

Efficiency Sustainability Growth





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About this Report

Since our spin-off from Hyundai Heavy Industries in 2017, HD Hyundai Electric Co., Ltd. has been publishing an Integrated Report annually. The purpose of this report is to transparently disclose our Environmental, Social and Governance (ESG) information, including our financial performance, to all stakeholders. The “ESG Story” section introduces the HD Hyundai Electric’s competitiveness, future direction, and corresponding future plans, making it easier for our stakeholders to understand. The “ESG Fact Book” systematically reports on topics related to E (Environment), S (Social) and G (Governance) in accordance with International ESG disclosure standards.

Reporting Standards

The ESG information contained in this report has been included in accordance with the 2021 Global Reporting Initiative (GRI) Standards, an international disclosure guideline for corporate sustainability management. It also complies with the recommendation of the Task Force on Climate-related Financial Disclosure (TCFD) and the guideline standards of the Sustainability Accounting Standards Board (SASB). The financial information was included in accordance with the documentation guidelines of the Korean International Financial Reporting Standards (K-IFRS).

Reporting Period

This report covers activities from January to December 2023, with some results including data from 2024. The quantitative data for three years (2021, 2022, 2023) have been disclosed to provide insights into the changes over time.

Reporting Scope

The ESG information contained in this report exclusively covers the performance of HD Hyundai Electric. However, the financial information includes data from HD Hyundai Electric and its subsidiaries.

Verification of the Report

The main information and the greenhouse gas and energy data contained in this report have been independently verified by external third parties, the results of which can be found in the “Appendix”.

Interactive Guide

The “HD Hyundai Electric Integrated Report 2023” may be download from the HD Hyundai Electric website (<https://www.hd-hyundaelectric.com>). For the user’s convenience, this report has been produced in the Interactive PDF format.

Inquiries about the Report

For inquiries and comments on the “HD Hyundai Electric Integrated Report 2023”, please contact the ESG Management Team of HD Hyundai Electric.

HD Hyundai Electric’s ESG Management Team

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CEO Message



HD Hyundai Electric
 President & CEO, **Seok Cho**

Esteemed HD Hyundai Electric stakeholders,

The year 2023 was marked by global economic recession due to continued high inflation and high interest rates throughout the world and China's entry into a low-growth phase; geopolitical risks intensified by the prolonged Russia-Ukraine war and the outbreak of the Israel-Hamas conflict, which disrupted supply chains. Despite these adverse conditions, HD Hyundai Electric devoted to achieving its business goals. As a result, HD Hyundai Electric was able to continue its growth trend in 2023, setting a new record for the highest performance since its establishment. In addition, 2023 was significant in terms of ESG, including taking the first step toward RE100 and carbon neutrality and laying the foundation for win-win cooperation with partner companies in the ESG field.

The uncertainty surrounding HD Hyundai Electric in Korea and overseas is expected to intensify further this year. As many as about 40 countries around the world, including the US and the EU countries, are facing leadership changes through elections, and geopolitical risks and each country's protectionism have now become permanent variables in the market. Despite this situation, HD Hyundai Electric will pursue the following policies to maximize the benefits of

favorable market conditions and to continuously secure sustainable competitiveness in the future.

First, HD Hyundai Electric will actively participate in the global renewable energy and the electrification project markets.

Nowadays, as severe natural disasters due to climate change occur worldwide, the urgency for carbon neutrality is increasing day by day. As a result of the efforts to pioneer renewable energy and carbon-neutral markets, HD Hyundai Electric has been able to take the first step into new markets such as offshore substations, carbon capture, and hydrogen plants. Moving forward, we plan to actively participate in the expanding renewable energy market. In line with the upcoming era of electrification, HD Hyundai Electric is prepared to foster its rotating machinery business as a new growth business. In addition, in accordance with the expansion of the eco-friendly market such as carbon capture and high-efficiency application equipment and the trend of electrification of the industries' core facilities, HD Hyundai Electric is planning to accelerate its advancement into these markets. Furthermore, HD Hyundai Electric will go beyond its existing role of supplying equipment and actively participate in the electrification business, discovering new business opportunities, and will strengthen market response by expanding its premium products.

Second, HD Hyundai Electric will continue to strengthen R&D capabilities to secure future growth engines.

To secure sustainable competitiveness, HD Hyundai Electric declared "Research for Future, Development for Business!" as its core R&D vision for 2023. In addition, by operating the Future Technology Committee, HD Hyundai Electric is discovering items that will become future growth engines. In this way, the 170kV SF₆-free GIS and the Complex Energy Management System (CEMS), which developed with advanced HD Hyundai Electric's advanced technology, won the Innovation Award at "CES 2023". In April of the same year, HD Hyundai Electric succeeded in commercializing the world's first 1 MW DC

power distribution facility for buildings. In 2024, HD Hyundai Electric is establishing an open R&D cooperation system, which includes industry-academia cooperation with major universities, and will strengthen its research expertise by organizing working groups for core technologies. In addition, by streamlining its R&D operation system through DT (digital transformation) innovation activities, HD Hyundai Electric will secure growth momentum by developing, in a timely manner, products that meet market needs.

Third, HD Hyundai Electric will practice collaborative ESG management.

In 2023, HD Hyundai Electric established an ESG management system for partner companies through the "ESG Management Support Project for Partner Companies" and operated various financial support programs to alleviate their financial burden, laying the foundation for shared growth. In addition, through the implementation of the "Health and Safety Win-Win Cooperation Project" for major partner companies, HD Hyundai Electric was selected as the "2023 Excellent Workplace for Health and Safety Win-Win Cooperation". HD Hyundai Electric plans to continuously expand support programs that provide substantial assistance to partner companies, aiming to strengthen relationships in fields, including procurement and safety. Furthermore, by planning and participating in ESG activities with the local community, HD Hyundai Electric will contribute to the development not only of its partner companies but also of the local communities.

The growth of the renewable energy and electrification markets in response to climate change presents new opportunities for HD Hyundai Electric. By actively participating in these markets and developing products demanded by them in a timely manner, HD Hyundai Electric will simultaneously pursue corporate growth while addressing climate change. We are committed to growing together with our partner companies, striving towards becoming a "trusted company that creates sustainable value". We sincerely appreciate the generous support and interest from all stakeholders toward HD Hyundai Electric.

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General Information

Since its inception in 1977 as Hyundai Heavy Industries' Electro Electric System Division, HD Hyundai Electric has grown into Korea's leading comprehensive electrical & electronic device and solution provider, undertaking a wide array of projects. On April 1, 2017, following a spin-off from Hyundai Heavy Industries, we emerged as an independent entity specializing in electrical & electronic devices and solutions. Since then, we have been growing into a "sustainable company", leading the way in the carbon-neutral era.

Company overview¹

Company name ²	HD Hyundai Electric Co., Ltd.
Business Areas	Electrical & electronic devices and energy solutions
Head Office address ²	477, Bundanguseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
Date of establishment ³	April 1, 2017
CEO	Seok Cho
No. of employees	2,119 persons
Revenue	KRW 2.7 trillion
Operating profit	KRW 315.2 billion
Shareholder status	HD Hyundai Co., Ltd.: 37.22% National Pension Service: 12.44% Employee Stock Ownership Association: 0.66% Others: 49.68%

1) As of Dec. 31, 2023

2) The company name and the Head Office address were changed at the General Meeting of Shareholders on March 22, 2023.

3) Spun off from Hyundai Heavy Industries Co., Ltd.

Business Overview

HD Hyundai Electric develops and supplies various electrical and electronic devices and energy solutions required in power generation, transmission and distribution.

1 Power Solution

HD Hyundai Electric's Power Solutions provide power systems within the grid (electricity grid) for the purpose of power generation, transmission and transformation. Our main products include power transformer, gas insulated switchgear, etc.

2 MV/LV Solution

HD Hyundai Electric's MV/LV solutions supply power distribution systems, control systems and drive systems, to chemical plants and general industries. Our main products include switchgears, distribution transformers, low- & medium-voltage circuit breakers and industrial control systems.

3 Marine Solution

HD Hyundai Electric's Marine Solutions provide electrical systems to ships and offshore facilities, and are used for general ships, warships, etc. Our main products include switchgears, distribution transformers and rotating machineries, used for ships.

4 GREENTRIC

"GREENTRIC", a compound of "Green" and "Electric" features the main products that include SF₆-Free GIS and Natural ester/Synthetic oil immersed power transformer. HD Hyundai Electric strives to supply products that further benefit the environment and humanity and enhance future sustainability.

5 INTEGRICT

"INTEGRICT" is an ICT solution that provides high energy efficiency and asset investment utility to clients and is divided into two areas: energy solutions and asset management solutions. It maintains and improves client assets in their best conditions so that clients can focus on their business growth while also providing insights that lead their businesses to success based on asset utilization analysis.



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Management Philosophy

HD Hyundai Group's Mission



"We pioneer the future through leading innovations and relentless challenges."



HD Hyundai Group's Core Values



Leading Innovations

- We innovate the way we work through creative thinking.
- We lead industrial innovation with future technologies.



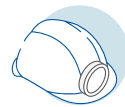
Fearless Challenges

- We continuously challenge limits and create new values.
- We foster a culture that embrace failure and encourage endless challenges.



Mutual Respect

- We strive for open communication based on diversity.
- We respect growth of our employees.
- We create a better world by practicing social responsibilities.



Safety for All

- We aim for the highest level of safety to protect ourselves.
- We bring safety to customers, society, and humanity as a whole by providing safe products.

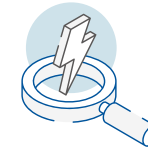
HD Hyundai Electric's Mission



Empower Growth



The Core Values (C.R.E.D.I.A.)



Creative

We provide products and solutions with creative foresight and unique technology that are faithful to the essence of our customers' business.

Reliable

We build customer trust by implementing our proactive "Before Service" philosophy, which meets the needs of customers before they are discovered.

Efficient

We provide products and solutions based on energy efficiency, to improve our customers' business efficiency and return on investment (ROI).

Determined

We achieve our goal of spearheading the market with a strong drive and determination, and lead customer communication by proactively responding to their needs.

Integrated

We advance as a total solution provider which offers products and control technologies in an integrated manner.

All Values. We make the Electric & Energy for All

By integrating all values, we will make Electric & Energy for All.

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Power Solution

HD Hyundai Electric's Power Solutions are solutions which provide power systems within the grid (electricity grid) for the purpose of power generation, transmission and transformation.

Power Transformer

HD Hyundai Electric has supplied 1.2 million MVA power transformer to 70 countries worldwide on a cumulative basis. With the establishment of the latest equipment and production systems that meet the international standards, we produce power transformers with diverse specifications ranging to 800 kV, with a total production capacity of up to 100,000 MVA per year. In particular, one of our strengths lies in flexible design capabilities which enable customization that meets various needs of customers.



Gas Insulated Switchgear

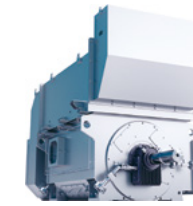
HD Hyundai Electric supplies gas insulated switchgear to 40 countries worldwide. We are equipped with the state-of-the-art facilities and manufacturing systems that meet the international standards, which enable us to have the capacity to manufacture gas insulated switchgears of up to 800 kV, the maximum rated voltage in Korea. These gas insulated switchgears boast stable structures, compact sizes, convenient control & monitoring, low levels of noise & electromagnetic emission, and long service lives. In recognition of these outstanding features, we have received certifications from internationally accredited testing agencies such as the KEMA¹, CESI², and KERI³. These gas insulated switchgears which boast such excellence are recognized for their technology and quality in the global market, especially in the Middle East market including Saudi Arabia, and are occupying a high market share.



1. KEMA: Keuring van Elektrotechnische Materialen te Arnhem (The Dutch Electrical Safety Standards)
2. CESI: Centro Elettrotecnico Sperimentale Italiano (The Italian Central Electricity Testing Institute)
3. KERI: Korea Electrotechnology Research Institute

Medium & High Voltage Motor

HD Hyundai Electric's medium & high voltage motor come in various specifications and are supplied in models optimized for customers' operating environment and conditions. Our medium & high voltage motors are manufactured under the thorough quality management, capitalizing on cutting-edge design technologies in compliance with international standards including the IEC¹, NEMA², JIS³, ANSI⁴, and DIN⁵. Our high-voltage motors boast high efficiency, low vibration, and low noise levels, which are supplied to various industries such as power generation, desalination, shipbuilding, offshore engineering, oil & gas, water treatment, nuclear power plants, hydrogen and ammonia plants, carbon capture, and electrification.



1. IEC: International Electrotechnical Commission
2. NEMA: National Electric Manufacturers' Association
3. JIS: Japanese Industrial Standards
4. ANSI: American National Standards Institute
5. DIN: Deutsche Industrie Normen (German Industrial Standards)

Generator

HD Hyundai Electric is a provider of a wide range of generators ranging from ones tailored to the characteristics of each industry, such as generators for power plants, ships, general industrial use, and DPPs¹ and PPSs², to special-purpose generators for nuclear facilities and other test facilities. We apply our unique design and manufacturing technologies to produce generators with a high efficiency and a high-power density (lightweight), which ensure their stable operation even in extreme conditions.



1. DPP: Diesel power plant
2. PPS: Packaged power station

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MV/LV Solution

HD Hyundai Electric's MV/LV Solutions are solutions which supply power distribution systems and control systems to chemical plants and general businesses.

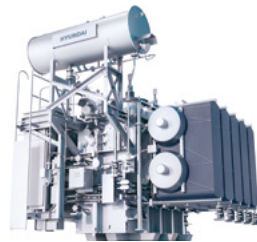
Switchgear

HD Hyundai Electric manufactures high-performance and high-reliability switchgears certified with the IEC and the ANSI standards. Their portfolio includes gas-insulated switchgears, high/low voltage switchgears, and electric motor control panels. Our switchgears have advantages such as high compatibility, long service lives and minimal maintenance requirements due to customized and standardized designs. Based on high reliability in quality, we have a wide range of supply records in the Korean industrial plant market for various facilities, plants, and nuclear power plants.



Distribution Transformer

HD Hyundai Electric produces oil-immersed and dry-type distribution transformers up to 35 kV, 50 MVA, supplying them to various places including plants, apartments and subways. Being recognized of the flexible design and manufacturing capabilities for the high degree of customization of oil-immersed distribution transformers, we are exporting them to over 70 countries in the world. Cast-resin transformers, which are other types of our transformers, are fire retardant with excellent insulation and have the advantage of easy maintenance and inspection.



Low- & Medium-Voltage Circuit Breaker

HD Hyundai Electric offers a broad portfolio of low- & medium-voltage circuit breakers from MCCBs¹ for households to ACBs² and VCBs³ for industrial plants. The remarkable competitiveness of our low- & medium-voltage circuit breakers are that they safely protect the electrical equipment. In particular, our "HG Series" won several design awards, including the "IF Design Award 2016" for their compact and sophisticated design.

1. MCCB: A Molded Case Circuit Breaker that detects an abnormal current state and blocks the circuit before it is burned or damaged by heat
2. ACB: An Air Circuit Breaker that detects overvoltage, overcurrent and undervoltage and protects motors by blocking the circuit
3. VCB: A vacuum circuit breaker that detects overvoltage, overcurrent, undervoltage and short circuit and protects the discharge of a transformer, etc., by evacuating the inside of the circuit breaker



Low-Voltage Motor

HD Hyundai Electric's low-voltage motor has an optimized structural design with low noise and low vibration, reducing power costs through premium-level high operation efficiency. It is also effective in extending the motor's service life with Class F (Maximum permissible temperature: 155°C) insulation, a winding temperature below Class B (Maximum permissible temperature: 130°C), and a low bearing temperature. In addition, it allows inverter duty and high IP degree protection. These high-performance low-voltage motors are recognized for their technology as they have acquired numerous efficiency and safety certifications from around the world.



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Marine Solution

HD Hyundai Electric's Marine Solutions supply electrical systems to ships and offshore facilities.

Marine Switchgear

HD Hyundai Electric's marine switchgears safely supply power to onboard electric equipment and protect power systems¹ in the case of electrical accidents. On the foundation of our unrivaled quality and technology, we have supplied our products to HD Hyundai Heavy Industries as well as Samsung Heavy Industries, Hanhwa Ocean and various other shipyards, for over 40 years.

1. A power transmission system which is widely connected with a power plant, a substation, transmission lines, etc.



Marine Distribution Transformer

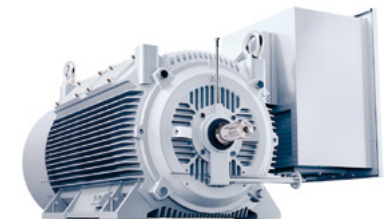
HD Hyundai Electric's marine distribution transformers have unparalleled advantages in stability, low loss, low noise, compactness, and lightweight. In addition, the advanced molding technology applied to these transformers eliminates the risk of explosion and fire. It also gives excellent crack resistance and insulation performance.



Rotating Machineries for Marine

HD Hyundai Electric manufactures generators and motors for ships, which meet worldwide ship classification standards such as the KR¹, ABS² and LRS³, and has supplied our products to HD Hyundai Heavy Industries, Wartsila, MAN and many other leading engine manufacturing companies. We produce models not only for general merchant ships, but also for warships, FPSOs⁴, drill ships⁵ and other specialized ships. With our unrivaled technologies, we supply the optimized models for the characteristics of each ship. Our products' excellent corrosion resistance, and our prompt customer service through our global after-sales service network, raise the reliability of our quality.

- 1. KR: Korean Register of Shipping
- 2. ABS: American Bureau of Shipping
- 3. LRS: Lloyd's Register of Shipping
- 4. FPSO: Floating Production Storage and Off-loading
- 5. Drill ship: A ship-type drilling facility specially designed to perform oil and gas drilling in the deep sea or in the middle of the ocean where fixed structures cannot be installed



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GREENTRIC

GREENTRIC is HD Hyundai Electric's product brand, designed to lead the next-generation power market in the era of great energy transition. The term "GREENTRIC" is a compound of "Green" and "Electric", and reflects HD Hyundai Electric's commitment to supply products that benefit the environment and humanity and enhance future sustainability. HD Hyundai Electric will continue to develop products that care for the future of the Earth and the environment and become the standard for future power technologies.

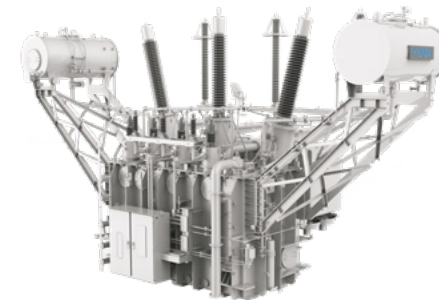
SF₆-Free GIS

HD Hyundai Electric has developed the SF₆-free GIS, which is the first product in Korea to which purely proprietary technology has been applied. The product uses C₄F₇N+CO₂ gas, instead of SF₆ (sulfur hexafluoride), which has a Global Warming Potential 23,900 times higher than that of CO₂, allowing reduction of greenhouse gas emissions by about 99% compared to existing products. In April 2021, based on the technology we have accumulated over a long period of time, we succeeded in developing Korea's first 170 kV 50 kA 4,000 A GIS that uses Novec mixed gas. We are currently developing a 72.5 kV GIS with dry air and vacuum interrupters applied, and we plan to develop GISs in various voltages in the future to respond to market demands for carbon neutrality.



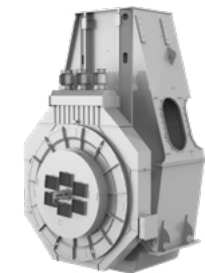
Natural ester/Synthetic oil immersed power transformer

HD Hyundai Electric has developed a transformer that uses insulating oil(vegetable/synthetic), which is flame retardant, biodegradable, and non-toxic, this transformer prevents serious leakage environmental pollution. The product guarantees both stability and performance as it is not only equipped with excellent core technologies such as insulation and cooling designs that existing transformers have, but can also apply the DPRS (Dynamic Pressure Resistant System) technology.



Engine Mounted Generator

HD Hyundai Electric's Engine Mounted Generators (EMG) can use space more efficiently than existing shaft generators. In addition, it improves the energy efficiency of the entire ship propulsion system, reducing fuel consumption by about 2~3% and carbon emissions by about 4~5% compared to the existing shaft generators.



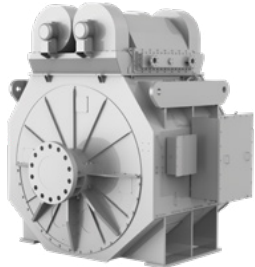
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Permanent Magnet Shaft Generator

In November 2021, HD Hyundai Electric developed Korea's first "2 MW large-capacity permanent magnet shaft generator" with its proprietary technology, succeeding in domestically producing large-capacity permanent magnet shaft generators, which had been entirely imported. The generator's rotor uses permanent neodymium magnets, which are high-performance magnets, improving the power generation efficiency by up to 3% compared to the existing methods. Also, the generator has been made smaller and lighter, improving the power density performance compared to that of the induction type. Moreover, we applied the rotational power of large propulsion engine to generate electricity, enhancing the energy efficiency and reducing fuel costs at the same time. The generator can also reduce carbon emissions by about 3%, improving the EEDI¹ and enabling proactive response to many environmental regulations.

1. EEDI: Energy Efficiency Design Index; the amount of carbon dioxide emitted when a ship transports 1 ton of cargo for 1 nautical mile (1.852 km) (Unit: g/ton. mile)



Dry-Air Switchgear (E-GIS)

In 2015, HD Hyundai Electric signed a business agreement with KEPCO, and developed an switchgear whose Global Warming Potential (GWP) is 1 or less and which uses dry air as an insulating medium instead of SF₆ which is regulated by greenhouse gas regulations. Later, in response to the demand for expansion of the eco-friendly switchgear market, we developed and delivered the 25.8kV E-GIS. In 2020, we successfully exported the 25.8kV E-GIS overseas for the first time in Korea. We are also committed to secure and commercialize original technologies for various insulation media other than dry air, to strengthen the competitiveness of our products.



IE4 LV Motor (Super Premium Efficiency Low-Voltage Motor)

In July 2023, the European Union's minimum efficiency requirement of electric motors was tightened from the Premium Class (IE3: International Energy Class) to the Super Premium Class (IE4), and it will also be applied in Korea from 2025 or 2026. In response to this, HD Hyundai Electric has developed IE4 motors with a 1.1% increase in efficiency compared to IE3 motors, proactively responding to the increase in the ratio of mandatory use of IE4 low-voltage motors in developed countries. Based on the technologies accumulated over many years, we will expand our product lineup of high-output, high-efficiency electric motors.



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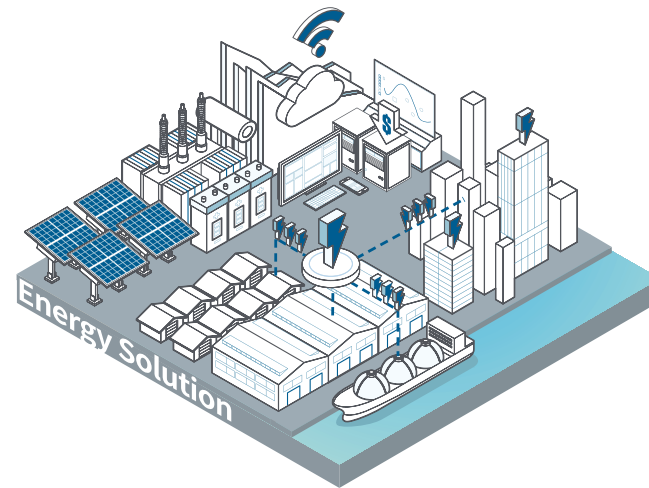
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“INTEGRICT” is an ICT solution that provides high energy efficiency and asset investment utility to clients and is divided into two areas: energy solutions and asset management solutions. It maintains and improves client assets in their best conditions so that clients can focus on their business growth while also providing insights that lead their businesses to success based on asset utilization analysis.

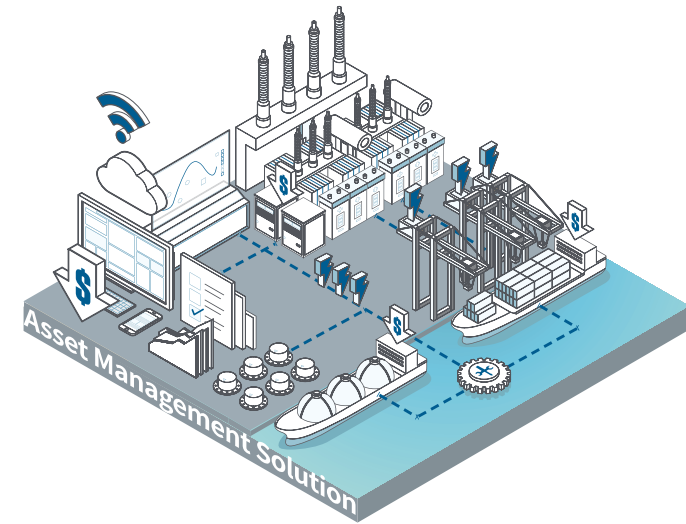
Energy Solution

HD Hyundai Electric’s Energy Solution business builds systems that enable efficient use of electric power through the integrated management of energy production, consumption, sales and operation. At this juncture when demand for new renewable energy is increasing and the electric power industry structure is changing, our INTEGRICT energy solutions which help efficient management of energy are particularly at the center of attention. Our Energy Storage System (ESS) is a customized system for energy production, efficiency, management, etc. while the Building Energy Management System (BEMS) refers to a system that maximizes efficiency by integrating the analysis, operation and management of energy used in buildings. The Factory Energy Management System (FEMS) provides an optimal energy efficient environment by integrating the analysis, operation and management of energy consumption in factories. The Microgrid solution is a next-generation power system that supports independent supply of electricity by building smart systems capable of self-producing electricity in small areas.



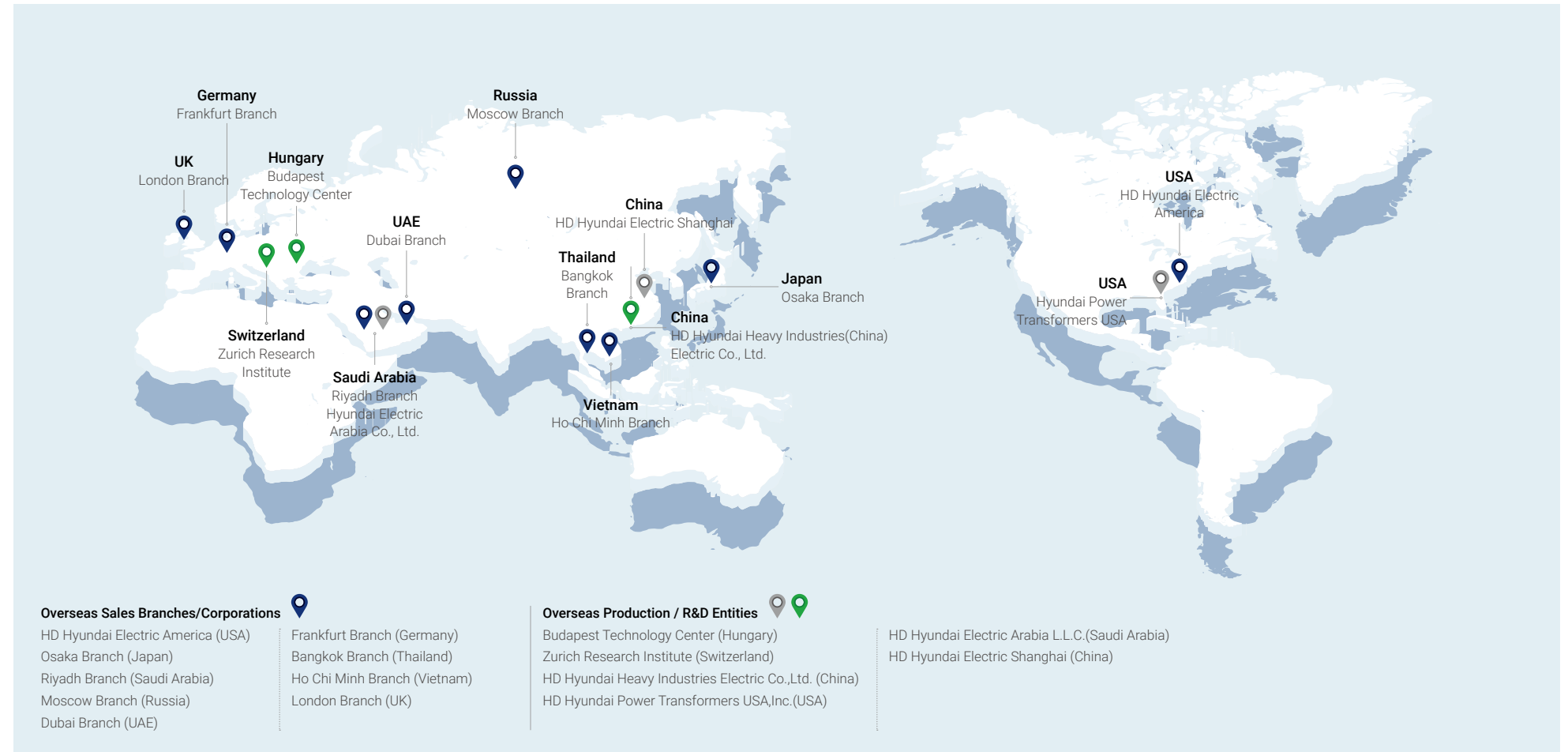
Asset Management Solution

HD Hyundai Electric’s Asset Management Solution business maximize the overall business Efficiency, by systematically managing the performance, risks, and maintenance costs, according to the product life cycle (PLC) of various products, and by providing asset management solutions tailored to customer needs. The product service lives can be extended by acquiring and analyzing essential information after connecting the ICT platform to the major power facilities and then by managing the operation performance according to failure prediction. Therefore, problems such as breakdowns can be preemptively prevented, improving the overall facility performance.



Global Network

HD Hyundai Electric has established overseas branches, corporations, and R&D hubs in major countries, including the U.S., China, and Germany. Based on these footholds, we produce and supply electrical and electronic devices and energy solutions that are required in every stage of electricity supply across global markets, supported by an extensive global network.



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OUR ESG Vision

HD Hyundai Electric is dedicated to embracing continuous challenges and fostering innovations to create tomorrow's possibilities with today's technology. We have established ESG strategies to provide new solutions to challenges facing human society, such as transitioning to a low-carbon society and realizing future energy ecosystems, and to position ourselves as a company that maintains win-win relationships with all stakeholders.

Our ESG Strategies

ESG Management Vision



A trusted company that creates sustainable value

ESG Slogan

Efficiency, Sustainability and Growth

ESG Strategy Direction

- Creating Environmental Impact through eco-friendly management
- Pursuing Shared Growth through stakeholders' mutual respect and participation
- Ensuring Transparency & Compliance with ESG management

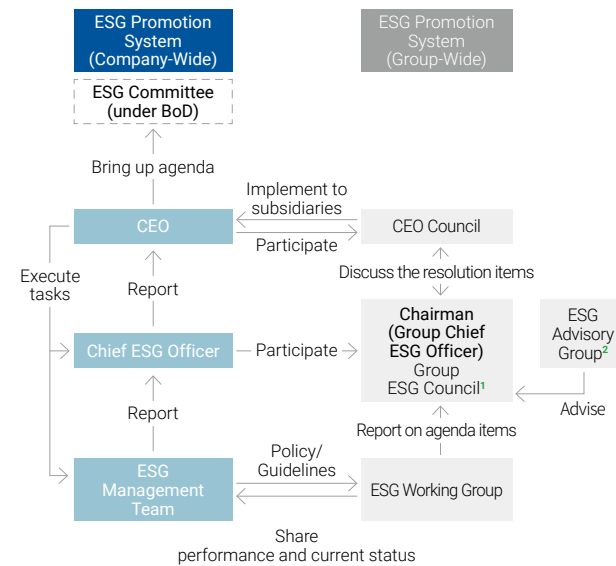
ESG Core Tasks

- Expanding business portfolio by developing low-carbon products and services
- Expanding the use of renewable energy
- Enhancing ESG management support for partner companies
- Strengthening human rights management
- Expanding support projects for vulnerable groups in local communities
- Strengthening governance transparency and integrity
- Participating in Global Initiatives

ESG Governance

HD Hyundai Electric has established a company-wide ESG organizational system, strengthening the management of new risks or opportunities related to non-financial factors. We have formed the ESG Committee under the Board of Directors, the highest decision-making body, to oversee ESG strategies, goals, and fulfillment levels, with the ESG Management Team being in charge of overall ESG-related operations.

ESG Governance



1. Comprised of Chief ESG Officers of each subsidiary
2. Comprised of outside experts of each ESG section

2023 Group ESG Council Operation Status

Council	No. of meetings held	Main agendas
Group ESG Council	Once	• Discussing the group's ESG direction
ESG Working Group	Twice	• The group's ESG implementation plan • Sharing the direction of carbon neutrality work • Discussing the direction of the group's ESG platform development

2023 ESG Committee Operation Status

Meeting Date	Attendance rate	Main agendas
Feb. 2, 2023	100%	• Approval of the ESG work plan for 2023
Mar. 22, 2023	100%	• Determination of the order of acting duties in the event of the ESG Committee Chairperson's absence
Apr. 21, 2023	100%	• Status reporting according to supply chain ESG strengthening trend • Reporting of ESG materiality assessment results
Jul. 25, 2023	100%	• Reporting of the ESG management status



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Stakeholder Engagement

HD Hyundai Electric defines shareholders, investors, employees, partner companies, and the government as our key stakeholder groups and manages and responds to ESG issues by each stakeholder. We recognize the importance of communication with stakeholders, and operate specialized communication channels. Our Corporate Governance Charter explicitly outlines the

rights of stakeholders and emphasizes our responsibilities towards them, such as consumer protection, fair trade practices, and their involvement in business oversight. HD Hyundai Electric remains committed to engaging sincerely with stakeholders through various communication channels.

	Customers	Shareholders and investors	Employees	Partner companies	Government	Local community	Press and media
Key Issues and Interests	<ul style="list-style-type: none"> Strengthening the competitiveness of products and technologies Developing low-carbon and high-value-added product Improving product stability Enhancing communication satisfaction 	<ul style="list-style-type: none"> Enhancing shareholder values Generating stable business performance Managing business opportunities and risks Establishing a sound governance structure 	<ul style="list-style-type: none"> Fair evaluation and compensation Improving welfare benefits Conducting education and training Creating cooperative labor-management relations Operating a safe workplace 	<ul style="list-style-type: none"> Promoting shared growth Reinforcing fair trade Supporting capacity building of partner companies Safety and health for partner companies Responsible supply chain management 	<ul style="list-style-type: none"> Taking part in government policies Participating in and supporting government events Sharing industrial and corporate information Invigorating the local economy Safety and labor related issues 	<ul style="list-style-type: none"> Invigorating the local community Bringing industries and increasing employment in the region Guaranteeing environmental and human rights Implementing social contribution activities centered on local community Enhancing communication with the local community 	<ul style="list-style-type: none"> Business performance and industrial issues Major issues across the company Direction of the company's key business
Main Communication Channels	<ul style="list-style-type: none"> Customer satisfaction survey Customer service center SNS (Instagram, LinkedIn, etc.) 	<ul style="list-style-type: none"> Investment briefing sessions General meetings of shareholders Annual reports Website 	<ul style="list-style-type: none"> Labor-management council Grievance handling and reporting system Intranet and internal newsletters Management status briefing sessions Safety environment meetings 	<ul style="list-style-type: none"> Regular meetings of partner companies Partner company grievance resolution system Partner Companies Council 	<ul style="list-style-type: none"> Policy advisory body Policy meetings Visiting the National Assembly and government ministries 	<ul style="list-style-type: none"> Local governmental councils Civil groups and volunteer groups 	<ul style="list-style-type: none"> Press release Media center on website Press meetings
HD Hyundai Electric's Key Activities	<ul style="list-style-type: none"> Training on quality improvement for employees Green product and technology certification Continuous product R&D 	<ul style="list-style-type: none"> Disclosing decisions made by the Board of Directors Introducing an e-voting system Notifying agendas before each general meeting of shareholders Implementing proxy voting system and stipulating the rules Increasing the dividend per share 	<ul style="list-style-type: none"> Operating a labor-management council Providing various training programs and human rights education Providing retirement training Acquiring family-friendly company certification Settling the PC-OFF system Establishing the Human Rights Management Committee Conducting human rights impact assessments 	<ul style="list-style-type: none"> Financial support and ESG management support Operating a fair trade system Training and technical support programs Operating grievance handling and reporting channels related to partner companies' safety and health 	<ul style="list-style-type: none"> Operating a fair trade voluntary compliance program Investing in R&D of green energy conversion Membership and activities in major associations 	<ul style="list-style-type: none"> Operating talent program in the local community Supportive policy for the socially vulnerable Supporting investment for community development Employees' participation in salary sharing campaigns Social contribution engaging employees, including volunteer work 	<ul style="list-style-type: none"> Distributing press release Posting news on the website Supporting news coverage of reporters Holding press conferences

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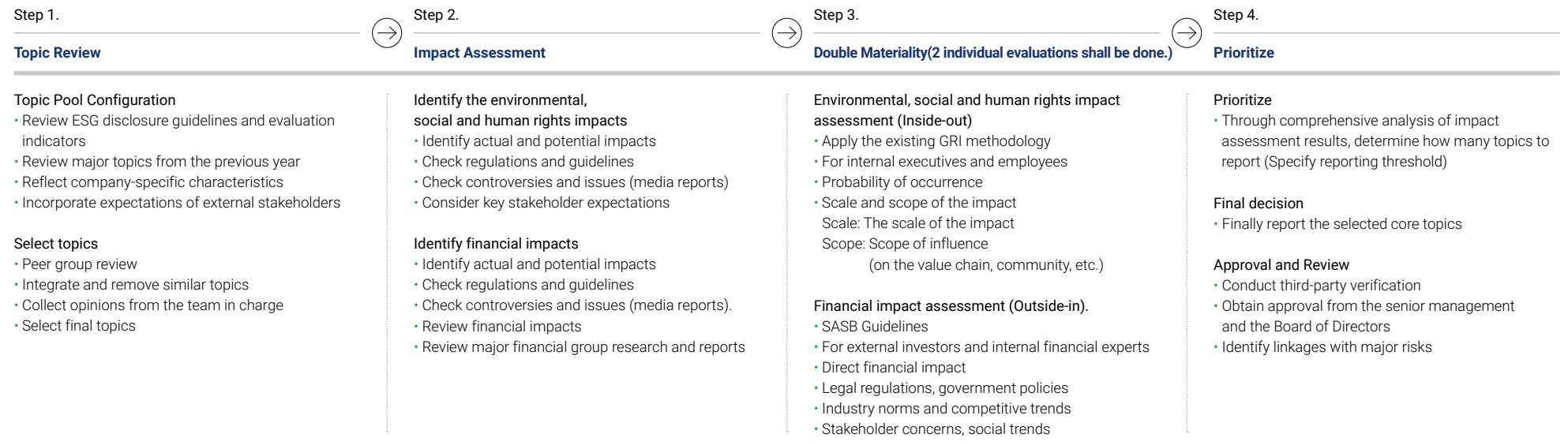
The Assessment Process

Every year, HD Hyundai Electric conducts a materiality assessment to identify essential topics related to sustainability. Our double materiality assessment reflects the approach suggested by the Global Reporting Initiative (GRI) Standards and the European Commission's Corporate Sustainability Reporting Directive (CSRD). This takes into account not only the environmental and social impacts, but also the impact on corporate value and finance from an external perspective. We integrate the derived key topics into our ESG strategies and continuously monitor them.

The Double Materiality Assessment Process

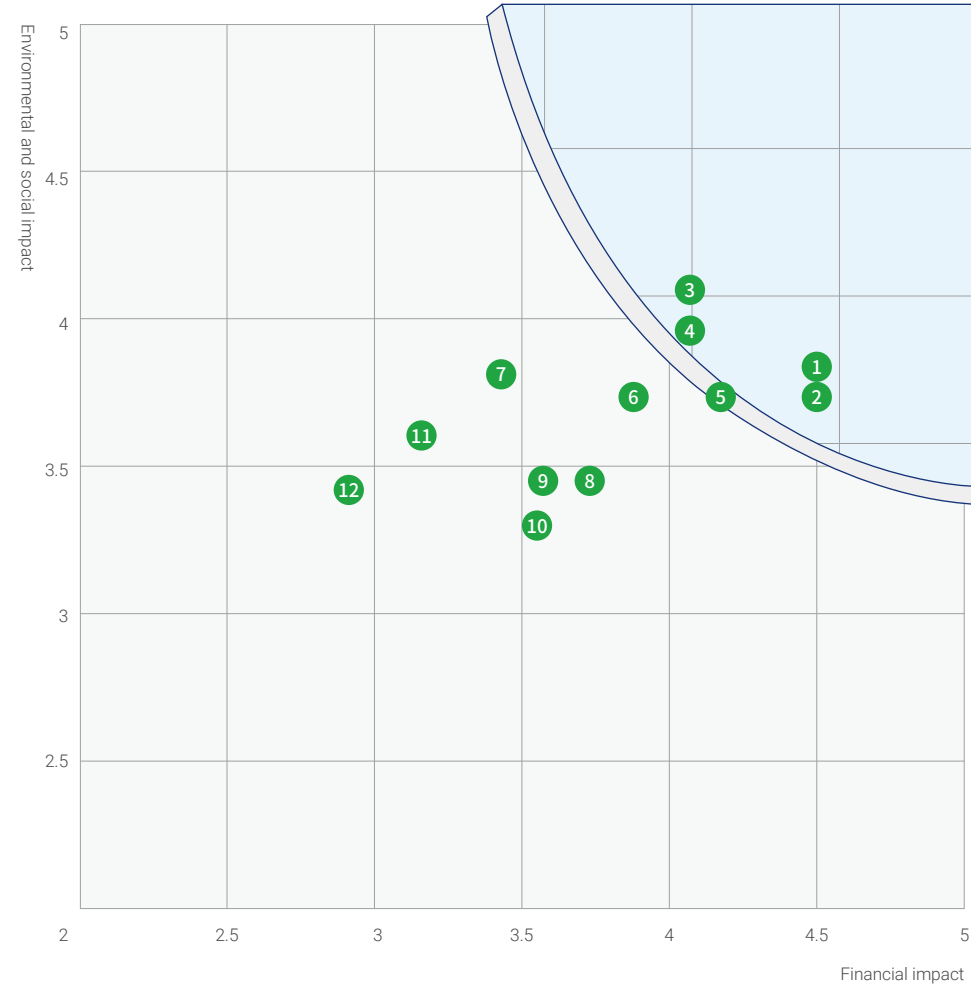
HD Hyundai Electric has conducted a double materiality assessment by integrating it with the Enterprise Risk Management (ERM) process. Upon reviewing the key topics from sustainability guidelines such as GRI, SASB, and MSCI, and analyzing benchmarking data from major Korean and foreign peers, along with internal and external management data, we derived a set of 12 issues relevant to our business and stakeholders. We reviewed related regulations, guidelines, controversial issues from the past three years, identified risks, and opportunities to understand the impact of each

issue, and then conducted a survey to assess the economic, social, and environmental impact (Impact Materiality) and financial impact (Financial Materiality). The survey, conducted on a five-point scale, had internal employees and other stakeholders evaluate the Impact Materiality, external investors and internal financial experts assessed the Financial Materiality.



Double Materiality Assessment

Materiality Assessment Result



Rank	Field	Topic	Environmental and social impact	Financial impact	Priority in 2022	GRI	Page
1	Social	Enhancing quality control	3.72	4.38	New	self-management indicators	19~21
2	Environmental	Developing eco-friendly products	3.64	4.38	1	302	26~28
3	Environmental	Responding to climate crises	3.94	3.99	3	302, 305	38~40
4	Social	Enhancing occupational safety and health	3.76	4.01	4	403	60~67
5	Social	Strengthening supply chain competitiveness and shared growth	3.60	4.10	2	308, 414	72~75
6	Governance	Strengthening business ethical management	3.59	3.83	6	205, 206	87~90
7	Environmental	Waste management	3.84	3.44	9	306	43~45
8	Governance	Governance transparency	3.46	3.71	5	2	81~86
9	Social	Human resources management	3.44	3.58	7	401, 404	53~59
10	Social	Strengthening human rights management	3.37	3.54	10	406, 408, 409	68~71
11	Environmental	Water management	3.61	3.22	11	303	41~42
12	Environmental	Biodiversity	3.40	2.93	New	304	47~52

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Analysis of the Top Priority Topics

① Material issues and metrics for enterprise value creation

Category	Enhancing quality control	Developing eco-friendly products	Responding to climate crises	Enhancing occupational safety and health	Strengthening supply chain competitiveness and shared growth
Material risk or opportunity	<ul style="list-style-type: none"> Market opportunities resulting from securing products that meet domestic and international quality standards 	<ul style="list-style-type: none"> Increased development and commercialization of environmental equipment, including greenhouse gas reduction and high-efficiency products, due to environmental changes¹ in the electric power industry 1. Strengthening global environmental regulations, demanding reduction of carbon emissions, expanding new and renewable energy generation, etc. 	<ul style="list-style-type: none"> Due to the strengthening of greenhouse gas emission regulations and climate change response-related regulations (including disclosure), the cost of purchasing emission rights is increasing and the need to respond to climate disclosure is emerging. Costs are being incurred to procure renewable energy to achieve greenhouse gas reduction goals 	<ul style="list-style-type: none"> Incurring costs related to litigation and reduced revenue due to industrial accidents Strengthened penalties under the Industrial Safety and Health Act due to comprehensive amendments, including increased fines and penalties for corporations Enhanced safety management responsibilities for contractors, necessitating verification of compliance with safety and health measures by internal and external partner companies when contracting 	<ul style="list-style-type: none"> Potential disruption in material supply due to supply chain risks (overload of parts production by partner companies due to increased orders from our company, logistics disruption due to international situation, etc.)
Business case	<ul style="list-style-type: none"> Increasing demand for power equipment in various countries due to the rise in renewable energy usage and the need for replacing aging power grids Our major products, including power transformers and gas insulated switchgears, have secured international competitiveness through low-loss, compact designs 	<ul style="list-style-type: none"> Customers located in major markets leading the development of renewable energy, such as the US and EU, seek to manage their greenhouse gas emissions by using power equipment with low environmental impact Particularly, SF₆ has a global warming potential 23,900 times higher than CO₂, necessitating proactive measures to reduce its usage 	<ul style="list-style-type: none"> HD Hyundai Electric is subject to the emissions trading, requiring the purchase of greenhouse gas emission permits if emissions exceed allocated quotas RECs purchase costs are incurred to procure renewable energy 	<ul style="list-style-type: none"> Improved external image due to gradual reduction in accident rates, resulting in decreased indirect costs such as workers' compensation premiums With increased new orders, expansion projects are underway to enhance production capacity by expanding factories and production lines, leading to an increased scope of safety management Increased need for safety management at external construction sites due to recent rise in demand for power equipment products 	<ul style="list-style-type: none"> Failure in managing supply chain risks, such as procurement delays in raw materials, could lead to interruptions in our business operations, resulting in decreased sales and reputation damage
Business impact	<ul style="list-style-type: none"> Revenue 	<ul style="list-style-type: none"> Revenue 	<ul style="list-style-type: none"> Costs and revenue 	<ul style="list-style-type: none"> Costs and revenue 	<ul style="list-style-type: none"> Costs and revenue

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Analysis of the Top Priority Topics

① Material issues and metrics for enterprise value creation

Category	Enhancing quality control	Developing eco-friendly products	Responding to climate crises	Enhancing occupational safety and health	Strengthening supply chain competitiveness and shared growth
Business strategy	<ul style="list-style-type: none"> Proactive quality management system establishment for stable product performance: Early identification of quality risks, enhancement of root cause analysis for quality issues, and continuous development of quality innovation activities. Implementation of preventive diagnostic systems on testing equipment for key products to enhance product performance verification systems and optimize facility asset management, aiming to promote preventive diagnostic system solutions through secure track records 	<ul style="list-style-type: none"> Developing products that reflect market requirements for carbon neutrality (greenhouse gas reduction, high efficiency) Securing new growth engines by developing products in a timely manner and building a lineup to proactively prepare for the eco-friendly market Securing products/technology in response to global environmental/efficiency regulations and electrification Establishing technology development and investment strategies to expand the GREENTRIC product lineup and verify effectiveness through green product and technology certification 	<ul style="list-style-type: none"> Progress management towards enhanced greenhouse gas emissions control and achieving carbon neutrality goals Utilization of EMS management systems and other solutions to optimize renewable energy procurement and minimize procurement costs Strengthening the GREENTRIC product lineup, such as developing the 145kV SF₆-free GIS product series, for greenhouse gas reduction and carbon mitigation initiatives 	<ul style="list-style-type: none"> Operation of occupational health and safety management system according to ISO 45001 certification standards Special inspections related to the Serious Accidents Punishment Act to prevent accidents (monthly) Monthly executive inspections by the CEO and safety management officers to demonstrate top management's commitment to safety management Regular implementation of risk assessments and conducting risk assessment competitions for proactive management Development and training on disaster and emergency response scenarios Implementation of safety incentive programs Expansion of employee health support initiatives (health check-ups, smoking cessation programs, mental health support buses, etc.) Support for compliance with the Serious Accidents Punishment Act through safety and health inspections of internal and external partner companies 	<ul style="list-style-type: none"> Establishing sustainable supply chain management policies incorporating major ESG issues including environment, labor, and anti-corruption, in addition to occupational health and safety Conducting annual risk assessments on supply chain
Goal	<ul style="list-style-type: none"> Continued reduction in failure cost-to-sales ratio 	<ul style="list-style-type: none"> Short-term (2023~2025): Establishing a foundation for entering new markets Mid-term (2026~2028): Expansion of product lineup for new markets Long-term (2029~2030): Expansion of business scope into new markets (market diversification) 	<ul style="list-style-type: none"> Long Term (2030): RE34 	<ul style="list-style-type: none"> Mid-term goal (2028): 0 serious accidents, accident rate 0.103, converted accident rate 0.180 	<ul style="list-style-type: none"> Enhancing the ESG management system of the supply chain (expanding ESG evaluation targets and supporting ESG management of partner companies) Expanding support programs for partner companies
Key achievements	<ul style="list-style-type: none"> Decrease in failure costs as a percentage of revenue in 2023 compared to the previous year 	<ul style="list-style-type: none"> SF₆-free 170kV GIS green technology product certification (2023) 	<ul style="list-style-type: none"> Through energy saving activities, a reduction of 1,413,035 kWh in electricity consumption and a reduction of 652 tCO₂eq in greenhouse gas emissions were achieved in 2023¹ 	<ul style="list-style-type: none"> Achieved 0 major accidents in 2023, with an accident rate of 0.103, and a converted accident rate of 0.180 	<ul style="list-style-type: none"> Conducted supply chain ESG diagnostic assessments for 40 companies in 2023 Identified high-risk groups through initial assessments (below 70 points, 75%) and supported risk mitigation measures. Reduced high-risk groups with scores below 70 points to 20% in the second assessment
Compensation for executives	<ul style="list-style-type: none"> Reducing failure costs compared to sales 	<ul style="list-style-type: none"> Development of eco-friendly technologies and products 	<ul style="list-style-type: none"> Reducing greenhouse gas emissions 	<ul style="list-style-type: none"> Prevention of Serious Accidents 	<ul style="list-style-type: none"> Enhancing communication with partner companies for supply chain stability

1. The amount of Savings through self-reducing activities (replace factory ceiling lights with LEDs, manage office heating and cooling temperature, turn off lights during lunch time, turn off office equipment when leaving work, etc.) compared to full-time operation

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② Material issues and metrics related for external stakeholders

Category	Enhancing quality control	Developing eco-friendly products	Responding to climate crises	Enhancing occupational safety and health	Strengthening supply chain competitiveness and shared growth
Topic relevance on external stakeholders	<ul style="list-style-type: none"> • HD Hyundai Electric supplies essential power equipment critical to major societal infrastructure such as the power grid • Issues related to the quality or safety of our products can disrupt energy supply at regional levels using these grids, directly impacting quality of life and increasing social costs 	<ul style="list-style-type: none"> • Greenhouse gas emissions contribute to climate change such as temperature and sea level rises, resulting in social damage • Reducing greenhouse gas emissions per unit of our products mitigates climate change impacts and simultaneously reduces the economic costs for society 	<ul style="list-style-type: none"> • Excessive global temperature rise leads to negative consequences for the environment, ecosystems, and human society • Increased frequency of natural disasters • Reduction of ecosystem services, etc. 	<ul style="list-style-type: none"> • The implementation of the Serious Accidents Punishment Act has expanded our company's responsibility for the supply chain. • Smaller-scale companies often lack safety systems and equipment, increasing the likelihood of accidents. Therefore, it is necessary for HD Hyundai Electric to prevent accidents by proactively identifying potential risk factors in the supply chain 	<ul style="list-style-type: none"> • HD Hyundai Electric's supply chain consists of numerous small and medium-sized enterprises (SMEs). • SMEs account for 99% of all enterprises and play a crucial role in the domestic economy, encompassing intellectual capital such as technological expertise among their workforce • Bankruptcy of SMEs due to the economic downturn causes enormous social losses and further leads to a decline in Korea's national competitiveness
Impact metric	<ul style="list-style-type: none"> • Power loss rates of our products • Electricity cost per unit 	<ul style="list-style-type: none"> • Greenhouse gas emissions per product • Social cost per ton of greenhouse gas emission 	<ul style="list-style-type: none"> • HD Hyundai's greenhouse gas emissions (based on Scopes 1 and 2) • Social cost per ton of greenhouse gas emission 	<ul style="list-style-type: none"> • Number of executives and employees who suffered work losses due to industrial accidents 	<ul style="list-style-type: none"> • Supply chain sales growth rate • Joint development of technologies, and market development performance



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EFFICIENCY < ⌂ ≡ >
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Story 01: Bringing forward the future of eco-friendly energy

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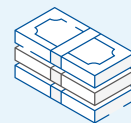
In order to limit the global temperature rise to 1.5°C, the Maginot line of the climate crisis, the world is establishing energy transition goals and is moving toward achieving net zero greenhouse gas emissions. Achieving this requires a shift to low-carbon renewable energy sources such as wind power, solar power and hydrogen, as well as electrification. According to the International Energy Agency (IEA), in order to achieve the mid- to long-term goals of the net zero scenario, the proportion of electricity use among final energy sources must be considerably increased from approximately 20% in 2023 to 30% by 2030. Therefore, significant investments are anticipated globally within short term.¹

As a proof, companies and organizations around the world have recently been accelerating their expansion of investments in transmission and distribution network infrastructure. In addition to the United States and Europe, which are actively investing in replacing old facilities and promoting renewable energy, Saudi Arabia, an oil-producing country, is also actively expanding investment in renewable energy generation. Moreover, emerging economies, such as India, which are focusing on urban development, are also expected to experience rapid market growth. HD Hyundai Electric plays a crucial role in energy conversion through its power equipment business. By actively participating in related projects and expanding our portfolio, we are committed to contributing to advancing the global energy transition.

1. Source: IEA 2024 Global Electricity Market Report (Electricity 2024)

Participated in the Neom City Project in Saudi Arabia

Secured a contract worth KRW 67.8 billion for power equipment for Neom Mountain Substation



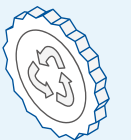
Advanced into the European offshore wind power market

Secured a contract worth KRW 79.2 billion for power equipment for an offshore substation in the Baltic Sea



Synthetic oil-immersed transformers

Received a first order for high-voltage, large-capacity transformers (400 kV, 460 MVA)



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Story 01. Participating in Global Renewable energy Projects

The Neom City Project in Saudi Arabia

In September 2023, by signing a power equipment supply contract with Al Gihaz, a Saudi company specializing in the construction of power transmission and substation facilities, HD Hyundai Electric participated in the "Neom City Project", Saudi Arabia's futuristic new city project. The Neom City Project is an eco-friendly future city construction project, where 100% of the electricity used is supplied by renewable energy, making the stable supply and demand of renewable energy crucial. For this project, HD Hyundai Electric plans to supply a total of KRW 67.8 billion worth of power equipment until November 2024, including extra-high-voltage transformers, high-voltage circuit breakers, and reactors, to the Neom Mountain Substation, which Al Gihaz is constructing in northern Saudi Arabia. Based on this experience, HD Hyundai Electric will expand its market by actively participating in future large-scale power infrastructure construction projects.



On September 10, 2023 (local time), HD Hyundai Electric signed a power equipment supply contract with Al Gihaz, a Saudi company specializing in the construction of power transmission and substation facilities. The power equipment supplied will be installed in Neom City.

The DAC (Direct Air Capture) facility in Texas, USA

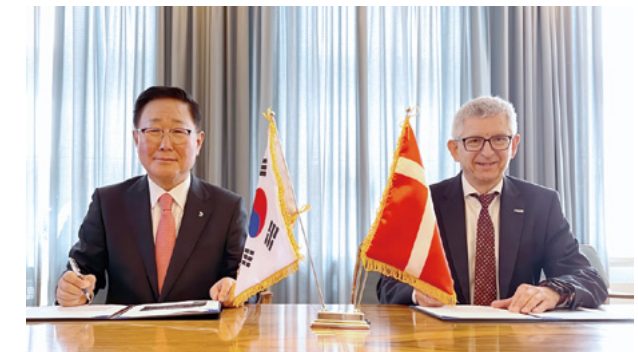
In April 2023, HD Hyundai Electric signed a contract to supply electric motors to the DAC¹ facility under construction in Texas, USA. The DAC facility is being built as a wet-type adsorption plant capable of capturing 500,000 tons of carbon per year in southern Texas, USA, and is expected to begin operation in mid-2025. The products we delivered will be used in the first-phase construction of this project. In addition, we are in discussions with multiple customers to participate in various carbon capture projects, including the subsequent second-phase construction.

1. DAC : Direct Air Capture, technology of directly capturing carbon dioxide emitted into the atmosphere



"Baltica 2", Poland's largest offshore wind power generation project

In June 2023, HD Hyundai Electric signed a contract with Semco Maritime, a Danish offshore wind power company, to supply power equipment for offshore substations worth a total of KRW 79.2 billion. Semco Maritime is the EPC (engineering, procurement, construction) lead company for "Baltica 2", Poland's largest offshore wind power project being developed on the Baltic Sea coast. Semco Maritime plans to utilize HD Hyundai Electric's substation transformers and reactors to the project, making HD Hyundai Electric's first foray into the European offshore wind power market. In particular, HD Hyundai Electric's experience in winning orders for offshore crude oil and gas production facility construction projects, along with recognition of its optimized product design capabilities, played a crucial role in securing this order. Building on the trust gained from various projects, HD Hyundai Electric successfully secured an additional order from Semco Maritime in November 2023 for reactors for offshore substations in Taiwan's offshore wind power generation project "Feng Miao".



HD Hyundai Electric signed a contract with Semco Maritime to supply transformers and reactors for offshore substations worth a total of KRW 79.2 billion (June 26, 2023, local time).

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Story 01.

Participating in Global Renewable energy Projects

The North American Hydrogen Plant Construction Project

The hydrogen energy complex under construction in southern Louisiana is a reforming facility designed to extract large amounts of blue hydrogen¹ from natural gas. This project aims to capture carbon dioxide emitted during the extraction process, permanently isolate it in underground facilities, and establish a system to sell the extracted blue hydrogen through pipelines across the Gulf Coast. HD Hyundai Electric supplied electric motors for this project. In addition, we are collaborating with many customers in the construction of hydrogen plants, including supplying electric motors to a hydrogen plant construction project in Alberta, Canada.

1. Blue hydrogen: Hydrogen produced by capturing and processing carbon dioxide generated during the reforming of fossil fuels

Expanding the supply of low-risk, high-efficiency equipment globally

Transformers that use synthetic oil

In response to the growing demand for low-risk transformers to minimize environmental pollution from potential power grid leaks, HD Hyundai Electric has expanded its portfolio with transformers using insulating oils (vegetable/synthetic) known for their flame retardant, biodegradable, and non-toxic properties. As a representative example, we signed a contract with National Grid UK, a British power grid operator, in January 2024, and received the first order from the UK for transformers using synthetic oil. Initially, we received an order for low-voltage (66 kV, 40 MVA) products for a UK power grid construction project. Subsequently in February, we successfully secured an additional order for four units of 400 kV (high voltage), 460 MVA (large capacity) synthetic oil transformers from National Grid UK. As a result, HD Hyundai Electric was able to record not only the first order for oil transformers from the UK, but also the first high-voltage, large-capacity synthetic oil transformer order. As the demand for transformers utilizing synthetic oils such as vegetable

oil continues to increase, we are committed to actively participating in the market.

Electric motors that increase energy efficiency in industrial sites

Throughout the world, there is a significant shift not only towards transitioning energy sources from fossil fuels to renewable energy but also towards technological advancements aimed at enhancing energy efficiency. A representative example of this is the transition to electric motors, which exhibit lower energy loss than internal combustion engines. HD Hyundai Electric is collaborating with major compressor companies in the United States to ensure that our products are applied from the design stage. In addition, we are participating in numerous electrification projects to replace compressor engines used at our plants in Texas and New Mexico with electric motors. Based on this experience, we are committed to accelerating our entry into the electrification market.



Story 02: The energy for sustainable growth is “technology”

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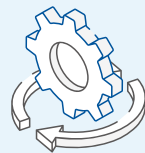


In the midst of rapidly changing industrial environment, one thing remains constant: technological prowess forms the cornerstone of corporate competitiveness. In order to strengthen its R&D capabilities and lead the future industry, HD Hyundai Electric declared “Research for Future, Development for Business!” as the company’s core R&D vision in February 2023, and established the Future Technology Committee, an organization which will lead the achievement of the vision. Serving as HD Hyundai Electric’s think tank, the Future Technology Committee analyzes future trends in the power industry, evaluates business necessity and urgency, and guides the development of short, medium, and long-term product and technology roadmaps.

In 2024, making the second year of operation for the Future Technology Committee, HD Hyundai Electric is innovating its operational methods and organizational structure while actively promoting internal and external cooperation activities such as open R&D. We remain committed to strengthening our technological capabilities to expand the development of technologies and products that can contribute to the global energy transition.

Establishing an open R&D cooperation system

Establishing an integrated R&D funding cooperation system with KAIST



Green technology & product certification

GREENTRIC ECO 170kV GIS



The Korea Engineer Award

The world’s first DC power supply system for MW-class buildings



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Laying the foundation for future growth engines through R&D innovation activities

Redefining the status of R&D by operating the Future Technology Committee

In 2023, HD Hyundai Electric has established and is actively operating the Future Technology Committee to systematically reposition its R&D status and lay a foundation for strategic R&D activities. The Committee, through its working-level organizations, is tasked with identifying items across five key fields — ICT, eco-friendliness, DC, and others — that will serve as future growth drivers. It plays a pivotal role by presenting these items to quarterly management meetings, ensuring focused discussions on business feasibility, technological aspects, and alignment with management strategies. Throughout 2023, the committee focused on nine items derived from trends in the power industry market, including A VFD¹ motor preventive diagnostic system, a large permanent magnet type synchronous motor for ship propulsion, and the Gridforming² solution. These initiatives have led to the re-establishment of the company's technology development roadmap. Moreover, in anticipation of the upcoming implementation of the "Special Act on Activation of Distributed Energy," aimed at expanding distributed energy sources, the committee has actively engaged in discussions regarding the latest market and technology trends relevant to its business areas.

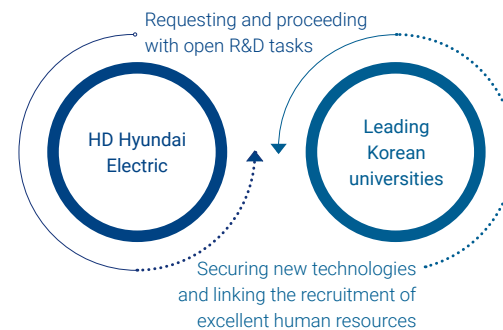
In 2024, the Future Technology Committee aims to improve operational efficiency by intensively selecting items for specific product lines each quarter and encouraging active participation from working-level staff. In particular, in order to proactively respond to changes in the global electricity market such as decarbonization, electrification, and digitalization, the committee plans to lay the foundation for strengthening R&D capabilities by selecting items that require preparation in the mid to long term.

1. Variable Frequency Drive
 2. Self-changing voltage and frequency to increase the stability of the power system

Establishing an open R&D cooperation system to strengthen technological competitiveness

HD Hyundai Electric has initiated the establishment of an open R&D cooperation system with top Korean universities to pioneer research on cutting-edge technologies that will drive the future electric power industry. In March 2024, we established an integrated R&D funding cooperation system with KAIST as our first partner university. Accordingly, we plan to proactively secure new technologies that we do not possess while organically developing industry-academia collaboration with KAIST, and strengthen HD Hyundai Electric's R&D capabilities by establishing a virtuous cycle structure, such as linking the recruitment of excellent human resources. Building on this collaboration with KAIST, we plan to gradually expand our partnership with other leading Korean universities in the future.

The open R&D virtuous cycle structure



Forming a working group to strengthen research expertise

The capabilities of an R&D organization are not only critical to a company's competitiveness, but can also determine the success or failure of a business. Recognizing this, the composition of the R&D organization, as the core unit of the company, must adapt efficiently to meet the challenges faced by the company. HD Hyundai Electric's R&D organization previously operated as a department for each "product group", which effectively enhanced sales and business feasibility. However, to address potential limitations inherent in this approach, we introduced a new initiative in 2024: establishing a dedicated "Technology" unit within the R&D organization. This strategic move aims to advance technology, the primary focus of R&D, while fostering a collaborative environment among experts in specialized fields such as Insulation, Thermal Fluid, and AI. Experts from these sectors collaboratively select research topics and conduct joint studies. Going forward, we intend to actively leverage the outcomes from these working groups, ensuring that developed technologies are scalable and integrating them into our development roadmap and technology investment plan for the upcoming year.



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Research and development for sustainable products

The permanent magnet shaft generator series for marines

In April 2023, HD Hyundai Electric completed the development of a series of permanent magnet shaft generators (2 MW-class) for ships utilizing proprietary technology for the first time in Korea. Shaft generators are a major equipment known for its high efficiency capable of generating electric power for ships using the rotational power of the propulsion engine or serving as electric motors for ship propulsion. The HD Hyundai Electric permanent magnet shaft generator series uses high-performance neodymium (NdFeb) permanent magnets, achieving up to 3% higher power generation efficiency compared to conventional squirrel-type and wire-wound synchronous machines, thereby reducing fuel costs. Moreover, leveraging the engine's rotational power for electricity production results in higher energy density, enabling the product to be compact and lightweight. These advantages enable compliance with stringent eco-friendly regulations for ships, such as the Energy Efficiency Design Index (EEDI) and Carbon Intensity Index (CII) by the International Maritime Organization (IMO). The capacity ranges from 1.3 to 3.1 MW, adaptable to different types of ships to meet diverse demands from ship owners and system integration (SI) companies. Building upon this advanced technology, HD Hyundai Electric also completed the development of large ship models (4 to 5 MW-class) within the series in June 2024, and plans to expand the lineup by capacity in the future.

SF₆ -free GIS

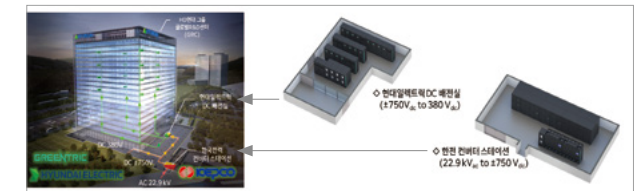
HD Hyundai Electric is developing SF₆-Free gas insulated switchgear (GIS) to respond to market demands for carbon neutrality. In 2021, we developed a 170 kV GIS that reduced greenhouse gas usage by approximately 99% compared to existing products by replacing SF₆ with fluorine-based mixed gas (C₄F₇N + CO₂) using Korea's first proprietary technology. In 2023, the development of a 145kV product with export-optimized specifications was completed. The 145 kV and 170 kV products are designed to be the same size as existing products using SF₆ gas. This allows for seamless installation without site modifications, accommodating demands for both expanding existing substations and transitioning to SF₆-free solutions. In addition, 170 kV GIS (50 kA) received green technology & product certification from the Ministry of Science and ICT in September 2023, underscoring HD Hyundai Electric's commitment to sustainable technological advancements.



The GREENTRIC ECO 170 kV 50 kA GIS Green Technology Product Certificate

The world's first DC power supply system for MW-class buildings received the "Korea Engineer Award".

DC power is a next-generation power distribution technology renowned for its ability to achieve annual energy savings exceeding 10% compared to AC power, due to its reduced conversion stages and ease of integration with renewable energy sources and grids. However, the development of large-capacity direct current distribution for buildings was difficult to introduce due to the absence of commercialization cases and insufficient preparation of related standards and supply terms. Despite these restrictions, HD Hyundai Electric successfully developed core electrical components such as power converters for DC distribution and semiconductor circuit breakers using its own proprietary technology. We also established a system protection cooperation system leading to the successful commercialization of the world's first DC power supply system for MW-class buildings in April 2023. Externally, this achievement is recognized as a pivotal step toward long-term validation and expansion of the DC distribution network, as well as the establishment of regulatory frameworks. In recognition of his leadership in engineering and commercializing the DC power supply system, Senior Researcher Ducksu Lee was honored with the "Korea Engineer Award" by the Ministry of Science and ICT in March 2024.



The World's First MW-class DC Power Supply System for Building

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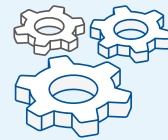


In the current era where ESG management is essential for the sustainable growth of companies, creating a sustainable business ecosystem, especially focusing on supply chain management, is emerging as a hot topic. Recently, global guidelines for corporate supply chain management, such as the European Union's Corporate Sustainability Due Diligence Directive (CSDDD), have been announced successively. In addition, the importance of supply chain management is increasing as issues related to forced labor, child labor lawsuits, and the Serious Accidents Punishment Act are being expanded to include small businesses.

HD Hyundai Electric is committed to creating a supply chain ecosystem that aligns with global standards. In 2023, we established a code of conduct for partner companies to develop a supply chain ESG management system and formulated ESG evaluation indicators, enabling us to implement an ESG evaluation system for our partners. In addition, through the partner company council, we have actively listened to and addressed the concerns of partner companies. We are also expanding our support policies tailored to the needs of our partner companies, including increased support for facility investment funding. Moving forward, HD Hyundai Electric remains dedicated to fostering a sustainable business ecosystem and fostering synergistic relationships with partner companies.

Establishing the supply chain ESG management system

Establishing the code of conduct for partner companies, development of ESG evaluation indicators



40 partner companies

Number of partner companies that received ESG management status evaluation



Excellent company in safety and health win-win cooperation project

Selected as an excellent company in the 2023 Ministry of Employment and Labor's "Large, Small and Medium Business Safety and Health Win-Win Cooperation Project"



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Establishing a supply chain ESG management system

Establishing a code of conduct for partner companies

HD Hyundai Electric supports the growth and development of its partner companies under the core value of "just, fair, and legal performance of business". In accordance with these core values, HD Hyundai Electric established the Partner Company Code of Conduct in 2023, to promote legal compliance and strengthen competitiveness.

The HD Hyundai Electric Partner Company Code of Conduct incorporates guidelines from global standards such as the Responsible Business Alliance (RBA) Code of Conduct, the UN Declaration of Human Rights, the UN Convention on the Rights of the Child, and the International Labour Organization (ILO). It addresses issues related to human rights and labor practices, fostering a safe working environment, promoting environmental management, and advocating ethical business practices. HD Hyundai Electric requires all partner companies to be informed of and adhere to these standards, and as of the end of 2023, a total of 259 companies have signed the Partner Company Code of Conduct and are conducting business in accordance with its principles.



Development of ESG evaluation indicators

In order to systematically conduct ESG evaluation of partner companies, HD Hyundai Electric developed ESG evaluation indicators for partner companies based on important issues related to supply chain ESG. The evaluation index consists of a total of 39 diagnostic items in the environmental, social, safety, and governance sectors. The evaluation process involves both written assessments and on-site inspections, ensuring a comprehensive evaluation from multiple perspectives.

ESG Evaluation Indices HD Hyundai Electric's Partner Companies

Category	No. of indices	Components
Environment	8	Environmental Management, Energy Management, Greenhouse Gases, Waste Management, Resource Recycling, etc.
Social	10	Human Rights Management, Labor-Management Consultation, Forced Labor, Grievance Handling, Social Contribution Activities, etc.
Safety	16	Safety and Health System, Risk Assessment, Hazardous Work, Work Environment Measurement, etc.
Governance	5	Ethical Management, ESG Management, Stakeholder Communication, Risk Management, etc.
Total	39	

ESG Management Support for Partner Companies

ESG Management Status Evaluation

HD Hyundai Electric has been conducting evaluations of its partner companies' ESG management status using the ESG evaluation indicators established in the supply chain ESG management system. In 2023, a total of 40 major partner companies were for evaluation, which was carried out in two phases of on-site evaluation. To ensure that these evaluations provided partner companies with opportunities to enhance their actual ESG performance, we conducted consulting and improvement activities focused on addressing deficiencies identified during the initial assessment phase. As a result, the overall ESG management scores of the partner companies improved significantly by approximately 20 points, rising from 58.8 points initially to 77.9 points in the final assessment. Through this ESG management evaluation, many partner companies have taken steps such as establishing new regulations like the Human Rights Management Charter and initiating management of greenhouse gas emissions based on data-driven approaches.

ESG Capacity Building Training and Consulting

HD Hyundai Electric held a preliminary ESG capacity building seminar in June 2023. During this seminar, we provided guidance on ESG evaluation and provided ESG training, including presentation of response guidelines. Additionally, in October 2023, we held a comprehensive review event to look back on the year's ESG management support projects for partner companies. This event served as an occasion to express our appreciation for win-win cooperation through a special ESG lecture and an award for ESG excellent partner companies. It also provided a platform to foster future cooperation and mutual growth.

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Efforts for shared growth

The "Partner Company Council", a communication channel for shared growth

HD Hyundai Electric regularly convenes partner company councils consisting of its major partners, focusing on fostering active communication. These sessions serve as platforms for sharing the company's business direction and vision, actively working on communication by addressing the concerns and feedback of partner company members. As of 2024, HD Hyundai Electric has established and operates a partner company council specifically for 46 high-dependency transactional partners. As one of our communication activities, we held a New Year's meeting for our partner companies in January 2024, where HD Hyundai Electric executives, including CEO Seok Cho, and representatives from 46 partner companies attended to share management status and discuss coexistence. In addition, at the event, we expressed our gratitude by awarding the Five Excellent Partner Companies for 2023.



The 2024 New Year's Party for the HD Hyundai Electric Partner Company Council

"Together Café"

HD Hyundai Electric has expanded its internal communication program, "Seok Café¹," to include partner companies, organizing "Together Café" sessions where they directly engage with members of these companies. These gatherings provide CEO Seok Cho and staff an opportunity to visit partner company sites, share coffee and snacks, express gratitude for their efforts, and listen to the challenges they face firsthand. In 2023, we started with a visit to Busan, where Shinyoung Electric, a partner company specializing in transformers, is located, and then visited Eunsung Electric and Taeyang Electric to convey HD Hyundai Electric's gratitude. We identified areas for improvement through direct engagement and listening to the challenges experienced in the field.

1. Named after our CEO Cho Seok, the cafe was a communication event for our executives and employees



"Together Café" visited by partner company, Eunseong Electric, in 2023.

"Safety and health win-win cooperation project": Creating a safe workplace for everyone

HD Hyundai Electric is conducting a safety and health win-win cooperation project aimed at enhancing the capabilities of partner companies. In 2023, we provided safety and health consulting to a total of six companies. Tailoring our support to each company's specific needs, we facilitated the establishment of safe workplaces by offering safety educational materials, supporting the installation of automatic external defibrillators, and supplying necessary safety equipment. These efforts were acknowledged when HD Hyundai Electric was recognized as an "Excellent company in the safety and health win-win cooperation project between large corporations and small and medium-sized enterprises" by the Ministry of Employment and Labor in 2023. Additionally, we are dedicated to fostering safe industrial environments through initiatives such as training for safety managers at partner companies and hands-on safety education provided by our in-house experts.



HD Hyundai Electric was selected as an "Excellent company in the safety and health win-win cooperation project between large corporations and small and medium-sized enterprises" by the Ministry of Employment and Labor in 2023.

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Efforts for shared growth

The partner company support policy which provides strength with practical help

Financial support programs

To ease the financial burden of partner companies, HD Hyundai Electric operates a financial support program worth KRW 49.5 billion. We have signed an agreement with the Credit Guarantee Fund to provide financial and non-financial guarantees worth KRW 19.5 billion. In addition, by establishing a shared growth fund of KRW 30 billion with Industrial Bank of Korea (IBK), we are supporting our partner companies to receive business loans at lower interest rates than commercial banks.

The Facility Investment Funding Support System

The "Facility Investment Funding Support System," introduced in 2023, provides a mechanism where HD Hyundai Electric offers interest-free loans of up to 70% of the investment amount, capped at KRW 500 million, to partner companies needing new investments like equipment replacement or automation system installation. Through this, in the first half of 2024, the first year of implementation, a total of KRW 2.6 billion was provided to a total of 8 partner companies.

Supporting promotion of partner companies' job postings

Amidst the ongoing severe manpower shortages, especially in the manufacturing industry, HD Hyundai Electric's partner companies are also experiencing difficulties in supplying manpower. To address these issues, we provide support for promoting job openings at our partner companies. Those eligible for support are member companies of the Partner Company Council, and in 2023, a total of four partner companies utilized the program. In the future, HD Hyundai Electric will spare no efforts to create a "culture in which everyone grows together", by expanding support policies tailored to the management situations of partner companies.



EFFICIENCY < ⏠ ≡ >
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Environmental Management

Approach

Environmental Management Policy

Through environmentally friendly management, HD Hyundai Electric will continue to improve its environmental performance. At the same time, we will adhere to the following requirements to minimize the negative environmental impact of our business activities and overall value chain along with our employees, partners, customers and local communities.

- 1 We recognize the environment as a key corporate success factor and create corporate value, and fulfill social responsibilities through active environmental management.
- 2 We set implementable goals for environmental factors that have a significant impact on business operations (climate change, pollutant emissions, waste, chemicals, water, etc.) and evaluate implementation performance.
- 3 We comply with Korean and foreign environmental laws and agreements, and respond proactively to strengthened and newly established environmental regulations.
- 4 Throughout the entire process, from product raw material supply, purchase, production, use, disposal and recycling, we actively strive to ensure sustainable use of resources and energy and to reduce pollutants.
- 5 We actively support the environmental management activities of our partner companies and establish and implement the standards necessary to implement eco-friendly supply chain policies.
- 6 We protect biodiversity and establish policies to preserve the natural environment.
- 7 We disclose environmental management performance to company members and stakeholders according to reasonable and objective standards.
- 8 By providing environmental management training to executives, employees and other stakeholders, we seek to improve awareness of the need for environmental management.
- 9 We supervise overall environmental management risk management and performance improvement activities through management councils in which the top decision-maker or key decision-makers participate.
- 10 By forming a dedicated environmental management implementation organization, we establish and operate the following environmental management system: establishing and implementing pollutant discharge management policies, identifying and improving environmental risks, receiving and processing environmental-related grievances, etc.

Supply chain and distribution	When selecting external companies (goods suppliers, service providers, etc), we evaluate their environmental management capabilities and support the establishment of an environmental management system by assessing sustainability for high-risk or core supply chains. Also, by expanding our purchases of products (raw materials) and services that have obtained eco-friendly certification, we are building a supply chain and a collaborative ecosystem for the development and production of eco-friendly products. In addition, we require all partner companies to follow the Partner Company Code of Conduct in order to comply with ESG responsibilities. Furthermore, by operating green purchasing guidelines, sourcing environmentally friendly parts and producing products, we strive to satisfy our customers and fulfill our social responsibilities.
Production sites	The production sites establish an environmental management system based on internationally recognized standards (ISO 14001). We establish process procedures such as goal management, education and training, document and record management, and internal reviews, and establish management standards and internal regulations for each sector (air, water quality, waste, chemicals, soil, odors, etc.). We also monitor environmental impacts and promote improvement activities and performance evaluations.
Products and services	In order to identify the environmental impact of the entire process from raw material input for each product unit, product production/distribution, and waste product recovery and recycling, we are conducting a product life cycle assessment. In addition, we strive to develop technologies, products, and services for the transition to a low-carbon/ renewable energy society.
Waste management	All business procedures, from waste generation to final disposal, are performed in accordance with waste management standards. The management standard includes the scope of application, definition of terms, responsibility and authority, and waste generation, collection, storage and disposal, inspection, consignment contract and monitoring. Through collaboration between waste processors and cross-industry, we maximize resource reuse and recycling rates. Additionally, we spread economic value by recycling usable waste generated at our workplaces.

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The Environmental Management Policy

HD Hyundai Electric is committed to fostering sustainable value through its safety, health, and environment management policy. Our approach includes developing sustainable products and services, and implementing strategies for carbon emission management and energy efficiency. To achieve these goals, we have defined sustainable products and projects as key indicators for management and regularly assess their performance. Environmental management is integrated into our company-wide management system, with data linkage to Key Performance Indicators (KPIs) and established management goals. Moreover, we conduct periodic internal inspections to determine whether we are complying with environmental laws and regulations, and we provide training to raise awareness of the environmental impact of internal and external stakeholders.

Environmental Management Governance

HD Hyundai Electric assigns decision-making authority for environmental management to the CEO and the CSO (Chief Safety Officer). The CEO and CSO oversee environmental impacts assessment, policy formulation, risk evaluation, and new investment decisions related to environmental management. The Safety and Environment Department, reporting directly to the CSO, is tasked with implementing environmental management initiatives. It formulates and executes strategies while regularly monitoring management indicators. Semi-annually, the ESG Committee conducts comprehensive reviews of significant environmental issues. Additionally, executives and employees above environmental management managers, including the CEO and CSO, integrate environmental management indicators into their Key Performance Indicators (KPIs) and are remunerated based on their performance evaluations.

Environmental Management System (ISO 14001)

To achieve environmental management operation policies and goals, HD Hyundai Electric has established a system foundation to recognize environmental risks early and improve environmental performance. Accordingly, we have acquired and are maintaining the ISO 14001 certification, an international standard environmental management system, and received renewal certification from Lloyd's Certification in 2023.

Commitment

HD Hyundai Electric is committed to managing natural capital risks throughout the lifecycle of its products and technologies, from development through to use and disposal. Internal management standards ensure compliance with environmental laws, supported by comprehensive environmental education initiatives for personnel. These efforts enhance departmental expertise and promote a high level of environmental awareness across the organization.

Category	Unit	Result for 2023	Goal for 2024	Goal for 2025	Goal for 2026
Implementation of environmental impact assessment	Y/N	Y	Y	Y	Y
Environmental patrol inspection ¹	No. of inspections	20	20	20	20

1. On-site inspections conducted by our environmental engineers every month to check the operation status of environmental facilities, check for breakdowns, and prevent other environmental accidents

Environmental Management Organization Chart



The Safety & Health & Environment Management Department is an organization dedicated to implementing environmental management, and establishes and operates an environmental management system.

1. CSO: Chief Safety Officer

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Environmental Management

Performance

Green technology and green product certification

HD Hyundai Electric is focusing its capabilities on developing technologies and products with low environmental impact. As a result, in 2022, we acquired Certificate of Green Technology and Green Product Confirmation for our SF₆-free switchgear technology using high-voltage dry-air insulation technology. In 2023, we acquired Certificate of Green Technology for SF₆ alternative mixed gas-based puffing grounding switchgear technology, and Green Product Confirmation for gas insulated switchgear to which the technology was applied. Certificate of Green Technology and Confirmation of Green Technology Product are given by the Ministry of Science and ICT in accordance with the Carbon Neutrality Act.

Vegetable/synthetic insulating oil with low environmental load

HD Hyundai Electric has completed investment in vegetable/synthetic insulating oil facility infrastructure to produce transformer products that have a low environmental burden in case of leakage or disposal. Vegetable/synthetic insulating oil is not only non-toxic, but also has a low environmental impact even when discharged into the air, water, and soil.

Investment review process considering safety and environmental risks

When evaluating facility investments, HD Hyundai Electric prioritizes safety and environmental considerations alongside financial factors. For investment plans ranging from KRW 1 billion to less than KRW 10 billion, we present them to the "Facility Investment Deliberation Committee" for thorough review. The committee assesses the investment plan, feasibility, and economic viability before making a decision. By including "Compliance with safety and environmental standards" as an evaluation item in addition to financial factors such as the adequacy of investment effects in the Deliberation Committee's facility investment check point list¹, we make comprehensive investment decisions that consider both financial factors and safety and environmental factors.

1. Facility investment check point list (Detailed rules on safety, health and environment facility investment deliberation):
 Review of whether the facility is appropriate according to the Waste Management Act, whether it is a toxic and soil-polluted facility, whether or not a wastewater treatment system is installed, and so on

Environmental education

In order to actively respond to strengthening environmental regulations, HD Hyundai Electric is conducting face-to-face environmental education for executives and employees, including environmental managers, new employees, and environmental facility managers. By sharing with executives and employees the latest information collected from external training and the activities of the Environmental Engineers Association, and by providing repetitive training such as detailed regulations on environmental facilities and chemicals, inspection items for each facility, and tips for writing operating logs, we help facility managers improve their understanding of them. In addition, by providing UNGC Academy and ISO internal auditor training to working-level groups, we are enabling them to learn the value of ESG management, such as corporate carbon neutrality and renewable energy conversion, and leading executives and employees to actively respond to environmental risk and opportunity management.

Compliance with environmental laws and regulations

In order to respond to environmental media laws¹ company-wide, HD Hyundai Electric has established, distributed, and managed standards for each media law. In addition, we conduct semi-annual legal reviews and feasibility assessments to apply revised laws and establish internal management standards. HD Hyundai Electric is preparing a detailed response policy based on established management standards and is striving for continuous compliance with laws and internal standardization by establishing response strategies² for major environmental laws and regulations. As the installation of IoT measuring devices became mandatory, in 2023, we completed the installation of 9 Internet of Things (IOT) measuring devices at the Seonam Plant, our target business site, and completed compliance management and improvement measures through on-site environmental technology inspections.

1. Environment-related laws such as the Clean Air Conservation Act, the Water Environment Conservation Act, and the Waste Management Act
 2. Establishment of strengthened in-house management standards compared to discharge allowance standards, establishment of management standards for each type of waste, standardization of wastewater discharge facility installation standards, etc.

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Environmental Management

Environmental management system

		Unit	2021	2022	2023
Environmental Management Certification	ISO 14001 ¹	%	100	100	100
	No. of third-party eco-friendly certifications ²	No. of certifications	1	2	3

- 1. Ratio of application of Ulsan plant, Sunam plant, and Anseong plant
- 2. 2022: Certification of green technology products is obtained (green switchgears using high-pressure dry-air insulation technology) certification obtained
 2023: Certification of green technology products is obtained (SF₆-free gas insulation opening/closing device using fluorine-based mixed gas)

Green products and services

		Unit	2021	2022	2023
Green products and services	Total revenue in green products and services	KRW 100 million	636	939	1,210
	Percentage of total revenue ¹	%	4.1	5.1	5.3

- 1. Revenue: Based on separate financial statements (head office) of the annual report

Environmental investment

		Unit	2021	2022	2023
Facility improvement investment costs		KRW 100 million	18	31	125
R&D costs		KRW 100 million	41	43	92

Education

		Unit	2021	2022	2023
Environmental education ¹	Total No. of participants	Persons	35	38	34
	Total education time	Hours	35	140	108
	- Education hours per person	Hours	1.0	3.7	3.2

- 1. Environment-related training such as operation management of environmental facilities, handling chemicals, and ISO internal examiners conducted for the company's executives and employees

Violations

		Unit	2021	2022	2023
Violations of environmental regulations	No. of violations	Incidents	1	1	0
	Penalties and fines	KRW 1 million	0.4	0.8	0

Environmental pollution accident prevention

		Unit	2021	2022	2023
Environmental pollution accident prevention	Environmental liability insurance	Y/N	Y	Y	Y
	Education on response to environmental pollution accidents	Y/N	Y	Y	Y

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Greenhouse Gases and Energy

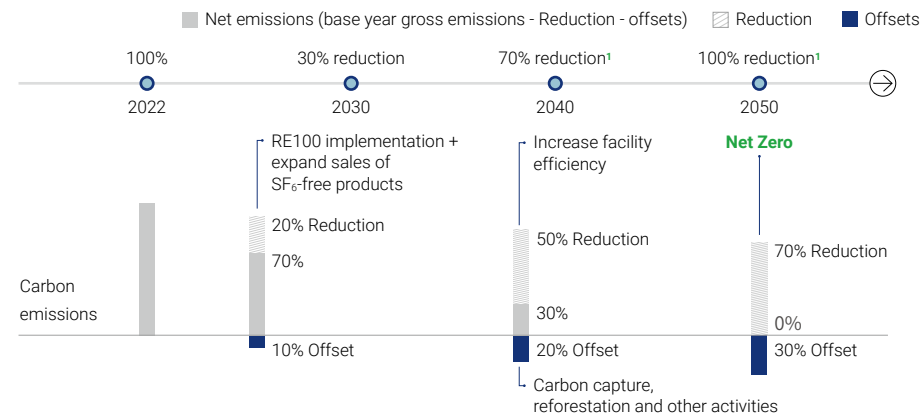
Approach

Carbon Neutrality by 2050

HD Hyundai Electric embarked on its "2050 Carbon Neutral Roadmap" in earnest beginning in 2022. Initially, our focus is on prioritizing the reduction of Scope 2 emissions (indirect emissions from electricity, etc.) through the implementation of the RE100 roadmap, targeting achievement by 2040. Concurrently, we are expanding the deployment of SF₆ (sulfur hexafluoride)¹-free products and engaging in carbon emission offset² activities. Our ambitious goal³ is to reduce carbon emissions by approximately 70% compared to 2021 levels by 2040. Looking forward, we aim for a 100% reduction in carbon emissions by 2050 by further strengthening the efficiency of workplace facilities, conversion to electric vehicles, and offset activities according to the reduction trend.

1. It is an inert gas with high safety. It is non-toxic, odorless, colorless, and non-flammable. It has excellent electrical insulation performance and is widely used as an insulator in electrical appliances. However, it is a representative greenhouse gas with a global warming potential that is on average 23,900 times higher than that of carbon dioxide.
2. Offsetting greenhouse gas emissions by purchasing emission rights equivalent to the amount of carbon dioxide emitted from corporate activities or through afforestation activities, etc.
3. This goal is based on the GHG Protocol (Guidelines for greenhouse gas accounting and reporting) and applies to headquarters, subsidiaries, and overseas business sites.

2050 Carbon Neutrality Roadmap



2040 RE100

By declaring RE100 in December 2022 and joining the Korean (K)-RE100, HD Hyundai Electric is striving to achieve carbon neutrality. We aim to convert 100% of the electricity used at all business sites in Korea and abroad to renewable energy by 2040. To this end, in 2023, we introduced renewable energy through REC purchases for the first time, and in the future, we will expand the use of renewable energy through REC purchases, PPA signing, and direct production.

Climate change governance

HD Hyundai Electric manages climate change-related issues through its ESG Committee, operating under the Board of Directors. The ESG Committee plays a pivotal role in formulating mid- to long-term business strategies and climate change response measures, ensuring these issues are integrated across the organization. Discussions in 2023 focused on internalizing initiatives related to carbon neutrality and the RE100 roadmap. To effectively address climate change, HD Hyundai Electric has established dedicated organizational structures including the Safety & Health & Environment Management Department and the ESG Management Team. Additionally, an ESG advisory group composed of experts from various fields operates at the group level, providing specialized insights. The dedicated organization reports climate change agenda and key issues to the CEO and the ESG Committee at least twice a year, and the CEO makes decisions through final consultation with the ESG Committee. In addition, we set goals such as emissions reduction and energy saving for all executives, including the CEO, and reflect them in performance evaluation items, and provide incentives based on the evaluation results.

Climate change risk management

To respond to climate change risks, HD Hyundai Electric is identifying risks and opportunity factors and evaluating financial and strategic impacts through scenario analysis. Major risks include strengthening related regulations, rapid transition to low-carbon technologies, reputational risks, and typhoons, while major opportunities include the development of low-carbon technologies and efficient use of resources. We analyzed major risks and opportunities based on the IEA 450 scenario and RCP 8.5 scenario, conducted a quantitative impact assessment on issues that can be applied to emission price forecasts. The other issues were qualitatively analyzed for their impact by referring to similar industries and global literature. Detailed information has been published in the "TCFD" section of the APPENDIX.

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Greenhouse Gases and Energy

Commitment

When establishing annual company-wide environmental goals, HD Hyundai Electric announces greenhouse gas emissions reduction goals and tracks and manages annual emissions performance. In addition, we are striving for efficient energy management by calculating energy usage compared to sales performance with a goal of reducing energy consumption per unit of energy.

Category	Base year	Result for 2023 ²	Goal for 2025	Goal for 2030
Greenhouse gas reduction goal¹	2018	4% reduction	11+% reduction	14+% reduction

1. Goal for 2023: Reduce emissions by more than 10% compared to 2018 emissions, 37,543 tCO₂eq (emissions to less than 33,789 tCO₂eq)
 2. Result for 2023: Emitted 35,943 tCO₂eq, achieving 42.6% of target
 * Scope of calculation: Scopes 1 & 2, calculation standard: Ministry of Environment Greenhouse Gas Emissions Allocation and Trading Act

Performance

Greenhouse gas emission reduction activities

HD Hyundai Electric has invested in company-wide energy conservation and aging plant facilities to reduce energy consumption. In order to reduce electric energy, which is a major factor in overall energy consumption and greenhouse gas emissions, we establish autonomous reduction plans for each production sector and continuously manage the plans by reflecting organizational KPIs. The Ulsan and the Seonam Plants replaced the plant and office building ceiling lights with LEDs from 2022 to 2023 to increase power energy efficiency and reduce annual greenhouse gas emissions. In addition, we are practicing energy saving in daily life through employee participation campaigns such as managing office heating and cooling temperatures in summer and winter, turning off lights during lunch hours, and turning off office equipment when leaving work. Through these efforts, in 2023, we reduced electricity consumption by 1,413,035 kWh and greenhouse gas emissions by 652 tCO₂eq. Externally, we reduced Scope 2 greenhouse gas emissions through the purchase of RECs (Renewable Energy Supply Certificates) and continued our efforts to achieve the K-RE100 strategic task. HD Hyundai Electric is reviewing various strategies to expand the introduction of renewable energy in the future.

Third-party verification of greenhouse gas data

HD Hyundai Electric builds a greenhouse gas inventory and prepares greenhouse gas emissions statements every year in accordance with the Framework Act on Carbon Neutrality. The contents of the greenhouse gas emissions statement are being reviewed for eligibility and suitability through a third-party verification agency, and we are ultimately submitting the statement to the government agency.

Strengthening Scope 3 management

HD Hyundai Electric calculated Scope 3 greenhouse gas emissions and completed third-party verification, and is preparing energy efficiency measures by reducing greenhouse gases within the value chain. By reducing greenhouse gas emissions such as SF₆ and CO₂ and expanding product lines such as GREENTRIC, we will contribute to carbon neutrality.

Greenhouse Gases and Energy

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Greenhouse gases and energy¹

		Unit	2020	2021	2022	2023
Greenhouse gas emissions	Total emissions (Scopes 1+2)	tCO ₂ eq	32,882	30,550	33,167	35,943
	- Direct emissions (Scope 1)	tCO ₂ eq	6,020	6,205	6,915	6,907
	- Indirect emissions (Scope 2)	tCO ₂ eq	26,862	24,345	26,252	29,036
	Greenhouse gas intensity (1+2, basic unit) ²	tCO ₂ eq/KRW billion	18.16	16.92	15.76	13.30
Energy consumption	Total consumption	TJ	668	628	682	738
	Energy intensity	TJ/KRW billion	0.37	0.35	0.32	0.27
	Reduction rate	%	5.6	5.4	6.9	15.7
	Achievement rate (compared to the goal) ³	%	564	543	690	114.9
General energy	Total direct energy usage	TJ	115	119	133	133
	- LNG	TJ	111.37	117.27	129.50	129.36
	- Gasoline	TJ	0.48	0.42	0.49	0.23
	- Diesel	TJ	3.36	2.72	2.97	3.13
	- Kerosene	TJ	0	0.02	0	0
	- LPG	TJ	0.03	0.03	0.01	0.01
	Total indirect energy usage	TJ	553	509	548	606
	- Power	TJ	553	509	548	605
	- Steam	TJ	0	0	0	1
	Renewable energy	Total procurement amount	MWh	0	0	0
- Purchase RECs		MWh	0	0	0	480.2
Total power generation		MWh	566	544.2	538.9	512.9
Total sales		MWh	566	544.2	538.9	512.9

Scope 3 emissions

	Unit	2023
Total	tCO ₂ eq	275,755,063
1. Purchased goods & services	tCO ₂ eq	306,212
2. Capital goods	tCO ₂ eq	9,721
3. Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	tCO ₂ eq	2,915
4. Upstream Transportation and Distribution	tCO ₂ eq	37,526
5. Waste Generated in Operations	tCO ₂ eq	2,034
6. Business Travel	tCO ₂ eq	1,963
7. Employee Commuting	tCO ₂ eq	2,632
8. Upstream Leased Assets	tCO ₂ eq	204
9. Downstream Transportation and Distribution	tCO ₂ eq	3,629
10. Processing of sold products	tCO ₂ eq	-
11. Use of Sold Products	tCO ₂ eq	275,260,088
12. End of Life Treatment of Sold Products	tCO ₂ eq	128,140
13. Downstream Leased Assets	tCO ₂ eq	-
14. Franchise	tCO ₂ eq	-
15. Investment	tCO ₂ eq	-

1. 2020 calculation scope: Ulsan plant, Seonam plant, Mechanical and Electrical Research Institute
 2021-2023 calculation scope: Ulsan plant, Seonam plant, Mechanical and Electrical Research Institute, Anseong plant, Bundang office, GRC Bundang office, Gye-dong office
 2. Sales: Based on consolidated financial statements
 3. Change of output formula from 2023, 2023 target: 1% reduction in energy intensity (0.321) compared to previous year (0.324)

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Water Resources

Approach

Water policy

As climate change leads to global challenges like heat waves and droughts, effective water resource management has become increasingly crucial. HD Hyundai Electric diligently monitors monthly water usage at its business sites in Korea to mitigate water stress. We actively manage water consumption and implement reuse practices, including the establishment of a coolant reuse facility within our testing processes. Additionally, we are exploring methods to recycle discarded water.

Water stress management

HD Hyundai Electric manages water stress indicators by referring to the World Nature Research Institute (WRI)'s WATER RISK ATLAS to manage water risks. Located in Ulsan, an area with medium-high water stress (20~40%), we recognize the volatility of water supply as a significant long-term risk. To address this, we have established a response strategy focused on monitoring and controlling wastewater discharge to minimize water wastage. In 2023, we generated 264 tons of wastewater, equivalent to 0.11% of the approximately 240,000 tons of municipal water supplied to us, resulting in a financial impact of approximately KRW 22.5 million for wastewater treatment. To manage water risks comprehensively and reduce associated financial impacts, we remain committed to proactive measures. This includes ongoing efforts to decrease water consumption across our living and utility facilities, as well as exploring opportunities for water reuse.

Category	Factor	Impact	Financial impact	Detailed strategy
Risk	Water stress management	Risk of water supply volatility due to increased water stress in the Ulsan region	In 2023, 264 tons (0.11%) of wastewater will be generated out of 240,000 tons of municipal water, resulting in a financial impact of approximately KRW 22.5 million for wastewater treatment.	<ul style="list-style-type: none"> • Monitoring and volume control of discharged wastewater • Develop ways to reduce and reuse water

Commitment

Recognizing the importance of water resources at business sites, HD Hyundai Electric diligently monitors annual water usage to mitigate water shortage risks. We manage water consumption by establishing intensity goals based on sales metrics. In 2023, we surpassed our target by achieving a lower water usage intensity. Based on trends from the previous three years, we are setting and managing mid- to long-term goals to consistently maintain water usage intensity below 120. In addition, in the case of wastewater-generating workplaces, we report wastewater generation volume and treatment performance with the goal of achieving a wastewater generation rate of 0.25% or less by 2025 to ensure minimal wastewater generation. The target indicator, wastewater generation rate, is the amount of wastewater generated relative to the water intake, and we have set wastewater treatment costs as an auxiliary indicator to systematically manage detailed indicators related to wastewater. Based on the strategy (continuous monitoring of water and wastewater) for the established water and wastewater-related goals, we will achieve our goals by analyzing the causes of excessive water waste and wastewater generation.

Category	Unit	Result for 2023	Goal for 2024	Goal for 2025	Goal for 2026
Water usage intensity	ton/sales (KRW billion)	88.86	120 or below	120 or below	120 or below
Wastewater generation rate	%	0.11	0.25 or less	0.25 or less	0.25 or less

* Water Consumption Intensity 2023 Target: less than 120

* Wastewater generation rate 2023 target: less than 0.25%

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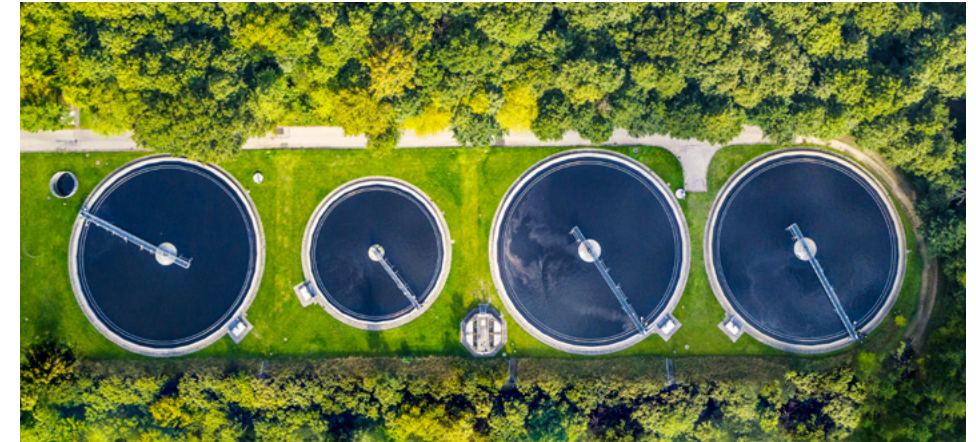
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Water Resources

Performance

Wastewater monitoring

HD Hyundai Electric ensures responsible management of wastewater generated during its production processes by entrusting 100% of it to specialized treatment companies. Wastewater is safely stored in designated waste collection tanks for each process, and subsequently treated by contracted companies to reduce water pollutant levels below legal standards. Following treatment, we receive semi-annual reports confirming compliance with regulatory limits on water pollutants. To maintain stringent environmental standards, we conduct regular self-inspections of equipment to prevent potential leaks during wastewater storage and transport. Additionally, ongoing training for relevant personnel enhances awareness and reduces the risk of environmental incidents. In January 2024, we replaced all three old wastewater storage tanks at the Ulsan Transformer Plant and improved wastewater monitoring by attaching storage volume confirmation gauges.



Water Resources Index

	Unit	Ulsan Plant				Seonam Plant				Total				
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	
Water withdrawal	Total water withdrawal	ton	146,073	209,949	228,917	217,825	56,336	19,364	22,865	22,625	202,409	229,313	251,782	240,450
	- Surface water	ton	0	0	0	0	0	0	0	0	0	0	0	0
	- Groundwater	ton	0	0	0	0	0	0	0	0	0	0	0	0
	- water distribution	ton	0	0	0	0	0	0	0	0	0	0	0	0
	- Third-party supplied water (municipal water, industrial water, etc.)	ton	146,073	209,949	228,917	217,825	56,336	19,364	22,865	22,625	202,409	229,313	251,782	240,450
Consumption	Total consumption ¹	ton	145,698	209,659	228,668	217,561	56,336	19,364	22,865	22,625	202,034	229,023	251,533	240,186
	Water intensity (unit) ²	ton/KRW billion	-	-	-	-	-	-	-	-	111.56	126.81	119.52	88.86
	Achievement rate (compared to goal)	%	-	-	-	-	-	-	-	-	107.03	94.33	100.4	125.95
Wastewater discharge	Total discharge	ton	375	290	249	264	0	0	0	0	375	290	249	264

1. Sales: Based on consolidated financial statements in the business report
 2. 2023 Water Usage Target: Water Intensity below 120

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Resource Circulation and Environmental Pollutants

Approach

Chemical Substances

Chemical Management Process

To minimize harm to health and the environment, HD Hyundai Electric systematically manages all stages from the purchase of chemical substances to their disposal. At the purchasing stage, we check the harmfulness of chemical substances and minimize the use of discovered hazardous substances or purchase substitute substances. At the usage stage, we monitor whether chemicals are handled safely and legally, conduct chemical emissions and statistical surveys, and report them to the competent authority. At the disposal stage, we comply with relevant laws and ensure disposal through a waste disposal company. We regularly monitor EU-REACH international regulatory trends (SVHC, PFAS, etc.) and are planning to establish an internal chemical management system.

DB Management of Chemical Substances

As chemical regulations in Korea and overseas become more stringent, systematic management of chemical databases is required. HD Hyundai Electric conducts hazard assessments from the purchase stage to reduce hazards and risks within the company's business sites, restricting the handling of regulated chemicals. In addition, we regularly monitor our chemical database to prevent environmental and cost risks associated with compliance to Korean chemical substance-related laws¹.

¹ 19 laws including the Occupational Safety and Health Act, Chemical Substances Control Act, Act on Registration and Evaluation of Chemicals, etc., and Dangerous Substances Safety Management Act

Operation of Chemical Hazard Assessment

HD Hyundai Electric is checking chemical substance-related regulations through hazard assessment. Purchasing partners must submit Material Safety Data Sheets (MSDSs) and chemical substances components to the hazard assessment system. Based on the submitted data, we evaluate the safety of chemicals from environmental and safety perspectives, ensuring that only approved products are delivered. Additionally, we monitor chemicals through HiSEs System's chemical database, periodically updating MSDSs and verifying data. Our main chemicals include insulating oil, insulating gas, paint and thinner. In 2023, we conducted a total of 133 hazard assessments, and no hazardous chemicals were found.

Air Pollution Management

Operation of the HiSEs System of the Air Pollution Management

By operating the HiSEs System, HD Hyundai Electric manages the pollutant emission concentration of 77 outlets. We apply in-house standards that are more than 70% stricter than the legal requirements. If the emission concentration increases, we notify the responsible department and take measures to improve facilities, such as replacing activated carbon, inspecting prevention facilities, and changing old equipment. In 2023, we attached Internet of Things (IOT) measuring devices to some air pollution emission facilities within the Seonam Plant, enhancing compliance with legal facility operation and self-monitoring management.

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Resource Circulation and Environmental Pollutants

Waste Management

HD Hyundai Electric monitors the discharge and treatment of waste generated from all of its business sites. By inspecting waste storage areas, we are preventing spills of accumulated waste and reducing the risk of long-term storage. In addition, we select legitimate waste disposal companies and entrust them with the disposal of the waste. Moreover, in accordance with the Act on Promotion of Transition to Circular Economy Society, we are minimizing waste emissions and making efforts to recycle generated waste through recycling companies. While we anticipate an increase in waste generation due to higher product production from increased orders, we are planning various policies, such as a separate collection campaign, to realize resource circulation in line with government policies.

Commitment

HD Hyundai Electric is strengthening its management of environmental pollutants and hazardous chemicals. Our main goal for chemicals is to eliminate the use of hazardous substances by switching to alternatives. We aim to manage air pollutants (NOx) to a higher level than legal standards. In addition, we are managing the recycling and reuse rate of waste at our workplaces to transition to a circular economy society.

* As the total air pollutant (NOx) allocation is to be updated in 2025, we plan to incorporate this into our future quantitative emission targets. (Current allocation period: 2020~2024)

Category	Unit	Result for 2023	Goal for 2024	Goal for 2025	Goal for 2026
Waste recycling/reuse rate	%	60	55% or higher	55% or higher	55% or higher
Emission ratio of air pollutants (NOx) to total allocation	%	37.2	60% or lower	60% or lower	60% or lower

Performance

Training of Personnel

HD Hyundai Electric conducts annual environmental accident emergency response and firefighting training for the hazardous materials storage handling department. Each member undergoes pre-training on emergency response organizational structure and roles, followed by practical scenario training to ensure swift response during emergencies. Managers at each hazardous materials handling site complete regular training in accordance with regulatory standards. Through on-site inspections, they uphold with their obligations to prevent chemical leaks and manage pollutants effectively.

Participation in the Circular Economy Performance Management System

As a company participating in the circular economy performance management system, HD Hyundai Electric selects waste treatment methods that align with circular economy goals when discharging and disposing of waste at its workplace. Waste generated at each business site is classified and stored according to designated codes based on waste analysis. We select legitimate treatment companies to handle and process this waste. Additionally, we are committed to improving our waste recycling rate. In 2023, we achieved the major performance management goals¹ and plan to further enhance our management system through continuous performance improvements.

1. Circulation utilization rate; Final disposal rate

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Resource Circulation and Environmental Pollutants

On-Site Regular Inspection of Environmental Facilities

To foster a clean workplace and manage pollutant emissions, HD Hyundai Electric employs environmental engineers who have completed statutory training to regularly inspect environmental facilities within the workplace. We monitor on-site management and compliance with operational standards to prevent environmental accidents, including monthly assessment of the operation and damage of air pollution prevention facilities and the status of waste storage management. For air pollutants, we measure the concentration of each pollutant according to the legal cycle and rigorously manage it through our internal management system and government reporting. In 2023, we conducted regular inspections, on average twice a month, and promptly addressed any identified improvements through the field management department. Starting in 2023, we are installing new environmental facilities and replacing aging facilities in accordance with the Ulsan plant maintenance plan. This initiative aims to enhance the management of workplace pollutant and improve efficient energy consumption.

Recycling of Insulating Oil

Transformer products inherently require large amounts of insulating oil. At HD Hyundai Electric, we recycle insulating oil by removing moisture and impurities through filtering equipment. In addition, insulating oil with excessive impurity concentrations that render it unusable is processed through a recycling company.

Plastic Resource Circulation

HD Hyundai Electric is continuously conducting a resource circulation campaign to promote separate recycling. As part of this initiative,, the collected transparent plastic is being repurposed into work uniforms. Furthermore, we actively incorporate diverse ideas from our employees into our resource circulation programs to discover more opportunities for recycling and reuse.

Resource recycling performance in 2023

Recycled raw material items	2022	2023
PET(polyethylene terephthalate)	678kg	937.6kg

Waste¹

		Unit	2020	2021	2022	2023
Waste discharge	Total emissions	ton	2,923.2	2,593.3	2,803.3	3,284.9
	- General waste	ton	2,561.3	2,232.9	2,456.2	2,878.8
	- Designated waste	ton	361.9	360.4	347.1	406.1
	Waste intensity (basic unit) ²	ton/ KRW 100 million	0.16	0.14	0.13	0.12
	Reduction rate (basic unit)	%	6.3	10.6	7.6	8.3
	Achievement rate (compared to goal) ³	%	-	118.6	106.5	75.8
Waste disposal	Total disposal	ton	2,923.2	2,593.3	2,803.4	3,284.9
	Regular waste	ton	2,561.3	2,232.9	2,456.3	2,878.8
	- Incineration	ton	1,032.2	898.3	973.6	1,146.5
	- Landfill	ton	68.0	25.1	71.8	37.4
	- Recycle	ton	1,461.1	1,309.5	1,410.9	1,694.9
	Hazardous waste	ton	361.9	360.4	347.1	406.1
	- Incineration	ton	108.9	122.5	109.0	83.4
	- Landfill	ton	1.6	0.2	0.4	42.3 ⁴
	- Recycle	ton	248.2	237.7	237.7	275.1
	- Others	ton	3.2	0	0	5.3
Recycling	Total disposal	ton	1,709.3	1,547.2	1,648.6	1,970.0
	Recycling rate	%	58	60	59	60

1. Scope of calculation: Ulsan Plant, Seonam Plant

2. Revenue: Based on the business report's consolidated financial statements

3. Waste discharge target for 2023: 2,374.41 tons

4. Generation of asbestos waste due to transformer plant remodeling work



Resource Circulation and Environmental Pollutants

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Air pollutants¹

		Unit	2020	2021	2022	2023
Air pollutant emissions	NOx emissions	ton	3.21	2.36	2.92	3.58
	NOx emission intensity	ton/ KRW 1 billion	0.0017	0.0013	0.0014	0.0013
	SOx emissions	ton	0	0.19	0.08	0.03
	SOx emission intensity	ton/ KRW 1 billion	0	0.00011	0.00004	0.00001
	VOCs emissions	ton	0.86	1.18	0.41	0.63
	VOCs emission intensity	ton/ KRW 1 billion	0.0005	0.0007	0.0002	0.0002
	PM10 emissions	ton	0.81	0.83	0.80	0.85
	PM10 emission intensity	ton/ KRW 1 billion	0.0004	0.0004	0.0004	0.0003

1. Scope of calculation: Ulsan Plant and Seonam Plant; Sales: Based on the consolidated financial statements
VOCs in-house management standard for 2023: Kept below 0.89

Water pollutants¹

		Unit	2020	2021	2022	2023
Water pollutant emissions	TOC emissions	ton	-	0.0006	0.0004	0.0089
	TOC emission intensity	ton/KRW trillion	-	0.0003	0.0002	0.0033
	BOD emissions	ton	0.0003	0.0002	0.0003	0.0034
	BOD emission intensity	ton/KRW trillion	0.0002	0.0001	0.0001	0.0013
	SS emissions	ton	0	0.0015	0.0002	0.0033
	SS emission intensity	ton/KRW trillion	0	0.0008	0.0001	0.0012

1. In accordance with the change in the Water Environment Conservation Act, the management index has been changed from COD (chemical oxygen demand) to total organic carbon (TOC) from 2021.
Revenue: Based on consolidated financial statements

Raw materials¹

		Unit	2020	2021	2022	2023
Major raw materials	Electrical steel sheet	ton	32,329	34,049	38,275	34,660
	Electrical steel sheet intensity	ton/KRW million	0.0206	0.0219	0.0209	0.0151
	Cooper wire (rectangular)	ton	4,157	3,639	4,678	5,675
	Cooper wire (rectangular) intensity	ton/KRW million	0.0027	0.0023	0.0026	0.0025

1. Revenue: Based on separate financial statements

Chemical substance¹

		Unit	2021	2022	2023
Chemical substance management	Chemical usage	ton	146.9	224.9	135.6
	Chemical emissions	ton	0.689	0.239	0.503

1. Based on PRTR (Chemical emission and movement information according to the Chemical Substances Control Act) data
Scope of calculation: Korea

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Biodiversity

Approach

Biodiversity

HD Hyundai Electric is evaluating the potential impact on species during the course of our business. In the planning and execution phases of projects and investments, if biodiversity risks are identified, we actively seek and implement measures such as risk removal, mitigation, and avoidance. If necessary, we are prepared to cooperate with external stakeholders such as local governments and environmental specialized organizations.

Biodiversity Governance

HD Hyundai Electric reviews biodiversity issues through the “ESG Chief Officer – CEO – ESG Committee” Structure. The ESG Committee reviewed the results of biodiversity conservation activities conducted in 2023, the assessment of biodiversity risks and response measures, and plans for biodiversity conservation activities in collaboration with local communities.



Biodiversity Risk Management

HD Hyundai Electric manages biodiversity risks in accordance with TNFD recommendations and LEAP methodology. The LEAP methodology, which stands for “Locate–Evaluate–Assess–Prepare,” is used to calculate and evaluate nature-related financial information. Accordingly, we identify and manage the dependencies, impacts, risks, and opportunities between our operations and nature.

	Locate	Evaluate	Assess	Prepare	
Category	Understanding the value chain	Selection of priority areas	Identifying dependencies and impacts	Identifying risks and opportunities	Responding
How to identify	Identifying the scope of organizational activities	Classification of major analysis target regions considering the entire value chain	Evaluating natural capital dependence and impact	Assessing risks and opportunities considering dependency and impact	Setting future plans and goals

Commitment

HD Hyundai Electric aims to prevent biodiversity loss and preserve and restore sustainable ecosystems. To this end, we plan to expand the areas subject to biodiversity risk assessment and enhance the impact analysis methods for each process or product. In addition, we will strengthen the management of waste and pollutants generated in the process of conducting business and establish a collaborative system with external stakeholders to contribute to the conservation of biodiversity.

Category	Unit	Result for 2023	Goal for 2024	Goal for 2025	Goal for 2026
Conduct biodiversity risk assessment¹	%	-	40	60	80

1. Percentage of business sites in Korea (Seongnam, Ulsan, Seoul, Yongin, Anseong) that have conducted biodiversity assessments near their business sites

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Performance

Biodiversity Risk Assessment Results

HD Hyundai Electric has conducted a risk assessment according to the LEAP methodology. Accordingly, we have identified locations, dependencies, impacts, risks, and opportunities, and developed and implemented response strategies.

1. Locate (Region Selection)

To select key regions, we divided the value chain into supply chain, our operations, and our customers. We assessed the risk and importance of each region based on the World Wildlife Fund Biodiversity Risk Filter (WWF BRF) and internal data. Based on the evaluation results, we identified Ulsan, where our main production plant is located, and Seongnam, where our headquarters is located, as key region. We then used tools like the IBAT tool¹ and data from the Ministry of Environment² to analyze the presence of protected species and protected areas in these regions.

Category	Risks		Importance
Evaluation item	Water shortage	Air pollution	Importance of business activities
	Key biodiversity area	Landslide	Value chain correlation
	State of ecosystem fragmentation ³	Heat wave	
	Local pollution level		

1. A tool provided by UNEP (United Nations Environment Programme, an organization coordinating the UN's environmental activities) that helps check global biodiversity data based on regional location
 2. National Institute of Ecology, Ministry of Environment, statistical data collection on endangered wild animals
 3. A phenomenon in which one ecosystem is divided into several small ecosystems due to the construction of roads, railways, etc.

Protected species and protected areas based on IBAT classification

Category	Ulsan(production plant)	Seongnam (Headquarter)
IUCN ¹	Critically Endangered	8
	Endangered	40
	Vulnerable	53
	Near Threatened	46
	Least Concern	871
WDPA ²	National protected area	120
	Ramsar wetland	1
KBA ³	Important Bird and Biodiversity Areas	1

1. IUCN: . International Union for Conservation of Nature, Red List of Threatened Species
 2. WDPA: World Database Protected Areas
 3. KBA: Key Biodiversity Areas, World's Major Biodiversity Regions

Endangered species designated by the Ministry of Environment¹

Category	Ulsan (Production Plant)	Seongnam (Headquarter)
Mammals	Otter (Grade 1), Marten, Leopard Cat	Leopard Cat, flying squirrel
Birds	10 species, including yellow-billed egret (Class 1), steller's sea-eagle (Class 1), storks (Class 1), white-tailed eagles (Class 1), yellow-billed spoonbills, eagles, hawks, ospreys, and beetles	Bee-hawk, buzzard, bird-hawk, owl, white-throated plover
Amphibians and reptiles	Ringed salamander	Narrow-mouthed toad
Insects	Baby dung beetle	-
Invertebrates	Horse's whelk	-
Land plants	Evening primroses, water ferns, and red-eared marigolds	Prickly water lily

1. Organisms marked with "(Class 1)" are classified as endangered wild species Class 1, and organisms without the mark are classified as Endangered Wildlife Class 2
 • Endangered Wildlife Class 1: Wildlife that is at risk of extinction due to a significant decrease in population
 • Endangered Wildlife Class 2: Wildlife that is at risk of extinction in the near future as its population is greatly decreasing

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2. Evaluate (Dependency and Impact)

To understand the relationship with natural capital in the Ulsan and Seongnam regions, we used the ENCORE tool to identify dependency and impact on natural capital.

Dependence and impact on natural capital of heavy electrical equipment manufacturing

Category	Factor	Importance level
Depen- dencies	<ul style="list-style-type: none"> • Water supply Use of water resources such as groundwater and surface water in operational activities → Depending on local atmospheric conditions, vegetation, and other factors 	Medium
	<ul style="list-style-type: none"> • Prevention of damage from storms and floods (inundation of facilities) Vegetation's buffering and attenuation effect against natural disasters → Indirect help in protecting corporate facilities and production activities 	Medium
Impacts	<ul style="list-style-type: none"> • Water pollution The production of heavy electrical equipment uses a variety of chemicals such as acids, solvents, compressed gases, and colorants → Causing groundwater and surface water contamination in areas around the plant 	High
	<ul style="list-style-type: none"> • Ecosystem disturbance Negative impacts on species such as noise and vibration from the manufacturing process and light pollution at night 	Medium
	<ul style="list-style-type: none"> • Greenhouse gas emissions Product production activities and customer use of products → Greenhouse gas emissions such as carbon dioxide (CO₂) and sulfur hexafluoride (SF₆) 	High

Natural capital dependence and impact of value chain

Category	Upstream (supply chain)	Downstream (product use and disposal)
Depen- dencies	<ul style="list-style-type: none"> • Raw materials and resources Use of raw materials such as copper and iron when manufacturing products 	<ul style="list-style-type: none"> • Resource consumption Consumption of raw materials and energy resources during product use and waste disposal
	<ul style="list-style-type: none"> • Water and air quality Rely on water and air quality to handle waste and emissions and comply with environmental regulations. 	<ul style="list-style-type: none"> • Environmental conditions When processing waste, it depends on natural environmental conditions such as topography, ground, and water quality
	<ul style="list-style-type: none"> • Energy Energy use such as electricity, gas, oil, etc. 	
Impacts	<ul style="list-style-type: none"> • Resource consumption Large-scale use of raw materials and resources when manufacturing products → Possibility of resource depletion and ecosystem destruction 	<ul style="list-style-type: none"> • Energy consumption and greenhouse gas emissions Power loss occurring during the power conversion process of the transformer → Additional energy consumption and increased greenhouse gas emissions
	<ul style="list-style-type: none"> • Pollution Causes air, water, and soil pollution during the production process → Negative impact on ecosystem and biodiversity 	<ul style="list-style-type: none"> • Waste disposal Pollutants are generated during the disposal of heavy electrical equipment → Soil contamination and impact on the local ecosystem
	<ul style="list-style-type: none"> • Energy consumption and greenhouse gas emissions High energy consumption and greenhouse gas emissions during plant operation → Impact on climate change 	

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3. Assess (Risks and Opportunities)

By taking into account dependencies on and impacts on identified natural capital, we have identified key potential risks and opportunities.

Risks and opportunity factors that may arise at Seongnam GRC (Headquarter)

Category	Factor	Description
Risks	Corporate image impact	As biodiversity conservation and sustainable management gain importance, any negative impact on biodiversity from corporate activities may harm our corporate image
	Legal liability and litigation risk	Manufacturing heavy electrical equipment consumes a lot of energy and resources, which increases the risk of legal liability and litigation if environmental laws are violated
Opportunities	Building an environmentally friendly image	Building an environmentally friendly image by protecting biodiversity and using sustainable resources can positively change social evaluations and maintain a competitive edge in the market
	Development of environmentally friendly technology	Development of energy efficiency technologies and SF ₆ GAS replacement technology can strengthen corporate competitiveness while contributing to biodiversity protection and environmental protection
	Biodiversity activities	Biodiversity conservation activities contribute to forming positive relationships with local communities and gaining their trust
	Biodiversity monitoring	Monitoring biodiversity, analyzing and improving the impacts on the surrounding environment, and transparently disclosing these efforts can garner positive evaluations from stakeholders
	Education and Awareness Raising	Increasing environmental protection awareness among employees through internal training can develop innovative and environmentally friendly processes and strengthen sustainable management strategies

Risks and opportunities that may arise at the Ulsan production plant

Category	Factor	Description
Risks	Increased maintenance, repair and replacement costs	Due to scarcity of natural resources, maintenance and repair costs for equipment and facilities may increase, along with rising costs associated with finding alternative resources
	Raw material shortages and rising prices	A reduction in raw material supply due to natural resource scarcity can constrain production and lead to increased production costs due to higher raw material prices
Opportunities	Production instability	Natural resource scarcity or environmental changes can destabilize production processes, resulting in reduced output, delays, and lowered quality
	Natural resource efficiency	Recycling and utilizing discarded heavy electrical equipment products, as well as employing renewable energy, can efficiently utilize resources, reduce costs, increase production volumes, minimize resource wastage, and create economic value

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4. Prepare (Response)

We are planning to advance our evaluation process and develop a strategy to integrate the results into our sales activities. Moving forward, we aim to strengthen analysis of potential risks and factors and apply scenario techniques determine their financial impact.

Signed a business agreement for “Win-Win Cooperation in the ESG Environmental Field” with Seongnam City

HD Hyundai Electric has signed a “Win-Win Cooperation in the ESG Environmental Field” business agreement with Seongnam City and other eight companies in the Seongnam area. This initiative represents a collaborative effort where private and public sectors jointly plan ESG environmental activities and participate in community environmental protection activities, fostering shared growth. Alongside Seongnam City, nine companies, including ours, have committed to initiatives such as population restoration projects and removal of ecosystem-disturbing species to preserve biodiversity at six locations, including Maengsan Ecology Learning Center, Tancheon Wetland Ecology Center, and Pangyo Environmental Ecology Learning Center.



Biodiversity Conservation Activities

Environmental purification activities to preserve coastal species in Jujeon, Ulsan

In July 2023, HD Hyundai Electric carried out coastal environmental cleanup activities to preserve the marine ecosystem and promote biodiversity at Jujeon Beach, Dong-gu, Ulsan. Approximately 100 executives and employees divided the approximately 1 km stretch of the coast of Jujeon into three areas to collect plastic waste, household waste, and coastal seaweed.



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Biodiversity conservation activities to preserve the habitat and promote growth of the nationally protected plant "prickly water lily"

HD Hyundai Electric, together with executives and employees of HD Hyundai affiliates such as HD Hyundai Energy Solutions and HD Hyundai Robotics, removed ecosystem-disturbing plants (ginseng vine, maple ragweed, etc.) equivalent to fifteen 75-liter volume standard plastic garbage bags, to preserve the habitat and promote the growth of the nationally protected species of prickly pear, which grows naturally in the "Tancheon Freshwater Fish Wetland Ecological Garden" located in Seongnam-si, Gyeonggi-do. In addition, prior to the removal work, executives and employees carried out plogging activities to collect trash by traveling along the Tancheon Stream banks up to the Ecological Garden.



Biodiversity conservation activities to expand flying squirrel habitat

On May 17, 2024, HD Hyundai Electric conducted biodiversity conservation activities to expand the habitat of flying squirrels in Seongnam City. This activity, carried out jointly with HD Korea Shipbuilding & Marine Engineering and HD Hyundai Oilbank, aimed to improve the habitat environment and expand the population of flying squirrels, a Class 2 endangered wildlife species, by providing shelter. Approximately 20 employees from the three companies gathered on this day to install around 40 flying squirrel houses in the Maengsan Ecological Forest in Seongnam. Moving forward, we plan to monitor the usage rate of these installed houses and the amount of excrement inside them to assess changes in the flying squirrel population and ensure ongoing management.



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Approach

Eradicating Discrimination and Harassment

HD Hyundai Electric is striving to establish a fair and transparent internal organizational culture. We do not discriminate on the grounds of gender, age, race, ethnicity, religion, or educational background at all stages, from recruitment to placement, training, performance evaluation, and retirement, and we operate a personnel management process based on the principle of enhancing diversity. We establish employment rules and personnel regulations in compliance with domestic laws such as the Labor Standards Act to determine matters related to the company's personnel and recruitment. We operate a system to report discrimination and harassment issues, enforce a zero-tolerance policy for incidents, and implement sanctions after thorough investigations. In addition, we provide training on discrimination and harassment to all employees every year to raise awareness.

Realization of Productive Labor-Management Relations

HD Hyundai Electric strives to establish a labor-management relationship based on cooperation, aiming for a common destiny that contributes to productive labor-management relations. Management shows strong will and continuous action, the labor union demonstrates community awareness and voluntary participation, and members exhibit a strong sense of belonging and active support for labor-management relations. HD Hyundai Electric conducts annual collective bargaining (wage and collective agreement renewal) with the labor union and holds quarterly labor-management council meetings (system improvement and welfare). The results of these consultations are transparently disclosed to executives and employees through the company intranet. HD Hyundai Electric's labor and management concluded the 2023 collective bargaining agreement without disputes, and we plan to continue striving to improve employment stability and working conditions for executives and employees, including the full implementation of the results from the labor-management council.

Labor Governance

To improve its organizational culture, HD Hyundai Electric appointed Jeon Soon-ok, executive director of the Jeon Tae-il Foundation and an expert in labor and society, as chairman of the ESG Committee. The ESG Committee receives reports, deliberates, and approves labor issues related to employment, worker diversity, labor-management relations, and talent attraction and retention. Since 2022, the ESG Committee has been reviewing content related to human rights impact assessments to identify company-wide human rights risks, encompassing labor and the supply chain.

Discrimination and Harassment Prevention Policy

HD Hyundai Electric has established policies to prevent bullying, sexual harassment, and discrimination in the workplace so that all executives and employees can work in a safe and fair environment. We also recommend these policies to our subsidiaries, joint ventures, supply chains, and contractors, and we fully comply with relevant laws, including the Equal Employment Opportunity Act, the Labor Standards Act, and the Occupational Safety and Health Act.

No Harassment HD Hyundai Electric prohibits any form of harassment that causes physical or mental pain to other employees or worsens the working environment by taking advantage of one's position or relationship within the company.

No Sexual Harassment Any behavior that causes other employees to feel sexually humiliated or disgusted by sexual language or behavior during work is prohibited. This includes all forms of sexual harassment, whether verbal, behavioral, or visual.

No Discrimination Discrimination based on gender, race, ethnicity, nationality, religion, disability, age, political opinion, region of origin, etc., is strictly prohibited. All executives and employees must be treated fairly and equally.

Confidentiality Confidential information learned during the investigation of workplace bullying, sexual harassment, and discrimination will not be disclosed against the will of the victim or reporter, and those who participated in the investigation will be protected from being disadvantaged.

Education and Prevention HD Hyundai Electric conducts preventive training for all employees to prevent the recurrence of bullying, sexual harassment, and discriminatory behavior.

Response Plan in Case of Occurrence We apply strict response principles to harassment and discrimination to ensure a workplace culture that values mutual respect and dignity. We take appropriate corrective and personnel actions in response to any type of harassment, sexual harassment, discrimination, or other unlawful conduct, depending on the severity of the situation.

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Commitment

HD Hyundai Electric strives to go beyond guaranteeing workers' rights and to support them in growing through continuous self-development and leading an initiative-taking life between work and personal life. We provide a variety of training programs to support the growth of our employees, and particularly focus on cultivating talent through internal or external professional training on eco-friendly technologies. In addition, we plan to continuously renew the family-friendly company certification received in 2021 to help executives and employees maintain work-life balance.

Category	Unit	2023 Performance	2024 Goal	2025 Goal	2026 Goal
Family-friendly company certification	N/A	Certification maintained	Certification maintained	Certification maintained	Certification maintained

Performance

Work-Life Balance

Health	Leisure	Family Support	Affiliate Discount	Residential Living	Other
<ul style="list-style-type: none"> • Health screenings • Healthcare • Medical expenses • Cancer treatment support 	<ul style="list-style-type: none"> • Welfare mall • HD Hyundai Family Card 	<ul style="list-style-type: none"> • Maternity protection • Daycare center operation • Support for children's education 	<ul style="list-style-type: none"> • Hotel • Recreational facilities • Pan-Hyundai price discount 	<ul style="list-style-type: none"> • Dormitory • Get a home purchase loan 	<ul style="list-style-type: none"> • 5 days of summer vacation • Long service leave • Congratulatory and condolence support funds • PC-OFF system • Staggered commute

Support for Pregnant and Childbirth Female Workers

HD Hyundai Electric operates a variety of childbirth and childcare support systems to create a sustainable environment where family life and work life can coexist. We provide welfare mall points worth KRW 300,000 through the 'Happy Mom Package Plan', a welfare benefit related to pregnancy and childbirth, and provide separate recovery support funds after childbirth to support pregnant and childbirth female workers. Additionally, in the early stages of pregnancy, we provide employee ID necklaces that identify the pregnant woman, and we operate a flexible paid half-day leave system for regular prenatal checkups. We operate a parental leave system in accordance with legal standards, and parental leave benefits are paid for one year. In 2024, we will strengthen the maternity protection system and provide additional support with 30 days of special maternity leave, KRW 4.7 million in pregnancy congratulatory money, KRW 4.5 million in congratulatory money for birth, and infertility support leave. In addition, we support nursing rooms, daycare centers, and family leisure facilities, and actively support executives and employees' work-life balance by providing tuition for children, early childhood education subsidies, and education expenses for children with disabilities.

Labor-Management Communication Program

HD Hyundai Electric provides organizational revitalization and labor-management relations training programs to managers and new employees in order to establish cooperative labor-management relations. To this end, we are striving to improve relations and communication between labor and management by operating programs such as class-level meetings and monthly letters from the CEO. In addition, we pursue various activities such as a joint labor-management blood donation event, a joint labor-management donation, regular meetings between labor and management representatives, and regular management status briefings, seeking ways to achieve a win-win for both labor and management. We are striving to build a culture of coexistence by operating a grievance resolution system, an employee stock ownership association, and an in-house labor welfare fund, including support for recreation facilities and funeral support.

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Providing Educational Opportunities

HD Hyundai Electric adopts the advancement of human resources as a core strategy to achieve business success and maintain market competitiveness. The company has established a systematic talent development strategy to attract and nurture excellent talent. To this end, we developed training programs tailored to each rank, job, and position, and ensured that all executives and employees, including non-regular workers, could benefit from the training.

Education Curriculum	Content
Nurturing Leaders	HD Hyundai Electric offers group training courses, HLC (HD Hyundai Group Leader Course) and HTLC (HD Hyundai Group Technical Leader Course), to help each member grow into an expert in their field. HLC consists of a total of 5 stages, cultivating executives and employees' basic knowledge and management mindset through customized training tailored to their positions and levels. Intensive training is provided for each stage for 10 days (12 days for stage 5), aimed at providing practical training such as action learning to solve problems based on the challenges faced by each business. <p>[2023 HLC performance]</p> <ul style="list-style-type: none"> • Stage 1: 8 person completed • Stage 2: 7 person completed • Stage 3: 5 person completed • Stage 4: 4 person completed • Stage 5: 1 person completed <p>* HTLC for production technicians has not been implemented in 2023, and a total of 6 person are being selected and operated as of 2024.</p>
Nurturing Convergence Talent	To foster convergence talent with business insight, we focus on nurturing talent by having top performers in the humanities and business acquire basic engineering knowledge, and top performers in electrical and mechanical engineering acquire basic management education.
Nurturing DT Talent	To provide excellent services by nurturing digital talent, we operate a DT talent training system to foster early changes in executives and employees' perceptions of DT and to develop talent with specialized technical skills.

Education Curriculum	Content
Nurturing Job Expert	We conduct job expert development training through an autonomous job training system and group job training to improve the work capabilities of field employees. After completing training, we strive to enhance executives and employees' job capabilities by managing training program performance indicators.
ESG Training for Independent Directors	To strengthen the board's ESG management capabilities, ESG training was conducted for independent directors in July 2023. We improved the Board of Directors' understanding of ESG by providing training on other companies' ESG management cases and domestic and international regulatory trends.
Retirement Planning Support Training	To support a healthy and stable retirement for our executives and employees, we operate a retirement planning support education program that consists of a total of 16 hours of training over 2 days and 1 night, which 52 out of 57 participants successfully completed, and in 2024, we aim to provide those scheduled to retire at retirement age with a positive perception of retirement and the opportunity to prepare for life after retirement by exploring various environments that change after retirement and life areas such as career, finance, health, and leisure, and we plan to inspect and provide programs to prepare for re-employment and develop basic competencies.
Consignment Training	We provide consignment training for professional bachelor's, master's, and doctoral programs to strengthen the capabilities of each class, including the Executive AMP, Hyun Joong (Hyundai Heavy Industries) Meister University, and the self-development study abroad system. <p>[Achievements in 2023]</p> <ul style="list-style-type: none"> • Executive AMP course: 1 person completed the Seoul National University/KEPCO Energy CEO course, 1 person completed the Busan National University Business School course • Office technical positions: 4 person completed the Yonsei Leaders Mini MBA, 1 person completed the Ulsan University CEO course, and 1 person completed the Techno CEO course at the Graduate School of Industry at Ulsan University • Production technician: 1 person completed an associate degree course at Hyundai Meister University

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Detailed Curriculum for Technicians Working in the Office

Job Title	Nurturing Leaders		Nurturing Hybrid Talents	Education by Rank	DT Training	Job Training	Global Training	Others		
Executive	Leader course	Leadership coaching		Education for new executives	DT leadership special lecture					
Senior Manager	HLC IV	Leadership improvement course	New head of the department New head of the job	Capacity building training	DT planner, expert course	Professional job training	Consortium training	Cyber training		
	HLC III								Course for candidates of the entity head	
	HLC II									Short-term study abroad for degrees overseas sites
Manager	HLC I		Hybrid course					Retired life design	Work-study system	
Associate Manager				Training for employees at the second year of work	DT beginner					
				Mentoring for new employees						
New Hire			Hybrid course for new employees	Orientation for new / experienced employees						

Detailed Curriculum for Production Technicians

Job Title	Leadership Training	Technology Transfer Training	Common Training	Job Training	Corporate Culture Training	Legally Mandatory Training				
Executives										
Production Head		Core skill transfer program	Basic capacity and job capacity building	Technical capability nurturing system	Certification training	Safety management training				
Production Deputy Head							General skill transfer program	Collective professional training	Field autonomous job training	Organization facilitation training
Production Manager	HTLC II (officer)									
Production Asst. Manager	HTLC I (head of production team)	New production team leader				Retirement planning				
4th Class Engineer										
5th Class Engineer	H-II Meister University									
New Hires			Mentoring for new hires							
			Orientation for new hires							

In-house Venture Support System

HD Hyundai Electric is implementing 'DREAM CUBE,' an in-house venture support system at the group level, to create new value for the group and foster a creative and challenging corporate culture. Dream Cube targets executives and employees at the senior (assistant) level or higher, and during the selection stage, we cooperate with external professional companies to support business advancement. Officially selected in-house venture teams are provided with an independent working environment so they can focus on implementing their ideas. When an in-house venture team spins off, start-up support is provided, and compensation is paid to teams that choose the in-house commercialization route. In particular, we are creating an environment where employees can take on challenges without fear of failure by allowing re-employment within 5 years after a spin-off.

Executives and Employee Evaluation System

HD Hyundai Electric conducts performance evaluations twice a year, in the first and second half, to fairly manage the performance of executives and employees. The results obtained through these evaluations are used in various decisions such as promotion, compensation, training, and leader selection to motivate executives and employees. In particular, we actively support the development and growth of our employees based on a core talent system linked to evaluations. To enhance communication and adaptability, we incorporate agile conversations into our evaluation process, ensuring that feedback is timely, continuous, and constructive. The company adopts the Management by Objectives (MBO) method for managers above the department head level to measure and evaluate the achievement rate of individual goals. Through this, we connect individual goals with the company's strategic goals and achieve efficient talent management and development through clear performance evaluation.

Retirement Pension System Operation

HD Hyundai Electric operates a retirement pension system in accordance with the Employee Retirement Benefit Security Act to support a stable retirement life for all executives and employees who have worked for more than one year. We operate a defined contribution (DC) retirement pension system for salaried employees over 56 years of age.

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Labor Union

		Unit	2021	2022	2023
Labor union	Union membership rate	%	91.2	83.6	84.3
Collective bargaining	Collective bargaining agreement application rate	%	100	100	100
Strike	No. of strikes	case	13	0	0
	No. of person on strike	person	264	0	0

Employees

		Unit	2021	2022	2023
By employment type	Total employees	person	2,122	2,084	2,119
	Regular worker	person	2,064	1,959	2,004
	Non-regular worker	person	58	125	115
	Regular worker rate	%	97.3	94.0	94.6
	Non-regular worker rate	%	2.7	6.0	5.4
By age	Under 30	person	112	177	200
	30 to under 50	person	1,064	1,007	980
	50 and above	person	946	900	939
	Rate of under 30	%	5.3	8.5	9.4
	Rate of 30 to 50	%	50.1	48.3	46.3
	Rate of 50 and above	%	44.6	43.2	44.3

Employee Diversity

		Unit	2021	2022	2023
Female	Total no. of female	person	147	192	167
	- Management positions ¹	person	5	8	9
	- Senior managerial positions ²	person	0	0	0
	- Managerial positions in revenue generating department	person	3	4	3
	- STEM department ³	person	37	41	42
	- New hires	person	37	21	9
	Total female rate	%	6.9	9.2	7.9
	- Management positions	%	2.2	3.7	2.4
	- Senior managerial positions	%	0	0	0
	- Managerial positions in revenue generating department	%	1.5	2.1	1.6
- STEM department	%	25.2	23.6	25.1	
- New hires	%	57.8	22.6	11.0	
Minorities	People with disabilities ⁴	person	27	28	27
	People with disabilities rate	%	1.3	1.3	1.3
	Patriots and veterans ⁵	person	58	55	57
	Patriots and veterans rate	%	2.7	2.6	2.7
Nationality	Foreign nationals	person	1	0	0
	- Mexican	person	1	0	0

1. Managerial positions: (for office organization) executive, heads of department ~ section leaders, part leaders (for production organization) executive, heads of department ~ senior foreman/assistant foreman

2. Executive positions: President ~ Vice President

3. Development department, Design department, Laboratory, Information technology department

4. Based on the Disability Employment Levy Report

5. Based on the Patriots and Veterans Status and Plan Report

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APPENDIX

Hiring¹

		Unit	2020	2021	2022	2023
New hires	Total	person	28	64	93	82
	- New (no experience)	person	26	50	71	65
	- Experienced	person	2	14	22	17
Internal hires	Rate ²	%	86.4	60.2	40.0	54.9
Regional	Local hires	person	25	38	246	259

1. Employee hiring data is categorized by age group, gender, job position, and nationality (country of origin)
 2. Number of internal hires/(number of new hires + number of internal hires)

Turnovers and Retention¹

		Unit	2020	2021	2022	2023
Turnovers	Total turnovers	person	220	55	125	120
	- Voluntary turnovers	person	176	21	103	35
	Turnover rate	%	11.0	2.7	8.3	5.7
	- Voluntary turnover rate	%	8.4	1.0	4.9	1.7
Years of service³	Average years of service	year	2.8	3.7	4.3	4.7
	- Male	year	2.9	3.8	4.4	5.1
	- Female	year	2.1	2.6	2.9	3.4

1. Employee Turnovers and Retention data is categorized by age group, gender, job position, and nationality (country of origin)
 2. Voluntary turnovers include turnovers and retirements by voluntarily (excluding regular retirement, disciplinary action, dismissal, restructuring, etc.)
 3. Calculation beginning date: After spin-off from HD Heavy Industries in April, 2017

Wage¹

		Unit	2021	2022	2023
Salary	Average salary for all employees	KRW million	81	95	110
	- Male	KRW million	85	97	113
	- Female	KRW million	53	64	78
Equal salary	All employees	%	63.1	66	69
	Managerial position ²	%	92.6	97	91.6
	Non-managerial position ³	%	64.6	71.9	85
Employees without titles	Average fixed annual salary for male employees	KRW thousand	61,874	62,779	67,230
	Average fixed annual salary for female employees	KRW thousand	46,185	47,360	50,761
	Average total annual salary for male employees (fixed salary + variable salary)	KRW thousand	72,983	79,173	92,898
	Average total annual salary for female employees (fixed salary + variable salary)	KRW thousand	55,305	60,642	71,789
Employees with titles	Average fixed annual salary for male employees	KRW thousand	91,731	93,302	98,429
	Average fixed annual salary for female employees	KRW thousand	84,655	87,543	87,192
	Average total annual salary for male employees (fixed salary + variable salary)	KRW thousand	105,841	113,739	129,553
	Average total annual salary for female employees (fixed salary + variable salary)	KRW thousand	97,089	107,378	115,453
Executives⁴	Average fixed annual salary for male employees	KRW thousand	213,154	236,854	234,738
	Average fixed annual salary for female employees	KRW thousand	-	60,000	84,000
	Average total annual salary for male employees (fixed salary + variable salary)	KRW thousand	261,700	335,697	373,202
	Average total annual salary for female employees (fixed salary + variable salary)	KRW thousand	-	60,000	84,000
Wage gap between CEO and employees	Based on average	%	12.3	8.2	8.4

1. Wage amount based on annual report
 2. Managerial positions: (for office organization) executives, heads of department ~ section leaders, part leaders (for production organization) executives, heads of department ~ senior foreman/assistant foreman based on basic salary
 3. Non-managerial positions: All employees except managerial positions, based on basic salary
 4. Executive positions: President ~ Vice President

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Training¹

		Unit	2021	2022	2023
Training hours	Training hours per employee	hour	6.09	8.30	4.34
	- Male	hour	6.24	8.27	4.31
	- Female	hour	4.12	8.65	4.58
	- Regular worker	hour	6.21	8.13	4.40
	- Non-regular worker	hour	1.17	10.92	3.25
	- Under 30	hour	8.05	14.11	11.43
	- 30 to under 50	hour	6.09	8.17	4.10
- 50 and above	hour	5.86	7.29	3.07	
Training cost	Training cost per employee	KRW thousand	366.60	280.60	321.41
Total engagement rate		%	53.2	60.1	53.4

1. Partially includes statutory training

Performance Evaluation¹

		Unit	2021	2022	2023
Competency development evaluation system	Application rate	%	3.8	3.5	3.9

1. Follows the management by Objectives (MBO) evaluation method.
 2021 and 2022 Target : department head level or higher, 2023 Target : section leaders level or higher

HCROI¹

	Unit	2020	2021	2022	2023
HCROI	-	5.960	3.884	5.663	7.970

1. HCROI(Human Capital Return on Investment) = {total revenue-(operating expenses-costs related to executives and employees)} / costs related to executives and employees

Welfare benefits

		Unit	2021	2022	2023
Welfare benefits	Welfare benefit costs	KRW 100 million	117.0	119.3	171.8
	Welfare benefit costs per person	KRW million	5.51	5.73	8.11
	Welfare benefit intensity ¹	%	0.65	0.57	0.64

1. Revenue: based on consolidated statements in the annual report

Childbirth and Childcare

		Unit	2021	2022	2023
Number of people on parental leave ¹	- Male	person	20	16	12
	- Female	person	5	2	3
Return to work after parental leave	- Male	person	10	16	16
	- Female	person	5	2	3
	- Male	%	90.9	106.72 ²	88.9
	- Female	%	100	100	100
Worked for more than 12 months after returning to work	- Male	%	100	100	75
	- Female	%	100	100	100

1. Number of people taking parental leave is calculated based on childbirth incentive payment
 2. Exceeded 100% due to return before the scheduled return date

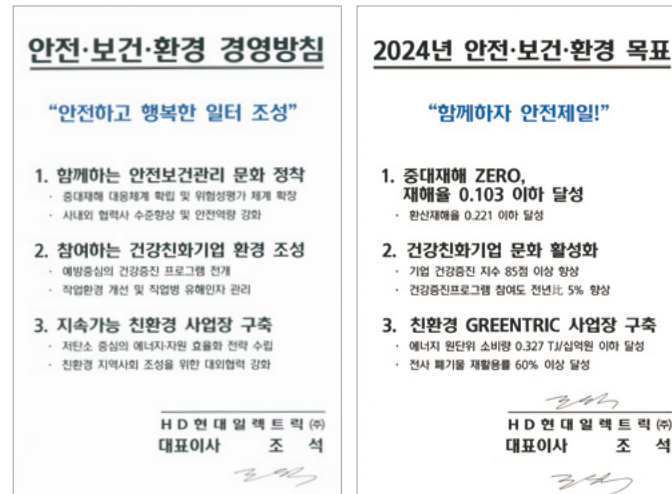
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Health and Safety

Approach

Health and Safety Policies

HD Hyundai Electric has set 'creating a safe and happy workplace' as its health and safety management policy and is fostering a culture where everyone, including executives, employees, and partner companies, participates. To comply with domestic and international health and safety laws, enhance partner company standards, and strengthen safety capabilities, we focus on improving the working environment, managing harmful factors for occupational diseases, minimizing risk blind spots, and creating a health-friendly corporate environment. We provide a safe and healthy work environment for all executives, employees, and partner companies, and strive to maintain a safety culture throughout the company. Additionally, company-wide health and safety performance and plans are reviewed and approved by the board of directors at the beginning of each year.



Health and Safety Management System (ISO 45001)

HD Hyundai Electric operates a health and safety management system that meets global standards by acquiring and maintaining ISO 45001 certification, an international standard for health and safety management, and sets and achieves health and safety goals accordingly. We will establish an action plan and carry out the following.

1. Implement regular safety risk assessments within the policy's scope
2. Apply improvement measures for safety risks and harmful risk factors
3. Monitor and evaluate the effectiveness of the company-wide health and safety management system
4. Continuously improve the management system according to domestic and international occupational safety and health trends
5. Enhance health and safety capabilities and awareness of executives and employees through education and training

HD Hyundai Electric analyzes the risks and opportunities of the health and safety management system, evaluates the derived risks and opportunities, and continuously implements improvement activities to reduce identified health and safety risks. We maintain certification through follow-up management and renewal reviews conducted by LRQA, a third-party verification agency. Additionally, we conduct annual internal audits of the health and safety management system to assess its operation by reviewing major documents, inspecting on-site safety management, and confirming risk assessments and legal compliance evaluations. We also verify operability by ensuring compliance with ISO standards, and we are committed to building a robust health and safety management system.

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Health and Safety

Accident Investigation Process

HD Hyundai Electric applies accident investigation procedures in accordance with incident and accident regulations to all business sites. When an accident occurs, the supervisor reports the situation to the safety and environment department, investigates the cause, takes immediate action, and writes a safety accident report. In the event of a serious accident, we follow a process to investigate the root cause and establish countermeasures based on Root Cause Analysis (RCA) techniques.

Occupational Safety and Health Committee

HD Hyundai Electric faithfully listens to workers' opinions to create a safe and healthy working environment and operates the Occupational Safety and Health Committee, which consists of six management-side members and six employee-side members, to discuss matters related to occupational safety and health between labor and management, and we deliberate and decide on these matters together. The Occupational Safety and Health Committee meets quarterly to deliberate and decide on matters related to the establishment of occupational accident prevention plans, employee health and safety education, and the inspection and improvement of the working environment. Health and safety risks are systematically monitored, and the results of meetings are communicated to all executives and employees. Additionally, to simplify the on-site risk factor reporting process, we have introduced a QR code system to collect opinions from on-site workers.

Commitment

HD Hyundai Electric sets health and safety environmental management policies and goals and discloses them on its website. The number of serious accidents is maintained at zero, and the accident rate is steadily decreasing. We have established and managed targets to achieve zero serious accidents and a disaster rate of 0.069 (converted accident rate of 0.207) in 2023, a disaster rate of 0.103 (converted accident rate of 0.221) in 2024, and a disaster rate of 0.103 (converted accident rate of 0.200) in 2025, reducing the converted accident rate by more than 10% compared to the previous year.

Category	Unit	2023 Performance	2024 Goal	2025 Goal	2026 Goal
Serious accidents	case	0	0	0	0
Accident rate ¹	%	0.069	0.103	0.103	0.103
Health-friendly company (Corporate health promotion index)	point	87.5 points	85 points or more	85 points or more	85 points or more

1. Including personnel from resident partner companies

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Performance

Strengthening Management Safety Leadership

HD Hyundai Electric aims to manage performance by setting safety management policies and goals, and expresses its strong commitment to safety management by posting large signs at major entrances. To strengthen management's responsibility for health and safety, we hold a safety management meeting led by the CEO, and the health and safety general manager conducts on-site safety inspections at least once a month. Additionally, the budget for health and safety is pre-allocated and inspected at least once every six months according to the legal compliance evaluation checklist. To raise workers' safety awareness and improve the level of safety culture, we thoroughly implement rewards, campaigns, and management of rules. Furthermore, we have appointed a Chief Safety Officer (CSO) and formed a dedicated health and safety management organization to ensure the implementation of improvements to harmful risk factors and compliance with health and safety standards.



Establishing a Risk Assessment System

HD Hyundai Electric conducts regular risk assessments every year and whenever new equipment or processes are introduced or accidents occur. To help workers autonomously identify and improve dangerous situations, we use QR codes to search for on-site risk factors and implement the right to request safe work. This is reflected in regular risk assessments to effectively address risk factors. We reduce the risk of major factors identified through this process by registering significant improvement plans and confirming the implementation of improvement measures. The entire risk assessment process is monitored through inspections of the implementation status. Inspections were conducted in the first and second halves of the year, and 350 risk assessments and 25 significant improvement plans were registered. Improvement plans were established and completed for 25 registered major harmful risk factors.

Major Improvements by Division

Power Equipment Division	<ul style="list-style-type: none"> Use a rechargeable air saw when cutting neck pins and bolts Install safety fences using safety blocks Install a safety fence using safety blocks to prevent falling accidents during conservator installation work Install and use sliding work platforms to prevent falling accidents when moving the upper part of the iron core
Distribution Division	<ul style="list-style-type: none"> Use a protective cover for the operating part of operation test equipment Install air balancers when transporting the CB cover to prevent injuries Use protective covers on the operating part of test equipment to prevent accidents where fingers could be caught during motion testing. Install covers to prevent the cutter's rotating body from being caught when cutting cables, thereby preventing hand injuries.
Other	<ul style="list-style-type: none"> Require a team of three to operate a mobile truck to prevent contact accidents, with mandatory checks for foreign substances on the floor. Control access and use strict signaling before powering on during shock testing to prevent electric shock accidents.

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Health and Safety

Conducting Health and Safety Training

HD Hyundai Electric is thoroughly conducting health and safety education to improve the health and safety knowledge and awareness of executives and employees. We provide statutory safety training, including regular training, training upon hiring, training when work changes, and special training. Additionally, we offer in-house safety training such as risk assessment training, reinstatement training, and equipment operation training. Furthermore, we provide job-specific health and safety training, including health and safety manager training and senior health and safety manager training, for health and safety managers and person in charge of safety and health.

Safety Short Forms

In 2023, to improve safety culture awareness and use as safety education material, HD Hyundai Electric produced safety short forms related to TBM¹ (Toolbox Meeting), unsafe acts and unsafe conditions, gray rhino, and in-house traffic order. Among these, the TBM video was featured in a contest held by the Ulsan branch of the Ministry of Employment and Labor in May 2023, where it received an encouragement award. We are contributing to improving the level of safety education and culture by participating in such events and receiving recognition.

1. Toolbox Meeting: Before work begins, workers gather to discuss work methods and safety rules



Safety Reward System

HD Hyundai Electric provides organizational awards, such as zero-accident awards and excellent safety prevention activity team awards, to raise safety awareness among executives and employees and strengthen their ability to execute safety activities. Individual safety awards, such as disaster prevention meritorious awards, are also given. Additionally, we provide immediate rewards by issuing compliment coupons to employees who practice safe behavior on site. In 2023, a total of 2,385 awards were given to teams, partner companies that excelled in safety prevention evaluations, and individuals who contributed to preventing serious disasters by identifying and improving risk factors, thereby preventing safety accidents and improving safety culture awareness.



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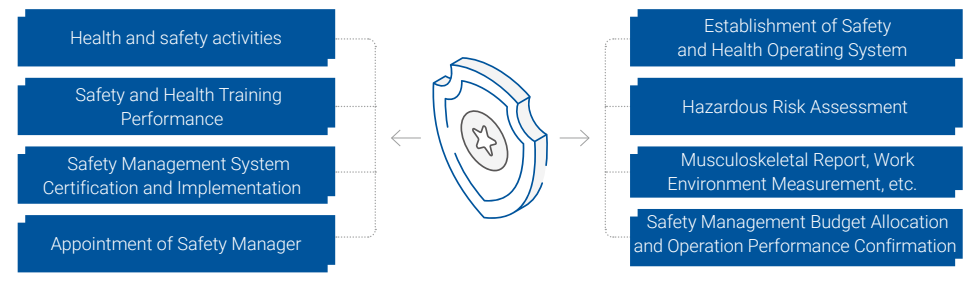
Health and Safety

Strengthening Win-Win Partnership

Partner Company Safety Level Evaluation

When selecting a partner company, HD Hyundai Electric conducts a health and safety competency evaluation to select qualified suppliers. Additionally, we conduct safety prevention assessments once a month to improve the health and safety management levels of our partner companies. We provide rewards to partner companies with excellent evaluation results and request improvement plans from those that need enhancement. Monthly meetings are held to share safety information and raise safety awareness. Furthermore, health and safety councils and joint inspections are conducted monthly and quarterly to improve the health and safety standards of our partner companies.

Partner Company Health and Safety Evaluation Items



Conducting Safety Training for Partner Companies

We are conducting 'visiting safety training' to strengthen our partner companies' health and safety response capabilities. In particular, in response to the expanded policy of applying the Serious Accident Punishment Act to workplaces with fewer than 50 employees starting in January 2024, we are focusing on closely examining the health and safety preparations of our partner companies and improving our response capabilities. Over two days in March 2023, we visited four partner companies, including 'Luxco' and 'Dongyang Industries electric Co., Ltd.' located in Buk-gu, Ulsan, and conducted 'visiting safety training'. We monitored the status of compliance based on the checklist for implementing the obligations of the Serious Accident Punishment Act and directly inspected the production site to guide improvements.



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Strengthening the Safety of Off-site Installation Work

HD Hyundai Electric distributes health and safety management guidelines to off-site installation construction sites, and the CSO and the Safety and Environment Department from headquarters visit major sites twice a quarter to inspect legal documents related to health and safety and provide on-site safety management guidance. In 2023, we conducted a total of eight inspections in Gunsan, Pohang, and Gwangyang to improve the level of health and safety management at external construction sites.



Health and Safety Win-Win Partnership Project

In 2023, we participated in the Ministry of Employment and Labor's small- and medium-sized enterprises (SMEs) health and safety win-win partnership project and were recognized as an excellent workplace. We engaged in initiatives in 2023 aimed at preventing industrial accidents, including supporting both internal and external partner companies to achieve recognition as excellent workplaces through risk assessments, providing the health and safety products, and conducting a win-win partnership campaign. Additionally, we distributed a foreign worker safety guidebook to internal, external partner companies. A total of 434 copies of the guidebook were distributed, to enhance safety communication and education levels among foreign workers.



Enhancing Safety Communication and Mindset

Listening to Worker Opinions

HD Hyundai Electric promptly addresses field risk factors by gathering feedback from workers through a QR code system for identifying workplace risks and exercising the right to request safe work. In 2023, we received 1,339 reports identifying risks, recognized best practices with awards for disaster prevention contributors, and issued compliment coupons. Additionally, 536 safety work requests were submitted, leading to on-site verification and action.

Conducting Disaster and Emergency Response Activities

HD Hyundai Electric creates scenarios for responding to disasters and emergency situations and conducts response training once a half of the year accordingly. If deficiencies or areas for improvement are identified during the training process, they are immediately reflected in the scenario. In 2023, in order to minimize damage from emergency situations, we strengthened our ability to respond to emergency situations by conducting 10 firefighting and emergency response drills at the Rotating Machineries factory, high-voltage circuit breaker factory, transformer factory, and Seonam factory.

Executives and Employees Health-Friendly System

Health Screenings

HD Hyundai Electric conducts general checkups to monitor the health status of executives and employees, as well as special checkups for workers exposed to harmful factors such as organic compounds, dust, and noise. Additionally, we provide comprehensive checkups and optional (precise) tests for long-term executives and employees to help detect and prevent diseases early. In 2023, a total of 1,969 people underwent health check-ups, and those who exhibited symptoms are receiving follow-up management.

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Health and Safety

Health Promotion Program

HD Hyundai Electric provides executives and employees with accurate information about health and conducts various health promotion programs such as stress management, lifestyle improvement, and prevention of cerebrovascular diseases to encourage healthy lifestyle habits. In 2023, we implemented the Mind Safety Bus and mental health education for office workers to manage stress, along with mobile healthcare, smoking cessation clinics, and non-face-to-face walking activities (walk-ons) to improve lifestyle habits. Additionally, we held a visiting health experience center to prevent and manage cerebrovascular diseases and offered various health management activities, such as nutritional counseling, body fat measurement, and lung age measurement.

Work Environment Measurement

To create a comfortable working environment, HD Hyundai Electric measures the work environment once a year and improves processes with excessive exposure. The results of the work environment measurements are communicated to the relevant department, and if exposure standards are exceeded, improvement measures are quickly established and implemented. In 2023, we completed measurements of harmful factors for 459 cases in the first half and 333 cases in the second half, and implemented improvement measures for processes with excessive exposure.



Health experience center



Mind Safety Bus

Occupational Accidents

		Unit	2020	2021	2022	2023
Employees	Lost Time Injury (LTI) ¹	case	3	3	3	2
	Lost Time Injury Frequency Rate (LTIFR) ²	case per 1 million work hours	0.74	0.72	0.66	0.41
	Industrial accident rate ³	%	0.14	0.15	0.14	0.10
	Disaster frequency rate ⁴	case per 1 million work hours	0.81	0.72	0.66	0.41
	Severity rate ⁵	case per 1,000 work hours	0.03	0.04	0.04	0.02
	Occupational Illness(OI) ⁶	case	3	3	2	4
	Occupational Illness Frequency Rate (OIFR) ⁷	case per 1 million work hours	0.74	0.72	0.44	0.82
	Work-related fatalities	person	0	0	0	0
	Near miss rate ⁸	%	0	0.04	0.03	0.08
	- Regular workers	%	0	0.04	0.03	0.08
- Non-regular workers	%	0	0	0	0	
Partner companies	Work-related fatalities	person	0	0	0	0
	Lost Time Injury (LTI)	case	2	0	1	0
	Lost Time Injury Frequency Rate (LTIFR) ⁹	case per 1 million work hours	0.15	0	0.60	0
	Industrial accident rate	%	0.53	0.37	0.32	0
	Disaster frequency rate	case per 1 million work hours	2.41	1.68	1.46	0

1. Based on the number of accidental injuries
 2. Recalculated 2021 Lost Time Injury Frequency Rate (LTIFR)
 3. Recalculated 2021 Industrial accident rate
 4. Recalculated 2021 disaster frequency rate
 5. Recalculated 2021 severity rate
 6. Recalculated 2021~2022 Occupational Illness(OI)
 7. Recalculated 2021~2022 Occupational Illness Frequency Rate (OIFR), based on the number of accidents approved by the Korean Worker's Compensation and Welfare Service
 8. Recalculated 2021 Near miss rate
 9. Recalculated 2022 Lost Time Injury Frequency Rate (LTIFR)

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Accidents and Violations

		Unit	2021	2022	2023
Safety accidents	Serious occupational Injuries	case	0	0	0
	Violation of laws and regulations	case	1	1	1
Violation of laws and regulations	Administrative fines	KRW 1,000	0	4,000	1,200
	Fines	KRW 1,000	2,000	0	0

Health and Safety Education

		Unit	2021	2022	2023
General employees	Training hours per employee ¹	hour	24	24	24
	Training participation rate	%	100	100	100
Resident partner companies	Training hours ¹	hour	24	24	24

1. Re-arranged training hours data in 2021

Industrial Machinery Operation Training

		Unit	2022	2023
Certification acquisition	Crane pendant operation Training ¹	person (%)	52(79)	46(92)
	Aerial work platform operation training	person (%)	13(93)	8(100)
	Small construction machinery operation training	person (%)	13(100)	17(100)

1. In-house certification

2. Small construction machinery: loaders, forklifts

Number of people and rate of obtaining in-house training certificates that can be exchanged for small construction machinery operator licenses

Product Safety and Quality

		Unit	2020	2021	2022	2023
Customer satisfaction ^{1,2}		%	3.96	3.95	4.15	4.12

1. Among customers who have filed claims for our power distribution products, only major customers for whom action have been taken are investigated

2. Customer satisfaction is calculated considering 'customer service satisfaction' and 'product quality satisfaction'

Partner Company Communication

		Unit	2021	2022	2023
Partner company grievances ¹	No. of health and safety grievances received	case	105	100	132
	Health and safety grievance resolution rate	%	100	100	100

1. HD Hyundai Electric receives reports on health and safety grievances and related issues of partner company workers through the Health and Safety Council

Occupational Health and Safety System

		Unit	2021	2022	2023
Health and safety certification	ISO 45001 application rate ¹	%	100	100	100
Workers covered by occupational health and safety system ²		person	1,612	1,563	1,594

1. Application rate to production plants (Ulsan Plant, Seonam Plant, Anseong Plant)

2. As of the end of the year

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Human Rights

Approach

Human Rights Policies

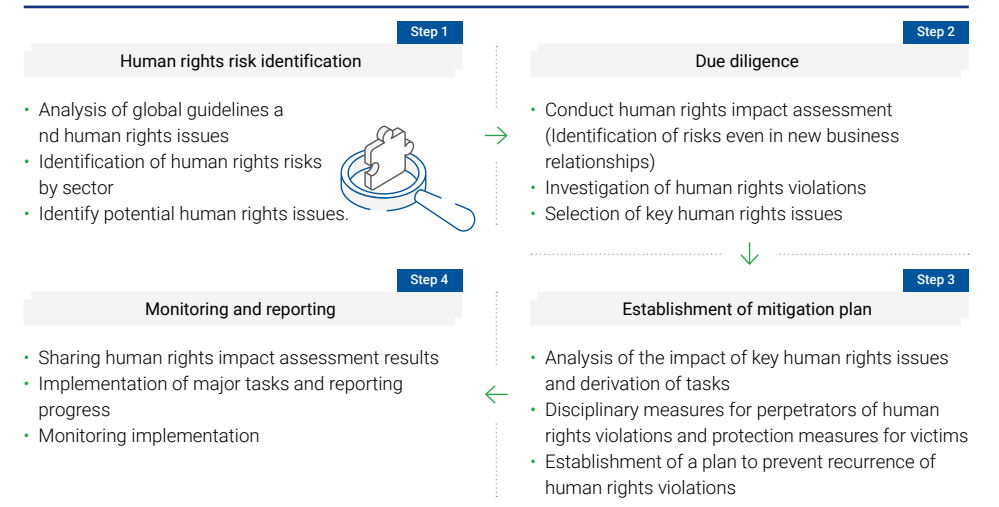
HD Hyundai Electric is committed to respecting the human rights of all stakeholders, including employees and customers. To ensure effective human rights management, our company adheres to various international standards such as the 'Universal Declaration of Human Rights' and the 'UN Guiding Principles on Business and Human Rights'. We uphold and support the values of human rights, labor, environment, and anti-corruption as outlined in these human rights standards and norms, and we are dedicated to actively implementing them. Our human rights management practice regulations, which are based on these principles, include guidelines on prohibiting discrimination, forced labor, and child labor, as well as preventing workplace bullying and sexual harassment. Additionally, in alignment with these values, we have issued the Human Rights Management Declaration for all management activities. All executives and employees are committed to practicing this Declaration as the standard for their actions and value judgments.

Human Rights Management Committee

HD Hyundai Electric has established a Human Rights Management Committee, which includes the Chief ESG Officer and executives from relevant departments. This committee is responsible for establishing, implementing, and reviewing human rights management plans. The Human Rights Management Committee discusses and reports on agendas related to human rights management, including the formulation of human rights management declarations, the code of conduct, and sector-specific policies. To systematically develop, implement, and educate on policies that promote human rights, we have created a dedicated human rights management organization. This organization is tasked with establishing and executing annual human rights promotion plans and providing human rights education.

Human Rights Impact Assessment

HD Hyundai Electric conducts human rights impact assessments at least once a year to identify issues affecting the human rights of executives, employees, and stakeholders during company operations and major business processes, and to implement improvement measures. The human rights impact assessment is overseen by the human rights management organization, and the results are presented to the CEO after deliberation by the Human Rights Management Committee to support decision-making that considers human rights risks. The human rights impact assessment consists of a checklist-type survey reflecting the latest trends and corporate status, based on the National Human Rights Commission's standard assessment areas. After the assessment, we prepare a results report that includes (1) the checklist evaluation results and (2) improvements to address actual and potential human rights risks. This report is reviewed by the Human Rights Management Committee. Additionally, this evaluation is conducted for all business sites, and we plan to expand the scope of the evaluation to include our subsidiary, HD Hyundai Plaspo, in the future.



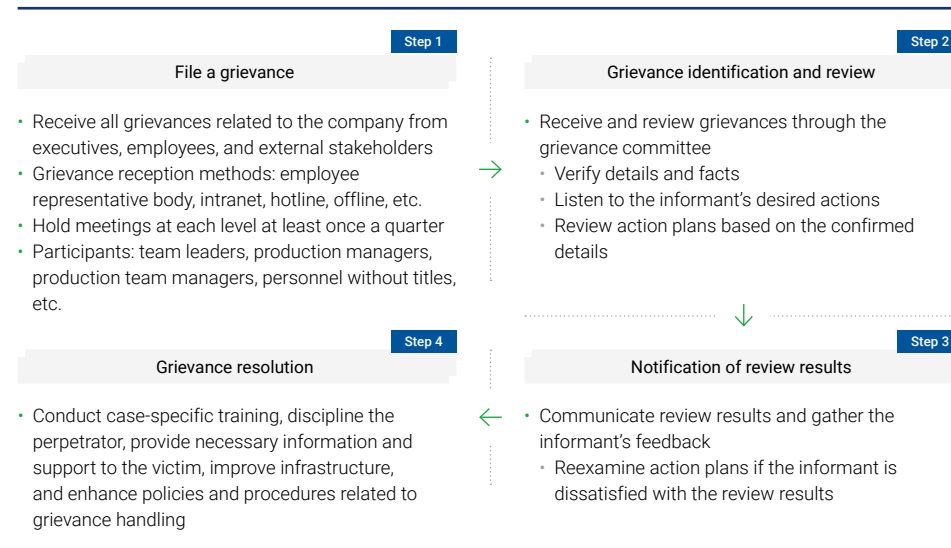
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Grievance Handling Channel

HD Hyundai Electric operates a grievance handling channel¹ where stakeholders, including executives and employees, can anonymously report cases of human rights violations. This channel is available in English, Chinese, and Korean to ensure accessibility for employees and stakeholders at all business locations, including those overseas. Additionally, we have designated a person in charge to handle any incidents of sexual harassment in the workplace. When a human rights violation is reported, we verify the details and conduct an investigation to discuss remedies. We guarantee the anonymity of the informant and the contents of the report to prevent any form of retaliation, such as discrimination or other disadvantages. In 2023, we received a total of two human rights-related reports, and all of these cases have been resolved.

1. <https://ethics.hd.com/html/main.html>



Commitment

HD Hyundai Electric is committed to protecting the human rights of stakeholders by addressing risks identified through human rights impact assessments. Specifically, after identifying human rights impacts, we continuously improve and strengthen our human rights management system. Through annual human rights impact assessments and human rights training, we aim to enhance understanding of human rights within the organization, resolve issues identified in the evaluation report, and implement improvement measures. In 2024, we plan to hold a Human Rights Management Committee meeting to review the follow-up measures on the results of the human rights impact assessment conducted in 2023.

¹ Refer to the results of the 2023 Human Rights Impact Assessment on page 70

Organization Chart



¹ Department in Charge of Human Rights Impact Assessment

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Performance

2023 Human Rights Impact Assessment Results

The human rights impact assessment conducted in 2023 focused on human rights-related improvements in each company sector, particularly on areas recommended for improvement identified in 2022, such as ensuring industrial safety, responsible supply chain management, and guaranteeing labor rights. As a result, scores increased in a total of five areas, including the key inspection areas, and we completed actions for 71.4% of the total risks that occurred in 2022. In addition, we plan to secure objectivity and fairness through evaluation by an external professional organization.

Human Rights Issues	Major Implementation Performance in 2023	Future Plans
Establishment of human rights management system	<ul style="list-style-type: none"> Convened the human rights management committee Vulnerable factors identified by conducting a human rights impact assessment once a year 	<ul style="list-style-type: none"> Plan to expand evaluation targets to include the subsidiary (HD Hyundai Plaspo)
Non-discrimination in employment	<ul style="list-style-type: none"> Preparation and training of non-discrimination practices in employment/interview guidelines for executives and team members 	-
Guaranteeing freedom of association and collective bargaining	<ul style="list-style-type: none"> Guaranteeing legitimate union activities for union members in accordance with the [Trade Union and Labor Relations Adjustment Act] and the collective agreement agreed upon between labor and management, and managing the level of implementation of agreed matters Operates a labor-management council once a quarter 	-
Guaranteeing occupational safety	<ul style="list-style-type: none"> Safety protective gear provided to workers in accordance with the collective agreement Establishment of regulations to create a safe and hygienic working environment Payment of medical compensation costs, etc. for work-related injuries or diseases without delay 	<ul style="list-style-type: none"> Strengthening monitoring procedures for workplace safety equipment and facilities Requires constant management of workplace ventilation, lighting, drinking water, etc.
Responsible supply chain management	<ul style="list-style-type: none"> Human rights risk management through partner company ESG evaluation (for 40 major partner companies by 2023) Monitor compliance with human rights protection by signing a 'Supplier Code of Conduct' for partners and conducting on-site visits 	<ul style="list-style-type: none"> Expanding the number of suppliers subject to ESG evaluation Establishment of response plans for non-compliance with partner companies' code of conduct
Protecting the human rights of local residents	<ul style="list-style-type: none"> Establishing regulations and procedures to minimize negative impacts on local residents' lives, economic rights, etc. Compliance with laws and consultations with local residents and local governments when necessary 	-
Guaranteeing environmental rights	<ul style="list-style-type: none"> Establish and operate an environmental management system Acquired international standard ISO 14001 certification 	<ul style="list-style-type: none"> Supporting business department management capabilities through supplementing environmental impact assessment manuals When developing a new product or business model, conduct a comprehensive environmental impact assessment and implement measures to prevent or mitigate negative environmental impacts.
Prevention and relief of human rights violations	<ul style="list-style-type: none"> Mandatory workplace harassment prevention and human rights training in addition to legally required training for all executives and employees Disclose the grievance committee organization chart and grievance handling process in a channel accessible to all executives and employees 	-
Guaranteeing labor rights in the workplace	<ul style="list-style-type: none"> Compliance with the [Labor Standards Act] and [Acts related to equal employment between men and women and support for work-family balance] and establishment of a culture of related systems such as childcare leave Operation of the GRC¹ Maternity Protection Center (May 2023) and expansion of telecommuting for pregnant women once a week (October 2023) 	<ul style="list-style-type: none"> Identify vulnerable groups and prepare support measures (1) Establishment of systems and working environment improvement measures for pregnant women (2) Improvement of systems to provide separate safety and hygiene measures and transportation convenience for disabled workers (renovation of old facilities, etc.)

1. Global R&D Center, HD Hyundai Group Office in Seongnam

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Implementation of Human Rights Management Training

HD Hyundai Electric provides human rights training for all executives and employees at least once a year. In 2023, online training on human rights management was conducted for all executives, section leaders of technicians working in the office and production technicians.

Human Rights Impact Assessment¹

	Unit	2021	2022	2023
Rate of workplaces subject to assessment	%	-	100	100

1. Implementation of Human Rights Impact Assessment Starting in 2022



Human Rights Violation Report

		Unit	2021	2022	2023
Human rights violation report ¹	Reports on human rights related issue	case	-	3	2
	Resolution rate of human rights violation report	%	-	100	100

1. Separately aggregated human rights related reports since the Declaration of Human Rights Management (July 2022)

Human Rights Education

		Unit	2021	2022	2023
Education hours	Training Hours per Employee	hour	2	2	2
	- Sexual harassment prevention education	hour	1	1	1
	- Education to improve awareness of disabilities	hour	1	1	1

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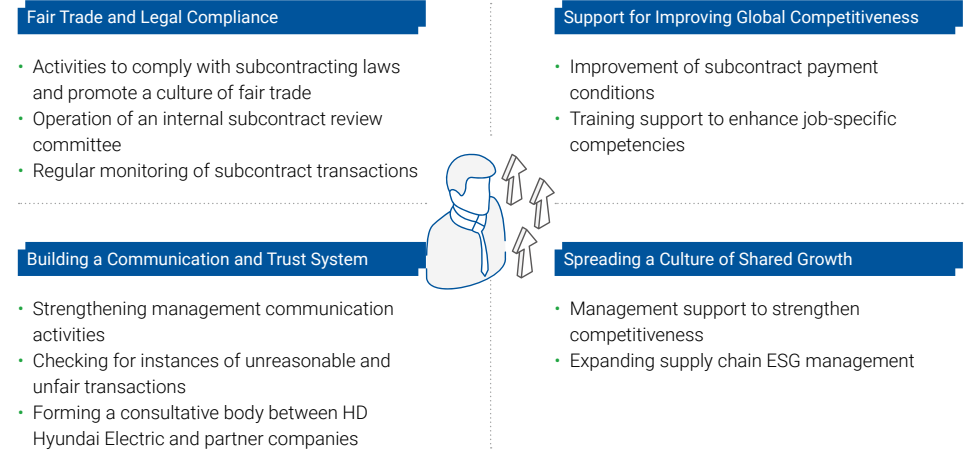
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Approach

Four Major Shared Growth Policies

HD Hyundai Electric aims to build a healthy corporate ecosystem with 'just, fair, and lawful business performance' as its core value. Through our 'Four Key Shared Growth Policies,' we support our partner companies in fulfilling their social responsibilities and focus on strengthening our supply chain ESG management. Additionally, we strive to establish and promote a culture of fair trade while fostering communication and trust.

Four Major Shared Growth Policies



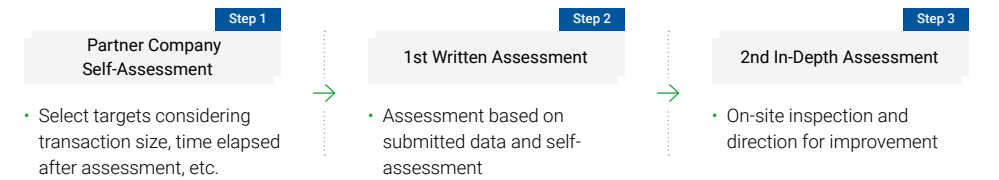
Partner Company Code of Conduct

HD Hyundai Electric has established a code of conduct for partner companies to help them fulfill their social responsibilities. This includes human rights and labor, safety and health, environmental protection, ethical management and fair trade, and conflict minerals. The code of conduct is based on global standards such as the Responsible Business Alliance (RBA) Code of Conduct, which aims to improve sustainability across the supply chain, the UN Universal Declaration of Human Rights, the UN Convention on the Rights of the Child, and core conventions of the International Labor Organization (ILO). Additionally, we have our partner companies sign a pledge to practice social responsibility every year. This pledge ensures the implementation of the code of conduct, respect for workers' and labor rights, environmental responsibility, and anti-corruption. We continuously review these practices to prevent potential conflicts with the code of conduct.

Supply Chain ESG Management

HD Hyundai Electric has a diagnostic system to identify ESG risks in partner companies early and reports the results to the board of directors and management. Considering environmental, social, governance, and business relevance, we use a total of 39 indicators that reflect domestic laws, regulations, and country-specific risks, and conduct self-diagnosis along with primary and secondary evaluations separately. Additionally, companies that receive excellent scores in the ESG evaluation of new partner companies are given additional points during partner selection.

Assessment Process



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Responsible Procurement

HD Hyundai Electric is committed to fulfilling its corporate social responsibility to address climate change by enacting and implementing a green purchasing policy aimed at acquiring eco-friendly certified products. We prohibit the use of conflict minerals and actively pursue responsible procurement by purchasing materials from social enterprises, such as companies that employ individuals with disabilities.

Conflict Minerals

HD Hyundai Electric does not use raw materials (such as tungsten, tin, gold, tantalum, and cobalt) produced in conflict and high-risk areas. We comply with the guidelines of the Organization for Economic Cooperation and Development (OECD) or other internationally recognized due diligence frameworks for procuring raw materials. Through these measures, we strive to prevent negative impacts such as human rights violations and corruption.

Conflict minerals include tin, tantalum, tungsten, and gold produced in 10 countries, including the Democratic Republic of Congo (DRC), Sudan, Rwanda, Burundi, Uganda, Congo, Zambia, Angola, Tanzania, and Central African Republic. As a responsible corporate citizen, HD Hyundai Electric strives to ensure that these conflict minerals are not included in its product production supply chain.

To this end, we recommend all our partner companies not use conflict minerals. We will continue to actively participate in international efforts to ban the use of conflict minerals together with our partner companies and customers. Through these efforts, we aim to ensure that conflict minerals linked to armed groups in conflict areas are not included in our supply chain.

Procurement Management System

Operation of Hyundai Integrated Procurement System (G-HIPRO)

HD Hyundai Electric allows companies wishing to do business to freely apply for partnerships through the Hyundai Integrated Procurement System (G-HIPRO) in order to build partnerships based on mutual trust with its partners. We register our partner companies in accordance with fair and transparent standards and procedures, and ensure the fairness of the process through processes such as receiving quotations through electronic bidding, technical review, bidding, and selection of product supply contractors. In addition, we evaluate registered partner companies every year to strengthen their competitiveness and minimize material procurement risks.

Determination of Material Price Linked to Market Conditions

HD Hyundai Electric is enhancing its monitoring of major raw materials markets to manage risks associated with materials used in the production of its main products, such as power transformers and rotating machineries. By focusing on major raw materials with high price volatility, such as copper (Cu) and silver (Ag), we identify factors that may have an impact, such as international prices and exchange rates, and set standard prices for material transactions. HD Hyundai Electric incorporates these factors into a systematic material price determination process linked to market conditions, which is periodically reflected in the unit prices paid to partner companies.

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Commitment

HD Hyundai Electric aims to identify and prevent risks in the supply chain in advance, ensuring mutual growth. To achieve this, we conduct ESG evaluations on new partner companies and plan to expand the number of companies subject to regular ESG evaluations. Additionally, we provide various forms of support for the growth of our partner companies, including financial assistance, education, and technology development.

Performance

2023 ESG On-Site Inspection Results of Partner Companies

HD Hyundai Electric, in collaboration with the Korean Standards Association, an ESG management specialist organization, established a supply chain ESG management system with the goal of conducting ESG evaluations for 40 partner companies in 2023. We assessed the level of ESG management for these 40 target companies. Additionally, we aimed to implement improvement activities based on these evaluations. We conducted on-site inspections in 1-2 rounds and created and delivered customized guidelines to help these companies implement the recommended improvement activities.

Score Range	1st Inspection Result	2nd Inspection Result
95 points or higher	0 company	1 company
90 or more points but less than 95 points	0 company	3 companies
85 or more points but less than 90 points	0 company	6 companies
80 or more points but less than 85 points	2 companies	8 companies
75 points or more but less than 80 points	3 companies	10 companies
70 or more points but less than 75 points	5 companies	4 companies
Less than 70 points	30 companies	8 companies

Evaluation Items	Major Improvements
Environment	<ul style="list-style-type: none"> • Establishment of environmental management policies and goals • Greenhouse gas and energy item record management • Systematic management of hazardous chemical substances (MSDS)
Society	<ul style="list-style-type: none"> • Establishment of human rights management policy • Practical operation of labor-management council and grievance handling procedures
Safety	<ul style="list-style-type: none"> • Supplement safety and health policies, plans, and goals • Recognize and implement the need for risk assessment • Improvement of missing safety signs for hazardous and dangerous work
Governance	<ul style="list-style-type: none"> • Establishment of code of ethics and regulations • Securing a channel to report ethical issues

Operation of Financial Support Program for Partner Companies

HD Hyundai Electric continues to build a shared growth financial support model that fosters growth together with its partner companies. We signed an agreement with the 'Korea Credit Guarantee Fund' to provide financial and non-financial guarantees worth KRW 19.5 billion to partner companies. Together with IBK (Industrial Bank of Korea), we created a 'Shared Growth Fund' worth KRW 30 billion, totaling KRW 49.5 billion in support. Additionally, we implemented a 'contract-based future bond collateral loan' program in collaboration with Hana Bank, providing loan benefits worth KRW 700 million to support our partner companies.

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Operation of Facility Investment Funding Support Program for Partner Companies

HD Hyundai Electric has established a new 'Facility Investment Funding Support System for Partner Companies' to stabilize the supply chain and strengthen the competitiveness of its partners. Recently, partner companies have been experiencing setbacks in production operations due to aversion to work in small and medium-sized manufacturing industries and a decrease in professional labor due to the accelerated aging of the population. To address this supply chain crisis, we have set a budget of KRW 3 billion and provided support benefits to partner companies planning to invest in environmental improvements such as facility investment, system investment, and quality enhancement. Through this system, up to 70% of the total investment cost for each partner company, or up to KRW 500 million, is supported in the form of an interest-free loan for 3 years. This system, newly established in 2023, received applications from partner companies wishing to participate. Eight companies were selected through internal screening, and loans worth KRW 2.6 billion were disbursed to the selected partner companies in early 2024.

'Together Cafe': A Window of Communication

As part of its shared growth activities, HD Hyundai Electric visits its partner companies in person and opens a 'Together Cafe' to provide coffee and snacks. In 2023, we visited three companies.

March	June	September
<ul style="list-style-type: none"> • Shinyoung Heavy Electric (distribution transformer partner, Busan-si) 	<ul style="list-style-type: none"> • Eunseong Electric (distribution transformer partner, Hwaseong-si, Gyeonggi-do) 	<ul style="list-style-type: none"> • Taeyang Electric (low-voltage motor partner, Gyeongju-si, Gyeongsangbuk-do)

Operation of Partner Company Participation System

HD Hyundai Electric hosts New Year's events and management briefings to promote open communication and win-win partnership. Important issues are communicated via email newsletter. Additionally, we have a system to share a portion of the profits with our partner companies if improvements from their suggestions lead to increased profits.

Introducing and Operating a Complaint Handling Process for Partner Companies

To handle complaints from our partner companies, our relevant departments and personnel continuously monitor the complaints. When necessary, we visit our partner companies to receive and resolve VOCs directly. Additionally, we operate a channel on our website to listen to complaints and suggestions from our partner companies.

1. <https://www.hd-hyundaielectric.com/elect/ko/esg/esg3.jsp>
 *(No. of complaints received in 2023: 0)

Partner Company Status

	Unit	2023
No. of partner companies	company	1,403
No. of major partner companies ¹	company	47 ²
Rate of spending on major partner companies compared to total purchase cost	%	42.6

1. Major partner companies refer to member companies of the 'Partner Company Council' managed by our company
 2. As of the end of 2023

Supply Chain ESG Assessment

	Unit	2021	2022	2023
Supply Chain ESG Assessment ¹ Companies evaluated	company	-	98	40

1. In 2023, we conducted an assessment by upgrading ESG assessment questions by implementing the 'Supply Chain ESG Management Support Project' for major partner companies.

Support for Partner Companies

		Unit	2021	2022	2023
Financial	Financial support and funding	KRW 100 million	100	165	253
	- Shared growth fund	KRW 100 million	79.3	143.9	232.1
	- Shared growth agreement guarantee (financial)	KRW 100 million	15.7	15.7	15.7
	- Shared growth agreement guarantee (non-financial)	KRW 100 million	5	5	5
	Win-win partnership fund (support amount)	KRW 100 million	-	33.3	39.2
	Training expense support	KRW 10 thousand	-	576	732
Hiring	No. of employees hired by In-house partner companies	person	-	60	73

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Local Community

Approach

Local Community Support Policies

HD Hyundai Electric actively contributes to solving social problems by promoting sustainable and sincere social contribution activities to realize a 'A Better World, A Brighter Future'. Our efforts focus on supporting the underprivileged, boosting the local economy, and nurturing future generations. Aligned with the group's core direction, we have prioritized 'coexistence with the local community', 'self-reliance support and care for the underprivileged', and 'environmental protection'. We are not limited to addressing simple problems but continuously expand our social contribution activities in collaboration with various stakeholders, such as the 'HD Hyundai 1% Sharing Foundation' and the 'Community Council', to achieve the UN Sustainable Development Goals and create social value.



Community Risk Management

HD Hyundai Electric is identifying the negative impact of our business activities on the local community through its own preliminary research and communication channels with local governments and residents. A typical community complaint is the industrial odor generated during the painting process due to sea breezes. To address this, we are regularly conducting odor inspections in the Dong-gu and Buk-gu regions in cooperation with member companies of the Ulsan Environmental Engineers Association. We are establishing an in-house response system and standards, conducting our own environmental accident response training, and identifying and minimizing negative impacts on the local community. Additionally, we manage waste, wastewater, and pollutants by applying stricter standards than the law. To strengthen communication and collaboration with the local community, we regularly carry out river and road management activities near our business sites to protect the local environment and ecosystem, and fulfill our social responsibility by considering the quality of life of local residents.

Potential Negative Impacts on the Community and Mitigation Measures

Negative Impacts	Causes	Mitigation Measures
Industrial Odor	Odor generated from the painting process and spread by sea breeze	<ul style="list-style-type: none"> Conduct regular odor inspections with member companies in the Dong-gu and Buk-gu regions of the Ulsan Environmental Engineers Association Implement activities to reduce and manage odor complaints
Environmental accidents and disaster emergencies	Environmental accidents and disaster emergencies during the manufacturing process of power equipment	<ul style="list-style-type: none"> Establish an in-house response system and standards Conduct environmental accident response training
Waste and wastewater management	Waste and wastewater generated during the manufacturing process of power equipment	<ul style="list-style-type: none"> Select recycling companies based on strict standards Manage waste and wastewater to be reborn as circular resources
Environmental management activities	The need to manage local environments such as rivers and roads near business sites	<ul style="list-style-type: none"> Regularly carry out river management activities in cooperation with local governments and nearby companies Improve the living environment of local residents through local ecosystem protection activities and road management activities near business sites
Protecting the human rights of local residents	Potential negative impact on local residents' lives and economic rights due to business operation	<ul style="list-style-type: none"> Regulations and procedures in place to minimize negative impacts on residents' lives and economic rights Compliance with procedures and payment of compensation according to the Land Compensation Act (Articles 21, 26, 61, and 78 of the Land Compensation Act)

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Local Community

Commitment

HD Hyundai Electric maintains cooperative relationships with local governments and communities, striving to improve quality of life through social responsibility activities. We actively review complaints received through various channels and plan programs that offer practical assistance.

Performance

Win-Win Partnership with Local Communities Supporting White Rice for Local Welfare Facilities

Since 2000, we have been providing monthly rice donations to welfare facilities in the Dong-gu area of Ulsan. In 2023, through contributions to the Rural Community Coexistence Cooperation Fund, we delivered KRW 10,421,000 worth of white rice to social welfare facilities and provided free meals to neighbors in need within the community.

Sisterhood Welfare Facility Sponsorship Project

Since 2018, we have sustained our sponsorship initiatives through sister relationships with the 'House of Open Love' and 'Seongnam City Arium', welfare organizations in Seongnam, Gyeonggi-do. In 2023, 101 executives and employees raised KRW 5,612,000 through salary-sharing activities. The funds were utilized for the operational needs and welfare of residents at the 'House of Open Love', a residential facility for the developmentally disabled, and 'Seongnam City Arium', a residential facility for elderly individuals living alone.

Procurement of Products and Services from Social Enterprises and Certified Workplaces for Individuals with Disabilities

HD Hyundai Electric continues to support the local community by procuring products and services from social enterprises and organizations. In 2023, we purchased cotton gloves valued at KRW 28,299,000 from the 'Sanggae Sheltered Workshop for the Disabled,' and utilized congratulatory and condolence wreath services totaling KRW 12,600,000 from 'The Hue,' a company promoting linked employment for individuals with disabilities. Additionally, we provided holiday gifts to employees through products from the 'Seongnam GOOD Foundation' sales profit donation project, totaling KRW 127,676,000. These initiatives not only enhance employee welfare but also contribute to community development.

Caring for the Underprivileged

Sponsorship Activities of HD Hyundai 1% Sharing Foundation

Since January 2020, we have consistently allocated special funds to the HD Hyundai 1% Sharing Foundation each year. Moreover, executives and employees voluntarily engage in salary-sharing activities by donating 1% of their basic salary monthly. In 2023, 160 executives and employees participated, contributing approximately KRW 100,706,000. These contributions supported public interest projects sponsored by the HD Hyundai 1% Sharing Foundation. Detailed reports on project costs and execution are regularly disclosed through monthly performance reports and publications.

HD Hyundai 1% Sharing Foundation's Public Service Projects		Areas where Donations from HD Hyundai Electric were Utilized in 2023
Happy family	Happy Meal	• Free meal support for seniors at 13 welfare centers
	Heating Oil of Love	• Heating oil support for the underprivileged
	Solid Parents	• Low-income single parent education and training support project
Happy donor	Happy Supporters	• Regional customized social contribution projects proposed by executives and employees
	HD119	• Emergency relief and support for victims in major disaster-hit areas
Dream future	Dream Place	• Improvement of living facilities in childcare facilities
	Dream Academy	• Career planning and independence support for young people preparing for independence (children who have ended protection)
	Dream Harmony	• Support for cultural activities for children at child welfare facilities
Dream partner	HD Hyundai Honor	• Discover and reward organizations/individuals who are dedicated to the underprivileged • Support projects that reflect the opinions of individual regular/one-time donors
	I'm Donor	• Support projects that reflect the opinions of individual regular/one-time donors
	ESG-linked Social Contribution	• Support for training course for biological specimen makers (for people with disabilities) • Wedding ceremony in the forest of a national park (multicultural families, low-income families, etc.)

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Group Blood Donation Event

In 2021, we signed a long-term blood donation partnership with the Korean Red Cross in the region of our work sites (Ulsan Blood Center and Seoul Nambu Blood Center) and regularly hold group blood donation events every year since then. In 2023, 143 employees participated in quarterly and semi-annual blood drives. The driven blood was delivered to local medical institutions in need of blood through the Ulsan Blood Center and Seoul Nambu Blood Center of the Korean Red Cross.

Improving the Living Environment for Vulnerable Groups

Through the HD Hyundai 1% Sharing Foundation, HD Hyundai Electric has actively supported various projects to assist underprivileged individuals in collaboration with social contribution organizations. In 2023, we partnered with 'Good Neighbors' to allocate KRW 12,000,000 for enhancing the living conditions of two single-parent families in semi-basement housing in Seongnam Cit. Additionally, in cooperation with the 'Green Umbrella Children's Foundation', we invested KRW 10,000,000 in a Young Carer project to support self-development and recreational activities of 10 teenagers in Gyeonggi-do facing challenges due to family caregiving. In addition, to alleviate the challenging conditions faced by vulnerable groups in the Ulsan area, we partnered with 'Save the Children' to provide meal kits valued at KRW 6,534,000 to 11 families with children at risk of undernourishment, supported by the Ulsan Dong-gu Family Center. Furthermore, we granted scholarships totaling KRW 10,000,000 to 93 underprivileged students from 22 middle and high schools in Ulsan. HD Hyundai Electric remains committed to collaborating with the HD Hyundai 1% Sharing Foundation and social contribution organizations to improve the quality of life for vulnerable groups through effective and customized support projects.

Children's Protection Zone Sign LED Lighting Installation Project

Since 2021, HD Hyundai Electric has actively participated in joint public-private partnership social contribution initiatives with the Ulsan City Jung-gu Office and the Korea Energy Agency. In 2023, we expanded these efforts by improving safety measures in children's protection zones through a joint public-private partnership project. We installed LED lighting valued at KRW 10,000,000 across four child protection zones in Ulsan. Going forward, we remain dedicated to continuing these collaborative social contribution activities to foster a safer and healthier environment for children and youth in our local community.

Neighbor Love Donation Sponsorship through Community Chest of Korea

In December 2023, HD Hyundai Electric donated KRW 300 million to the Community Chest of Korea to support underprivileged neighbors facing difficulties at the end of the year. The donations were used for public projects managed by the Community Chest of Korea and for designated donation projects proposed by sponsors.

Environmental Protection

Biodiversity Conservation Activities in the Seongnam Region

In November 2023, HD Hyundai Electric, along with executives and employees from HD Hyundai affiliates, including HD Hyundai Energy Solutions and HD Hyundai Robotics, engaged in biodiversity preservation activities at the Tancheon Freshwater Fish Wetland Ecological Garden in Seongnam-si, Gyeonggi-do. To protect the habitat and promote the growth of the native, nationally protected species of prickly water lily, we removed invasive plants using fifteen 75-liter bags. Additionally, we conducted a 'plogging' activity, collecting trash along the banks of Tancheon Stream to the Ecological Garden.

Plogging Activity along the Coast of Jujeon-dong, Ulsan

As part of our ESG management activities aimed at preserving the local community ecosystem, HD Hyundai Electric conducted plogging activities along the main coast of Jujeon Beach in Dong-gu, Ulsan. This involved collecting seaweed and waste to prevent the death of nationally protected species and improve the marine habitat environment. A total of 95 employees, including executives, department heads, and managers in Ulsan, participated. They walked along the beach, collecting waste such as seaweed, tree branches, waste plastic, and vinyl.

Donation and Social Contribution Amount

	Unit	2021	2022	2023
Donation and Social Contribution Amount	KRW 100 million	7.14	10.49	11.89

Employee Engagement

		Unit	2021	2022	2023
Volunteering	Volunteer hours per employee	hour	0.30	0.38	0.53
Salary-sharing	Amount	KRW 100 million	0.78	1.04	1.06
	No. of participants	person	277	253	236

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Corporate and Personal Information

Approach

Information Security Policies

HD Hyundai Electric establishes personal data protection management regulations and security management regulations and revises them in accordance with changes in related laws and regulations to prevent the loss, theft, leakage, alteration, and damage of personal data. In addition, information protection regulations have been established to protect various types of information, including handwritten documents as well as the collection and use of personal data through information and communications networks. If an executive or employee continues to violate security standards, action will be taken in accordance with the company's disciplinary action standards. Our company enforces thorough information security management by applying information management regulations to all stakeholders, including executives and employees of partner companies, employed foreigners, and outsiders residing or visiting the company. The privacy policy is clearly stated on our website, providing detailed information on the purpose of personal data collection, items and collection methods, processing and retention periods, and more. Through this, we help customers easily understand our privacy policy and provide information with confidence.

Information Security Management Certification System (ISO 27001)

Since acquiring ISO 27001 certification in 2020, HD Hyundai Electric has continuously updated and maintained a high-level information security system that is recognized externally. Every year, we operate a security committee to identify security vulnerabilities that may occur in various areas such as design, general affairs, and computerization. Through this, we share the status of operations for the year, discuss future plans, and manage information protection policies. These efforts enable us to continuously improve information security and prevent personal data leaks.

Information Security Governance

HD Hyundai Electric's corporate and personal data protection tasks are supervised by the Chief Information Security Officer (CISO) and the Chief Privacy Officer (CPO). The CISO's primary role involves developing information security strategies and implementing technical protection measures to enhance information security awareness. The CPO focuses on establishing internal management systems for personal data protection and managing personal data files, emphasizing administrative measures related to information technology. The criteria for appointing CISOs and CPOs emphasize expertise, including relevant work experience and experience as organizational leaders. Semi-annually, the security committee enhances the rigor of information security status checks and identifies potential security risks through third-party vulnerability analyses, including hacker attack assessments. Response procedures and responsible personnel are designated to handle information security incidents. Executives and employees detecting security incidents must promptly report the details to the security manager for immediate response.

Corporate and Personal Data Protection Risk Management

To maintain information security policies and governance, HD Hyundai conducts annual security assessments at the group level. The 2023 security assessment was conducted by the Security Planning Team of HD Korea Shipbuilding & Offshore Engineering, achieving the goal of enhancing the overall security level and ensuring the continuity of security standards across the group.

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Commitment

HD Hyundai Electric utilizes digital technology to enhance management efficiency, but also closely monitors the accompanying increase in risks. The primary goal is the initiative-taking identification and prevention of these risks through regular information security risk assessments. Additionally, the company plans to expand training to internalize a culture of corporate and personal data protection throughout the organization.

Category	Unit	2023 Performance	2024 Target	2025 Target
Preventive risk identification activities	N/A	Semi-annually	Semi-annually	Semi-annually
Executives and employees training participation rate	%	95% or higher	95% or higher	95% or higher

Performance

Corporate and Personal Data Training Implementation

HD Hyundai Electric conducts security training under the guidance of security managers to strengthen information security. This training is designed to enhance awareness of personal data protection and actively prevent the misuse and leakage of personal data. It is conducted regularly and as needed for all executives and employees. Additionally, when there are violations of personal data protection, policy changes, or specific educational needs based on the characteristics of business divisions, the security management department and Chief Privacy Officer lead group training sessions and various ad-hoc training programs. HD Hyundai Electric also provides regular security training or educational materials to partner companies to enhance their security awareness.

Information Security Management Certification System¹

	Unit	2021	2022	2023
Information security management certification	ISO 27001 application rate	%	100	100
				100

1. Application rate for domestic business sites

	All Executives and Employees		Security Officers and Personal Data Handlers	
	Employees	Executives and Department Heads	Department Security Officers	Key Operations Handlers
Information security training	<ul style="list-style-type: none"> • Security awareness • Security regulations 	<ul style="list-style-type: none"> • Security management 	<ul style="list-style-type: none"> • Specialized security management training 	
Personal data protection training	<ul style="list-style-type: none"> • Personal data protection management regulations • Need for personal data protection 		<ul style="list-style-type: none"> • Role of personal data handlers • Procedures for handling personal data 	

Information Leakage

	Unit	2021	2022	2023
Total leakages	case	0	0	0
Violations	Fines	KRW 1,000	0	0

Information Protection Training

	Unit	2021	2022	2023
Dedicated employee	Training hours per employee	hour	4	4
General employee	Training hours per employee	hour	4	4

Investments in Information Security

	Unit	2021	2022	2023
Rate of investments in information security ¹	%	12.2	2.5	2.3

1. Proportion of IT budget invested in information security

Board of Directors

Approach

Composition of the Board of Directors

HD Hyundai Electric operates the Board of Directors and its subcommittees to ensure transparency and soundness in governance. The Board of Directors, as the highest permanent decision-making body within the company, supports, supervises, and monitors the decisions made by the management team. Additionally, HD Hyundai Electric transparently discloses its board regulations, which include provisions on diversity, independence, and accountability of

Category	Name	Gender	Position	Appointment Date	Term (Years)	Career Highlights	Subcommittee
Internal Director	Cho Seok	Male	• Chair	2024. 3.26	2	Current) CEO of HD Hyundai Electric	Independent Director Recommendation Committee ESG Committee
	Keum Seok-ho	Male	• Director	2023. 3.22	3	Current) Head of Communications Division at HD Korea Shipbuilding & Offshore Engineering Current) Head of HR Support Division at HD Hyundai	Internal Trade Committee
Independent Director	Han Chan-sik	Male	• Chair of Independent Director Recommendation Committee • Chair of Compensation Committee	2023. 3.22	3	Current) Lawyer at Kim & Chang Law Office	Internal Trade Committee Independent Director Recommendation Committee ESG Committee Audit Committee Compensation Committee
	Park Soo-hwan	Male	• Chair of Audit Committee	2024. 3.26	3	Former) CEO of Samil PwC	Internal Trade Committee Independent Director Recommendation Committee ESG Committee Audit Committee Compensation Committee
	Jeon soon-ok	Female	• Chair of Internal Trade Committee • Chair of ESG Committee	2022. 3.21	3	Current) Executive Director of the Jeon Tae-il Foundation	Internal Trade Committee Independent Director Recommendation Committee ESG Committee Audit Committee Compensation Committee

the board, to protect the rights and interests of shareholders and customers. The company also subscribes to Directors and Officers (D&O) liability insurance to mitigate the risk of indemnity for management errors, thereby creating a management environment where executives can focus on their activities with confidence.

Independence

HD Hyundai Electric strengthens the independence of its Board of Directors (BOD) by appointing a majority (60%) of the BOD as independent directors, creating an environment where board members can freely discuss their opinions without being influenced by the interests of the company, management, or major shareholders. In accordance with the Articles of Incorporation and relevant laws, the Independent Director Recommendation Committee discloses information about candidates before the appointment of independent director and recommends suitable candidates through a fair process and thorough review. An independent director is a director who does not engage in the company's day-to-day operations and is selected as a candidate by verifying the requirements for independent director candidates. Additionally, the BOD considers the domestic and international environment and the circumstances of the directors and the company, including any significant relationships between the directors and the company, in determining independence.

Requirements for independent director Candidates

An independent director must meet the qualifications set forth in relevant laws and regulations, including the following requirements.

- 1 An independent director must not have served as an executive of the company within the past two years
- 2 An independent director must not be an immediate family member of an executive of the company or its subsidiaries
- 3 An independent director must not have any conflicts of interest with the company, such as serving as an advisor, consultant, or executive or employee of an organization or major shareholder that has a primary advisory contract with the company or its senior management
- 4 An independent director must not be an executive, employee, or major shareholder of a significant customer or supplier of the company as stipulated in Article 34, Paragraph 5, Subparagraphs 2(a) and 2(b) of the Enforcement Decree of the Commercial Act
- 5 An independent director must not have been a partner or employee of the company's external auditor in the past two years
- 6 An independent director must not have any economic interests or other conflicts of interest related to matters decided by the Board of Directors

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Board of Directors

Diversity

HD Hyundai Electric strives to compose a Board of Directors with diverse members to ensure that the board can make significant decisions based on a broader perspective, considering the interests of shareholders, customers, and other stakeholders. Therefore, there is no discrimination or restriction based on nationality, age, gender, experience and background, race, or ethnicity. In 2023, the board includes one female independent director, thereby enhancing the diversity of the BOD.

Nationality	Age	Gender	Experience and Background	Other
<ul style="list-style-type: none"> Discovering a diverse pool of director candidates to establish a globally advanced governance structure 	<ul style="list-style-type: none"> Enhancing board efficiency by balancing experience and flexibility in response to changing business environments 	<ul style="list-style-type: none"> Reflecting the principle of gender equality to operate the BOD based on diverse perspectives 	<ul style="list-style-type: none"> Considering the characteristics of Korean society while avoiding bias towards specific backgrounds 	<ul style="list-style-type: none"> Considering diversity factors such as race, religion, ethnicity, and others

Expertise

HD Hyundai Electric's BOD ensures expertise by comprising professionals with industrial experience as well as specific job expertise in fields such as finance and accounting, labor, and management, maintaining a majority of such experts on the board.

Board Skills Matrix	Cho Seok (Internal Director)	Keum Seok-ho (Internal Director)	Han Chan-sik (Independent Director)	Park Soo-hwan (Independent Director)	Jeon Soon-ok (Independent Director)
Management	0				
Human Resources		0			
Legal			0		
Accounting & Finance				0	
Labor					0
Industry Experience	0	0			

Efficiency

HD Hyundai Electric's Board of Directors has been operating efficiently with an average attendance rate of 93% over the past three years. The average tenure of BOD members is 4 years and 8 months for internal directors and 3 years for independent directors. It is stipulated that the tenure of independent directors cannot exceed 6 years. Additionally, independent directors are limited to holding no more than two other positions. Regular BOD meetings are held quarterly, in principle, but ad-hoc meetings are convened as necessary to review agenda items. The BOD regulations specify a principle of prior notification for board attendance and familiarization with agenda items.

Board Committees

Independent Director Recommendation Committee

The Independent Director Recommendation Committee manages and verifies independent director candidates at least once a year and recommends candidates for appointment at the general meeting of shareholders. To ensure independence, Han Chan-sik, an independent director, serves as the chairman of the Independent Director Recommendation Committee, and 75% (3 out of 4) of the committee members are independent directors.

Director Appointment Process



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Audit Committee

The Audit Committee, as the company's mandatary, performs the role of monitoring the management to ensure sound management, protect shareholders' rights and interests, and maintain and enhance the company's social trust. The Audit Committee is composed entirely of independent directors, and the chairman of the Audit Committee is Park Soo-hwan, an independent director.

Internal Trade Committee

The Internal Trade Committee, established to enhance transparency in transactions with affiliated companies, reviews internal transactions, deliberates, makes resolutions, and takes corrective actions, as necessary. Seventy-five percent (75%) of the four members of the Internal Transactions Committee are independent directors, and the committee is chaired by Jeon Soon-ok, an independent director.

ESG Committee

The ESG Committee establishes strategies and policies related to ESG for the company and performs the role of managing and supervising the performance of ESG initiatives. Jeon Soon-ok, an independent director and expert in labor and social fields, has been appointed as the chair of the ESG Committee. The committee deliberates and approves the company's ESG strategic direction, plans, and implementation-related matters. It has reported on agenda such as climate change response strategies and ESG-related KPIs. In 2023, the committee reviewed and approved the materiality assessment results, the carbon neutrality roadmap, and the RE100 roadmap.

Compensation Committee

To ensure the objectivity and transparency of director remuneration, the Compensation Committee was established within the BOD on February 2, 2024. This committee deliberates on the appropriateness of registered directors' remuneration, including the remuneration limits and compensation system to be presented at the general meeting of shareholders. The Compensation Committee is composed of three or more directors in accordance with relevant regulations, and the chairman is selected by resolution among the committee members. On February 22, 2024, Han Chan-sik, an independent director, was appointed as the chairman of the Compensation Committee.

Commitment

HD Hyundai Electric is committed to maintaining a balance of independence, diversity, and expertise within its BOD to ensure efficient management and supervision of the executive team. Additionally, we will continue to explore various support measures to enhance the capabilities of our directors.



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Board of Directors

Performance

Board Evaluation

HD Hyundai Electric has implemented a board activity evaluation system to assess the appropriateness of its board composition and ensure efficient board operations. The evaluation consists of 25 questions across five sections: roles and responsibilities, structure, operations, BOD committees, and the reflection of evaluation results. All directors conduct a self-assessment once a year. The 2023 evaluation confirmed that the board composition is sound and that the board fulfills its roles and responsibilities diligently.

Independent Directors Education

To ensure that independent directors can perform their duties effectively, HD Hyundai Electric provides education programs. In 2023, training on the latest ESG trends and the role of committees was conducted through the Public Institution Social Responsibility Research Institute (PSR).

Executive Performance Evaluation

HD Hyundai Electric evaluates executive performance by considering both quantitative indicators, such as sales, orders, and operating profit, and qualitative indicators, such as leadership, job expertise, and accountability. Additionally, the company establishes ESG key performance indicators (KPIs) at the corporate and executive levels, setting sustainability-related targets for CEOs and executives, and continuously monitors the achievement of these goals.

Determination and Payment of Executive Performance Compensation

HD Hyundai Electric's executive performance compensation consists of management performance bonuses and long-term performance bonuses. Management performance bonuses are paid at the beginning of the following year, considering quantitative indicators such as sales, orders, and operating profit, as well as leadership and expertise in achieving business performance. To prevent decision-making focused only on short-term performance and to maximize long-term corporate value, a long-term performance bonus was newly established at

the end of 2023. This bonus is determined and paid after the deferment period (at least three years), considering organizational evaluation, net income, and other indicators. For independent directors and audit committee members, a fixed base salary is provided without performance-based pay to ensure independence.

Major Agenda of the ESG Committee

HD Hyundai Electric submitted ESG agenda to the BOD or the ESG Committee for deliberation. If improvements were identified during the deliberation process, they were subsequently incorporated.

Date	ESG Committee Agenda
Feb. 02, 2023	[Resolution] Approval of the 2023 ESG Work Plan • Establishment and implementation of ESG evaluation improvement tasks • Establishment and implementation plan of RE100 and carbon neutrality roadmap
Apr. 21, 2023	[Report] Report on the status according to the trend of strengthening ESG in the supply chain [Report] Report on ESG materiality assessment results • Strengthening supply chain competitiveness and ESG, responding to climate crisis
Jul. 25, 2023	[Report] Report on ESG management status • Analysis of the evaluation methods of the 'Korea Institute of Corporate Governance and Sustainability' and 'Sustainvest' [Education] Recent trends in ESG and the role of the committee
Feb. 2, 2024	[Resolution] Approval of the 2024 ESG Work Plan • Major achievements in 2023 (ESG rating evaluation results, RE100 and carbon neutrality, support and management system for supply chain ESG, human rights impact assessment results, biodiversity conservation activities, etc.) • Major work plan for 2024 (implementation of RE100 and carbon neutrality roadmap, biodiversity conservation activities, calculation of carbon emissions throughout the life cycle of major products, etc.) [Report] Analysis of ESG Committee agenda and benchmarking of other companies

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Board of Directors

Protection of Shareholder Rights and Shareholder Return Policy

HD Hyundai Electric has implemented a proxy voting system and established relevant regulations in its Articles of Incorporation to actively reflect shareholder intentions at the general meeting of shareholders. To protect shareholder rights, a notice of the regular general meeting of shareholders is issued 28 days in advance, informing shareholders of the location, agenda, and other details. Additionally, significant matters affecting shareholder rights, such as mergers, business transfers, and corporate splits, are specified in the Articles of Incorporation as resolutions requiring shareholder approval. Measures are in place to protect dissenting and minority shareholders. Furthermore, an electronic voting system has been introduced and operated to protect the voting rights of minority shareholders.

All common shares carry one vote per share, and dividends are paid to enhance shareholder value. The basic dividend policy aims to achieve a payout ratio of at least 30% (based on net income in the separate income statement). The company decides on dividend payments within the range of distributable profits, considering the company's profit size, investment plans for sustainable growth, and financial structure, ensuring that shareholders receive returns through cash and stock dividends following board resolutions and shareholder meeting approvals. For the 7th regular dividend in 2023, a dividend of KRW 1,000 per share was paid, amounting to approximately KRW 36 billion on April 4, 2024. Due to planned new facility investments (KRW 117.3 billion) by 2025, the 2023 separate basis dividend payout ratio was around 14%, not meeting the target of 30%. However, HD Hyundai Electric will continue to respect shareholder rights through appropriate shareholder returns.

1. Dividend record date: December 31, 2023

Composition

		Unit	2021	2022	2023
Independence	Ratio of independent directors	%	60	60	60
Diversity	Female directors	person	0	1	1
	Ratio of female directors	%	0	20	20
Expertise	No. of industry experts	person	2	2	2
	Ratio of industry experts	%	40	40	40
	No. of financial experts	person	1	1	1
	Ratio of financial experts	%	20	20	20
	No. of ESG experts	person	0	1	1
	Ratio of ESG experts	%	0	20	20
Responsibility Reduction	Liability insurance coverage	Y/N	Y	Y	Y



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Operation

		Unit	2021	2022	2023
Meetings held and attendance	No. of meetings held	times	8	8	7
	attendance rate	%	90.2	92.5	97.1
Opinions by agenda	- Reported agenda	case	10	8	9
	- Resolved agenda	case	16	25	22
	- Disagree	case	0	0	0

Committees

		Unit	2021	2022	2023
Independent Director Recommendation Committee	Ratio of independent directors	%	75	75	75
	No. of meetings held	case	1	1	2
	Attendance rate	%	100	100	100
Audit Committee	No. of resolved agenda	case	1	1	2
	Ratio of independent directors	%	100	100	100
	No. of meetings held	case	6	7	7
	Attendance rate	%	89.5	90.5	100
ESG Committee	No. of resolved agenda	case	3	5	5
	No. of meetings held	case	2	2	4
ESG Committee	No. of meetings held	case	2	2	4
	No. of resolved agenda	case	1	1	2

Evaluation and Remuneration

		Unit	2021	2022	2023
BOD evaluation	Self-evaluation	Y/N	N	N	Y
	Independent evaluation by third parties	Y/N	N	N	N
Remuneration	Non-executive directors remuneration system	Y/N	Y	Y	Y
	Disclose annual remuneration for each director	Y/N	N	N	N
	Reflects ESG in CEO performance	Y/N	N	Y	Y
Shareholding	Directors and CEO shareholding	%	0.01	0.01	0.01
	Government shareholding	%	6.2	12.4	12.4

Shareholder Value

		Unit	2021	2022	2023
Shareholder engagement	Electronic voting system	Y/N	Y	Y	Y
	Soliciting proxy voting rights from all shareholders	Y/N	Y	Y	Y
	Notifying agendas in advance	Y/N	Y	Y	Y
Dividends	Establishing and disclosing mid- to long-term dividend policies	Y/N	Y	Y	Y

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Ethics and Compliance

Approach

Ethical Management Policy

HD Hyundai Electric pursues ethical values embodied in the acronym FOREST, akin to a forest that contributes to the coexistence and symbiosis of living organisms. The company aims to realize the values of Fairness, Ownership, Responsibility, Enthusiasm, Safety, and Transparency and Trust. Our goal is to be a "company people want to do business with" for customers and partners, a "company people want to invest in" for shareholders, a "company people want to work for" for executives and employees, and a "company that fulfills its responsibilities to the nation and society."

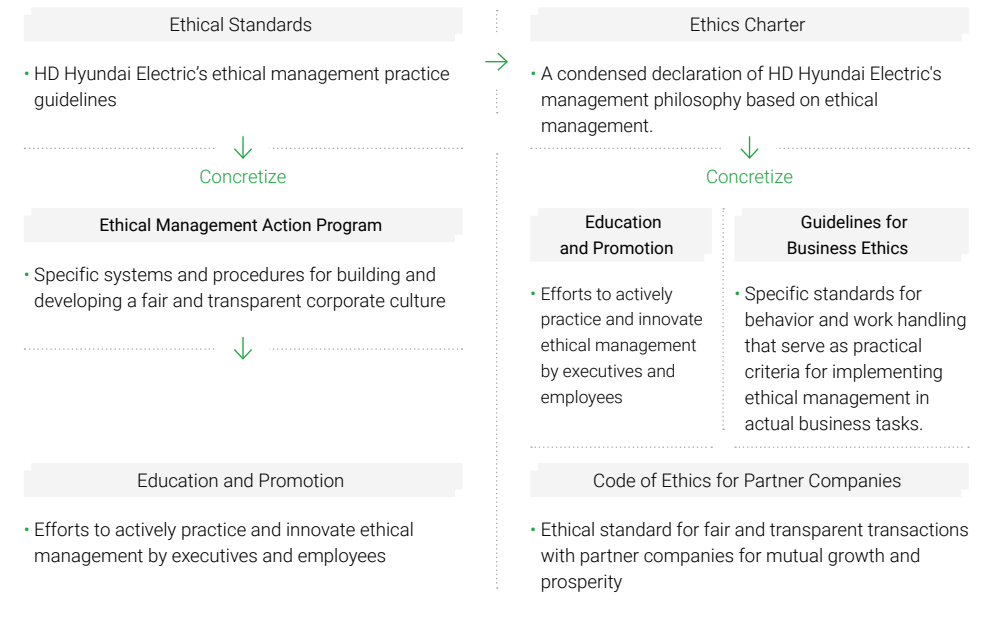
We participate in the global corporate citizenship initiative, the UN Global Compact, to implement responsible management. We provide specific standards for judgment and behavior for executives and employees and stakeholders through our Ethics Charter, Code of Ethics, Guidelines for Business Ethics and Code of Ethics for Partner Companies based on international ethical principles. Key areas include anti-corruption and bribery, discrimination, information protection, conflict of interest, and insider trading.

Ethics Charter

Based on HD Hyundai's core values of 'leading the world through innovation, fearless challenges, mutual respect, and safety for all,' we aim to become a respected company that contributes to customers, shareholders, and the nation. To this end, we establish and commit to the Ethics Charter as a standard of conduct to faithfully fulfill our corporate social responsibility and inherent roles.

- ① We aim to be an ethical company by complying with domestic and international laws and regulations, and by practicing reasonable and transparent management.
- ② We realize customer value creation and inspiring management by meeting and exceeding customer needs and expectations.
- ③ We pursue the maximization of shareholder value through fair and efficient management.
- ④ We fulfill our social responsibilities and obligations as members of the local community, contributing to the development of the nation and humanity.
- ⑤ We strive to create a bright and sound corporate culture through fair competition and the establishment of fair trade practices.
- ⑥ We aim to be the best talent-based company, providing our executives and employees with equal and fair opportunities for self-realization and a safe and pleasant working environment.

Ethical Management Process



Diagnosis of Ethical Management and Risk Management

HD Hyundai Electric conducts annual self-assessments of compliance with ethical management among its executives and employees to enhance understanding of related regulations, identify areas for improvement, and take immediate corrective actions. In addition, we regularly assess the level of ethical management practices by collecting feedback from executives, employees and partner companies. This process helps us gather insights on areas needing improvement, actively incorporate those insights, and continuously monitor the implementation of ethical management.

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Ethics and Compliance

Compliance Policy

To establish a systematic compliance system and culture across the organization, HD Hyundai Electric appointed a compliance officer and established compliance control standards in April 2017. In April 2018, we enacted guidelines for anti-corruption and bribery, covering political donations, charitable contributions, and sponsorships. Additionally, in April 2019, we introduced and implemented the Fair Trade Compliance Program and guidelines for compliance with economic sanctions to voluntarily adhere to fair trade regulations. Policies, including guidelines reflecting major risks (Fair Trade Compliance Program) and methods of implementation (obligations), are disclosed on our website. In the event of violations, we operate a disciplinary system to ensure prompt and fair action.

Fair Trade Compliance Program (CP)

HD Hyundai Electric has implemented and been operating a Fair Trade Compliance Program (CP) since 2019 to respect market competition order and establish a compliance management system. All executives and employees must adhere to the Fair Trade Compliance Program's operating regulations in their daily tasks. If they witness or experience any violations of competition laws, they are required to report them to the Compliance Officer. Additionally, employees must review the potential for competition law violations in their work and seek advice and consultation from the Compliance Officer if necessary. The Compliance Officer establishes company policies related to the compliance program by reflecting amendments to relevant fair trade laws and regulations. They also regularly conduct inspections and monitoring of business operations and report the results to the Board of Directors on a regular basis.

Management of Regulatory Compliance Risks

HD Hyundai Electric protects trade secrets through company-wide guidance and ensures that employees are well-informed about fair trade and subcontracting laws and related work precautions. The company also notifies essential laws, case studies, and work guidelines that must be reviewed by operational departments while supporting legal reviews of related laws. In 2023, to align with compliance laws and government systems, HD Hyundai Electric established a management plan for compliance regulations suitable for the company, including anti-corruption, economic sanctions, fair trade compliance programs, and compliance control standards. Accordingly, the company re-notified all departments via the intranet about the posting of compliance regulations such as anti-corruption compliance guidelines, economic sanctions compliance guidelines, fair trade compliance program operating regulations, and compliance control standards. Additionally, reviews were conducted to check for any violations of these regulations. HD Hyundai Electric also distributes information on compliance-related issues and trends to all departments.

Ethics Reporting System

HD Hyundai Electric operates channels for reporting ethical violations either anonymously or with a real name. Through these channels, the company addresses identified issues such as corruption and unreasonable practices. To protect the identity of whistleblowers, information is strictly managed, and all data related to the report is destroyed after the notification process is completed. Additionally, a separate consultation channel for reporting unfair transactions with partner companies is operated, allowing for the reporting of any observed violations in dealings with the company, either anonymously or with a real name. The confidentiality of the whistleblowers and their reports is guaranteed, and efforts are made to ensure that no disadvantages or discrimination occur. Furthermore, the company encourages the reporting of unethical behavior that contributes to preventing financial losses, recovering profits, and reducing costs by formalizing a reward system that offers up to KRW 1billion in rewards.

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Ethics and Compliance

Commitment

HD Hyundai Electric is reinforcing ethics and compliance awareness in its business activities. As overseas sales performance increases, the company aims to strengthen internal controls through education on domestic and international regulations, guidelines, and key case studies.

Performance

Pledge to Practice Ethical Management

HD Hyundai Electric requires all executives and employees (for production and technical positions, those with managerial titles, senior technicians and above) and partner companies to submit a pledge to practice ethical management annually. This pledge ensures the understanding and compliance with ethical management regulations. According to the ethical management regulations and anti-corruption compliance guidelines, the company prohibits unfair trade practices, corruption, and bribery, including improper solicitation or offering of gifts that are forbidden by relevant laws.

Ethical Management Education

HD Hyundai Electric operates various educational programs to raise awareness of ethical management among stakeholders and effectively integrate it into the organizational culture. The company systematically provides training on ethical management procedures, group ethical codes, and regulatory trends to executives and employees and partner company staff. New hires are required to undergo mandatory ethical management training early in their employment, ensuring they clearly understand the organization's core values and ethical principles. Additionally, the company develops educational content that addresses unethical cases, offering practical and realistic learning opportunities.

Ethics Violations and Reporting

In 2023, a total of 8 reports were received, and 3 of these were investigated. Among them, 2 cases were found to be violations of ethical management¹, and the relevant members were sanctioned according to the applicable regulations. The remaining 5 reports were complaints, which were directed to the relevant departments for handling, and the outcomes were verified.

1. Not applicable to corruption, bribery, discrimination, harassment, customer privacy protection, conflict of interest, money laundering, or insider trading.

Legal Support System

HD Hyundai Electric operates anti-corruption programs such as 'Provision of Economic Benefits' and 'Stakeholder Due Diligence' continuously through its legal support system, conducting a total of 8 reviews in 2023. In addition, the company periodically inspects the operation of the Fair Trade Compliance Program and identifies corruption risks. The 'Provision of Economic Benefits' program informs and verifies, on a case-by-case basis, the prohibition of public officials from receiving gifts, except for the exceptions listed in Article 8, Paragraph 3, Subparagraphs 1 to 8 of the Improper Solicitation and Graft Act (Kim Young-ran Act). The Stakeholder Due Diligence program reviews the Specially Designated Nationals List (SDN List) by the Office of Foreign Assets Control (OFAC) of the U.S. Department of the Treasury and the Corruption Perceptions Index published by Transparency International (TI) to determine the appropriateness of transactions with the respective customers. Additionally, the results of the operation of the legal support system and the Fair Trade Compliance Program, the inspection results of the compliance control standards, and the performance of compliance and fair trade compliance are reported to the Board of Directors, which continuously oversees and manages these matters.

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Ethics and Compliance

Compliance Control Training for Executives and Employees

HD Hyundai Electric identifies high-risk and medium-risk departments through its own compliance assessment (including areas such as collusion, unfair support, subcontracting, labor dispatch, corruption, and economic sanctions) and provides training on major competition laws to these departments. In 2023, to prevent issues such as corruption and unfair trade, the company planned compliance training based on job relevance for each department and separate compliance training for new managerial positions. Accordingly, compliance assessment sheets were distributed to each department twice, in the first and second halves of the year. Based on these assessments, high-risk and medium-risk departments were identified, with approximately 77% of executives and employees participating in either remote or in-department training and submitting their training checklists. Additional legal issues, case studies, and major advisory case training were provided to new department heads, production team leaders, and managerial staff, as well as executives and employees dispatched to group company training. In 2024, the company plans to continue compliance assessments and training based on job relevance in the first and second halves of the year, covering areas such as anti-corruption, fair trade, economic sanctions, and illegal dispatch.

Self-Compliance Check for Executives and Employees

HD Hyundai Electric distributes a Fair Trade Compliance Checklist to departments with high compliance risks and verifies the current status. This checklist is designed to identify potential risks related to violations of domestic unfair trade practices or economic sanctions laws. In 2023, the company assessed risks related to unfair trade, economic sanctions, and corruption by distributing evaluation sheets to each department. These sheets included evaluations of transaction status (sales transactions with customers/clients, agencies, partner companies, etc.) and business activities (meetings with competitors' employees, outsourcing to SMEs, in-house partner companies, involvement of public officials in business relationships, etc.). In 2024, the company plans to continue distributing compliance evaluation sheets to each department to assess job relevance and provide related training.

Ethics and Compliance Training

		Unit	2021	2022	2023
Ethics training	Training hours per employee	hour	0.20	0.58	0.30
	Participation rate	%	38.74	67.95	59.70
Compliance training	Training hours per employee	hour	0.60	0.59	0.84
	Participation rate	%	57	89	77

Violations

		Unit	2021	2022	2023
Legal violations	No. of violations related to subcontracting laws	case	0	0	0

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Risk Management

Approach

HD Hyundai Electric operates a risk management system to monitor and manage the impacts of unpredictable changes in the business environment on the company's operations at an appropriate level. The company has defined major risk types and monitors changes in predefined factors for each risk. If changes exceeding certain thresholds are detected, actions are taken according to predefined decision-making systems and response plans.

Risk Management Governance

The responsibility for establishing and overseeing the risk management system lies with the Board of Directors. The Board regularly reviews the level of risk exposure and incorporates it into decision-making. Depending on the type of risk, for financial risks, the Audit Committee reviews the adequacy of the risk management system and oversees the management's adherence to risk management procedures. The Internal Auditor supports the Audit Committee by performing regular and special reviews of risk controls and procedures, reporting the results to the Audit Committee. For non-financial risks, the ESG Committee oversees major risks and implementation plans and has appointed a Chief ESG Officer and Compliance Officer to closely address compliance and ethical risks.

Risk Management System



Performance

Types of Risks

HD Hyundai Electric reviews the level of risk exposure at least twice a year. By identifying financial risks such as credit risk and liquidity risk, as well as non-financial risks such as climate change, supply chain, and compliance, we aim to ensure stable business operations.

Financial Risks

Credit Risk	<ul style="list-style-type: none"> • The risk of financial loss to the company if a customer or counterparty to a financial instrument fails to meet its contractual obligations • Provisions are set for expected losses on trade and other receivables • Exposure to credit risk is limited by investing only in liquid securities and in counterparties with high credit ratings
Liquidity Risk	<ul style="list-style-type: none"> • The risk that the company will encounter difficulty in meeting obligations associated with its financial liabilities • Sufficient liquidity is maintained through operational activities and by securing borrowings or capital funding

Non-Financial Risks

Climate Change Risk	<ul style="list-style-type: none"> • The impact of transition risks and physical risks due to the intensification of the climate crisis on the company's business and assets • Review of global climate change regulations • Calculation of the financial impact of transition risks and physical risks
Compliance Risk	<ul style="list-style-type: none"> • The increased likelihood of violating anti-corruption and fair trade laws due to the expansion into overseas markets • Strengthened legal review during transactions or contract processes • Expanded training for responsible employees

Embedding Risk Management

HD Hyundai Electric is committed to establishing a risk management culture throughout the company by providing training to all executives and employees. In 2023, we conducted training for independent directors on topics such as internal accounting control systems, recent ESG trends, and the role of the Board of Directors in managing potential risks. We also provided appropriate training programs based on our risk management policies to key risk management departments, including the Finance Team and ESG Management Team.

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Summary of Consolidated Financial Statements (Unit: KRW million)

Category	7th Period (End of December 2023)	6th Period (End of December 2022)	5th Period (End of December 2021)
[Current assets]	1,972,953	1,548,306	1,398,338
· Cash and cash equivalents	176,098	172,686	354,809
· Short-term financial assets	23,951	22,092	21,057
· Trade and other receivables	659,957	506,399	456,484
· Contract assets	220,678	170,224	190,700
· Inventories	849,725	627,806	357,079
· Other current assets	42,544	49,099	18,208
[Non-current assets]	937,207	886,724	816,632
· Long-term financial assets	4,382	4,935	6,170
· Long-term trade and other receivables	12,336	5,069	3,473
· Property, plant, and equipment	624,253	536,868	516,254
· Intangible assets	70,006	65,511	52,678
· Other non-current assets	226,230	274,342	238,057
Total assets	2,910,160	2,435,030	2,214,970
[Current liabilities]	1,497,429	1,411,145	1,252,496
[Non-current liabilities]	355,701	192,717	316,252
Total liabilities	1,853,130	1,603,861	1,568,748
[Capital stock]	180,236	180,236	180,236
[Capital surplus]	401,837	401,833	901,707
[Capital adjustment]	-15,241	-15,241	-15,241
[Accumulated other comprehensive income]	84,690	83,844	79,333
[Retained earnings (deficit)]	396,621	171,908	-499,814
[Non-controlling interests]	8,888	8,589	-
Total equity	1,057,030	831,169	646,222

Summary of Consolidated Statement of Comprehensive Income (Unit: KRW million)

Category	7th Period (January 1, 2023 to December 31, 2023)	6th Period (January 1, 2022 to December 31, 2022)	5th Period (January 1, 2021 to December 31, 2021)
Revenue	2,702,799	2,104,499	1,805,992
Operating profit (loss)	315,218	133,041	9,736
Net profit (loss)	259,456	162,018	-33,687
- Equity attributable to owners of the parent	259,153	162,486	-33,687
- Non-controlling interest	303	-468	-
Total comprehensive income (loss)	243,859	175,764	-32,951
- Equity attributable to owners of the parent	243,556	176,232	-32,951
- Non-controlling interest	303	-468	-
Earnings per parent share (loss)	0.0072	0.004514	-0.000936

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HD Hyundai Electric identifies actual and potential risks and opportunities arising from climate change and formulates strategies to address them.



STEP 1. Identifying Climate Change Risks and Opportunities

HD Hyundai Electric identifies climate change-related risks and opportunities over the short, medium, and long term, and formulates response strategies for major risks and opportunities. Based on physical risks and transition risks recommended by the TCFD, we have created a pool of risks and opportunities that the company may face through industry characteristics and domestic and international literature reviews. Transition risks arise during the shift to a low-carbon economy, while physical risks are due to the physical impacts of climate change. These risks can have financial impacts on the organization, including direct losses to assets and indirect impacts such as supply chain disruptions.

Transition Risks		
Policy and Legal	Technology	Market and Reputation
The implementation and strengthening of climate change policies, such as the reinforcement of greenhouse gas emission regulations	Transition to low-carbon products or services	Market uncertainties such as rising prices of raw materials related to climate change issues
Strengthening of climate change-related disclosure obligations	Transition of production processes/equipment to low-carbon technologies	Changes in customer/consumer preferences and demand related to climate change
Increase in utility costs due to climate change regulations	Production of electricity from low-carbon energy sources	Reputation risk
Litigation related to climate change issues		

Physical Risks	
Acute	Chronic
Floods	Rising average temperatures
Typhoons	Changes in precipitation patterns
Heat waves	Sea level rise
Wildfires	
Droughts	
Heavy rain	

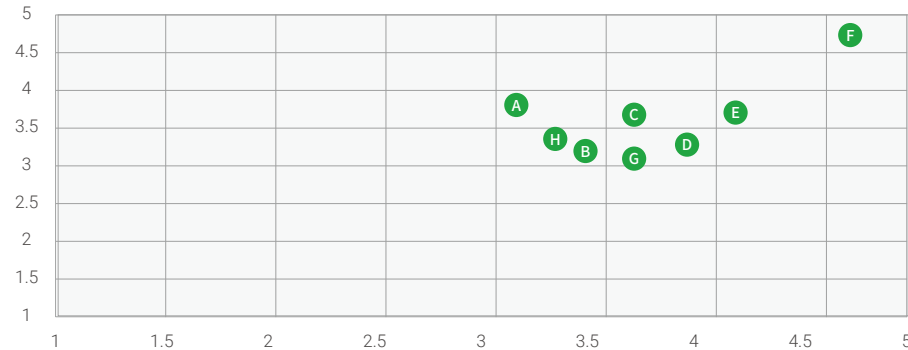
Opportunities			
Policy and Legal	Technology	Market and Reputation	Resources and Resilience
Implementation and enforcement of climate change policies	Development of low-carbon technologies/products/services	Changes in customer and consumer preferences and demand related to climate change	Utilization of low-carbon energy sources and high-efficiency resources
Participation in the greenhouse gas emissions market	Utilization of existing low-carbon technologies/products/services	Responding to climate change issues	Diversification of raw materials and use of alternatives for climate response
		Enhancement of corporate value/trust/image	

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STEP 2. Materiality Assessment

We evaluated the scale, likelihood, and expected timing of impact based on the pool of risks and opportunities to identify major risks and opportunities. The materiality assessment was conducted by assigning scores in accordance with the materiality criteria used by benchmark companies domestically and internationally, as well as the internal evaluation standards of third-party professional organizations.



Category	Topic	Impact Level		By Period			
		Scale	likeli-hood	Short-term (up to 2025)	Mid-term (2026-2032)	Long-term (2033~)	
A	Transition Risks	The implementation and strengthening of climate change policies, such as the reinforcement of greenhouse gas emission regulations	●●○○	●●●○	○	○	○
B	Transition Risks	Transition to low-carbon products or services	●●○○	●●○○	○	○	○
C	Transition Risks	Transition of production processes/ equipment to low-carbon technologies	●●○○	●●●○	○	○	○
D	Transition Risks	Reputation risks and opportunities	●●○○	●●○○	○	○	○
E	Physical Risks	Typhoons	●●○○	●●●○	○	○	○
F	Opportunities	Development of low-carbon technologies/ products/services	●●●●	●●●●	○	○	○
G	Opportunities	Responding to climate change issues	●●○○	●●○○	○	○	○
H	Opportunities	Efficient use of resources such as resource recycling, water use reduction, and low-carbon energy sources	●●○○	●●○○	○	○	○

1) ●●○○ : medium / ●●●○ : medium-high / ●●●● : high


STEP 3. Scenario Analysis

HD Hyundai Electric conducted a scenario analysis to identify the financial impacts of identified risks and opportunities, such as the strengthening of climate change policies and typhoons, on the company. For transition risks and opportunities, we used the IEA 450 scenario, which limits the increase in global average temperature to 2°C. For physical risks, we utilized the RCP 8.5 scenario, which assumes greenhouse gas emissions continue at current trends. For carbon costs, we estimated the projections by analyzing the trend line of the Korean Emissions Trading Scheme and domestic and international literature.

Category	Transition Risks and Opportunities	Physical Risks
Scenario Selection	• Conservative approach using the IEA 450 scenario for transition risks and opportunities	• Conservative approach using the RCP 8.5 scenario for physical risks
Scenario Concept	• IEA 450: Scenario with a 50% probability of limiting the temperature increase due to warming to 2°C by 2100	• RCP 8.5: Scenario where greenhouse gases are emitted at current trends (without mitigation), leading to a 4.8°C increase in global average temperature by the end of the 21st century
Key Assumptions	• Promotion of low-carbon technology development and dissemination • Increase in the number of countries implementing emissions trading schemes and high carbon prices to curb temperature rise	• Greenhouse gas (GHG) emissions continue at current trends without mitigation
Main Scenario Results	• Estimated increase of \$10.5 trillion in cumulative energy-related investments from 2010 to 2030 (especially in the transportation sector)	• CO ₂ concentration reaches 936 ppm by 2100 • 4.3°C increase in global average temperature from 2081 to 2100 compared to the pre-industrial period • Average sea level rise of 0.63 meters from 2081 to 2100 compared to 1986 to 2005

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Financial Impact Analysis

HD Hyundai Electric applied scenarios to the major risks and opportunities identified through the materiality assessment to qualitatively analyze their financial impacts. For those related to emissions trading costs or benefits, we conducted a quantitative impact assessment using projected carbon price estimates. We plan to conduct quantitative impact assessments for other major risks and opportunities in the future.

Category	Major Risks and Opportunities	Scenario Assumptions or Results	Financial Impact Assessment (Qualitative)	Financial Impact Assessment (Quantitative)																				
Transition Risks	The implementation and strengthening of climate change policies, such as the reinforcement of greenhouse gas emission	<ul style="list-style-type: none"> • Increased importance of emissions trading schemes (estimated \$180/ton by 2030) 	<ul style="list-style-type: none"> • Increased cost burden due to higher emissions trading costs and increased investment to reduce emissions • Decline in price competitiveness and sales due to increased total costs 	<ul style="list-style-type: none"> • Financial impact for Scope 1 & Scope 2 emissions <p style="text-align: right;">(Unit: KRW 100 million)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>2025</th> <th>2030</th> <th>2040</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Domestic</td> <td>1.7</td> <td>8.5</td> <td>13.8</td> <td>18.6</td> </tr> <tr> <td>China</td> <td>-</td> <td>1.2</td> <td>4.0</td> <td>6.7</td> </tr> <tr> <td>U.S.</td> <td>-</td> <td>20.3</td> <td>28.9</td> <td>34.0</td> </tr> </tbody> </table>		2025	2030	2040	2050	Domestic	1.7	8.5	13.8	18.6	China	-	1.2	4.0	6.7	U.S.	-	20.3	28.9	34.0
					2025	2030	2040	2050																
Domestic	1.7	8.5	13.8	18.6																				
China	-	1.2	4.0	6.7																				
U.S.	-	20.3	28.9	34.0																				
Transition to low-carbon products or services	<ul style="list-style-type: none"> • Increased investment in high-efficiency equipment, appliances, and buildings 	<ul style="list-style-type: none"> • Decreased sales due to reduced demand for high-carbon products and services • Increased costs for technology development and facility introduction for transitioning to low-carbon products and services • Reduced demand and sales for Hyundai Electric's products if major customers implement carbon neutrality 																						
Transition of production processes/equipment to low-carbon technologies	<ul style="list-style-type: none"> • Promotion of low-carbon technology development and dissemination 	<ul style="list-style-type: none"> • Increased costs for applying low-carbon technologies/CCS • Increased carbon costs due to lack of low-carbon technologies as business and production activities expand, leading to reduced price competitiveness and sales 																						
Reputation risks and opportunities																								

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Category	Major Risks and Opportunities	Scenario Assumptions or Results	Financial Impact Assessment (Qualitative)	Financial Impact Assessment (Quantitative)
Physical Risks	Typhoons	<ul style="list-style-type: none"> Rising global average temperature and sea temperature Extreme changes in precipitation patterns and increased frequency of typhoons 	<ul style="list-style-type: none"> Direct and indirect damage to facilities and site premises due to heavy rain and flooding accompanying typhoons, leading to a decrease in sales Increased costs for installing equipment to prevent typhoon damage Potential disruptions related to business continuity 	
	Opportunities	Development of low carbon technology, products and services	<ul style="list-style-type: none"> Promotion of low-carbon technology development and dissemination 	<ul style="list-style-type: none"> Increased demand and sales for HD Hyundai Electric's low-carbon products and SF₆-free products due to major customers' carbon neutrality declarations
	Responding to climate change issues	<ul style="list-style-type: none"> Increased investment in high-efficiency equipment, appliances, and buildings Increased investment in low-carbon/zero-carbon power generation 	<ul style="list-style-type: none"> Potential to secure capital and investment funds through various subsidies and incentives for corporate low-carbon initiatives Reduced carbon costs through the transition to low-carbon products and technologies to meet consumer demands 	
	Efficient use of resources such as resource recycling, water use reduction, and low-carbon energy sources	<ul style="list-style-type: none"> Increased investment in low-carbon/zero-carbon power generation Increased share of global renewable energy generation Increased adoption of CCS technologies in power and industrial sectors 	<ul style="list-style-type: none"> Cost savings by procuring renewable energy power to achieve RE100 	<ul style="list-style-type: none"> Carbon cost savings based on RE100 achievement

	(Unit: KRW 100 million)		
	2030	2040	2050
Domestic	1.48	0.74	87.26
China	1.72	4.15	6.18
U.S.	-	28.67	33.58

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STEP 4. Developing and Implementing Climate Change Response Strategies

HD Hyundai Electric has identified climate change-related risks and opportunities and formulated a climate change response strategy based on the results of scenario analysis. The primary response initiatives include: 1) calculating and reducing greenhouse gas emissions, 2) developing low-carbon products and services, and 3) managing climate risks and opportunities. We have designated responsible departments to implement these initiatives. Additionally, we have developed and are executing plans in phases, categorized into short-term, mid-term, and long-term.

Response Tasks	Key Risks and Opportunities	Short-term (~2025)	Mid-term (2026~2032)	Long-term (2033~)	Responsible Department
Calculation of Greenhouse Gas Emissions	<ul style="list-style-type: none"> Climate Change Policies 	Expand and identify improvement areas for emission calculation scope	Manage company-wide emission data in accordance with IFRS disclosure standards (including detailed product lines of overseas business units) and computerization	Identify calculation logic for additional greenhouse gas emission regulations and new products	Safety & Health & Environment Management Department (ESG Management Team, Project & Production Planning Department)
Reduction of Greenhouse Gas Emissions	<ul style="list-style-type: none"> Climate Change Policies Transition to low-carbon technology in production processes/equipment Efficient resource use 	Establish a foundation for promoting carbon neutrality roadmap (including RE100)	Operation of low-carbon vehicles (Electric Vehicles) and Decarbonization of process workflows	Continuously implement the carbon neutrality/RE100 roadmap and refine implementation plans and roadmaps based on emission-related policies and global trends (review and implement offset emission guidelines)	ESG Management Team(Safety & Health & Environment Management Department)
R&D for Low-Carbon Products and Services	<ul style="list-style-type: none"> Transition to low-carbon products or services Reputation risks and opportunities Development of low-carbon technologies/products/services 	Calculate LCA data and identify areas needing low-carbon transformation	Expand research budget for low-carbon products and services	Secure highly competitive low-carbon products by identifying trends in the industry and company's strengths	Technology Management Department, Project & Production Planning Department(ESG Management Team)

Response Tasks	Key Risks and Opportunities	Short-term (~2025)	Mid-term (2026~2032)	Long-term (2033~)	Responsible Department
Management of Climate Risks and Opportunities	<ul style="list-style-type: none"> Reputation risks and opportunities Typhoons Responding to climate change issues Efficient resource use 	Strengthen reporting systems for climate change implementation (internal communication)	Enhance evaluation methods for climate change-related risks, opportunities, and financial impacts (including internal carbon pricing)	Quantify the performance of climate change response tasks and strengthen supply chain management	ESG Management Team (Purchasing Department)

STEP 5 & 6. Monitoring Risks and Opportunities & Integrating Company-wide Risk and Opportunity Management

HD Hyundai Electric reports key progress updates to the CEO and the ESG Committee and continuously monitors areas for improvement. Additionally, identified and assessed climate change risks are reported to the CEO and the ESG Committee. The ESG Committee oversees and ensures that strategic directions, plans, and implementations to address these risks are managed from a company-wide perspective. HD Hyundai Electric defines climate change as a key risk and opportunity that significantly impacts mid- to long-term business strategies and proactively manages it to enhance corporate value.

ESG Committee (Under the Board)	<ul style="list-style-type: none"> The highest decision-making body of the company Overseeing and managing ESG issues, including climate change Annually reviewing and approving ESG strategic directions, plans, implementations, risks, and opportunities to ensure the climate change response strategy is integrated across all business areas Chaired by an Independent director, providing education on domestic and international ESG regulatory trends, peer benchmarking, and response strategies
CEO	<ul style="list-style-type: none"> Submitting agenda items to the ESG Committee Reviewing and approving major climate-related issues
Chief ESG Officer	<ul style="list-style-type: none"> Executing climate transition plans Setting corporate climate goals Managing value chain engagement on climate-related issues Reporting on climate-related issues
ESG Management Team and Related Departments	<ul style="list-style-type: none"> Regularly reviewing issues, including climate change risks and opportunities, and reporting to the Chief ESG Officer and CEO

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Board Supervision

HD Hyundai Electric oversees and manages ESG issues, including climate change, through its Board of Directors, the company's highest decision-making body. The ESG Committee, a subcommittee of the Board, annually reviews and approves the strategic directions, plans, implementations, risks, and opportunities related to ESG, ensuring that the climate change response strategy is comprehensively integrated across all business areas. Chaired by an Independent director, the ESG Committee also provides education on domestic and international ESG regulatory trends, responses from other companies, and response strategies, thus maintaining both independence and expertise. In particular, in 2023, the committee approved agenda items on carbon neutrality and the RE100 strategy, thereby strengthening HD Hyundai Electric's ESG strategy and enhancing corporate and shareholder value.

Role of Management

HD Hyundai Electric has established a cohesive climate change response system that involves management, operational staff, and experts to swiftly identify and manage climate-related risks and opportunities. The company maintains dedicated climate change teams, including the Chief ESG Officer, the ESG Management Team, and the Safety & Health & Environment Management Department. At the group level, an ESG advisory group consisting of experts in various fields is also in place. These dedicated teams regularly review issues related to climate change risks and opportunities, reporting to the CEO and the Chief ESG Officer, and submit agenda items to the ESG Committee for final decision-making. Items discussed and resolved by the Board are implemented by the responsible departments, with management overseeing the organization's climate change goals and performance. HD Hyundai Electric sets climate-related KPIs for the CEO and executives, offering incentives for achieving these goals.

Indicators and Reduction Targets

Greenhouse Gas Emissions

HD Hyundai Electric monitors its company-wide greenhouse gas emissions using the Corporate Greenhouse Gas Management System (HGMS).

Greenhouse Gas Emissions ¹	Unit	2021	2022	2023
Scope 1	tCO ₂ eq	6,205	6,915	6,907
Scope 2	tCO ₂ eq	24,345	26,252	29,036
Scope 3	tCO ₂ eq	-	-	275,755,063

1. Based on domestic business sites

Greenhouse Gas Reduction Targets

Since 2017, HD Hyundai Electric has been announcing annual greenhouse gas emission reduction targets and managing its performance on a company-wide basis. Aligned with the Nationally Determined Contributions (NDCs), HD Hyundai Electric has set medium-term goals to cut emissions by more than 11% by 2025 and more than 14% by 2030, relative to 2018 levels. In the long term, the company aims to achieve carbon neutrality by 2050.

The first phase of our greenhouse gas reduction strategy focuses on reducing Scope 2 emissions, which have a well-established implementation foundation based on the results of greenhouse gas emission assessments. The second phase aims at reducing Scope 1 emissions through the development of SF₆-free products. Greenhouse gas emissions from electricity consumption will be tackled through direct production methods, Power Purchase Agreements (PPAs), and the purchase of Renewable Energy Certificates (RECs) in overseas operations, including those in the United States and China, where renewable energy is economically viable. Scope 1 reductions will be achieved by gradually reducing the use of SF₆ through technological and product innovation, while also reviewing and addressing the regulatory and policy trends of emissions trading in various countries.



SASB

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Category	SASB Code	Metric	Unit	2023
Energy Management	RT-EE-130a.1	Total energy consumed	GJ	738,000
		Percentage of grid electricity	%	82.11
		Percentage of renewable	%	0.2343
Hazardous Waste Management	RT-EE-150a.1	Hazardous(designated) waste generated	ton	406.1
		Hazardous(designated) waste recycling rate	%	67.73
	RT-EE-150a.2	Number and total volume of hazardous material spills	number, kg	Preemptively blocked hazardous chemical through chemical hazard assessment
Product Safety	RT-EE-250a.1	Number of recalls and total units recalled	number	None
	RT-EE-250a.2	Total monetary losses from legal proceedings related to product safety	KRW	None
Product Lifecycle Management	RT-EE-410a.1	Revenue from products containing IEC 62474 declarable substances	%	Not applicable
	RT-EE-410a.2	Revenue from eligible products meeting ENERGY STAR® criteria	%	Not applicable
	RT-EE-410a.3	Revenue from renewable energy-related products and energy-efficient products	%	5.50
Materials Sourcing	RT-EE-440a.1	Disclosure of risk management strategies and approaches related to the use of critical materials	N/A	page 73
Ethical Management	RT-EE-510a.1	Description of policies and practices for preventing corruption and bribery	N/A	page 87~90
		Description of policies and practices for anti-competitive behavior	N/A	page 87~90
	RT-EE-510a.2	Total monetary losses from legal proceedings related to corruption and bribery	KRW	0
Activity Metrics	RT-EE-000a.A	Number of units produced by product category	-	Power transformers: 338 banks High voltage circuit breakers: 610 Bays
	RT-EE-000a.B	Number of employees	Persons	2,119

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UN SDGs

The UN Sustainable Development Goals (UN SDGs) are a set of shared objectives that the international community aims to achieve, covering a wide range of areas including poverty, education, economic development, and the environment. HD Hyundai Electric is committed to aligning its sustainability management practices with these goals to contribute to their realization.

Key SDGs Goals	HD Hyundai Electric's Key Activities and Achievements
Goal 1. End poverty in all its forms everywhere	<ul style="list-style-type: none"> Supporting training programs for creating biological specimens for individuals with severe disabilities Providing heating oil and living facilities for vulnerable groups Purchasing goods and services from standard workplaces for disabled individuals
Goal 2. End hunger, achieve food security, improve nutrition, and promote sustainable agriculture	<ul style="list-style-type: none"> Providing rice and meal support to welfare centers Providing food supplies to children suffering from hunger, as well as low-income, multicultural, and refugee families
Goal 3. Ensure healthy lives and promote well-being for all at all ages	<ul style="list-style-type: none"> Supporting blood supply through group blood donations from employees
Goal 4. Ensure inclusive and equitable quality education for all	<ul style="list-style-type: none"> Providing non-discriminatory education to secure job expertise Supporting career planning for young adults preparing for independence
Goal 5. Achieve gender equality and empower all women and girls	<ul style="list-style-type: none"> Supporting employees during childbirth and childcare periods Establishing anti-discrimination and anti-harassment policies and operating grievance channels
Goal 6. Ensure availability and sustainable management of water and sanitation for all	<ul style="list-style-type: none"> Identifying water risks and monitoring wastewater Managing water resource indicators
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	<ul style="list-style-type: none"> Enhancing grid stability and efficiency through business activities
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	<ul style="list-style-type: none"> Managing non-regular workers and vulnerable groups Providing financial and educational support to small and medium-sized enterprises (SMEs) Prohibiting child labor and forced labor Ensuring labor rights

Key SDGs Goals	HD Hyundai Electric's Key Activities and Achievements
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation	<ul style="list-style-type: none"> Strengthening technological development capabilities Improving outdated infrastructure and facilities
Goal 10. Reduce inequality within and among countries	<ul style="list-style-type: none"> Strengthening policies such as anti-discrimination and codes of ethical conduct
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	<ul style="list-style-type: none"> Installing LED lighting in school zones
Goal 12. Ensure sustainable consumption and production patterns	<ul style="list-style-type: none"> Using insulating oil with low pollutant emissions Managing waste recycling rates
Goal 13. Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none"> Establishing a roadmap for carbon neutrality by 2050 and RE100 by 2040 Calculating Scope 3 emissions
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources	<ul style="list-style-type: none"> Conducting beach clean-up activities in Ulsan
Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, halt and reverse land degradation, and halt biodiversity loss	<ul style="list-style-type: none"> Assessing biodiversity in areas near business sites Removing invasive species
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all	<ul style="list-style-type: none"> Prohibiting all forms of unethical behavior
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	<ul style="list-style-type: none"> Supporting global initiatives and strengthening disclosures Increasing public-private partnerships

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UNGC

The United Nations Global Compact (UNGC) is a global corporate citizenship initiative that presents ten principles across Four Categories, including human rights, labor, environment, and anti-corruption. HD Hyundai Electric joined the UNGC in September 2021 and has been fulfilling its social responsibilities by adhering to these principles in its business operations.

Category	Principle	HD Hyundai Electric's Key Activities and Achievements
Human Rights	1. Businesses should support and respect the protection of internationally proclaimed human rights	<ul style="list-style-type: none"> • Established Human Rights and Labor Policies and Implementation Rules • Operated a Human Rights Grievance Process • Conducted Human Rights Impact Assessments • Provided Human Rights Education • Operated a Human Rights Management Committee
	2. make sure that they are not complicit in human rights abuses	
Labor	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	<ul style="list-style-type: none"> • Complied with domestic and international labor laws • Guaranteed union activities and conducted collective bargaining • Operated a Labor-Management Council • Implemented anti-discrimination and anti-harassment systems • Certified as a Family-Friendly Company
	4. the elimination of all forms of forced and compulsory labour	
	5. the effective abolition of child labour	
	6. the elimination of discrimination in respect of employment and occupation	
Environment	7. Businesses should support a precautionary approach to environmental challenges	<ul style="list-style-type: none"> • Established a roadmap for carbon neutrality and RE100 • Disclosed environmental goals • Certified green technologies and products • Disclosed environmental information • Obtained and maintained ISO 14001 Environmental Management System certification
	8. undertake initiatives to promote greater environmental responsibility	
	9. encourage the development and diffusion of environmentally friendly technologies	
Anti-Corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery	<ul style="list-style-type: none"> • Established an Ethics Charter and Code of Ethics • Operated a Fair Trade Compliance Program • Conducted ethics and compliance training • Operated a whistleblowing process



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GRI

Statement of use	Used as the reporting standard for HD Hyundai Electric's 2023 Integrated Report
GRI 1 used	GRI 1 : Foundation 2021
Applicable GRI Sector Standard(s)	machinery and equipment (Unannounced)

GRI Index Universal Standard

Topic	No.	Disclosure	Reporting page
GRI 2 : General Disclosures 2021			
Organization and reporting practices	2-1	Organizational details	05
	2-2	Entities included in the organization's sustainability reporting	01
	2-3	Reporting period, frequency and contact point	01
	2-4	Restatements of information	Annotate as needed
	2-5	External assurance	106
Activities and workers	2-6	Activities, value chain and other business relationships	05
	2-7	Employees	57
	2-8	Workers who are not employees	57
Governance	2-9	Governance structure and composition	81
	2-10	Nomination and selection of the highest governance body	82
	2-11	Chair of the highest governance body	81
	2-12	Role of the highest governance body in overseeing the management of impacts	83
	2-13	Delegation of responsibility for managing impacts	83
	2-14	Role of the highest governance body in sustainability reporting	84
	2-15	Conflicts of interest	81

Topic	No.	Disclosure	Reporting page
Governance	2-16	Communication of critical concerns	84
	2-17	Collective knowledge of the highest governance body	82, 84
	2-18	Evaluation of the performance of the highest governance body	84
	2-19	Remuneration policies	84
	2-20	Process to determine remuneration	84
	2-21	Annual total compensation ratio	58
Strategy, policy, and practices	2-22	Statement on sustainable development strategy	04
	2-23	Policy commitments	15
	2-24	Embedding policy commitments	15
	2-25	Processes to remediate negative impacts	15
	2-26	Mechanisms for seeking advice and raising concerns	69, 89
	2-27	Compliance with laws and regulations	87~90
	2-28	Membership associations	111
	Stakeholder engagement	2-29	Approach to stakeholder engagement
2-30		Collective bargaining agreements	57
GRI 3: Material Topics 2021			
Disclosures on material topics	3-1	Process to determine material topics	17
	3-2	List of material topics	18

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GRI

Topic Standards

Topic	No.	Disclosure	Reporting page	Reasons for undisclosed
Enhancing quality control	3-3	Management of material topics	19~21	
Self-Management Disclosure	-	-	19~21	
GRI 201: Economic Performance	201-1	Direct economic value generated and distributed	93	
Developing ecofriendly products	3-3	Management of material topics	26~28	
GRI 302: Energy	302-5	Reductions in energy requirements of products and services	26~28	
Responding to climate crises	3-3	Management of material topics	38~39	
GRI 201: Economic Performance	201-2	Financial implications and other risks and opportunities due to climate change	96~97	
GRI 302: Energy	302-1	Energy consumption within the organization	40	
	302-2	Energy consumption outside of the organization	40	
	302-3	Energy intensity	40	
	302-4	Reduction of energy consumption	40	
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	40	
	305-2	Energy indirect (Scope 2) GHG emissions	40	
	305-3	Other indirect (Scope 3) GHG emissions	40	
	305-4	GHG emissions intensity	40	
	305-5	Reduction of GHG emissions	40	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	46	
Enhancing occupational safety and health	3-3	Management of material topics	60~66	

Topic	No.	Disclosure	Reporting page	Reasons for undisclosed
GRI 403: Occupational Health and Safety	403-1	Occupational health and safety management system	60	
	403-2	Hazard identification, risk assessment, and incident investigation	62	
	403-3	Occupational health services	65~66	
	403-4	Worker participation, consultation, and communication on occupational health and safety	61	
	403-5	Worker training on occupational health and safety	63	
	403-6	Promotion of worker health	65~66	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	64~65	
	403-8	Workers covered by an occupational health and safety management system	67	
	403-9	Work-related injuries	66	
	403-10	Work-related ill health	66	
Strengthening supply chain competitiveness and shared growth	3-3	Management of material topics	72~75	
GRI 308: Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	74	
	308-2	Negative environmental impacts in the supply chain and actions taken	74	
GRI 413: Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	76~78	
	413-2	Operations with significant actual and potential negative impacts on local communities	76~78	
GRI 414: Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	74	
	414-2	Negative social impacts in the supply chain and actions taken	74	

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Topic	No.	Disclosure	Reporting page	Reasons for undisclosed
Strengthening business ethical management	3-3	Management of material topics	87~90	
GRI 205: Anti-Corruption	205-1	Operations assessed for risks related to corruption	87	
	205-2	Communication and training about anti-corruption policies and procedures	89	
	205-3	Confirmed incidents of corruption and actions taken	89	
GRI 206: Anti-Competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	90	
Waste management	3-3	Management of material topics	44~45	
GRI 306: Waste	306-1	Waste generation and significant waste-related impacts	44	
	306-2	Management of significant waste-related impacts	44	
	306-3	Waste generated	45	
	306-4	Waste diverted from disposal	45	
	306-5	Waste directed to disposal	45	
Human resources management	3-3	Management of material topics	53~56	
GRI 201: Economic Performance	201-3	Defined benefit plan obligations and other retirement plans	56	
GRI 401: Employment	401-1	New employee hires and employee turnover	58	
	401-3	Parental leave	59	
GRI 402: Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	54, 57	

Topic	No.	Disclosure	Reporting page	Reasons for undisclosed
GRI 404: Training and Education	404-1	Average hours of training per year per employee	59	
	404-2	Programs for upgrading employee skills and transition assistance programs	55~56	
	404-3	Percentage of employees receiving regular performance and career development reviews	59	
Strengthening human rights management	3-3	Management of material topics	68~70	
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	57	
	405-2	Ratio of basic salary and remuneration of women to men	58	
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	71	
GRI 408: Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	N/A	
GRI 409: Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	N/A	
Water management	3-3	Management of material topics	41~42	
GRI 303: Water and Wastewater	303-1	Interactions with water as a shared resource	41	
	303-2	Management of water discharge-related impacts	42	
	303-3	Water withdrawal	42	
	303-4	Water discharge	42	
	303-5	Water consumption	42	
Biodiversity	3-3	Management of material topics	47~52	
GRI 304 : Biodiversity	304-2	Significant impacts of activities, products and services on biodiversity	47~50	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	48	

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To the Management of HD Hyundai Electric

We have undertaken a limited assurance engagement in accordance with ISAE 3000 established by IAASB (International Auditing and Assurance Standards Board) in respect of the selected sustainability information (the 'Identified Sustainability Information') in the HD Hyundai Electric's Sustainability Report for the year ended 31 December 2023 ('the Sustainability Report') listed below. Also, we performed assurance engagement Type2, High, and Moderate Combination levels of AA1000AS v3.

Identified Sustainability Information

The Identified Sustainability Information included in the HD Hyundai Electric's Sustainability Report for the year ended 31 December 2023 is summarized below:

- GRI (Global Reporting Initiative) Standards 2021 Index on pages 103 - 105
- TCFD (Task Force on Climate-Related Financial Disclosures) Index on page 94 - 99
- SASB (Sustainability Accounting Standards Board) Index on pages 100

Our assurance was with respect to the year ended 31 December 2023 and the first half of 2024 and before partially 2023 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the Sustainability Report and, therefore, do not express any conclusion thereon.

- Based on the data provided by HD Hyundai Electric, the Practitioner has confirmed that the contents related to the Universal Standards and Topic Standards are true based on the data presented

- Universal Standards/GRI 1, GRI 2(2-1~2-30), GRI 3 (1~3)
- Topic Standards/Economy:201(1,2,3), 205(1,2,3), 206-1., Environment: 302(1,2,3,4,5), 302(1,2,3,4,5), 303(1,2,3,4,5), 304(2,4), 305(1,2,3,4,5,7), 306(1,2,3,4,5), 308(1,2)., Social: 401(1,3), 402-1, 403(1,2,3,4,5,6, 7,8,9,10), 404(1,2,3), 405(1,2) 406-1, 408-1, 409-1, 413(1,2), 414(1,2)

Criteria

The criteria used by HD Hyundai Electric to prepare the Identified Sustainability Information on 'GRI Standards 2021' and 'Sustainability Accounting Standard Board (SASB)' and 'TCFD (Force on Climate-related Financial Disclosures)' and 'UNGC (UN Global Compact) 10 principles' (the 'Criteria') UN SDGs (UN Sustainable Development Goals)

HD Hyundai Electric's Responsibility for the Identified Sustainability Information

HD Hyundai Electric is responsible for the preparation of the Identified Sustainability Information in accordance with the Criteria. This responsibility includes the design, implementation, and maintenance of internal control relevant to the preparation of Identified Sustainability Information that is free from material misstatement, whether due to fraud or error.

Inherent Limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability.

Our Independence and Quality Control

We have complied with the ethical requirements of the Republic of Korea, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

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Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Identified Sustainability Information based on the procedures we have performed and the evidence we have obtained. We performed our limited assurance engagement in accordance with ISAE 3000(International Standard on Assurance Engagements 3000 (Revised)), issued by the IAASB (International Auditing and Assurance Standards Board). These standards require that we plan and perform this engagement to obtain limited assurance about whether the Identified Sustainability Information is free from material misstatement.

A limited assurance engagement involves assessing the suitability in the circumstances of HD Hyundai Electric use of the Criteria as the basis for the preparation of the Identified Sustainability Information, assessing the risks of material misstatement of the Identified Sustainability Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Identified Sustainability Information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. The procedures we performed were based on our professional judgment and included questions, observations of processes performed, document reviews, analytical procedures, suitability assessments of quantification methods and reporting policies, comparisons between basic information, and lines.

Given the circumstances of the engagement, in performing the procedures listed above we:

- Interview with the personnel responsible for internal reporting and data collection regarding HD Hyundai Electric's Identified Sustainability Information to understand their approaches to managing material issues
- Understand the systems and processes in place for managing and reporting the Identified Sustainability Information of HD Hyundai Electric. And Review documents related to sustainability information policies and standards, materiality assessments, stakeholder engagement activities, etc

- Assessment the adequacy of the design and operation of processes and control activities for the measurement of GHG emissions and sustainability information management and reporting during the reporting period
- Perform inquiries and analytical reviews on the Identified Sustainability Information

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether HD Hyundai Electric's identified Sustainability Information has been prepared, in all material respects, in accordance with the Criteria.

To increase the interoperability of assurance engagement, we simultaneously performed authentication in the form of a combination of AA1000AS v3, High and Moderate levels, one of the international assurance standards. We evaluated compliance with the principles of inclusivity, materiality, responsiveness, and impact presented by AA1000AP (2018) and at the same time evaluated the reliability and quality of specified sustainability information as Type 2. Our opinions on the principles are as follows.

Inclusivity: HD Hyundai Electric stipulates stakeholder rights and emphasizes responsibility for stakeholders in its Corporate Governance Charter. In addition, it fully understands the organization's responsibilities related to stakeholder participation and defines customers, shareholders and investors, executives, partners, governments, communities, and media that exchange various values and influences at the ESG level as major stakeholder groups and provides communication channels for each stakeholder to manage and respond to ESG issues and communicate with each stakeholder's characteristics. Through this, we confirmed that we are working to reflect the views and expectations of stakeholders in the reporting organization's strategies.

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Materiality: HD Hyundai Electric integrated the Double Materiality Assessment process with the ERM (Corporate Risk Manager) process to construct a materiality pool and conducted a survey to evaluate the identified environmental, social impact and financial impact. Internal and external stakeholders, external investors, and internal financial experts participated to analyze media research, review Peer Group at home and abroad, and analyze major global initiatives related to sustainability (SASB, TCFD). The reporting organization sets thresholds to determine the final five reporting topics, have been approved by senior management and the board of directors, and disclose them in accordance with Topic Standards.

Responsiveness : HD Hyundai Electric sets important sustainability topics, declares business strategies related to strengthening quality control (self-management indicators), developing eco-friendly products, responding to climate change, strengthening industrial safety and health, strengthening supply chain competitiveness, and preparing key performance and management compensation indicators (KPIs) to make the materiality topic a strategic concern for the company. Responding to the relevant impact in a timely manner from the perspective of the Materiality of sustainability and are disclosing it.

Impact : HD Hyundai Electric identifies and monitors how organizational activities affect the ecosystem and society as a whole, and explains and discloses how organizations' activities, performance, and others affect themselves in the economic, environmental, and social sectors.

As above, we found no inappropriate parts regarding the compliance with the principles laid out by AA1000AP (2018).

Reliability and Quality of Specified Sustainability Performance Information

In addition to the assessment of whether the HD Hyundai Electric's report follows the principles of the AA1000 AP (2018), we conducted Type 2 certification on the HD Hyundai Electric's GHG emissions, energy use, waste generation, and water resource use as specified sustainability performance information. To fully certify the completeness and accuracy of the information, we were interviewed by the person in charge of overall responsibility for the data processing process, system, and control devices for the certification of the information and data selected based on sampling, and we checked the management practices, process certification, and


evidence collection process, evidence documents and records from data sources to collection, and evaluated their reliability and quality. When judged by the certification results, no intentional errors or material misstatement were found in the sustainability performance information described in the report.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that HD Hyundai Electric's Identified Sustainability Information the year ended 31 December 2023 and the first half of 2024 is not prepared, in all material respects, in accordance with the Criteria. And, we have not found any inadequacies in respect of the principles presented by AA1000AP (2018)

Restricted Use

This Report is prepared solely for the management of HD Hyundai Electric to assist in obtaining understanding of HD Hyundai Electric's sustainable management performance and activities. Accordingly, we accept no liability or responsibility to any third party, other than HD Hyundai Electric and its management, who gains access to this report.

WITH Accounting Corporation
 Seoul, Korea
 25 June 2024 YoungSuk Lee, Chief Executive Officer 

This assurance report is valid as of the assurance report date (25 June 2024). This may result in events or situations that may have a significant impact on the company's report between the date of the assurance report and the time it is viewed, which may result in modification of the assurance report.



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Greenhouse Gas and Energy Assurance Statement

Introduction

DNV Business Assurance Korea Ltd. (“DNV”) was commissioned by HD HYUNCAI ELECTRIC (“Company”) to verify the Company’s Greenhouse Gas Inventory Report for the calendar year 2023 (“the report”) based upon a reasonable level of assurance. The Company is responsible for the preparation of the GHG emissions data on the basis set out within the guidelines on the operation of GHG emission trading scheme (“ETS” (Notification No. 2023-221 of Ministry of Environment)). Our responsibility in performing this work is to the management of the Company only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this verification opinion.

Objectives and Scope of verification

The GHG emissions data covered by our examination is set comprise Direct emissions (Scope 1 emissions) and Energy indirect emissions (Scope 2 emissions) from the Company’s boundary of the report;

- Organizational boundary for reporting: Domestic business sites of the Company

Verification Approach

The verification has been performed in accordance with the verification principles and tasks outlined in the guidelines on the operation of GHG ETS (Notification No.2023-221, Korean Ministry of Environment) and the verification guideline for GHG ETS (Notification No. 2021-112, Korean Ministry of Environment). We planned and performed our work to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a reasonable verification opinion concerning the completeness of the emission inventory. As part of the verification process;

- We have reviewed the GHG emissions and energy consumption report for the calendar year 2023
- We have reviewed and verified the process to generate, aggregate and report the emissions data

Conclusions

We confirmed that the company’s GHG emissions have been appropriately calculated and reported in accordance with the reporting standards above.

Domestic sites	GHG Emissions (tCO ₂ eq)			Energy Consumption (TJ)
	Direct Emissions (Scope 1)	Indirect Emissions (Scope 2)	Total Emissions	
Yr 2023	6,907	29,036	35,941	738

* Total emissions might be different from the sum of direct and indirect emissions by applying the rule that emissions should be summed after truncating decimal places at the business site level.

June 2024



Jang-Sub Lee
 Country Representative
 DNV Business Assurance Korea Ltd.

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Greenhouse Gas and Energy Assurance Statement

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Scope 3 Greenhouse Gas Emissions (hereinafter 'GHG emissions') HD HYUNDAI ELECTRIC CO., LTD. (hereinafter 'Company') for 2023.

Verification Scope

The verification Scope covered the emission categories selected by the company and the emissions between January 1st, 2023 to December 31st, 2023.

Verification Criteria

The following criteria and coefficients used by the company were applied.

- Criteria
 - WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard
 - ISO14064-1:2018
 - GHG Protocol Corporate Standard
 - Rule for emission reporting and certification of greenhouse gas emission trading Scheme 1)
 - ISO 14064-3:2019
 - 1) Notification No. 2023-221 of Ministry of Environment
 -
- Coefficient
 - Environmental Product Declaration evaluation coefficient (2021)
 - GREET 2 2022

Level of Assurance

The verification was performed in accordance with the procedures specified in ISO14064-3 and the assurance level of the verification was performed to satisfy the limited assurance level.

Verification Limitation

GHG emissions verification involves inherent limitations that may arise depending on the organization's data characteristics, calculations and estimates, sampling method, and limited assurance level. Additionally, this verification does not include responsibility for the accuracy of the original data provided by the company.

Verification Opinions

Through the verification process according to the 'ISO14064-3:2006' KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

- 1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
- 2) For GHG emissions, no material errors or omissions were found, except for emissions information not considered within the selected category range.
- 3) The criteria and process established or estimated/ assumed by the company to calculate GHG emissions were transparently reflected in the internal calculation process.

Company Scope 3 Emissions verification Results

Unit : tCO₂eq

Category	Scope 3 Emissions
1 Purchased goods & services	306,212
2 Capital goods	9,721
3 Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	2,915
4 Upstream Transportation and Distribution	37,526
5 Waste Generated in Operations	2,034
6 Business Travel	1,963
7 Employee Commuting	2,632
8 Upstream Leased Assets	204
9 Downstream Transportation and Distribution	3,629
11 Use of Sold Products	275,260,088
12 End of Life Treatment of Sold Products	128,140
Total	275,755,063

June 13th, 2024
 CEO Ji-Young Song
 Korean Foundation for Quality



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Memberships and Information Disclosure Status

Status of Membership

Korea Intellectual Property Association (KINPA)	International Council on Large Electric Systems (CIGRE) Korea Committee
Korea Electrical Contractors Association (KECA)	International Conference on Electricity Distribution (CIRED) Korea Committee
Korea Fire Safety Association (KFSA)	UN Global Compact Korea
Korea Electric Association (KEA)	Korea International Trade Association (KITA)
Korea Electrical Manufacturers' Association (KOEMA)	Korean Society for Quality Management (KSQM)
Korea Smart Grid Association (KSGA)	Korean Standards Association (KSA)
Korea Wind Energy Industry Association (KWEIA)	Ulsan Chamber of Commerce & Industry
Korea Industrial Technology Association (KOITA)	Seoul Chamber of Commerce & Industry
Korea Employers Federation	Seongnam Chamber of Commerce & Industry

Policy-Related Expenditure Status

	Unit	2020	2021	2022	2023
Political Contributions	KRW million	0	0	0	0
Related Organizations and Associations	KRW million	101	273	279	357

Top 5 Expenditures on Related Organizations and Associations

	Unit	2023
Korea Electrical Manufacturers' Association (KOEMA)	KRW million	96
Ulsan Chamber of Commerce & Industry	KRW million	49
Korea Electric Association (KEA)	KRW million	35
Korea Employers Federation (KEF)	KRW million	24
Korea Smart Grid Association (KSGA)	KRW million	17

Information Disclosure

Disclosure Channels for Management Information	URL	Key Details
HD Hyundai Electric Website	https://www.hd-hyundaelectric.com/elect/ko/index.jsp	Company introduction, IR, products & dealership, online customer service
HD Hyundai Electric LinkedIn	https://kr.linkedin.com/company/hd-hyundaelectric	Introduces HD Hyundai Electric's products and major news
HD Hyundai Electric Instagram	https://www.instagram.com/hd.hyundaelectric/	Introduces HD Hyundai Electric's products and major news
HD Hyundai Electric YouTube	https://www.youtube.com/@HDHYUNDAIELECTRIC	Introduces HD Hyundai Electric's products and major news
HD Hyundai Business Ethics Website	http://ethics.hd.com/Html/main.html	Group's ethical management direction, ethics regulations, online reporting and consultation
Financial Supervisory Service DART	https://dart.fss.or.kr/	Various mandatory and voluntary disclosures as a listed company
Corporate Presentation	https://www.hd-hyundaelectric.com/elect/ko/IR/disclosureList.jsp	Regular announcement of business performance and outlook

