energy Resource Planning	IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	n/a	54-55p
	IF-EU-110a.4	Number of customers served in markets subject to renewable portfolio standards (RPS)	Number	n/a
		percentage fulfillment of RPS target by market	Percentage (%)	n/a
Air Quality	IF-EU-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	Metric tons (t), Percentage (%)	0
	IF-EU-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (㎡), Percentage (%)	97p
Water Management	IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	Number	0
	IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	n/a	67p
	IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated, percentage recycled	Metric tons (t), Percentage (%)	n/a
Coal Ash Management	IF-EU-150a.2	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	Number	n/a
	IF-EU-240a.1	Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	Rate	n/a
_	IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	Reporting currency	n/a
Energy Affordability	IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	n/a
	IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	n/a	n/a

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Accounting metric	Unit of measure	KHNP
Workforce Health & Safety	IF-EU-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	Rate	101p
	IF-EU-420a.1	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	Percentage (%)	n/a
End-Use Efficiency & Demand	IF-EU-420a.2	Percentage of electric load served by smart grid technology	Percentage (%) by megawatt hours (MWh)	n/a
	IF-EU-420a.3	Customer electricity savings from efficiency measures, by market	Megawatt hours (MWh)	n/a
Nuclear Safety & Emergency	IF-EU-540a.1	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	Number	24
Management	IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	n/a	66-67p
	IF-EU-550a.1	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	Number	n/a
Grid Resiliency	IF-EU-550a.2	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Minutes, Number	n/a

Activity Metrics

Accounting Metric	Unit of measure	Code	KHNP
Number of: (1) residential, (2) commercial, and (3) industrial customers served	Number	IF-EU-000.A	n/a
Total electricity delivered to: (1) residential, (2) commercial, (3) industrial, (4) all other retail customers, and (5) wholesale customers	Megawatt hours (MWh)	IF-EU-000.B	n/a
Length of transmission and distribution lines	Kilometers (km)	IF-EU-000.C	n/a
Total electricity generated	Megawatt hours (MWh)		164,610,133
Percentage by major energy source	Percentage (%)	IF-EU-000.D	100
Percentage in regulated markets	Percentage (%)		100
Total wholesale electricity purchased1	Megawatt hours (MWh)	IF-EU-000.E	n/a

K-ESG Index

Area	Category	Classification NO.	Diagnosed item	Page
Notification	Notification Method	P-1-1	ESG Notification Method	2
		P-1-2	ESG Notification Period	2
		P-1-3	ESG Notification Range	2
	Notification contents	P-2-1	ESG Material issue and KPI	
	Notification Verification	P-3-1	ESG Notification Verification	114-115
	Environmental Management Goal	E-1-1	Establishment of Environmental Management Goal	49
	Raw materials	E-2-2	Rate of Recycled raw materials	-
		E-3-1	Amount of Greenhouse Gas emission (Scope 1 & Scope 2)	97
	Greenhouse Gas	E-3-2	Amount of Greenhouse Gas emission (Scope 3)	-
	Energy	E-4-1	Energy use, rate of renewable energy use	97
Environment	Water	E-5-1	Amount of water use	97
Environment		E-5-2	Rate of recycled water use	97
	Waste	E-6-1	Amount of Waste	97
		E-6-2	Rate of recycled waste	97
	Pollutant	E-7-1	Amount of air pollutant emission	98
		E-7-2	Amount of water pollutant discharged	97
	Eco-labelling	E-9-1	Rate of eco-certified products and services	98
	Goal	S-1-1	Establishment of goal and its notification	58, 74
	Labor	S-2-1	New employees and their employment retention	99
		S-2-2	Rate of regular employees	99
Social		S-2-4	Training & Education Expenditure	100
		S-2-6	Guarantee Freedom of Association	100
	Diversity and Gender Equality	S-3-1	Ratio of Female employees	99
		S-3-3	Rate of employees with disabilities	99

Area	Category	Classification NO.	Diagnosed item	Page
	Industrial	S-4-1	Safety & Health System	64
	Safety	S-4-2	Rate of Occupational accidents	101
		S-5-1	Establishment of Human Rights Policy	61
	Human rights	S-5-2	Assessment on Human right risk	61-62
		S-6-1	Partners' ESG Management	65
	Win-Win Growth	S-6-2	Partners' ESG Support	75-78, 82
Social		S-6-3	Partners' ESG Agreement	75-78
	Local	S-7-1	Strategic social contribution	79
	Community	S-7-2	Employees' participation in volunteer services	101
	Information	S-8-1	Establishment of Information Security System	70-71
	Security	S-8-2	Infringement and regulation of personal information	71
	BOD Composition	G-1-1	Establishment of ESG agenda by BOD	32
		G-1-2	Rate of Non-executive Directors	30
		G-1-3	Separation of CEO from the Chairman of BOD	30
		G-1-4	Gender diversity in BOD	32
		G-1-5	Expertise of Non-executive Directors	31
	Activities of BOD	G-2-1	Attendance rate of Directors	30
		G-2-3	Subcommittees of BOD	31
Governance		G-2-4	BOD's performance on Agendas	32
		G-3-1	Notification of general meeting of stockholders	N/A
	Stockholders' Right [*]	G-3-2	Conducting a meeting of stockholders in other date than regular meeting	N/A
		G-3-3	Concentrated/Electronic/Letter vote system	N/A
		G-3-4	Dividend policy and its implement	N/A
	Auditing organization	G-5-1	Establishment of Internal Auditing Department	30
		G-5-2	Expertise of Auditing organization (Accounting / Finance experts in the auditing organization)	30

^{*}As KHNP is not listed on the stock exchange, G-3-1,2,3,4 is not applicable.

Independeny Assurance Statement



Control Union Certifications was commissioned by Korea Hydro & Nuclear Power Co., LTD (KHNP) to conduct an independent assurance of 2021 KHNP Sustainability Report. The information in the Sustainability Report is the exclusive responsibility of KHNP. Control Union Certifications was not involved in the preparation of any material included in this document. The responsibility of Control Union is to express an opinion concerning the information including graphs, tables and statements included in the Report, within the assurance scope mentioned below, with the purpose to inform all the Interested Parties.

Assurance Scope

The assurance engagement has been planned and performed in accordance with AA1000AS v3 and the assurance criteria below to a "Moderate level of assurance" where the scope was a Type 2 engagement. The sustainability report is developed using the Global Reporting Initiative (GRI) standards. The assurance process involves evaluation of adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact. Confirming that the report is in accordance with GRI Standards and evaluating the accuracy and reliability of data and information for only the selected indicators listed below:

- GRI 102: General Disclosures
- Material Topic 1, Health and safety reinforcement: GRI 103-1~3, GRI 413-2
- Material Topic 2, Expanding the new and renewable energy business: GRI 103-1~3 Material Topic 8, Securing technological competitiveness: GRI 103-1~3
- Material Topic 3, Strengthen response to climate change: GRI 103-1~3, GRI 302-1, Material Topic 9, Wastewater and waste management: GRI 103-1~3, GRI 306-1, 2, GRI 305-1, 2
- Material Topic 4, Leading technology competitiveness: GRI 103-1~3
- Material Topic 5, Ethics and anti-corruption.: GRI 103-1~3, GRI 205-2
- Material Topic 6, Recruitment and fostering of talented people: GRI 103-1~3, GRI 404-1
- Material Topic 7, Contributing to community development: GRI 103-1~3, GRI 205-2, 3

- Material Topic 10, Stable power plant operation: GRI 103-1~3
- Material Topic 11, Creating economic value: GRI 103-1~3

INCLUSIVITY

Engagement with stakeholders in the report development process and their involvement in organizational decision making.

KHNP has defined the stakeholders by dividing them into executives and employees, labor unions, communities, citizens, governments, the National Assembly, the media, and NGOs, and reflects their opinions in decision-making. The verification team did not find any important stakeholder groups excluded from the process of communicating with stakeholders through personnel ombudsman, labor-management council, joint TF, nuclear-related agency representatives' meetings, customer sounds, parliamentary demands, and press releases

MATERIALITY

Identification of issues in the report that are relevant and significant to the organization's stakeholders, the presence of and the extent to which these material issues are disclosed in the report.

KHNP identified the material issues using the stakeholder communication channel and their own materiality assessment process. The outcome is a materiality matrix which shows personal information protection for customers' privacy as the most prioritized topic by the stakeholders KHNP. KHNP has documented their approach for protecting customer's privacy and tracing the records which related to customer information.

RESPONSIVENESS

Acting on stakeholder issues and provision of feedback through decisions, actions, performance and communication.

In order to establish an ESG-friendly management system, KHNP has established a system that allows transparent communication with stakeholders by connecting and expanding the distributed activity values of each ESG field to the ESG management platform. It was also confirmed that they were communicating with various stakeholders through corporate value reflecting non-financial performance. As a result, the verification team found no evidence that KHNP's response activities were improperly listed in the report on important stakeholder issues.

IMPACT

Monitoring, measurement and providing accountability for how the actions of the organization affect the economy, the environment, society, stakeholders or the organization itself.

KHNP is promoting various win-win cooperation activities to maintain the nuclear power plant ecosystem, improve management conditions of partner companies, and strengthen future capabilities of the nuclear power plant industry so that partner companies in the nuclear power plant ecosystem can overcome financial difficulties. In addition, it was found that the fund was operated by collecting donations from employees to contribute to the development of the local community, social contribution projects for children's centers in rural areas around the power plant, safe streets, and business partners' COVID-19. As a result, KHNP has confirmed that it is striving to have a good influence on the community.

Level of Assurance

The level of Assurance is used to determine the depth of detail that an assurance provider uses to identify if there are material errors, omissions or misstatements. The level of assurance for the report is moderate.

Methodology

- Review of internal and external documentary evidence presented by KHNP
- · Review of approach to data collection at company level
- · Audit of data presented in the Report including a detailed review of a sample of data
- Review of a selection of internal performance documents

Independence and quality control

Control Union Certifications is accredited according to ISO 17021-1:2015/ISO 17065:2012 covering our global scope and operations. This includes the need to maintain a comprehensive system of quality control including documented policies and procedures on compliance to ethical and legal requirements as well as objectivity throughout our operations. The auditors were selected appropriately based on our internal qualifications, training and experience. It is also reviewed by management to ensure that the applied approach and assurance are strictly followed and operated transparently.

Conclusions

Based on our moderate assurance process, nothing has come to our attention that causes us to believe that the scope (subject matter) as detailed above and presented in the report is not presented fairly in accordance with the criteria. Hence, our work confirms that the information included in the sustainability report is reliable and objective and is presented clearly and understandably. We provide the following recommendations to the extent that it does not affect the results of the assurance:

KHNP is the largest power generation company in Korea, accounting for about a guarter of Korea's electricity generation with new and renewable energy such as nuclear power, hydro, pumping, photovoltaic power, wind power, and fuel cells. In the process of verifying this report, it was confirmed that issues such as strengthening safety and health, expanding renewable energy businesses, responding to climate change, ethics and anti-corruption, recruiting and fostering talent, and contributing to community development are sufficiently important. It was also confirmed that as a state-run company related to energy production in Korea, it is strengthening community-based social contribution activities. However, it is necessary to accumulate, manage, and report related data to respond to impact measurement, internalization of ESG management, and ESGrelated performance reporting issues that will be more emphasized in the future. In addition, it is necessary to steadily publish sustainability reports to track and manage Korea Hydro & Nuclear Power's ESG performance.

> Jon Heinrichs Program Manager 14 January, 2022





UNGC Advanced Level



	Classification	Principle	Page	GRI Disclosure
1	Strategies, Governance and	This integrated report [IR] describes that the corporate role and business are being operated in a sustainable way.	18-19	GRI 102-2
2	Engage-ment	This IR describes the value chain activities.	75-78	GRI 102-2
3		This IR describes the company's strong commitment, strategies and policies in the area of human rights.	61	GRI 103-1
4	Human Rights	This IR describes an effective management system designed to integrate the company's human rights principles.	61-62	GRI 103-2
5		This IR describes an effective monitoring and assessment mechanism for the integrated human rights principles.	62	GRI 103-3
6		This IR describes the company's strong commitment, strategies and policies in the area of labor.	84, 87, 88, 91	GRI 103-1
7	Labor	This IR describes an effective management system designed to integrate the company's labor principles.	86-91	GRI 103-2
8		This IR describes an effective monitoring and assessment mechanism for the integrated labor principles.	89	GRI 103-3
9		This IR describes the company's strong commitment, strategies and policies in the area of environmental management.	49	GRI 103-1
10	Environment	This IR describes an effective management system designed to integrate the company's environmental principles.	49-51	GRI 103-2
11		This IR describes an effective monitoring and assessment mechanism for the integrated environmental principles.	49	GRI 103-3
12		This IR describes the company's strong commitment, strategies and policies in the area of anti-corruption efforts.	59	GRI 103-1
13	Anti-Corruption	This IR describes an effective management system designed to integrate the company's anti- corruption principles.	59-60	GRI 103-2
14		This IR describes an effective monitoring and assessment mechanism for the integrated anti-corruption principles.	59	GRI 103-3
15	UN Goals and issues	This IR describes the company's core business to support the goals and issues of the United Nations.	35	GRI 102-12~13
16		This IR describes the strategic social investment and social contribution activi-ties.	79-80	GRI 413-1
17		This IR describes protection of the rights of and engagement in public policies by local community.	80	GRI 203-1~2
18		This IR describes partnerships and collective actions.	44	GRI 102-13
19		This IR describes the CEO's will and leadership.	6-7	GRI 102-14
20	Governance	This IR describes appointment of executives and their supervision.	59-60	GRI 102-18
21		This IR describes stakeholder engagement.	92-93	GRI 102-40,42,43,44

*UNGC [UN Global Compact] Advanced Level: This is the criteria for fulfillment of social responsibilities and disclosure of the UN Global Compact, an initiative to encourage voluntary fulfillment of corporate social responsibilities. The UNGC Advanced Level comprises of 21 criteria in seven areas including strategies and operation, human rights, labor, environment, anti-corruption, UN goals and issues, and sustainable governance and leadership.

Awards & Memberships

Awards

Date	Contents	Received from	Date	Contents	Received from
11-04-2020	Commendation in recognition of win-win cooperation in materials,	Ministry of SMEs & Startups (MSS)	12-16-2020	Commendation for feat in information security	MOTIE
11-05-2020	parts, and equipment 2020 Korea Sharing Grand Prize	Ministry of Health &	12-16-2020	Commendation for feat in Hacking Mail-related training	MOTIE
11-11-2020	Korea IT Service Innovation Award	Welfare (MOHW) Ministry of Science &	12-22-2020	Korea Energy Prize 2020 (Prime Minister's commendation)	MOTIE
		ICT (MSIT)	12-23-2020	Commendation for our role in	Ministry of Interior &
11-19-2020	Korea Service Grand Prize (Presidential Commendation)	MOTIE		development of materials/parts/ equipment	Safety (MOIS)
11-19-2020	Commendation for well-performing business in quality competitiveness	MOTIE	12-31-2020	Commendation in recognition of our role in the International Nuclear	Korea Atomic Industrial Forum, Inc. (KAIF)
11-19-2020	Commendation in recognition of well- performing small group in quality	MOTIE		Energy Korea 2020 held in Busan	Small Enterprise &
11-25-2020	Software Industry Protection Grand Prize	MSIT	12-31-2020	Prize for an exemplary case of renewing traditional markets	Marketing Service (SEMAS)

Memberships

		Domestic			
	Overseas				
Korea Society for Nondestructive Testing	Gyeongjo Chamber of Commerce & Industry	Sea-Forest Outreach and Opportunity Program	Korea Engineering Asset Management Association (KEAMA)	Korea Smart Grid Association (KSGA)	CANDU Procurement Audit Committee (CANPAC)
Korea Project Management Association	Korea Council of Public Organization Auditors (KPOA)	Korea Business Council for Sustainable Development (KBCSD)	Korean Association for Policy Studies	Korean Society of Pressure Vessels and Piping (KPVP)	CANDU Owners Group (COG)
Korea Institute of Construction Safety (KIC)	Climate Change Center	Korean Association for Radiation Application (KARA)	Korea Photovoltaic Industry Association (KOPIA)	Korean Energy Foundation	Framatome Owners Group (FROG)
Korea Concrete Institute	Korean Society of Mechanical Engineers (KSME)	Korean Society for New and Renewable Energy	Korean Tunneling and Underground Space Association	Korea Personnel Improvement Association	Urban Technology Alliance (UTA)
H2K0REA	Korean Association for Radiation Protection	Korea New & Renewable Energy	Korea Plant Industrial Association (KOPIA)	Korea Electrical Manufacturers Association (KOEMA)	Nuclear Energy Institute (NEI)
Korea Hydrogen Industry Association (KHIA)	Korean Welding and Joining Society (KWJS)	Korea Society of Energy & Climate Change (KOSECC)	Fuel Cell Industry Promotion Agency (FIPA)	Korea Power Exchange (KPX)	Nuclear Procurement Issues Corporation (NUPIC)
Korean Hydrogen & New Energy Society	Korean Association of Medical Technologists (KAMT)	Korean Energy Society	Global Compact Network Korea	Korea SMEs Trade Association (KOSTA)	Pressurized Water Reactor Owners Group (PWROG)
Smart City	Korean Institute of Electrical Engineering (KIEE)	Women in Nuclear Korea (WiN Korea)	Institute of Internal Auditors Korea	Korean Standards Association (KSA)	World Association of Nuclear Operators (WANO)
Korea Information Technology Service Industry Association (ITSA)	Institute of Korea Energy Policy	Korea Institute of Nuclear Energy Industry Promotion (KNP)	Korea Coating Experts Society (KOCES)	Korean Society for Quality Management (KSQM)	World Nuclear Association (WNA)
Korean Association for Conflict Studies (KACS)	Gyeongju Chamber of Commerce & Industry	Korea Atomic Industrial Forum (KAIF)	Korea International Trade Association (KITA)	Korea Wind Energy Industry Association	World Nuclear Fuel Marke (WNFM)
Institute for Social Responsibility of Public Sector Industries (PSR)	Korean Public Organization Auditors (KPOA)	Korea Academy of Nuclear Safety (KANS)	Korean Radioactive Waste Society	Korea Radioactive Waste Society (KRS)	Information System on Occupational Exposure (ISOE)
Korean Association of Small Business Studies (KASBS)	Climate Change Center	Korean Nuclear Society (KNS)	Korea Industrial Technology Association (KOITA)	Korea Electric Association (KEA)	OECD Nuclear Energy Agency (OECD/NEA)
Korean Academy of SME and Startup Policy Initiative (KASPI)	Korean Association for Industrial Technology Security (KAITS)				

CLEAN ENERGY LEADER, **KHNP** Korea Hydro & Nuclear Power Co., Ltd. KHNP's Corporate Planning Department in Planning Office 1655 Bulguk-ro, Munmudaewang-myeon, Gyeongju-si, yeongsangbuk-do, Korea Phone: +0082-54-704-4127 Fax: +0082-54-704-4198 Homepage: www.khnp.co.kr E-mail: wonderboy@khnp.co.kr This report was printed using soy ink and

environmentally friendly paper certified by Forest Stewardship Council (FSCTM)