



2023 Consolidated ESG Report

The unmanned excavator first unveiled at CES 2024

About This Report

About This Report

HD Hyundai XiteSolution is an intermediate holding company in charge of the Construction Equipment Sector within the HD Hyundai Group and is publishing its first consolidated ESG report to share with stakeholders the core ESG management issues of HD Hyundai Construction Equipment Sector (HD Hyundai XiteSolution, HD Hyundai Construction Equipment, HD Hyundai Infracore). This report primarily focuses on the essential issues identified through the double materiality assessment of the HD Hyundai Construction Equipment Sector. It incorporates ESG governance, double materiality assessment, strategies and performance by ESG issue, and ESG data.

Reporting Principle

This report has been prepared in consideration of Global Reporting Initiative (GRI) Standards of 2021 for sustainable management reporting. The financial information contained in the report has been prepared in accordance with Korean International Financial Reporting Standards (K-IFRS), and reporting currency is the South Korean Won (KRW).

Reporting Period

This report presents sustainable management activities and performance that occurred during the 2023 calendar year (from January 1 to December 31, 2023). However, depending on the timeliness and materiality, some information mentioned in the report include developments recorded up to the first half of 2024.

Reporting Scope

This report mainly covers the activities and achievements of the major worksites of HD Hyundai Construction Equipment Sector in South Korea. Some qualitative and quantitative data, however, were taken from the sector's global worksites. Such global quantitative data reported herein are separately indicated in the 'ESG Databook'.

Contact Us

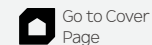
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Cover Story

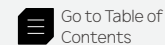


This unmanned excavator was first unveiled at CES 2024 and won the Best of the Best Award from the 2024 Red Dot Design Award: Design Concept

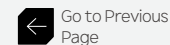
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Part I

Introduction

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CEO Message

We sincerely thank you for your unwavering support and interest in HD Hyundai Construction Equipment Sector.

HD Hyundai Construction Equipment Sector is advancing as a global top-tier company based on sustainable management for future generations. With the intermediate holding company HD Hyundai XiteSolution at the core along with its subsidiaries HD Hyundai Construction Equipment and HD Hyundai Infracore, we utilize the synergy among these three companies to preemptively respond to external regulations and further monitor global ESG trends and major issues.

We are publishing the "HD Hyundai XiteSolution Consolidated ESG Report" for the first time this year to systematize our ESG management and formulate practical ESG implementation strategies. We will convey the ESG management activities, goals, and plans of the HD Hyundai Construction Equipment Sector more transparently and accurately through this report, which identifies core ESG issues based on the double materiality assessment and common data standards of the three companies.

This year, responding to stronger environmental regulations and the climate change crisis, HD Hyundai Construction Equipment Sector has set up a new carbon emission strategy by upgrading its Carbon Neutrality Implementation Roadmap for Worksites and Product Use Phase Emissions Reduction Roadmap.



Bringing together the capabilities of the three companies, HD Hyundai XiteSolution Technology Center increased R&D efficiencies and accelerated the development of eco-friendly technologies and services, including equipment electrification and fuel efficiency improvement. We also pursue various support measures to grow with our supplier and constantly communicate with employees to share ESG strategies and take actions on our values. To establish a transparent and independent governance structure, HD Hyundai Construction Equipment Sector will listen to voices from inside and outside, including input from the Compensation Committee and the Outside Director Nominating Committee, and strive to achieve transparent management and enhance shareholder value.

We kindly ask for continued interest and encouragement from our shareholders, customers, and stakeholders.

Thank you.

CEO Cho Young-cheul

Lee Dong-wook

Introduction to HD Hyundai Construction Equipment Sector

HD Hyundai XiteSolution

HD Hyundai XiteSolution is an intermediate holding company of HD Hyundai Construction Equipment Sector, with HD Hyundai Construction Equipment and HD Hyundai Infracore as subsidiaries. It was established in February 2021 and changed its name from Hyundai Genuine to HD Hyundai XiteSolution in March 2023. HD Hyundai XiteSolution is leading the development of future technologies in the HD Hyundai Construction Equipment Sector, such as electrification, automation, and smart construction solution. It oversees sustainable purchasing and sales, creating a synergy effect in the HD Hyundai Construction Equipment Sector. The company manufactures and sells industrial vehicles, including forklifts and skid loaders, and construction equipment components such as MCVs and transmissions.

Company Overview

Company name	HD Hyundai XiteSolution
Year of establishment	2021
CEO	Cho Young-cheul, Lee Dong-wook
Headquarters	477 Bundang Suseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
Main business	Manufacturing of machinery and equipment
Major products	Industrial vehicles, etc.
Production capacity	Annual production of approximately 24,000 units of industrial vehicles and production of components
Number of employees	1,139
Web page	https://www.hd-xitesolution.com/?locale=en

Integrated R&D in Future Technology

HD Hyundai XiteSolution is leading the development of future technology for HD Hyundai Construction Equipment Sector, including electrification, automation and development of smart construction solution.



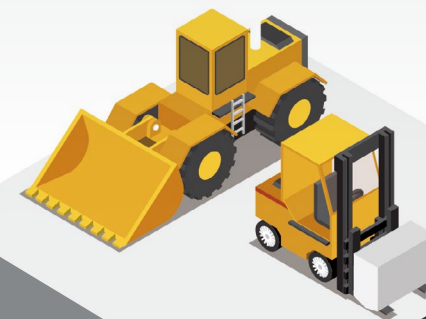
Insourcing of Core Components and Integrated Procurement

HD Hyundai XiteSolution plays a pivotal role in producing core components for various construction equipment and industrial vehicles. It generates synergies by integrating the procurement of key components to increase the operational efficiency of HD Hyundai Construction Equipment Sector.



Production and Sales of Industrial Vehicles

HD Hyundai XiteSolution engages in the production and sales of industrial vehicles such as forklifts and skid loaders.



Introduction to HD Hyundai Construction Equipment Sector

HD Hyundai Construction Equipment

Building a Comfortable Tomorrow

"We are the foundation of a more comfortable tomorrow for everyone."

HD Hyundai Construction Equipment is a comprehensive construction equipment company that started as the heavy machinery division of Hyundai Heavy Industries in 1985. It has produced various construction equipment such as excavators, wheel loaders, backhoe loaders, and skid loaders. On April 1, 2017, it was established as a spin-off from Hyundai Heavy Industries Co., Ltd. The company aims to develop the world's best construction equipment and is upgrading models such as excavators and wheel loaders by improving operator-oriented convenience. It is further committed to developing future eco-friendly energy solutions such as electric and hydrogen excavators.

Company Overview

Company name	HD Hyundai Construction Equipment	Major products	Excavators, loaders, special equipment, etc.
Year of establishment	1985	Production capacity	Annual production of approximately 40,000 units of construction equipment
CEO	Choi Cheol-gon	Number of employees	3,940
Headquarters	477 Bundang Suseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea	Web page	www.hd-hyundaice.com
Main business	Manufacturing of construction and mining machinery and equipment	2023 Integrated Report	Go to HD Hyundai Construction Equipment 2023 Integrated Report

Source: HD Hyundai Construction Equipment 2023 Integrated Report

HD Hyundai Infracore

Powered by Innovation

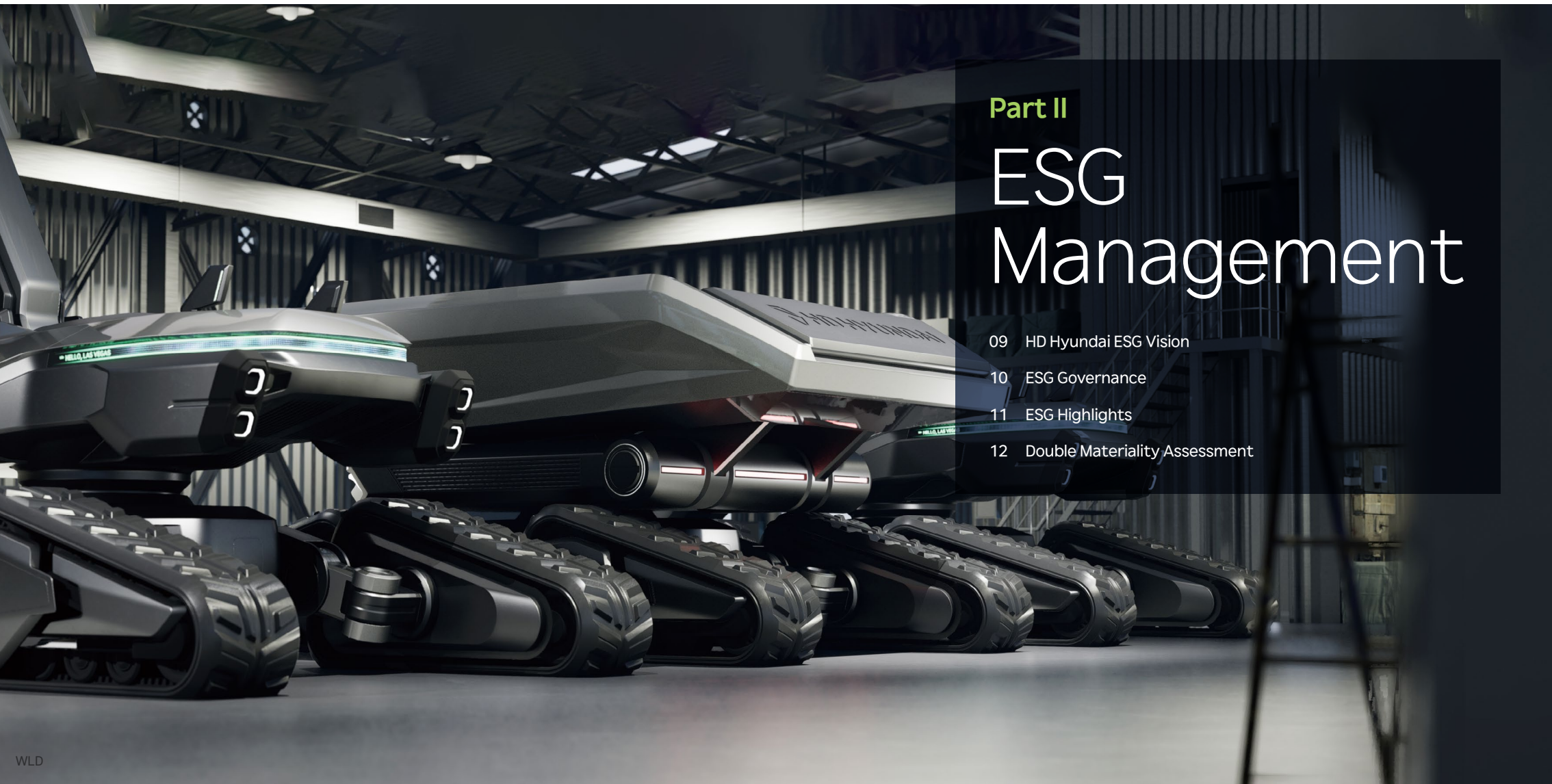
"We create infinite business opportunities based on ceaseless innovation."

HD Hyundai Infracore, established in 1937, has built a dominant position in various business fields such as construction equipment, engines, various attachments, and utility equipment through continuous growth, becoming the top machinery company in South Korea. In 2021, the company was incorporated into HD Hyundai Construction Equipment Sector and, in 2023, renamed HD Hyundai Infracore. The company's construction machinery business has a product line-up that ranges from excavators and wheel loaders to articulated dump trucks, and it has established production and sales bases as well as distribution network across the globe. In the engine business, HD Hyundai Infracore provides a total solution, offering a full line-up of high-quality and high specification engines that meet various environmental regulations.

Company Overview

Company name	HD Hyundai Infracore	Major products	Excavators, wheel loaders, engines, etc.
Year of establishment	1937	Production capacity	Annual production of approximately 30,000 units of construction equipment and 150,000 units of engines
CEO	Cho Young-cheul, Oh Seung-hyun	Number of employees	4,606
Headquarters	489 Injung-ro, Dong-gu, Incheon, Republic of Korea	Web page	www.hd-infracore.com
Main business	Production and sales of construction equipment and engines	2023 Integrated Report	Go to HD Hyundai Infracore 2023 Integrated Report Link

Source: HD Hyundai Infracore 2023 Integrated Report



Part II

ESG Management

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HD Hyundai ESG Vision

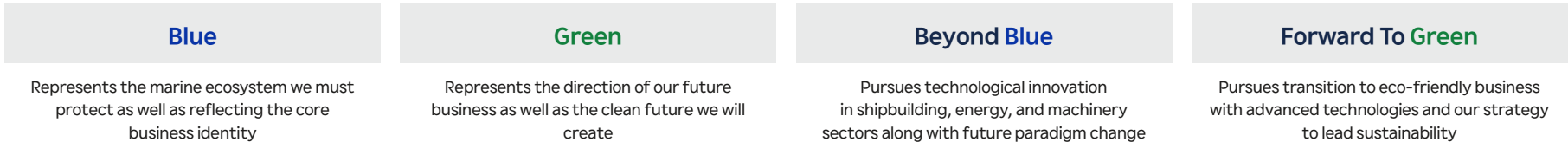
HD Hyundai Construction Equipment Sector establishes and implements detailed tasks to achieve the ESG Vision and strategy pursued by HD Hyundai Group.

ESG Vision



ESG Slogan

Beyond Blue Forward to Green



ESG Strategy



ESG Governance

Role of the Board of Directors

HD Hyundai Construction Equipment and HD Hyundai Infracore, which are listed company in HD Hyundai Construction Equipment Sector, operate an ESG Committee under the Board of Directors to establish a sustainable management system. The ESG Committee deliberates and makes decisions on key ESG strategies such as environment and safety, corporate social responsibility, customer and shareholder value, and governance, and manages various ESG risks and opportunities. The ESG Committee meetings are held once a year in principle and may be held more often as needed.

Role of the Executive

HD Hyundai Construction Equipment Sector operates an ESG Management Committee with the CEO as the chair and key executives as members. The Committee reviews and monitors key ESG strategies and makes major decisions through regular meetings held at least three times a year. "HD Hyundai XiteSolution's ESG Management Committee reviews its in-house ESG strategies and progress. Additionally, as an intermediate holding company, it monitors the major initiatives and ESG KPI performance of the subsidiaries' ESG Management Committees and oversees the ESG management of the subsidiaries." HD Hyundai XiteSolution's ESG Management Committee met three times in 2023 and discussed initiatives such as the development of eco-friendly products, reduction of energy usage and carbon emissions at worksites, advancement of human rights impact assessments, preventive management of safety incidents and environmental pollutant emissions, and supply chain ESG management.

Role of the ESG Team

The ESG team of HD Hyundai Construction Equipment Sector establishes and manages detailed tasks for ESG management and communicates with stakeholders. Relevant working groups such as EHS, HR, purchasing, accounting, and finance carry out specific ESG tasks.

HD Hyundai Group	
ESG Committee	CEO and three outside directors
ESG Council	Group Chief ESG Officer, Chief ESG officers of each affiliate
ESG Working Council	ESG Team of each affiliate
HD Hyundai Construction Equipment Sector	
Board of Directors	ESG Committee (HD Hyundai Construction Equipment, HD Hyundai Infracore)
	<p>Composition CEO and outside directors</p> <p>Frequency Once a year (additional meetings held as needed)</p> <p>Major roles</p> <ul style="list-style-type: none"> • Deliberates and makes decisions on ESG strategies and roadmaps • Manages ESG risks and opportunities
	ESG Management Committee
Management Council (C-Level)	<p>Composition CEO, heads of key departments and divisions</p> <p>Frequency At least three times a year</p> <p>Major roles</p> <ul style="list-style-type: none"> • Selects ESG strategic initiatives • Discusses ESG issues • Monitors the implementation of ESG strategic initiatives
	ESG Working Council
ESG Team	<p>Composition ESG Team of HD Hyundai Construction Equipment Sector</p> <p>Frequency Quarterly (additional meetings held as needed)</p> <p>Major roles</p> <ul style="list-style-type: none"> • Strengthens communication on ESG issues of the three companies • Communicates group ESG activities in advance • Discusses potentially synergetic items and matters requiring support
	<ul style="list-style-type: none"> • Establishes ESG strategic initiatives and collaborates with relevant departments • Manages ESG performance and supports decision-making • Publishes integrated reports and responds to evaluations and reviews global initiatives
Working Group	Implements detailed ESG initiatives

ESG Highlights



2040
Year to achieve RE100

18 MW
Renewable energy capacity
(as of 1H 2024)

10 %
Reduction in Scope 1+2 emissions
compared to the previous year

94 %
Waste recycling rate

300
Number of suppliers that
underwent ESG assessment

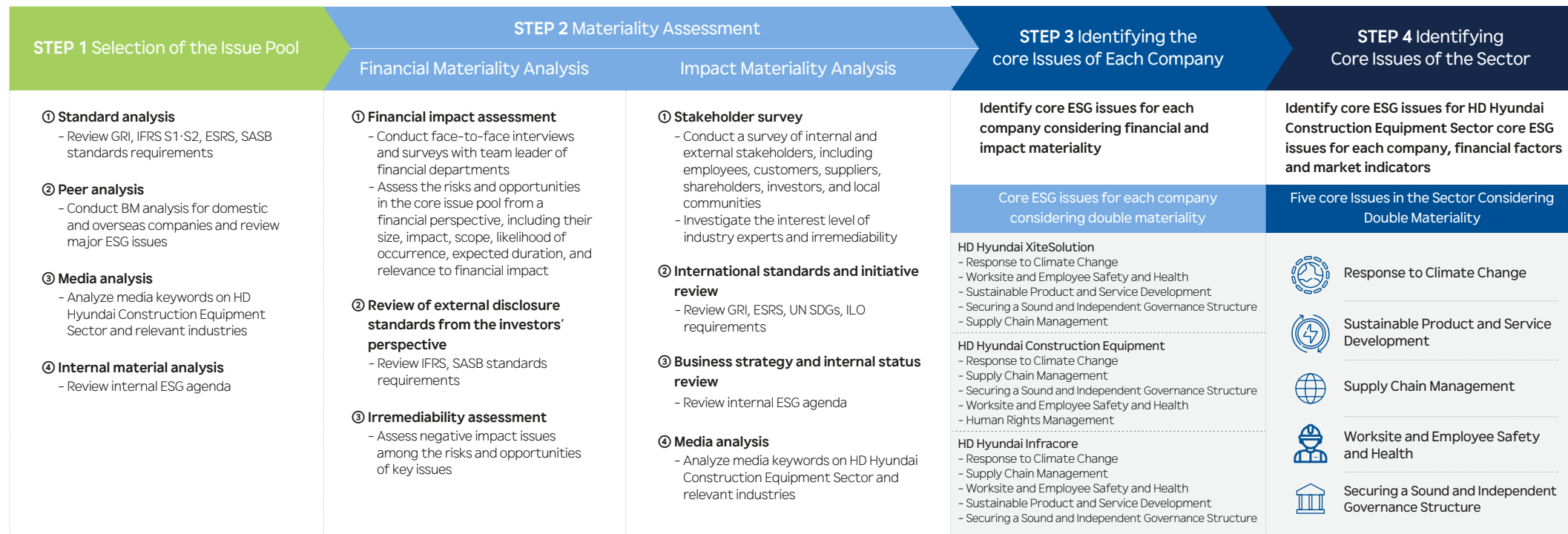
100 %
Ratio of high risk suppliers which
agreed to establish improvement
measures

12
Worksites with ISO 14001
(EMS) certification

KRW 37.9 billion
Dividend in 2023
(paid in 2024)

Double Materiality Assessment

Through a double materiality assessment, HD Hyundai XiteSolution has identified core issues of sustainable management in HD Hyundai Construction Equipment Sector. A pool of 33 issues was selected by analyzing GRI, IFRS, ESRS, and SASB standards, industry conditions, media analysis, and internal business strategies and status. The results of the financial and impact materiality assessments of each company were integrated based on financial factors and market indicators to determine the core issues for the entire HD Hyundai Construction Equipment Sector. The five core issues identified were finalized after a review and approval process through reports to the Board of Directors and the management of each company in HD Hyundai Construction Equipment Sector. This report will cover the activities and plans of each company regarding the core issues.



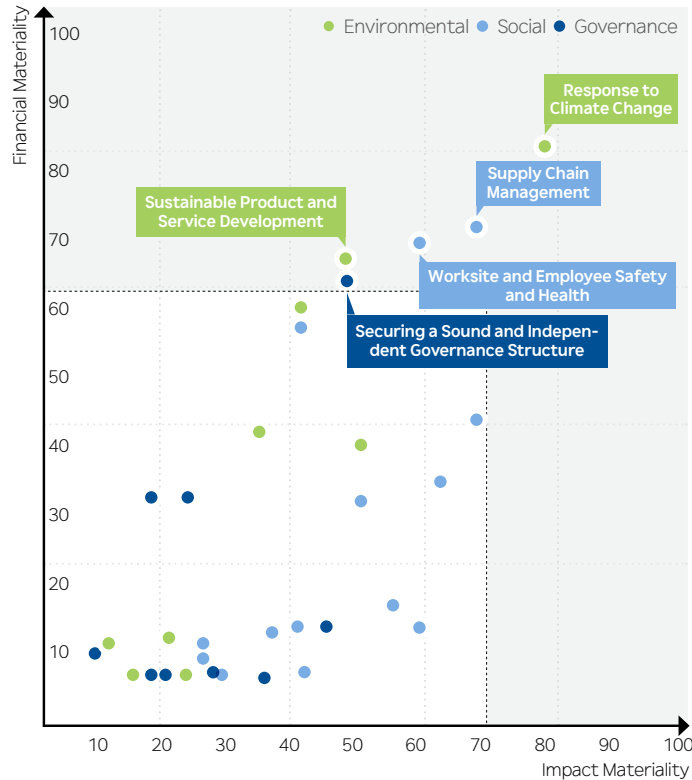
Double Materiality Assessment

The core issues of HD Hyundai Construction Equipment Sector identified through the double materiality assessment include response to climate change, sustainable product and service development, supply chain management, worksite and employee health and safety, and securing a sound and independent governance structure. In this regard, the HD Hyundai XiteSolution Consolidated ESG Report covers in detail the ESG activities and quantitative data of HD Hyundai Construction Equipment Sector.

ESG Issue Pool

1	E	Response to Climate Change
2	S	Supply Chain Management
3	S	Worksite and Employee Safety and Health
4	G	Securing a Sound and Independent Governance Structure
5	E	Sustainable Product and Service Development
6	S	Talent Recruitment and Employee Capacity Development
7	S	Human Rights Protection
8	S	Employee Diversity and Inclusion
9	E	Waste and Hazardous Material Management
10	S	Social Contribution and Local Community Participation
11	E	Establishment of an Environmental Management System
12	S	Product Quality and Safety
13	S	Labor-Management Relationship and Healthy Organizational Structure
14	G	Corporate Ethics and Compliance
15	G	Financial Management and Economic Performance Generation
16	S	Stakeholder Participation and Communication
17	G	Shareholder Rights Protection
18	S	Employee Welfare
19	S	Strengthening Information Protection and Information Security Management
20	G	Integrated Management of Financial/Non-financial Risks

Double Materiality Assessment Matrix



Core Issues	Major ESG Achievements		
	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Response to Climate Change	<ul style="list-style-type: none"> • Advancement of Carbon Neutrality Implementation Roadmap for Worksite • Reducing the target timeline for RE100 (2045 -> 2040) 	<ul style="list-style-type: none"> • Introduction of renewable energy to Chinese and Indian subsidiaries 	<ul style="list-style-type: none"> • Introduction of renewable energy in Gunsan and Incheon plants
Sustainable Product and Service Development	<ul style="list-style-type: none"> • Joining the RE100 Initiative • Advanced development of future technologies for HD Hyundai Construction Equipment Sector • Ongoing development of hydrogen-powered forklifts 	<ul style="list-style-type: none"> • Ongoing development of 14-ton hydrogen-powered excavators • R&D of fuel efficiency improvement technologies such as electro-hydraulic systems and hydraulic energy regeneration systems 	<ul style="list-style-type: none"> • Launch and development of eco-friendly power conversion products (electrification and hydrogen) • Commercialization of e-powerpack and development of hydrogen combustion engine in progress
Supply Chain Management	<ul style="list-style-type: none"> • Overseeing the establishment of ESG management systems in HD Hyundai Construction Equipment Sector supply chain • Operation of facility funding support and the ESG shared growth fund for the supply chain 	<ul style="list-style-type: none"> • Establishment of a supply chain ESG management system • Supporting the establishment of smart factories for suppliers 	<ul style="list-style-type: none"> • Establishment of the supply chain ESG management system • Support for the establishment of smart factory MES for suppliers
Worksite and Employee Safety and Health	<ul style="list-style-type: none"> • Safety culture establishment project in progress • Commencement of the development of an integrated safety and health information system 	<ul style="list-style-type: none"> • Safety culture establishment project in progress • Establishment of the 3GATE Process for securing safe worksites • Operation of a reward system to promote safety and health awareness among employees 	<ul style="list-style-type: none"> • Safety culture establishment project in progress • Safety and health consulting for partner • Operation of safety culture events, training, and grievance handling channels
Securing a Sound and Independent Governance Structure	<ul style="list-style-type: none"> • Introduction of a long-term performance incentive system for executives 	<ul style="list-style-type: none"> • Operation of the Outside Director Nominating Committee, ESG Committee, and the Compensation Committee under the Board of Directors 	<ul style="list-style-type: none"> • Operation of the Outside Director Nominating Committee, ESG Committee, and the Compensation Committee under the Board of Directors

Part III

ESG Performance

- 15 **E** Response to Climate Change
- 17 **E** Sustainable Product and Service Development
- 19 **S** Supply Chain Management
- 21 **S** Worksite and Employee Safety and Health
- 23 **G** Securing a Sound and Independent Governance Structure



E nvironmental

Response to Climate Change

HD Hyundai Construction Equipment Sector manufactures construction equipment. The business impacts the environment and society due to Scope 1 and 2 GHG emissions and has financial risks of rising carbon prices and increased electricity purchase costs. Therefore, HD Hyundai Construction Equipment Sector will continue to strive to mitigate risks and maximize opportunities by recognizing the double materiality of climate change responses.

Governance

HD Hyundai Construction Equipment Sector operates the ESG Committee, ESG Management Committee, and ESG Working Council to control ESG management effectively including climate change responses. HD Hyundai XiteSolution reviews the key ESG strategies and progress of HD Hyundai Construction Equipment Sector through the ESG Management Committee. The company also monitors energy use reduction by linking to KPI performance evaluation to clearly define the roles and responsibilities of the executive regarding climate change responses. Moreover, HD Hyundai Construction Equipment and HD Hyundai Infracore have ESG Committees within their respective Boards of Directors to make key decisions on climate change and manage climate risks and opportunities.

Climate Change Response Strategies

HD Hyundai Construction Equipment Sector advanced its climate change response strategy in line with external changes such as renewable energy supply issues, rising energy costs due to the prolonged war, stricter environmental regulations, as well as internal changes such as the management’s commitment to reducing carbon emissions. The company reduced its RE100 target year from 2045 to 2040 and upgraded Carbon Neutrality Implementation Roadmap for Worksite by checking the carbon emission status and integrating the operational management standards of the three companies. We will manage performance toward the target according to the new roadmap to achieve carbon neutrality across worksites by 2050.

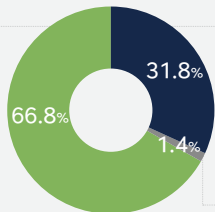
Introduction of Renewable Energy

HD Hyundai Construction Equipment Sector joined the RE100 initiative in 2023. It plans to achieve 100% renewable energy use by 2040 through solar self-generation and PPAs, etc. The sector has been gradually introducing renewable energy since 2022, considering the characteristics of each worksite. Domestically, HD Hyundai Construction Equipment is working to achieve RE100 2025 at its Ulsan Campus production site but has had difficulties in achieving timely progress due to infrastructure problems (installation of a dedicated line). It plans to adopt applicable means such as rooftop solar power installation to the maximum extent possible before the completion of infrastructure. The company aims to achieve RE100 at the Ulsan Campus in 2026, when the infrastructure is expected to be complete. Overseas, its Chinese subsidiary has procured half of its annual electricity use through solar power generation since 2022. The Indian subsidiary has been procured solar energy for 70% of its annual electricity use through a joint development business agreement since 2023. HD Hyundai Infracore’s Gunsan Plant has secured renewable energy power accounting for around 85% of annual power consumption through PPA and others. The company will expand its power supply using renewable energy in the future. The company has installed solar self-generation facilities in some buildings and parking lots within the Incheon Plant and started supplying renewable energy in April 2024.

Means of Reducing Worksite Carbon Emissions

Use of renewable energy

- Solar power self-generation
- Signing a renewable energy PPA
- Purchasing of REC and green premiums

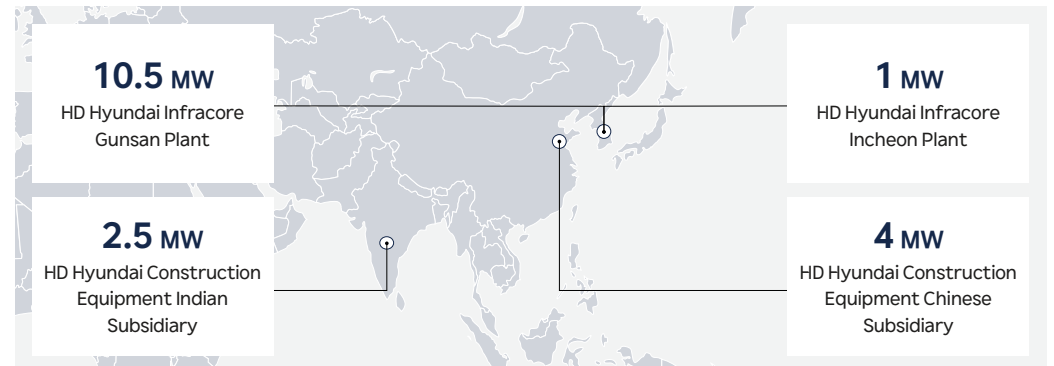


Reduction of process carbon emissions and fuel transition

- Improvement of facility operation efficiency
- Achievement of K-EV100
- Transition of product pilot operation fuel
- Use of eco-friendly paints

Others

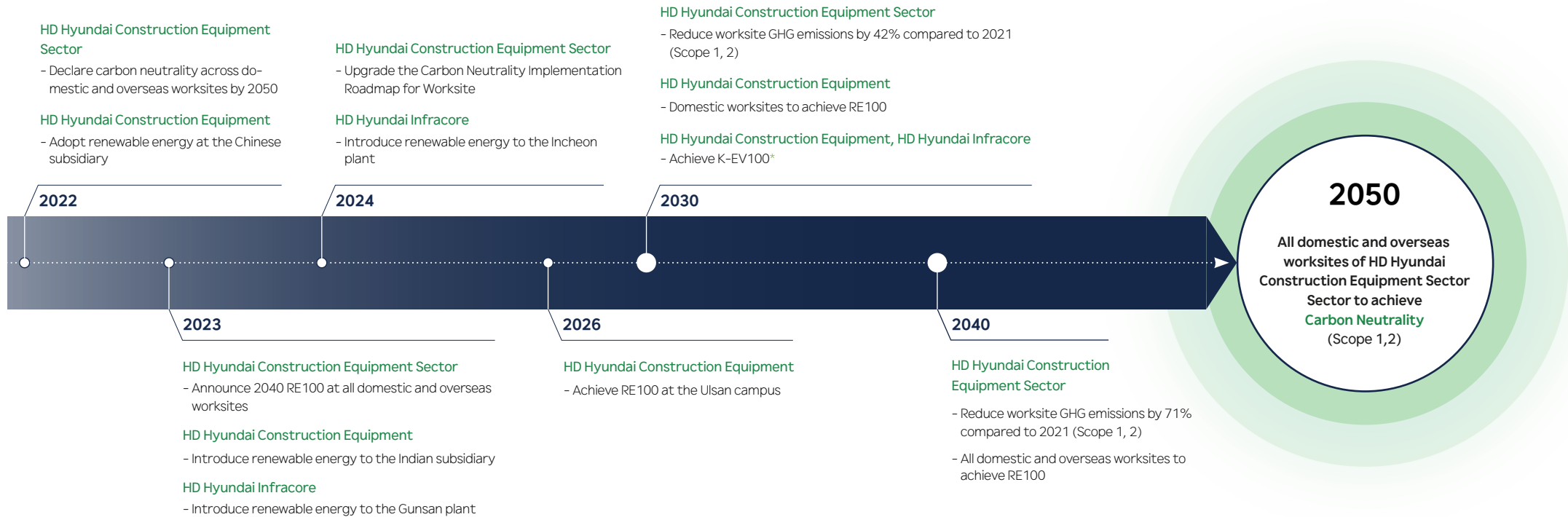
Renewable energy status



Environmental

Response to Climate Change

Carbon Neutrality Implementation Roadmap for Worksite • HD Hyundai Construction Equipment Sector has declared 2050 Worksite Carbon Neutrality and 2040 RE100 to engage in a climate change response. It discloses the Carbon Neutrality Implementation Roadmap for Worksite and its progress to ensure transparent stakeholder communication.



* K-EV100 – A campaign led by the Korean Ministry of Environment to declare and gradually implement the conversion of all vehicles owned or leased by companies to 100% zero-emission vehicles by 2030.

Environmental

Sustainable Product and Service Development

Governance

HD Hyundai XiteSolution, centered around its R&D organization, the Technology Center, generates synergy by preemptively developing future technologies for the Sector to create eco-friendly and smart construction sites. The Technology Strategy Committee and Product Strategy Committee hold annual meetings to flexibly respond to technology development strategies by monitoring the market, regulations, policies, and patent trends of the Sector and ensure that research and development proceeds smoothly according to strategy. The company has a R&D governance system that checks risks and tracks the development progress of each phase by holding monthly NPD¹⁾, NTD²⁾, and NSD³⁾ Committee meetings, based on the product portfolio and technology development roadmap approved by the Product/Technology Strategy Committee.

HD Hyundai Group ESG Committee	
	Product/Technology Strategy Committee (led by HD Hyundai XiteSolution)
Management Council (C-Level)	Composition : CEO and key product/technology development executives of the three companies in the Construction Equipment Sector
	Frequency : Once a year
	Major roles : <ul style="list-style-type: none"> Approval of the product/technology portfolio and roadmap Establishment of eco-friendly product development strategies to achieve carbon neutrality Integrated product/technology development strategy, digital technology development strategy, etc.
Working Group	Report on detailed ESG implementation performance tasks and results by division

1) New Product Development 2) New Technology Development 3) New Solution Development

In the internal combustion engine-dominated construction equipment manufacturing industry, Scope 3 product use-phase carbon emissions account for a large proportion of total carbon emissions. The growing low-carbon construction equipment market may significantly impact corporate financial performance. HD Hyundai Construction Equipment Sector develops eco-friendly products and services to reduce negative impacts on the environment and society and generate major business opportunities.

Vision

At CES2024, the world's largest home appliance and IT expo, HD Hyundai unveiled "Xite Transformation," a specific form of "Industrial solutions transcending time and space limitations." The company also presented Future Xite, Twin Xite, and Zero Xite as visions for future construction sites. HD Hyundai Construction Equipment Sector will strive to build a sustainable future for humanity by fundamentally innovating construction sites in terms of Safety, Productivity, and Sustainability.

Future Builder Vision



E nvironmental

Development of sustainable products and services

HD Hyundai Construction Equipment Sector proactively pursues the development and is working towards the eventual mass production of battery packs and hydrogen combustion engines that can create synergy with the electrification of existing diesel engine equipment, to meet the the specific goal of the company that reduces carbon emissions by 25% in the product use phase by 2040 under the Zero Xite Vision. The product portfolio conversion strategy is constantly upgraded according to the internal and external environment, including market conditions. The strategy is contained in this year's HD Hyundai XiteSolution TCFD Report.

 2023 HD Hyundai XiteSolution TCFD Report

Electric Excavators • Electric excavators generate less vibration and noise than conventional diesel engine equipment and reduce the environmental impact of worksites, since they do not emit carbon dioxide or air pollutants. In 2023, HD Hyundai Infracore launched the world's fifth electric excavator, a 1.7ton mini electric excavator. The company plans to expand its lineup by launching 2ton and 3ton electric excavators by 2026 and electrifying 14ton medium-sized excavators. HD Hyundai Construction Equipment will launch a 1.9ton mini electric excavator in 2024 and expand its lineup to include a 2.7ton excavator by 2025 and a 3.5ton excavator by 2026.

 Electric Excavator Impact Valuation Report

Electric Forklifts • Electric forklifts use batteries as a power source instead of conventional diesel engines. While electric forklifts were mainly produced and sold as small and medium-sized equipment for working indoors, the company is currently developing models suitable for working outdoors to meet the demand for reducing carbon emissions. HD Hyundai XiteSolution plans to expand the production and sales of electric forklifts by developing a fully electric lineup of forklifts. The company is conducting R&D to advance the development of electrified equipment components, improve energy efficiency through battery thermal management technology, and expand LFP battery models.

Battery Packs (e-powerpack) • Battery packs (e-powerpack) are a core component for electrification. It is designed to prevent risks of overcharge, over-discharge, overcurrent, and overheating, ensuring safety. In 2023, HD Hyundai Infracore mass-produced the battery pack it developed in-house and installed it within a 1.7ton mini electric excavator, which was commercialized in 2023. The company began

developing a large battery pack for medium- and large-sized excavators with the goal of mass production in 2026. It is also developing NCM and LFP packs to meet various customer requirements, aiming to provide energy solutions in the construction, industry, and marine fields.

Hydrogen Excavators • Hydrogen excavators are powered by hydrogen fuel cells. HD Hyundai Construction Equipment has been developing a 14ton hydrogen wheeled excavator since signing an MOU on the joint development of hydrogen fuel cell construction equipment with Hyundai Motor Company and Hyundai Mobis in 2020. The company developed and showcased a beta version prototype close to commercialization at the 2023 CONEXPO. It conducts research and development while monitoring external situations, including changes in hydrogen prices and expansion of charging infrastructure, to ensure timely responses.

 Hydrogen Excavator Impact Valuation Report

Hydrogen Forklifts • Hydrogen forklifts are powered by a hydrogen fuel cell that generates electric energy through an electrochemical reaction of hydrogen and oxygen. They do not emit carbon dioxide or air pollutants during use and make little vibration or noise. In 2020, HD Hyundai XiteSolution unveiled a prototype of a 5ton medium-sized hydrogen forklift in collaboration with Hyundai Motor Company and Hyundai Mobis. It also produced a prototype of a 1.8ton hydrogen forklift in 2021 and created a prototype of a 3.5-ton hydrogen forklift and evaluated its performance in 2022. HD Hyundai Construction Equipment Sector aims to commercialize hydrogen forklifts in 2027 and is working on relevant R&D.

 Hydrogen Forklift Impact Valuation Report

Hydrogen Combustion Engines • A hydrogen combustion engine is a device that combusts hydrogen as fuel to generate mechanical power. It does not emit carbon dioxide when burned and almost does not emit other air pollutants since hydrogen used as fuel does not contain carbon due to its chemical properties. HD Hyundai Infracore has been developing hydrogen combustion engine HX12 for 300kW, 11L displacement since 2023, and has been developing a cargo truck equipped with a hydrogen combustion engine for the first time in South Korea in 1H 2024. It plans to sequentially expand installation of the engine on large buses and 30ton large excavators, aiming for commercialization in 2025.

 Hydrogen Combustion Engine Impact Valuation Report

Social

Supply Chain Management

HD Hyundai Construction Equipment Sector has business relationships with various suppliers, since the industry requires numerous parts and materials. ESG issues in the supply chain have social and environmental impacts and may also affect the financial stability of the company. Recognizing these impacts, the company is building a sustainable supply chain ecosystem to create value and fulfill its environmental and social responsibilities.

Governance

Supply Chain Management Policy • HD Hyundai Construction Equipment Sector established a supply chain management policy to identify and prevent ESG risks among its suppliers and build a sustainable supply chain. It aims to carry out sustainable purchasing while specifying the responsibilities and ESG management areas, ESG evaluation system, and communication methods for its suppliers.

[Go to HD Hyundai XiteSolution's Supply Chain ESG Management Policy](#)

Code of Conduct for Suppliers • All suppliers of HD Hyundai Construction Equipment Sector requires all suppliers to comply with the Code of Conduct for Suppliers in their management decisions and overall business operations. The Code stipulates the ESG management areas for suppliers as follows: the environment, labor and human rights, safety and health, ethics, and management systems. The detailed requirements for each area are based on global standards such as the UN Guiding Principles on Business and Human Rights (UNGPs), OECD Guidelines for Multinational Enterprises, and ILO Core Conventions. HD Hyundai Construction Equipment Sector recommends its suppliers to comply with the Code of Conduct, and regularly reviews and supplements the Code.

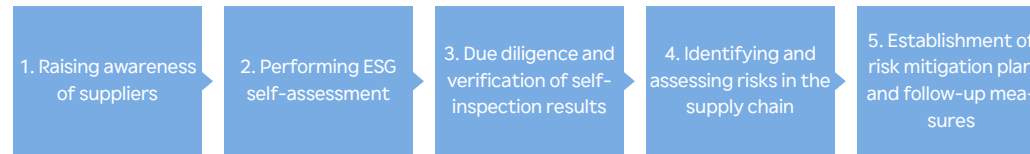
[Go to HD Hyundai XiteSolution's Code of Conduct for Suppliers](#)

Areas of Supply Chain ESG Management

Evaluation Metric Classification	Evaluation Areas	Specific Areas
Environmental	Environment	General, Environmental Permits and Reporting, Hazardous Substances Management, Waste Disposal, Air Pollutants, Water Resources Management
Social	Labor and Human Rights	General, Wages and Welfare, Forced and Voluntary Labor, Humane Treatment, Child Labor and Minor Labor, Prohibition of Discrimination, Working Hours, Freedom of Association
	Safety and Health	OHS System and Training, Industrial Safety, Emergency Response, Industrial Accidents, Industrial Hygiene, Manual Labor, Maintaining the Safety of Machinery and Equipment, Food, Hygiene and Housing
Governance	Ethics	General, Anti-Corruption and Conflict of Interest Prevention, Protection of Personal Information, Prevention of Unfair Trade, Protection of Intellectual Property, Responsible Material Procurement
	Management System	Norms, Performance Monitoring, Improvement Activities, Requirement of Compliance with Code of Conduct, Reflection of Business Relations

Supply Chain Risk Management

Supply Chain ESG Evaluation Process



Supply Chain ESG Assessment and Improvement Support • According to the supply chain management policy, we carry out inspections and due diligence to check whether supplier companies are complying with the provisions of the Code of Conduct for Supplier within the legally permitted scope. The scope of supplier companies that are subject to inspection is gradually expanding. In 2023, we conducted ESG self-inspections in writing for 300 major supplier of HD Hyundai Construction Equipment Sector. Comprehensively considering self-inspection diagnosis scores and purchase amounts, due diligence and verification were performed for 60 companies. HD Hyundai Construction Equipment Sector further shared a report containing ESG-level analysis and improvement tasks with all suppliers who participated in the assessment, encouraging them to check their ESG status and need for improvement. We also support our suppliers in strengthening ESG management capabilities by selecting prioritized improvement recommendation metrics to address issues that pose high legal risks but that are relatively easy to improve in the short term and providing relevant education and support for improvement plans.

2023 Supply Chain ESG Management Status

Classification	Suppliers subject to Assessment	Assessment method
Self-assessment	300 major suppliers of HD Hyundai's Construction Equipment Sector	Online self-assessment to identify potential ESG risks in the supply chain (some assessment indicators require submission of supporting documents)
Due diligence	60 of 300 suppliers participating in self-assessment	On-site evaluation to check the actual ESG management implementation level of the supplier (verification of self-inspection responses and supporting documents)

Social

Supply Chain Management

Supply Chain ESG Management Roadmap • HD Hyundai Construction Equipment Sector has established and is implementing a three-year supply chain ESG management roadmap focused on purchasing management principles and procedures, expanding ESG management to include more suppliers, enhancing communication and training with suppliers, and managing conflict minerals. We intend to establish purchasing procedures that take account of ESG factors and incorporate these into the purchasing process by 2026, while expanding the scope of target partners to 95% of the purchase amount. We will constantly advance supply chain ESG management by fortifying ESG education for partners and the management of conflict minerals and responsible minerals.

Classification	~2024 Short-term	~2025 Mid-term	~2026 Long-term
Purchasing Management Principles and Procedures	Establishing purchasing management principles	Globally expanding purchasing management principles	Establishing purchasing procedures and incorporating them into the purchasing process
Supplier ESG Performance Management	Calculating the ratio suppliers for which ESG was assessed	Sampling inspection on global worksites	Conducting assessment with coverage of 95%
Supplier Communication and Training	Establishing an ESG training system (by year)	Conducting quarterly ESG training	Benchmarking and development of support program
Conflict/Responsible Minerals Management	Diagnosing the status of conflict/responsible minerals	Developing CMRT for second tier supplier and more	CMRT/EMRT disclosures

Conflict and Responsible Minerals Management • HD Hyundai Construction Equipment Sector procures many parts and raw materials from various suppliers. We make efforts to register and manage raw materials to ensure that conflict minerals such as tin, tungsten, tantalum, and gold produced in conflict regions of Africa are not included in the supply chain for production. For this purpose, the Sector clearly states its conflict and responsible minerals policy in its Supplier Code of Conduct and assists its suppliers to comply. It will diagnose the status of conflict minerals use and develop the Conflict Minerals Reporting Template (CMRT), a standard template for reporting conflict minerals.

Supplier Support Programs

HD Hyundai Construction Equipment Sector runs various programs to support the ESG management of its supplier.

1. Financial Support • HD Hyundai Construction Equipment Sector established a Supply Chain ESG Win-win Growth Fund with a value of KRW 20 billion in 2024 to provide practical financial support for strengthening ESG management among its supplier. We practice win-win management by participating in a pilot project for the Delivery Price Indexation System that automatically links the delivery price to the raw material price when it fluctuates, and early payment of material costs during traditional holidays.

2. Facility Support • HD Hyundai Construction Equipment Sector supports its supplier in strengthening their competitiveness through facility support. HD Hyundai Infracore support building smart factories and the Manufacturing Execution System (MES) and HD Hyundai Construction Equipment assist in establishing smart factories to digitalize and improve the productivity of supplier manufacturing sites. HD Hyundai XiteSolution promotes investment support for supplier facilities to expand supplier production capacity and improve delivery and quality by 2024.

3. Educational Support • HD Hyundai Construction Equipment Sector provided training on EU REACH, RoHS, and CBAM to 201 supplier in 2023 to support our supplier' response to global environmental regulations. It further educated how to use the material information management system for partners to support their material information management and prevent the risk of regulatory violations.

Financial Support

Number of suppliers receiving financial support : **368** companies

Financial support amount :
KRW **85.7** billion

Facility Support

Mold and fixture support to strengthen supplier companies' component development capabilities

: **239** companies,
KRW **42.8** billion

Educational Support

Number of supplier companies that completed environmental regulation response training

: **201** companies

Social

Worksite and Employee Safety and Health

Given the nature of equipment manufacturing, HD Hyundai Construction Equipment Sector often involves high-risk work environments, making safety all the more crucial. Safety and health issues affect the quality of life of employees and is associated with the risk of decreased sales due to work stoppages and legal sanctions. HD Hyundai Construction Equipment Sector is committed to fulfilling its social responsibility, minimizing financial risks, and creating a safe and healthy workplace for all.

Governance

HD Hyundai Construction Equipment Sector operates a dedicated safety and health organization under the CEO to manage safety and health. The Sector appoints a safety and health officer to comprehensively manage safety at each worksite according to the Occupational Safety and Health Act and the Serious Accidents Punishment Act.

Classification	HD Hyundai XiteSolution	HD Hyundai Construction Equipment		HD Hyundai Infracore		
CEO	CEO	CEO		CEO		
CSO	EHS Officer	EHS Officer		EHS/Facility Management Officer		
EHS Working Group	EHS Team	EHS Team	Safety Team	Safety Culture/Planning Team	Safety and Health Team	Gunsan/Ansan EHS/Facility Team

Safety and Health Organizations

Classification	Frequency	Agenda
Board of Directors	Once a year	Approval of safety and health plans
Safety and Health Management Committee (EHS Session)	Once a half-year	Establishment of safety and health management policy, goals, and plans, and deliberation and resolution of company-wide major safety and health issues

Safety and Health Leadership • HD Hyundai Construction Equipment Sector reports and receives approval for safety and health plans from the Board of Directors and the Safety and Health Management Committee every year and carries out safety and health activities based on the outcome. The Occupational Safety and Health Committee meets regularly to deliberate and make decisions on matters concerning industrial accident prevention, discuss major issues for fulfilling legal obligations related to safety and health, including the occupational accident prevention plan, and initiate continuous improvement activities. The Safety and Health Council of contractor companies operates once a month under the supervision of the Chief Safety and Health Officer to promote the safety and health of in-house contractor companies, listen to their complaints, and discuss and share improvement measures. Furthermore, the Safety and Health Officer supervises the EHS Patrol once a week to identify issues, take measures, and monitor safety risk factors in the work site.

Safety and Health Management Policy • HD Hyundai Construction Equipment Sector recognizes the importance of safety and health management and strives to establish and implement policies based on domestic and overseas safety and health laws and regulations and the international standards for safety and health management systems (ISO45001) to prevent accidents and maintain and promote the safety and health of employees and all those with whom we work. We proactively carry out safety and health management activities with the voluntary actions and participation of employees.



Preventing serious accidents



Improving safety awareness



Preventing fire and explosion



Health promotion activities

Social

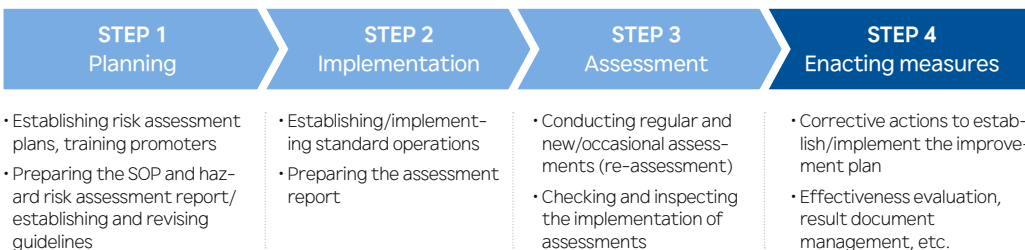
Worksite and Employee Safety and Health

Safety Risk Mitigation and Improvement Activities

Risk Assessment • EHS team in HD Hyundai Construction Equipment Sector periodically assesses risks and manages hazardous factors at work sites. Risk assessment is a process of identifying factors that may pose hazardous risks to people, facilities, materials, and work environments. The EHS team evaluates the likelihood of risk occurrence and the degree of severity of risk factors identified through this process. It prepares improvement plans and appropriate measures to lower risks when high-level risks are identified.

Occupational Safety and Health Management System ISO45001 • HD Hyundai Construction Equipment Sector obtained ISO45001 certification for 12 major domestic and overseas work sites. It continuously conducts safety and health activities based on the standards to predict and eliminate industrial accident risk factors to prevent industrial accidents and create a pleasant working environment.

Integrated Safety and Health System • HD Hyundai Construction Equipment Sector is building a computerized integrated safety and health system to manage health and safety more systematically and efficiently. The system consists of data required for work site safety management, such as risk assessment, risk factor discovery and management, and work process management, based on safety and health laws and standards. The system will improve the consistency and accuracy of information and enable rapid identification and response to potential risk factors.



Safety Culture Building Project • Considering that most safety accidents occur due to imperfect employee behavior, we are implementing a project to strengthen the safety culture. The purpose is to prevent accidents by enhancing employee's safety awareness and creating habits and an atmosphere promoting the practice of safe behavior. We will conduct a survey to diagnose the level of safety awareness to identify the current status of employees' safety awareness, derive key improvement tasks through comparative analysis of each factor and item, and establish a behavior-based safety system based on the analyzed outcome.



EHS Workshop • EHS Team of HD Hyundai Construction Equipment Sector regularly holds EHS workshops to discuss areas of collaboration among the three companies in the divisions dedicated to serious accident prevention, safety and health, fire-fighting, and the environment and discuss future initiatives. We strive to create synergy in safety and health among the three companies to set up an organic EHS management system.



Governance

Securing a Sound and Independent Governance Structure

HD Hyundai Construction Equipment Sector is committed to establishing a transparent and sound governance structure to achieve sustainable development and build the trust of stakeholders. It further works to mitigate legal and regulatory risks to reinforce financial safety and enhance shareholder value.

Board of Directors and Management

Expertise of the Board of Directors • The Board of Directors consists of individuals meeting the qualifications required by the Commercial Act and the Articles of Incorporation. The members have extensive experience and expertise in diverse fields, including management, economics, law, accounting, and HR. This enables the Board to discuss agenda items from various perspectives, thereby securing the expertise and responsibility of the Board of Directors.

Committees under the Board of Directors • HD Hyundai Construction Equipment and HD Hyundai Infracore, which are listed company, operate committees under the Board of Directors. Members with expertise participate depending on the role of each committee to ensure that decision-making is effective.

Classification	Major Roles
ESG Committee	Deliberates and decides ESG strategies and roadmaps and major issues on social responsibility
Outside Director Nominating Committee	Performs the function of recommending outside director candidates with the capabilities required to achieve management goals
Audit Committee	Manages and supervises business activities regarding the execution of duties by directors and executives
Compensation Committee	Secures objectivity and transparency by determining directors' remuneration

Executive Performance Evaluation • We consider non-quantitative metrics such as leadership, work performance expertise, and responsibility, as well as quantitative metrics such as sales, orders, and operating profit in performance evaluations. We have established a company-wide ESG KPIs, set sustainability-related KPIs for each company's CEO, and continuously follow up on whether the goals for each item are achieved.

Calculation of Executive Incentives • Incentives consist of management incentives and long-term incentives. Management incentives consider quantitative metrics such as the company's sales, orders, and

operating profit, as well as leadership and expertise for achieving management performance. Long-term incentives were adopted at the end of 2023 to prevent decision-making limited to short-term performance and maximize long-term corporate value. The final incentives are calculated after the grace period by comprehensively considering metrics such as organizational evaluation and net income during the grace period (3 years or more).

Shareholders Value

Improving Shareholder Value • HD Hyundai Construction Equipment and HD Hyundai Infracore, which are listed companies, implement cash dividends and treasury stock buyback/retirement to enhance shareholder value. In 2024, HD Hyundai Construction Equipment retired 4.3% (acquired by exercising stock purchase rights for the acquisition of the industrial vehicle division in 2022) and approximately 2.7% (KRW 30.3 billion, additionally buyback in 2024) of its treasury stock. It paid a dividend of KRW 700 per share as the 7th regular dividend in 2023, paying out a total of KRW 12.7 billion in dividends. In February 2024, HD Hyundai Infracore decided to buyback and retire 7.24 million treasury stocks worth KRW 56 billion by August. It further declared to pay a dividend of KRW 110 per share for its 2023 performance, paying out a total of KRW 22 billion in cash dividends.

Protection of Shareholder Rights • Shareholders can freely exercise their voting rights through general shareholders' meetings. We encourage more shareholders to participate in general shareholders' meetings by using various systems such as legitimate proxy solicitation and participating in the autonomous distribution program for general shareholders' meetings. We also utilize electronic voting to protect the voting rights of minority shareholders.

Communication with Shareholders • We conduct IR activities such as corporate briefings to proactively gather the expectations and demands of various stakeholders and ensure smooth communication. We further disclose financial information such as business and audit reports and non-financial information such as integrated reports through our website. In 2024, we also introduced a paperless "dividend inquiry service" on our website to maximize shareholder convenience.

Part IV

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ESG Data

Economic Data

Operating Performance

Metric Name	Unit	Scope	HD Hyundai XiteSolution		HD Hyundai Construction Equipment		HD Hyundai Infracore	
			2022	2023	2022	2023	2022	2023
Sales	KRW 1 million	Consolidated	8,503,577	8,748,217	3,515,612	3,824,967	4,756,114	4,659,605
Operating Income			464,422	724,210	170,610	257,228	332,547	418,264
Net Income			271,369	364,384	99,406	127,451	229,551	230,712
Sales		Separate	700,442	1,012,648	2,571,209	2,574,570	4,204,908	4,241,475
Operating Income			32,198	126,228	145,071	214,771	282,247	392,027
Net Income (Loss)			(7,260)	73,863	107,159	108,876	207,607	458,768

Financial Performance

Metric Name	Unit	Scope	HD Hyundai XiteSolution		HD Hyundai Construction Equipment		HD Hyundai Infracore	
			2022	2023	2022	2023	2022	2023
Total Assets	KRW 1 million	Consolidated	9,609,158	9,126,301	3,448,587	3,296,953	4,736,668	4,418,426
Total Liabilities			5,984,926	4,987,910	1,781,300	1,525,880	3,101,627	2,605,110
Total Equity			3,624,232	4,138,391	1,667,287	1,771,073	1,635,041	1,813,316
Total Assets		Separate	1,871,665	1,953,590	2,418,818	2,343,772	3,731,594	3,855,346
Total Liabilities			1,043,769	854,333	1,108,403	965,716	2,378,226	2,103,551
Total Equity			827,896	1,099,257	1,310,416	1,378,056	1,353,368	1,751,795

Research & Development

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
R&D Personnel	Persons	Korea	1,118	1,150	267	220	663
R&D investment	KRW 1 million		240,068	288,703	24,920	79,506	184,277
R&D investment to sales	Percentage (%)		3.21	3.69	2.46	3.10	4.34

Intellectual Property Rights

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Application	Cases	Global	2,750	2,883	99	221	2,563
Registration			1,991	2,037	77	162	1,798

Retirement Pension

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of Subscribers (DB)	Persons	Korea	3,696	3,940	752	1,169	2,019
Managed Amount (DB)	KRW 1 million		255,725	274,149	29,353	78,797	165,999
No. of Subscribers (DC)	Persons		571	564	30	41	493
Managed amount (DC)	KRW 1 million		58,739	7,357	997	2,511	3,849

Quality Management

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of ISO 9001 Certified Worksites	No.	Global	16	18	5	6	7

Governance Data

Compliance Management

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of times of compliance training	Cases	Korea	11	21	5	2	14
No. of employees who participated in compliance training	Persons		2,970	3,292	722	848	1,722
No. of cases of legal advice related to fair trade	Cases		132	164	29	79	56
No. of cases of legal advice related to anti-bribery and economic sanctions	Cases		16	41	9	6	26
No. of Violations of the Improper Solicitation and Graft Act	Cases		0	0	0	0	0

Violation of major laws related to environment/society¹⁾

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
By law and regulation							
No. of cases of violation of environmental laws	Cases	Korea	0	0	0	0	0
No. of cases of violation of fair trade laws	Cases		0	0	0	0	0
No. of cases of violation of Improper Solicitation and Graft Act	Cases		0	0	0	0	0
Others	Cases		0	0	0	0	0
By sanction							
Monetary Sanctions	Cases	0	0	0	0	0	
Non-monetary Sanctions	Cases	0	0	0	0	0	
Non-monetary Sanctions	KRW 100 million	0	0	0	0	0	

1) Monetary sanctions of USD 10,000 or more and non-monetary sanctions such as cancellation of license (registration) or suspension of business

Environmental Data

Investment in environment

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Environmental investment and operation cost	KRW 100 million	Korea	134	366	3	56	307
Eco-friendly Technology Development Costs			207	369	44	64	261
Eco-friendly Sales		Global	18,350	16,155	1,328	1,258	13,569

Environmental Management

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of ISO 14001 (EMS) Certified Worksites	No.	Global	11	13	4	4	5
Ratio of ISO 14001 (EMS) Certified Worksites ¹⁾	Percentage (%)		73	81	100	80	71

1) Targeting domestic worksites and overseas production subsidiaries

Energy

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total Energy Consumption	TJ	Korea	2,480	2,300	141	317	1,842
Energy Consumption Intensity¹⁾	TJ/KRW 1 million		0.000332	0.000294	0.000139	0.000123	0.000434
General Energy							
Direct Energy (Fuel) consumption			547	518	11	100	407
Indirect Energy (Electricity) consumption	TJ		1,933	1,772	130	217	1,425
Other Energy consumption			0	0	0	0	0
Renewable Energy							
Renewable Energy consumption	TJ		0	10	0	0	10
Total Energy consumption			226	365	61	139	165
General Energy							
Direct Energy (Fuel) consumption		106	155	25	64	66	
Indirect Energy (Electricity) consumption	TJ	117	197	36	62	99	
Other Energy consumption		0	0	0	0	0	
Renewable Energy							
Renewable Energy consumption	TJ	3	13	0	13	0	

1) Calculated based on the current year's separate financial statement revenue

Water

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Water Intake	ton	Korea	685,319	639,685	71,248	65,917	502,520
Water Discharge	ton		57,720	66,881	1,701	3,957	61,223
Water Consumption	ton		627,599	572,804	69,547	61,960	441,297
Water Consumption Intensity ¹⁾	ton/KRW 1 million		0.083942	0.073167	0.068679	0.024066	0.104000

1) Calculated based on the current year's separate financial statement revenue

GHG Emissions

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total Emissions (Scope 1 & 2)	tonCO ₂ eq		125,424	120,638	6,774	19,385	94,479
Emission Intensity (Scope 1 & 2) ¹⁾	tonCO ₂ eq/ KRW 1 million		0.016776	0.015410	0.007131	0.007529	0.022000
Scope 1			36,588	35,853	513	9,036	26,304
Scope 2 (location-based)			88,836	84,785	6,261	10,349	68,175
Scope 3 ^{2), 3), 4)}			1,974,305	16,310,596	1,069,926	8,107,120	7,133,550
① Purchased goods and services			9,090	93,357	13,974	27,968	51,415
② Capital goods			1,983	804	121	53	630
③ Fuel and energy related activities			19,191	12,588	890	1,674	10,023
④ Upstream transportation and distribution		Korea	50,465	247,889	19,713	81,524	146,652
⑤ Waste generated in operations	tonCO ₂ eq		746	2,420	189	988	1,243
⑥ Business travel			1,984	3,397	735	1,531	1,132
⑦ Employee commuting			7,731	1,204	78	56	1,070
⑧ Transportation and distribution of sold products			313	19,877	3,931	15,148	798
⑨ Use of sold products			1,882,802	15,924,135	1,029,969	7,976,188	6,917,978
⑩ End-of-life treatment of sold products			-	4,914	326	1,990	2,598
⑪ Investments			-	11	0	0.47	11

1) Calculated based on sales in the separate financial statements for the concerned year

2) Calculated and disclosed categories related to and applicable to company management activities as of 2023.

3) HD Hyundai XiteSolution calculated Scope 3 emissions for the first time in 2023

4) Scope 3 emissions calculation criteria by category

① Purchased goods and services: Based on energy consumption of suppliers that are included in top 50% in terms of purchasing amount

② Capital goods: Based on the purchase history of office supplies

③ Fuel and energy related activities: Based on energy used at domestic worksites

④ Upstream transportation and distribution: Based on marine/land transportation for products (company costs)

⑤ Waste generated in operations: Based on waste discharge from domestic worksites

⑥ Business travel: Based on the use of flight and hotels upon business travel

⑦ Employee commuting: Based on operation of commuting bus at domestic worksites

⑧ Transportation and distribution of sold products: Based on marine/land transportation of products (external cost)

⑨ Use of sold products: Based on emissions that reflect the durability of the products sold (until 2022, current year emissions are calculated based on sales volume)

⑩ End-of-life treatment of sold products: Based on emissions related to disposal of products sold (domestic)

⑪ Investments: Based on energy consumption by affiliated companies

GHG Emissions

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total emissions (Scope 1 & 2)			43,173	31,683	7,624	13,793	10,266
Scope 1	tonCO ₂ eq	Overseas	13,125	10,007	1,321	5,118	3,568
Scope 2 (location-based)			30,048	21,676	6,303	8,675	6,698

Emissions of air pollutants

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
NOx			6.98	13.36	0.18	0.19	12.99
SOx			0.46	1.60	0	0.28	1.32
VOCs	ton	Korea	27.63	37.07	0.37	18.70	18.00
Dust			24.12	18.50	0.58	0.92	17.00

Waste Generation

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total Waste Generated	ton	Korea	32,893	27,383	396	2,608	24,379
Generation by waste type							
Non-hazardous waste	ton		30,059	24,696	343	2,263	22,090
Hazardous waste			2,834	2,686	53	345	2,288

Waste Treatment

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total Waste Treated		Korea	32,893	27,383	396	2,608	24,379
Waste landfilled	ton		94	187	0	139	48
Waste incinerated			1,261	1,419	148	726	545
Waste recycling rate	Percentage (%)		96	94	63	67	98
Non-hazardous waste							
Waste landfilled			71	86	0	38	48
Waste incinerated	ton		790	932	133	638	161
Recycled amount			29,199	23,680	210	1,588	21,882
Subtotal			30,060	24,698	343	2,264	22,091
Hazardous waste							
Waste landfilled		23	102	0	101	1	
Waste incinerated	ton	471	487	15	88	384	
Recycled amount		2,342	2,097	38	156	1,903	
Subtotal		2,836	2,686	53	345	2,288	

Social Data

Privacy protection

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of Customers information leakages	Cases	Korea	0	0	0	0	0
No. of information security breaches			0	0	0	0	
Total number of customers and employees impacted by the breach			0	0	0	0	

Product Labeling

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Cases of violation of laws related to health and safety of products and services	Cases	Korea	0	0	0	0	0
Cases of violation of laws related to product and service information labeling			0	0	0	0	

Occupational safety and health

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Occupational accident rate (employees)	Percentage (%)	Korea	0.91	0.57	0.00	0.44	0.80
LTIR (employees)	200,000 hours	Global	0.74	0.39	0.09	0.24	0.66
LTIR (employees)		Korea	1.27	0.63	0	0.61	0.83
LTIR (employees)		Overseas	0.18	0.13	0.42	0.26	0.31
LTIR (contractors)		Korea	1.10	1.76	1.15	0.23	0.38
Fatalities (employees)	Persons	Global	0	0	0	0	0
Ratio of fatalities (employees)	Percentage (%)	Global	0	0	0	0	0

Safety Training

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of participants in safety training (employees)	Persons	Korea	4,310	4,391	888	1,308	2,195
No. of participants in safety training (contractors)			1,340	1,515	413	270	832

Safety and Health Management

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of ISO 45001 certified worksites	No.	Global	10	12	3	4	5
Ratio of ISO 45001 certified worksites	Percentage (%)		53	63	75	80	71

Supply Chain Status

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total number of suppliers	No.	Korea	1,316	1,409	434	404	571

Supply Chain ESG Management¹⁾

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of suppliers that received an ESG audit	No.	Korea	208	300	59	100	141
Supplier with positive/negative impacts identified ²⁾							
Ratio of excellent supplier	Percentage (%)		1.44	44	53	38	45
Ratio of high risk supplier	Percentage (%)		3.85	8.33	3.00	11	8.51
No. of suppliers provided with improvement measures/support							
Ratio of high risk suppliers which agreed to establish improvement measures	Percentage (%)		0	100	100	100	100

1) Eliminating any duplicated suppliers across the three companies in the HD Hyundai Construction Equipment Sector

2) Based on supplier ESG evaluation assessed by HD Hyundai Construction Equipment Sector

Shared Growth

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Mold and fixture support to strengthen supplier companies' component development capabilities	No.	Korea	249	194	33	16	145
Mold and fixture support to strengthen supplier companies' component development capabilities	KRW 100 million		241	428	15	61	352

Employee Status

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of employees	Persons	Global	9,301	9,685	1,139	3,940	4,606
No. of employees		Korea	4,761	4,951	888	1,316	2,747
No. of employees		Overseas	4,540	4,734	251	2,624	1,859

Employee Diversity

Metric Name	Unit	Scope	2022	2023				
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore	
Gender								
Male	Persons	Korea	4,361	4,458	744	1,186	2,528	
Female			400	493	144	130	219	
Disabled								
Disabled (executives)			0	0	0	0	0	
Disabled (senior managers)			22	19	5	9	5	
Disabled (managers)			43	40	0	8	32	
Veterans								
Veterans (executives)			1	1	0	0	1	
Veterans (senior managers)			45	49	7	19	23	
Veterans (managers)			94	92	3	26	63	

New hires

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
No. of new hires	Persons	Korea	370	434	148	119	167
By gender							
Male	Persons		325	354	109	97	148
Female			45	80	39	22	19
By age							
Under 30	Persons		218	304	93	76	135
30 to 49			137	126	51	43	32
50 and older			15	4	4	0	0

Employee Turnover Rate

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Voluntary Turnover Rate (By age)		Korea	-	2.66	3.28	4.30	1.67
Under 30	Percentage (%)		-	8.36	2.53	12.30	5.95
30 to 49			-	2.16	4.22	3.60	1.28
50 and older			-	0.89	0.83	0.80	0.93

Parental and Childcare Leaves

Metric Name	Unit	Scope	2022	2023				
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore	
No. of employees on parental leave (male)	Persons	Korea	172	127	16	41	70	
No. of employees on parental leave (female)			15	24	6	4	14	
No. of employees on childcare leave (male)			60	62	3	7	52	
No. of employees on childcare leave (female)			15	34	6	4	24	
No. of employees returned from parental leave (male)			22	49	4	4	41	
No. of employees returned from parental leave (female)			10	14	2	2	10	
Ratio of workers who continue to work for 12 months after childcare leave (male)			Percentage (%)	86	96	75	71	100
Ratio of workers who continue to work for 12 months after childcare leave (female)				100	100	100	100	100

Evaluation and Compensation

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Ratio of employees who received a personnel evaluation (total)	Percentage (%)	Korea	93	96	100	91	96
Ratio of employees who received a personnel evaluation (male)			93	96	100	93	97
Ratio of employees who received a personnel evaluation (female)			97	88	100	78	86

Talent Development

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Total number of trainees	Persons		4,761	4,738	888	1,130	2,720
Total training hours	Hours	Hours	100,617	141,661	32,062	27,997	81,602
Average training hours per person	Hours		21	30	37	25	30

Human rights

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
Ratio of human rights impact assessment (employees)			0	100	100	100	100
Ratio of risk identification based on human rights impact assessment (employees)	Percentage (%)		0	100	100	100	100
Ratio of actions taken to mitigate risk after identifying risk based on human rights impact assessment (employees)		Korea	0	100	100	100	100
No. of cases received regarding human rights related grievances	Cases		6	5	1	3	1
Ratio of handling human rights related grievances	Percentage (%)		100	100	100	100	100

Contribution to community

Metric Name	Unit	Scope	2022	2023			
				Total	HD Hyundai XiteSolution	HD Hyundai Construction Equipment	HD Hyundai Infracore
The number of employees' participation in CSR activities	No.		1,160	3,433	712	532	2,189
Hours of employees' participation in CSR activities	Hours	Korea	4,202	15,228	2,468	3,714	9,046
Total donation	KRW 100 million		14	40	6	4	30

About the Global Worksites

- Headquarters
- ▲ Production Subsidiary



Construction equipment production capacity:
Approximately **94,000** units per year

HD Hyundai XiteSolution:
Approximately **24,000** units per year
 HD Hyundai Construction Equipment:
Approximately 40,000 units per year
 HD Hyundai Infracore:
Approximately **30,000** per year

HD Hyundai XiteSolution
Production Subsidiaries
in **2** countries
(Korea, China)

HD Hyundai Construction
Equipment Production
Subsidiaries
in **4** countries
(Korea, China, India, Brazil)

HD Hyundai Infracore
Production Subsidiaries
in **3** countries
(Korea, China, Norway)

Stakeholder Engagement

Classification	Major Interests	Communication Channels
Employees	<ul style="list-style-type: none"> Labor practices (talent development and recruitment, employment, welfare) Organizational culture, human rights and diversity Education and capacity development Establishment of win-win labor-management relations 	In-house news, management status briefings, labor-management council meetings, employee satisfaction surveys, in-house reporters, grievance handling channels, etc.
Shareholders and Investors	<ul style="list-style-type: none"> Forming a consensus on industrial vision and growth engine Profitability improvement and dividend policy Sound governance structure 	General shareholders' meetings, management information disclosures, investment information website, conference participation, IR meetings, investor conferences, technology conferences
Partner companies	<ul style="list-style-type: none"> Building a foundation for coexistence and shared growth Supply chain ESG management Fair trade 	Global education center, council of partner companies, partner education, partner technology support, establishment of a shared growth fund
Customers	<ul style="list-style-type: none"> Providing products, services, and feedback based on periodic communication, product innovation Efforts to practice customer satisfaction management 	Field surveys, participation in exhibitions, VOC, call center, joint workshops, customer management system, digital showroom, blog, KakaoTalk channel, SNS channel, Happy Call, and dealer service education reinforcement to strengthen customer response
Local communities	<ul style="list-style-type: none"> Contributing to the growth and development of local communities through social contribution activities Eco-friendly products and production processes Improvement of worksites and their surrounding environment and pollution prevention 	Social contributions to the local community, meetings with residents, sisterhood agreements, 1% salary donation
Government, Local government	<ul style="list-style-type: none"> Compliance with laws and regulations Public-private partnership 	Participation in national projects, operation of cooperation programs
Media	<ul style="list-style-type: none"> Rapid and accurate information sharing 	Press releases, press conferences, regular meetings, work site visits (tours)
Industry	<ul style="list-style-type: none"> Strengthening industrial competitiveness through fair competition Contributing to solving social problems 	Korea Construction Equipment Manufacturers Association, Seoul Chamber of Commerce and Industry, UN Global Compact, TCFD, etc.

