

HD HYUNDAI OILBANK INTEGRATED REPORT 2023

ECO-FRIENDLY FUTURE WITH GREEN ENERGY

ABOUT THIS REPORT

Reporting Principles

This report was written based on the Global Reporting Initiative (GRI) standards, which are international guidelines for sustainability reporting. We also disclosed metrics required by the Sustainability Accounting Standards Board(SASB) industry standard and complied with the disclosure recommendations of the Task Force on Climate-related Financial Disclosure(TCFD). This report is an interactive PDF that allows navigation to related pages and shortcuts to relevant web pages.

Reporting Scope

The financial data in this report are consistent with the consolidated standards under Korean International Financial Reporting Standards (K-IFRS). Non-financial data includes the performance of HD Hyundai Oilbank and its affiliates—HD Hyundai Chemical, HD Hyundai and Shell Base Oil, HD Hyundai OCI, HD Hyundai Cosmo Petrochemical and HD Hyundai E&F. Any difference in the reporting scope and changes in data are indicated separately.

Report Verification

HD Hyundai Oilbank has received third-party verification from KMR (Korea Management Registrar) in accordance with the four principles of AA1000AP(2018)—materiality, responsiveness, inclusivity, and impact—to ensure the reliability of the report preparation process and the disclosed information. (Overall sustainability management, GHG emissions and energy usage are verified separately)





Reporting Period

This report was prepared based on the 2023 fiscal year (January 1, 2023 - December 31, 2023). The last three years' worth of data is included in the quantitative performance to identify trends, and qualitative performance includes data up to 2024 to ensure timeliness and significance.

How to use this report

This report is an interactive PDF that includes functions such as moving to related pages and shortcuts to related web pages.

Navigator Button

-  Go to cover page
-  Go to table of contents
-  Go to previous/next page
-  Go to link

Cover story

The cover reflects HD Hyundai Oilbank's commitment to a sustainable earth, where transparent governance, harmonious society, and diverse ecosystems coexist.



Contact

HD Hyundai Oilbank ESG Strategy Team
 E - M A I L | hdoesg@hd.com
 Head Office | 182, Pyeongshin 2-ro, Daesan-eup, Seosan-si, Chungcheongnam-do
 Seoul Office | HD Hyundai Global R&D Center 477, Bundangsuseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do

CONTENTS

INTRODUCTION

CEO Message	7
Company Overview	8
Business Model	9
Business Network	10

ENVIRONMENT

Response to Climate Change	20
Eco-friendly Businesses	26
Environmental Pollutant Management	38
Biodiversity	46

SUSTAINABILITY AT HD HYUNDAI OILBANK

ESG Management System	12
Double Materiality Assessment	14
2023 HIGHLIGHT	18

SOCIAL

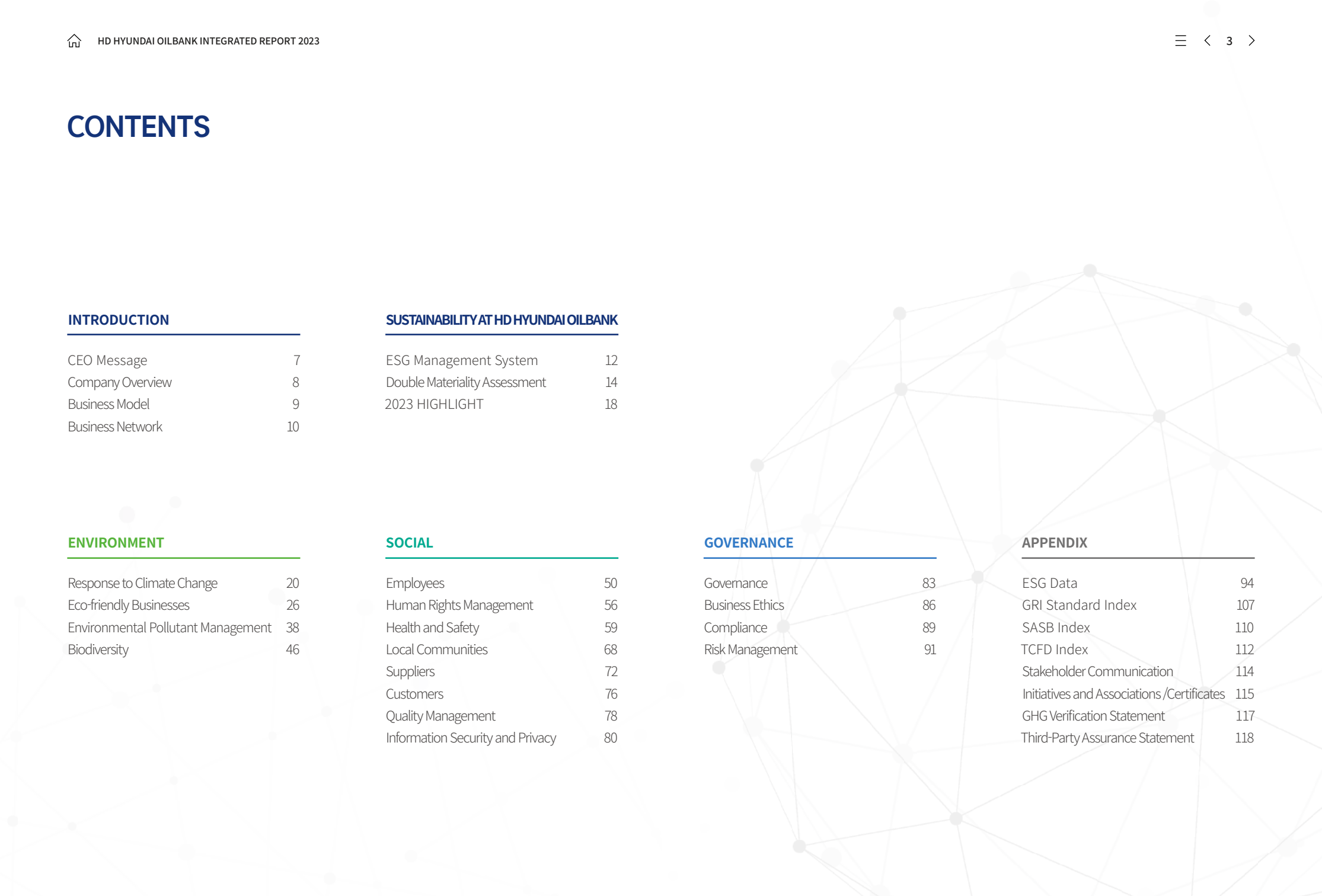
Employees	50
Human Rights Management	56
Health and Safety	59
Local Communities	68
Suppliers	72
Customers	76
Quality Management	78
Information Security and Privacy	80

GOVERNANCE

Governance	83
Business Ethics	86
Compliance	89
Risk Management	91

APPENDIX

ESG Data	94
GRI Standard Index	107
SASB Index	110
TCFD Index	112
Stakeholder Communication	114
Initiatives and Associations /Certificates	115
GHG Verification Statement	117
Third-Party Assurance Statement	118





NO.1 UPGRADING RATIO THROUGH INNOVATION

With the industry's the finest advancement facilities, HD Hyundai Oilbank focuses on the high-efficiency operation of the oil refining business while continuously striving to secure new competitiveness. Based on the cost competitiveness of the petrochemical business, we plan to expand our production capacity for high value-added, eco-friendly, and cutting-edge materials. Through these initiatives, we aim to take the lead in achieving our vision of an "Eco-Friendly Future with Green Energy."





THE FIRST CORPORATION TO SHARE 1% TO NEIGHBORS

In 2011, our employees came together to establish the HD Hyundai Oilbank 1% Nanum Foundation, donating 1% of their salaries to underprivileged neighbors. This initiative has now expanded to include all HD Hyundai affiliates, significantly increasing the scale of our charitable efforts. We remain committed to infusing the energy of hope and striving to create a healthy and sustainable society.





INTRODUCTION

CEO Message	07
Company Overview	08
Business Model	09
Business Network	10

CEO Message

As we celebrate our 60th anniversary, we are dedicated to making even greater strides toward becoming a sustainable energy company.



Dear respected stakeholders,

I would like to extend my deepest gratitude to all of your continued support and encouragement.

While 2023 marked the end of the COVID-19 pandemic and a return to normalcy, it was also a challenging year for businesses globally due to persistent low growth and high inflation trends.

The energy industry faces an unpredictable future and numerous challenges. The prolonged conflict between Russia and Ukraine, along with geopolitical issues in the Middle East, has caused international oil prices to rise, driving up costs for electricity and gas. This situation poses ongoing threats to both corporate and household economies.

Companies are tasked with navigating the energy paradigm shift and striving for carbon neutrality, all while the industrial ecosystem, including AI, evolves rapidly across sectors.

Despite these crises, we are dedicated to achieving qualitative growth in our existing oil refining and chemical businesses, as well as quantitative growth in eco-friendly sectors. As we celebrate our 60th anniversary, we aim to intensify our efforts to become a sustainable energy company.

We will focus on strengthening greenhouse gas reduction projects such as energy efficiency improvements, CCUS, and resource recycling. We plan to secure various bio-based raw materials to build an eco-friendly product value chain with biofuel and chemical products.

Additionally, we will expand business partnerships to develop a circular economy system for resources like waste plastics, tires, and lubricants.

Furthermore, we will carry out various activities to realize a 'Safety Well-being Company' through a dedicated safety and health organization, and we will implement systematic safety management by enhancing our safety, health, and environmental systems. We will also practice mutually beneficial management with our suppliers by establishing various support systems to enhance our ESG management.

Lastly, we will emphasize ethical management by strengthening our ethical management organization. Our goal is to be a 'company they want to do business with' for customers, a 'company they want to invest in' for shareholders, a 'company they want to work for' for employees, and a 'company that fulfills its responsibilities' for the government and local communities. By acquiring the Anti-Bribery Management Systems certification (ISO 37001), we will lead in internalizing ethics and compliance management, clearly stating our principles for preventing corruption.

In the meantime, HD Hyundai Oilbank has built a stable growth foundation for its petrochemical business based on its business competitiveness centered on refining. Throughout this process, we have always prioritized the environment and safety, striving to maximize the value for stakeholders such as employees, shareholders, the local community, and suppliers.

We will continue to be a trusted company that fulfills its social responsibilities by transparently disclosing our ESG performance, strategies, and plans each year.

We appreciate your continued interest and support.

Thank you.

June 2024

Youngmin Chu
HD Hyundai Oilbank CEO

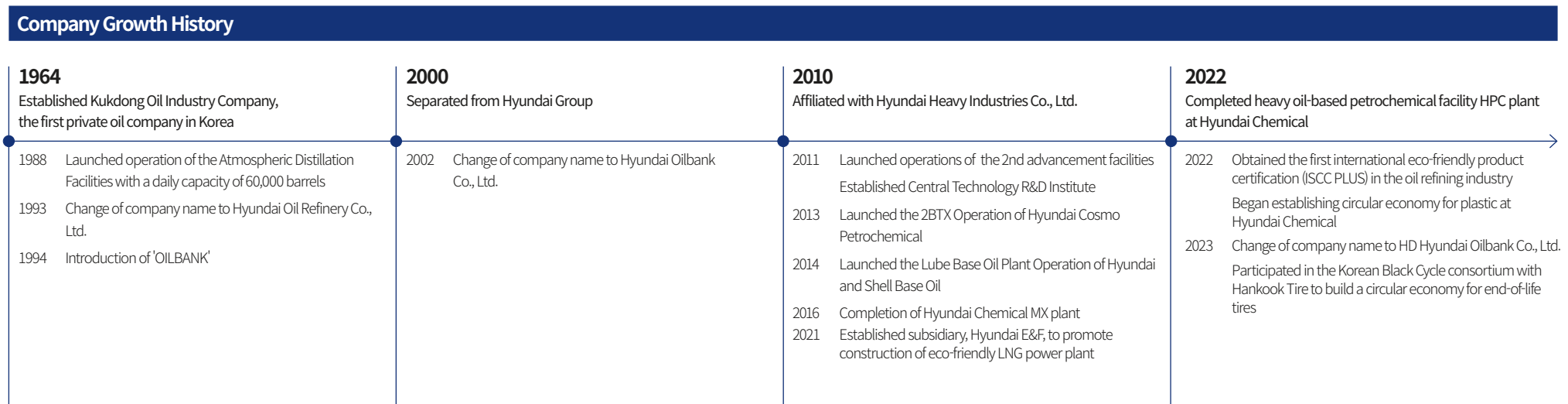
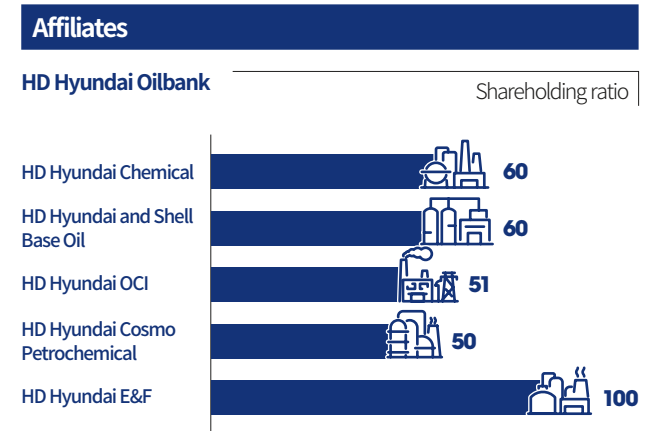


Company Overview

HD Hyundai Oilbank was established in 1964 as Korea's first private oil refining company, and we have about 2,500 of our gas stations offer exceptional services and reliable products. Currently, we are preparing to build an ecosystem for Carbon Capture and Utilization(CCU), blue hydrogen, and white bio businesses, and plan to expand into various eco-friendly businesses, such as waste plastic recycling, and the development of secondary battery materials. We will do our best to become a reliable company that fulfills its social responsibility and the corporate responsibility of generating profits.

Overview	
Name	HD Hyundai Oilbank Co., Ltd
CEO	Youngmin Chu
Date of Founding	November 19, 1964
Total Assets	KRW 19.669 trillion
Sales	KRW 28.1078 trillion
No. of Employees	(HD Hyundai Oilbank: 2,162, affiliates: 827) 2,989
Main Business Area	Refining petroleum and selling refined petroleum products
Petroleum Refining Capacity	690,000 barrels/day(*) (Upgrading rate 41.7%)

* Processing amount of HD Hyundai Chemical included



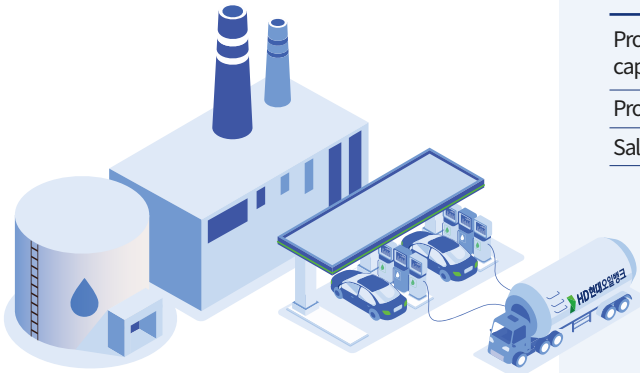
Business Model

HD Hyundai Oilbank

Petroleum refining and petroleum product business

Based on Korea's highest upgrading rate of 41.7%, we refine crude oil and produce high-quality petroleum products and naphtha, a raw material for petrochemical products, and operate approximately 2,500 gas stations and charging stations across the country.

Production capacity	520,000 barrels per day of crude oil
Products	Automobiles, aircraft and ship fuel, fuel for domestic and industrial uses
Sales	KRW 26.172 trillion (Separate standard)

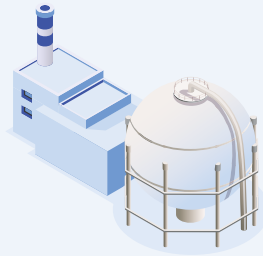


HD Hyundai Chemical

Petrochemical Business

The company produces petroleum, BTX, and polymer products using naphtha, a byproduct of the refinery process.

Production capacity	170,000 barrels of condensate per day and 850,000 tons of polyethylene (PE) and 500,000 tons of polypropylene (PP) per year
Products	Iso/diesel, aromatic (BTX, MX), polymer (PE, PP)
Sales	KRW 5.77 trillion

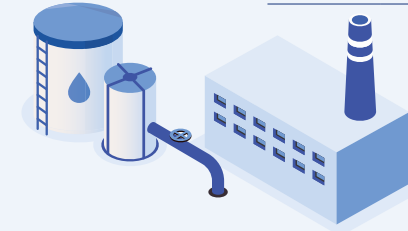


HD Hyundai Cosmo Petrochemical

Petrochemical Business

The company produces benzene, toluene, and xylene (BTX) using naphtha.

Production capacity	1.83 million tons of BTX per year
Products	BTX (benzene, paraxylene)
Sales	KRW 1.9879 trillion

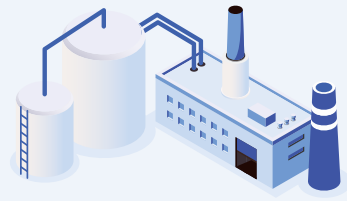


HD Hyundai and Shell Base Oil

Lube Base Oil Business

The company produces lube base oil using Hydrowax as a raw material.

Production capacity	1 million tons of lube base oil per year
Products	Lube base oil
Sales	KRW 1.3116 trillion

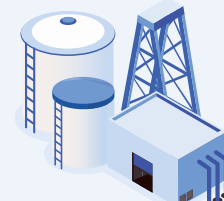


HD Hyundai OCI

Carbon Black Business

The company produces carbon black using coal tar and slurry oil and BTX using light oil.

Production capacity	150,000 tons of carbon black per year
Products	Carbon Black, BTX
Sales	KRW 336.4 billion



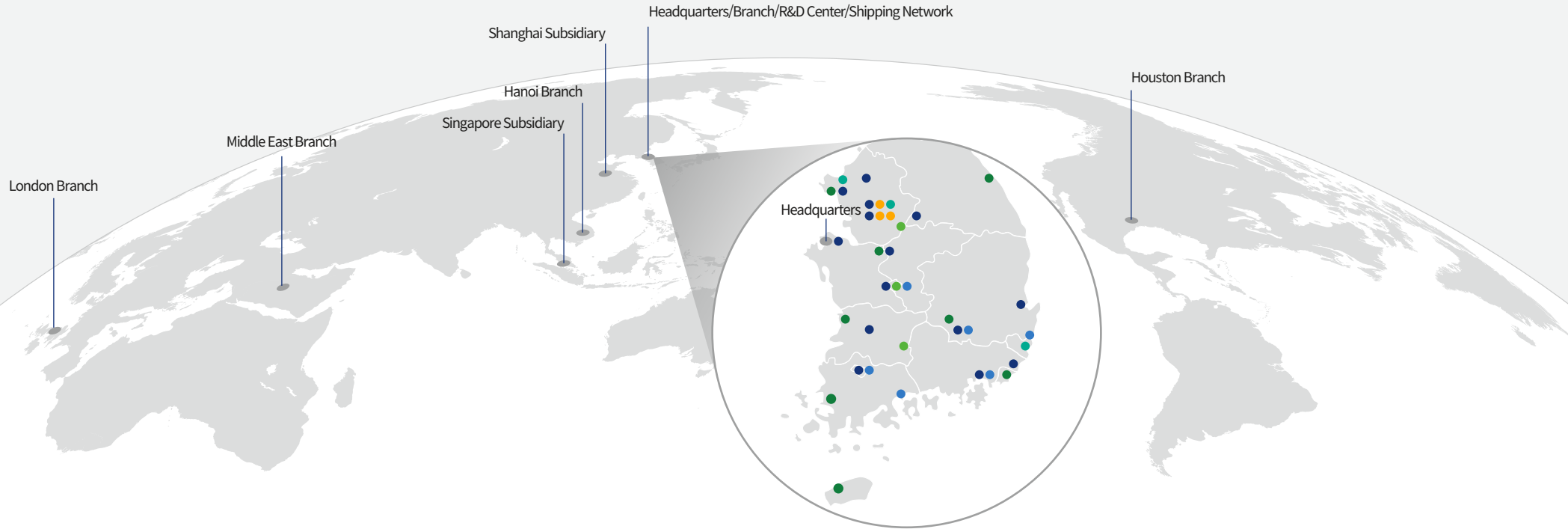
HD Hyundai E&F

LNG Power Generation Business

The company has obtained a collective energy business license and is in the process of constructing an LNG power plant.



Business Network



Overseas Network

Overseas Subsidiaries (2)	Singapore	HD Hyundai Oil Singapore Pte. Ltd.
	China	Hyundai Oilbank Shanghai Co., Ltd.
Overseas Branches (4)	Middle East	HD Hyundai Oilbank Middle East Branch
	Vietnam	HD Hyundai Oilbank Hanoi Branch
	United Kingdom	HD Hyundai Oilbank London Branch
	United States	HD Hyundai Oilbank Houston Branch

Domestic Network

Branches (16)	Seoul	Seoul Branch, Northern Directly-managed Branch
	Capital Region	Incheon Branch, Gyeonggi Northern Branch, Gyeonggi Southern Branch, Central Directly-managed Branch
	Yeongnam Region	Busan Branch, Gyeongnam Branch, Daegu/Gyeongbuk Branch
	Chungcheong Region	Daejeon branch, Chungnam Branch, Chungbuk Branch, Southern Directly-managed Branch
	Honam Region	Gwangju/Jeonnam Branch, Jeonbuk Branch
	Gangwon Region	Gangwon Branch

Shipping Network	● Distribution Centers (8)	Incheon Distribution Center, Ogye Distribution Center, Chungcheong Distribution Center, Mokpo Distribution Center, Gunsan Distribution Center, Daegu Distribution Center, Busan Distribution Center, Jeju Distribution Center
	● Lubricant Distribution Centers (3)	Metropolitan Lubricant Distribution Center, Chungcheong Lubricant Distribution Center, Honam Lubricant Distribution Center
	● Oil Storage Centers (3)	Seongnam Oil Storage Center, Goyang Oil Storage Center, Ulsan New Port Oil Storage Center
	● Shipping Centers (6)	Daejeon Shipping Center, Yeosu Shipping Center, Gwangju Shipping Center, Changwon Shipping Center, Ulsan Shipping Center, Daegu Shipping Center
● R&D Center (3)	Central Technology R&D Institute, Lubricant Research Institute, Pangyo Quality Research Institute	



SUSTAINABILITY AT HD HYUNDAI OILBANK

ESG Management System	12
Double Materiality Assessment	14
2023 HIGHLIGHT	18

ESG Management System

ESG Vision System

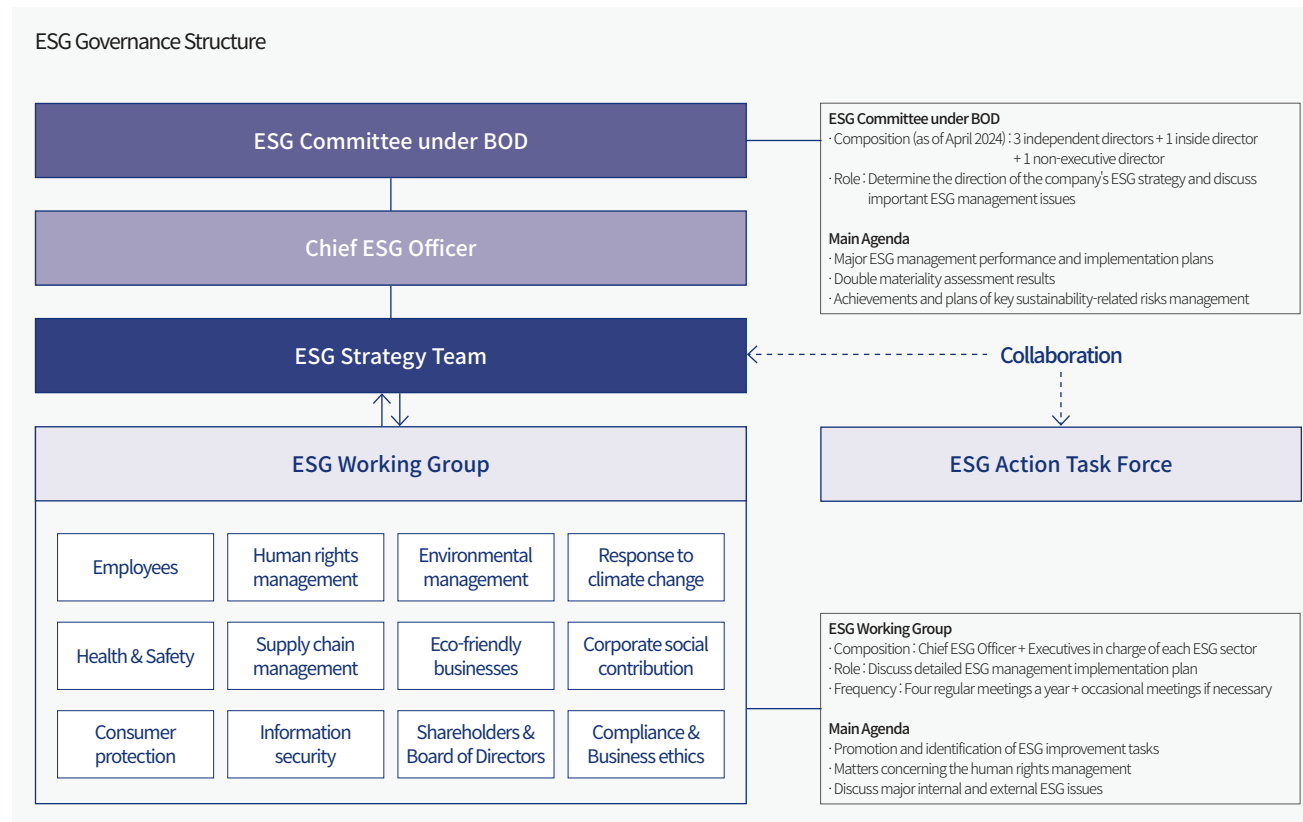
HD Hyundai Oilbank has set Green Growth, Green Value, Green Leadership as our strategic goal for implementing ESG management—under the motto 'Eco-Friendly Future with Green Energy.'



ESG Management System

ESG Governance

HD Hyundai Oilbank has launched an ESG Committee under the Board of Directors in June 2021 to determine the company's ESG strategy and discuss important matters related to the company's ESG management. As a team solely dedicated to ESG-related matters, the ESG Strategy Team operates an ESG Working Group led by the Chief ESG Officer to implement ESG strategies and directions. The Chief ESG Officer and executives from each ESG sector attend the meetings to monitor the company's overall ESG activities and ensure the smooth execution of improvement tasks.



ESG Performance Management System

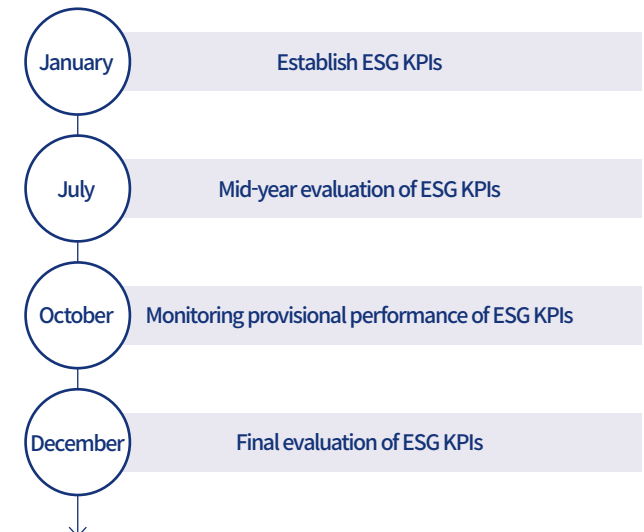
Implementation of ESG KPIs

We have integrated the ESG category into the KPIs of executives since 2023 to promote responsible management and enhance our ESG practices. Individual ESG performance indicators are assigned based on their responsibilities and organizational characteristics, and management performance is monitored frequently.

Linking ESG Performance to Compensation

The established ESG KPIs are tied to compensation based on goal achievement performance. To ensure the effective operation of the ESG KPI system, we intend to consistently refine it by integrating evolving ESG systems and trends into the KPI Pool.

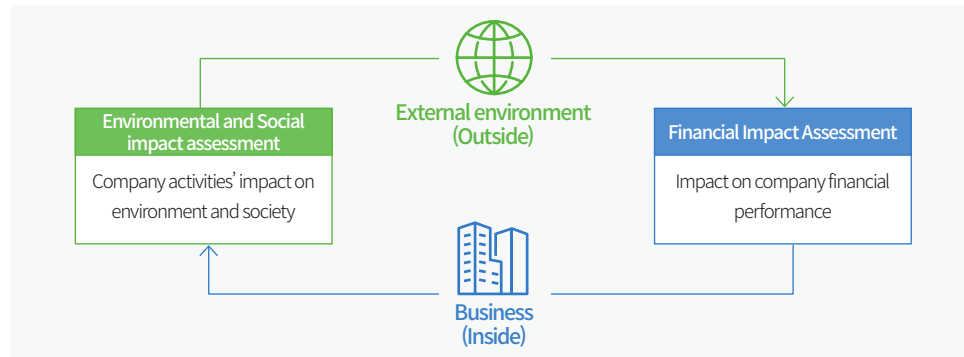
ESG Performance Evaluation Process



Double Materiality Assessment

HD Hyundai Oilbank conducted a double materiality assessment to identify material ESG issues. By defining and evaluating the environmental, social, and financial impacts of each ESG issue, we selected the top nine issues with the highest impact on the company as material issues.

Double Materiality Assessment Overview



We conducted a double materiality assessment, reflecting the impact assessment of the Global Reporting Initiative Standards (GRI) 2021 and the European Sustainability Reporting Standards (ESRS). This assessment involved identifying and evaluating the environmental and social impact (Inside-Out) of HD Hyundai Oilbank's material activities, as well as the financial impact (Outside-In) that may affect the company.

Double Materiality Assessment Process

Process	Understand the organization	Identify the impact	Conduct assessment	Select material issues
Description	Understanding the company's business, including business model and related activities	Identifying risks and opportunities associated with a company and identifying their impact.	Evaluating the identified impact of an issue on internal and external stakeholders (Assessment period : Jan 2024)	Determining the priorities of material issues and reporting them to the highest decision-making body
Details	<ol style="list-style-type: none"> Check the issue pool (Long-list) Draw up priority issues (Short-list) <ul style="list-style-type: none"> Issues in the industry Global Initiatives Internal agenda 	<ol style="list-style-type: none"> Define risks and opportunities by issue <ul style="list-style-type: none"> Check HDO's related activities and external risk and opportunity factors for each ESG issue Identify the impact <ul style="list-style-type: none"> Identify environmental, social and financial impacts 	<ol style="list-style-type: none"> Conduct environmental and social impact assessment (Inside-Out) Conduct a financial impact assessment (Outside-In) 	<ol style="list-style-type: none"> Prioritization of material issues based on impact assessment results Report to the highest decision-making body (Board of Directors)
Outcomes	· Priority issues	· Environmental and Social impact · Financial impact	· Impact assessment results and rankings	· Reporting to the board

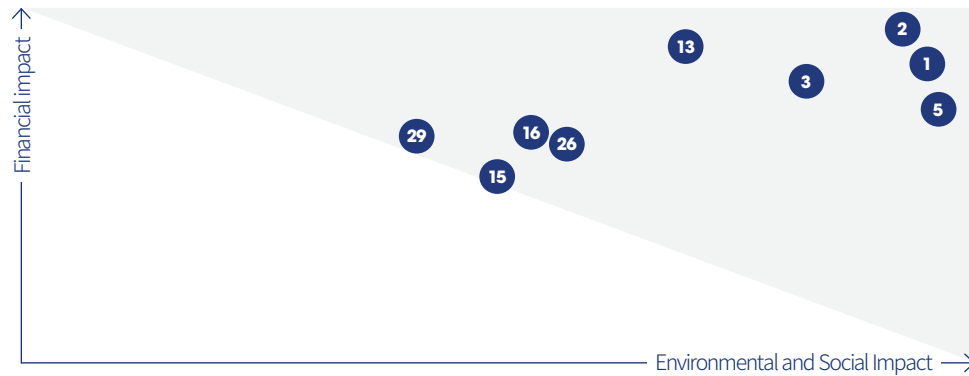
Double Materiality Assessment

Double Materiality Assessment Results

From a pool of 30 issues, nine material issues highly relevant to our company were identified through a simple scoring process. This process considered major issues in the same industry, requirements for evaluation and disclosure initiatives, and internal data.

(●●● High / ●●○ Middle / ●○○ Low)

Double Materiality Matrix



Issue Pool (Long-list)

No.	Issue	No.	Issue
1	Environmental risk management	16	Supplier ESG management and shared growth
2	Response to climate change	17	Information security and privacy
3	Eco-friendly business development	18	Social contribution activities
4	Environmental impact assessment of products and services	19	Mutual development with communities
5	Environmental pollutant management	20	Product quality and safety
6	Hazardous chemical discharge management	21	Customer satisfaction
7	Biodiversity conservation	22	Compliance with fair trade laws and regulations
8	Waste discharge management and recycling	23	Business ethics activities
9	Water management and reuse	24	Tax transparency
10	Sound labor relations	25	Public policy response activities
11	Securing and developing human resources	26	Stakeholder engagement and communication
12	Employee benefits and welfare	27	Establish and operate a responsible BOD
13	Practice health and safety management and prevent accidents	28	Protecting the rights of shareholders
14	Diversity and equal opportunity	29	Sustainability-related risk management at the board level
15	Respect for human rights	30	Economic value creation and distribution

Ranking	Category	Material Issues	Environmental and Social Impact	Financial Impact	UN SDGs	GRI Standards	Page
1	E	Response to climate change	●●●	●●●		201-2, 305-1-5	20-25, 95, 112-113
2	E	Environmental risk management	●●●	●●●		413-2	44, 92
3	E	Eco-friendly business development	●●●	●●●		-	26-37
4	S	Practice health and safety management and prevent accidents	●●○	●●●		403	51, 59-67, 92, 103
5	E	Environmental pollutant management	●●●	●●○		303, 305-7, 306	38-43, 96-99
6	G	Stakeholder engagement and communication	●●○	●●○		-	114
7	S	Supplier ESG management and shared growth	●●○	●●○		308, 414	72-75
8	G	Sustainability-related risk management at the board level	●●○	●●○		-	13, 91-92
9	S	Respect for human rights	●●○	●●○		405-411	56-58, 105

Double Materiality Assessment

Material issues refer to those issues that have a high level of stakeholder interest or significant potential impact on the economy, environment, or society due to the company's business activities. At HD Hyundai Oilbank, we focus on mitigating potential negative impacts associated with the material issues, while maximizing positive impacts.

Double Materiality Assessment Results

We analyzed the environmental and social impacts that may be affected by our company's activities related to the nine selected material issues from the materiality assessment, as well as their potential financial impact on the company. (●●● High / ●●○ Middle / ●○○ Low)

No.	Material Issues	Environmental and Social Impact			Financial Impact			Management Measure
		Main Impact	Attribute	Impact level	Main Impact	Attribute	Impact level	
1	Response to climate change	Acceleration of climate change due to continuous GHG emissions	negative - actual	●●●	Increase in investment costs for improving processes, mechanical facilities, and introducing eco-friendly power plants and technologies	Technology	●●●	<ul style="list-style-type: none"> Reduce energy consumption and improve efficiency Promote of low-carbon power generation projects Expand CO₂ gas sales business Review the introduction of CCUS technology
		Contribution to reducing GHG emissions by introducing low-carbon technology and reducing energy use	positive - actual	●●●	Increase in financial burden due to provisioning liabilities and purchasing carbon credits in case of failure to reduce GHG emissions	Laws and regulations	●●●	
2	Environmental risk management	Environmental pollution and negative impacts on the health of residents occur due to insufficient environmental risk management	negative - actual	●●●	Decrease in sales and operating profit due to sanctions (restrictions on sales of products or services or suspension of business activities) in case of violation of environmental laws and regulations (lawsuits and fines)	Laws and regulations	●●●	<ul style="list-style-type: none"> Comply with environmental laws Comply with pollutant emission standards Prevent and respond to environmental accidents
3	Eco-friendly business development	Contribution to reducing carbon and pollutant emissions through new eco-friendly businesses such as supplying low-carbon fuels and establishing a circular economy system	positive - actual	●●●	Increase in R&D costs and facility investment costs to utilize green energy resources and comply with environmental regulations	Technology	●●●	<ul style="list-style-type: none"> Strengthen eco-friendly businesses Bio, resource recycling, hydrogen, eco-friendly chemicals and materials, EV charging business
					Creation of future cash flow due to increased demand for eco-friendly products through the introduction of new products and market entry	Market	●●○	
4	Practice health and safety management and prevent accidents	Physical and psychological damage to employees and suppliers occurs in case of a safety accident	negative - potential	●●○	Increase in safety management costs and legal (dispute and punishment) costs due to the strengthening of health and safety regulations such as the Serious Accidents Punishment Act.	Laws and regulations	●●●	<ul style="list-style-type: none"> Conduct health and safety management activities Establish a management safety culture, strengthen safety capabilities, and internalize process safety management
5	Environmental pollutant management	Negative impact on the health of employees and local residents and the ecosystem occurs due to pollution caused by pollutant emissions	negative - actual	●●●	Incurrence of costs for compensating victims and restoring the environment in case of damage occurring due to environmental pollution	Laws and regulations	●●●	<ul style="list-style-type: none"> Prepare response strategies by area Conduct environmental pollutant management
		Minimizing environmental and local community impact through the establishment of sector-specific strategies to address environmental pollutants	positive - actual	●●●	Decrease in sales and operating profit due to the spread of negative image resulting from excessive discharge of environmental pollutants	Reputation	●●○	

Double Materiality Assessment

Material issues refer to those issues that have a high level of stakeholder interest or significant potential impact on the economy, environment, or society due to the company's business activities. At HD Hyundai Oilbank, we focus on mitigating potential negative impacts associated with the material issues, while maximizing positive impacts.

Double Materiality Assessment Results

We analyzed the environmental and social impacts that may be affected by our company's activities related to the nine selected material issues from the materiality assessment, as well as their potential financial impact on the company. (●●● High/●●○ Middle/●○○ Low)

No.	Material Issues	Environmental and Social Impact			Financial Impact			Management Measure
		Main Impact	Attribute	Impact level	Main Impact	Attribute	Impact level	
6	Stakeholder engagement and communication	Expansion of opportunities for cooperation with various stakeholders through more engagement	positive - actual	●●○	Increase in sales and operating profits by improving trust (reputation) for long-term stability and growth in sustainable management with strengthened communication with stakeholders	Reputation	●●○	· Operate communication channels for major stakeholders
7	Supplier ESG management and shared growth	Environmental and safety risks near the suppliers' business site occur due to the suppliers' lack of ESG management capabilities	negative - potential	●●○	Increase in costs for establishing and operating a supplier management system (regular evaluation, monitoring, etc.)	Technology	●●○	· Strengthen and support suppliers' ESG management
		Reduction of suppliers' ESG risks through sharing technology and related knowledge	positive - potential	●●○	Creation of stable operating cash flow by establishing a sustainable value chain through technical and training support for suppliers	Market	●●○	· Establish supplier code of conduct, provide ESG consulting, and training support
8	Sustainability-related risk management at the board level	Establishment of sustainable society by strengthening sustainability-related risk management of the highest decision-making body	positive - potential	●●○	Securing investment funds by increasing corporate value through sustainable management and responsible business practices	Market	●●○	· Submit sustainability-related agenda to the ESG Committee under the board
9	Respect for human rights	Leading to human rights violations among employees and suppliers due to the absence of human rights activities	negative - potential	●●○	Decrease in sales and operating profit due to the creation of a negative image if a company neglects to respect human rights and manage diversity and inclusion policies	Reputation	●●○	· Strengthen human rights management activities · Enhance employee diversity, conduct human rights impact assessments, and operate grievance handling channels

2023 HIGHLIGHT



Supplier ESG management support

ESG diagnosis for 165 companies
Consulting support for 18 companies

Advanced human rights management

Employee diversity and human rights training
Human rights due diligence and improvement tasks



Launched eco-friendly business

Acquired sustainability certification such as ISCC PLUS/EU
Completed biodiesel plant with annual capacity of 130,000 tons



Established biodiversity management system

Established biodiversity policy
Conducted impact assessments at key business sites



Strengthened ESG governance

Operated ESG KPIs
Managed ESG key issues at the board level



Established a virtuous cycle ecosystem for waste resources

Processed 14,000 tons of waste plastic such as waste vinyl, waste cooking oil, waste tires in 2023



Promoted ISO 37001 anti-bribery management systems certification

ENVIRONMENT

GREEN GROWTH WITH ECO-FRIENDLY BUSINESS

Response to Climate Change	20
Eco-friendly Businesses	26
Environmental Pollutant Management	38
Biodiversity	46

Response to Climate Change

Governance

Organizational Structure

Climate Change Response System

HD Hyundai Oilbank discusses major ESG issues, including climate change, and determines strategic directions in the ESG Committee under the Board of Directors.

To effectively respond to global climate change issues, we operate a GHG management organization to implement emissions reduction projects, striving to strengthen our expertise and execution capabilities.

With a commitment to responding to climate change, the organization's key performance indicators (KPIs) include the GHG and energy intensity, which represents GHG emissions or energy consumption per volume of crude oil refined, to regularly check performance against goals and derive results.

FOCUS ON

ESG 7 Challenge

We strive to promote ESG through various campaigns, such as the ESG 7 Challenge campaign, aimed at carrying out and certifying ESG activities that can be practiced in daily life. This allows employees to naturally experience and understand ESG principles. As part of this campaign, employees who completed all seven missions, including eliminating leftover food, separating recyclables, using tumblers and mugs, holding paperless meetings, and reading ESG-related materials, were provided with a small amount of zero waste products. Teams in which all members participated were awarded The ESG Together Award.



Strategy

GHG Reduction Plan

Climate Change Response Strategies

We are promoting reduction measures to achieve carbon neutrality by 2050, selecting energy efficiency improvement, CCUS, renewable and eco-friendly energy, resource recycling, and carbon offset projects as major carbon reduction areas. We plan to establish standards to quantitatively evaluate risk, feasibility, and economic effectiveness for detailed reduction measures of each area. We will derive business priorities and implement the Action Plan based on this.

GHG Reduction Measures

Item	Description
Energy Efficiency	<ul style="list-style-type: none"> · Optimize fuel and utility usage · Improve through periodic energy diagnostics · Install high-efficiency equipment
CCUS	<ul style="list-style-type: none"> · Incorporate CO₂ conversion and develop technology · CCS Project · Expand CO₂ gas sales business
Eco-friendly Energy	<ul style="list-style-type: none"> · Shift to low-carbon fuels · Use of hydrogen and ammonia · Use of renewable energy
Recycling	<ul style="list-style-type: none"> · Promote the use of plastic pyrolysis oil · Non-edible resource energy utilization · Waste lubricating oil recycling
Other Reduction Projects	<ul style="list-style-type: none"> · Carbon offset projects

Establishment of Energy Intensity Improvement Goals

We have set a goal to improve energy intensity by 1% per year as part of the Korea Energy Efficiency Partnership 30 (KEEP 30). To achieve the goal, we carried out various energy-saving efforts such as the #2 Crude Distillation Unit (CDU) heat exchange network improvement project, cleaning of all heat exchange facilities, and introducing Flare Gas Recovery Unit (FGRU) during the regular maintenance period in 2023. As a result, we achieved a 2.1% improvement in energy intensity compared to 2022, exceeding the 1.0% energy intensity improvement target we set for 2023. We plan to promote various energy-saving projects in 2024 and achieve a 5.0% cumulative improvement in energy intensity by 2027.

Response to Climate Change

Strategy

GHG Reduction Projects

Reduce Energy Consumption and Improve Efficiency

We continuously identify energy-saving opportunities by conducting plant energy optimization diagnostics to enhance energy efficiency. In 2023, we conducted a detailed review of previously discovered energy-saving projects, resulting in savings of 23,000 TOE/year, such as improvements to the heat exchange network for the atmospheric distillation process, recovery of waste heat from major towers, replacement of heat source used in heat exchangers, and energy optimization through operational adjustments.

Improving Process Efficiency

In April and October 2023, the #1 Crude Distillation Unit(CDU) heat exchange network cleaning work was carried out twice to improve process efficiency. During the T/A (Turnaround) period, the aging plate heat exchanger of the #2 CDU process was replaced. This improved process performance, including increasing the coil inlet temperature by 40°C, with an expected utility reduction effect of approximately KRW 22 billion per year.

Furthermore, the fuel-saving idea using heat exchangers, derived through the 2021 Heavy Oil Upgrade(HOU) optimization diagnosis, was applied during the regular maintenance period in 2023. This is expected to reduce GHG by about 6,600 tons per year by recovering waste heat emitted through air coolers and reducing heating fuel use.

Energy Consumption Reduction and Optimization

To optimize energy production and consumption, we operate the Hydrogen Manufacturing Unit (HMU) process by adjusting operation variables such as Steam to Carbon Ratio. Naphtha generated from the Residue De-Sulfurization (RDS) and Mild Hydrocracker (MHC) processes is reprocessed at the #2 CDU, with kerosene within the naphtha separated and the amount of reprocessing reduced, resulting in energy savings.

In 2023, we initiated an efficiency diagnosis and improvement project by conducting an optimization diagnosis of the cooling water system. We are reducing electricity costs by adjusting the operation of the cooling tower circulation pump and plan to further reduce it through the introduction of magnetic couplings and the installation of high-efficiency fan to cooling towers in 2024.

Energy Saving Activities Through the Oil Refining Industry E-innovation Technology Council

In March 2024, we signed the Oil Refining Industry E-Innovation Technology Council Agreement hosted by the Korea Energy Agency, aiming to reduce energy consumption and GHG emissions by sharing and disseminating energy innovation technologies within the oil refining industry.





Response to Climate Change

Strategy

GHG Reduction Projects

Reduce Energy Consumption and Improve Efficiency

HD HYUNDAI CHEMICAL

Factory Equipment Replacement and Installation

HD Hyundai Chemical reduced the ratio of steam input to feed by replacing the Critical Flow Nozzle (CFN) of the #1 Ethylene Cracking Unit(ECU) process furnace of the Heavy feed Petrochemical Complex (HPC), a significant petrochemical facility, resulting in a reduction of carbon emissions by 80,000 tons per year. The CFN is a facility that distributes the same flow rate to all tubes in the #1 ECU heating furnace, requiring a supply of more than the minimum flow rate to maintain the design differential pressure. By adjusting the dilution steam ratio compared to the existing feed of the 3 units of CFN for naphtha, ultra-high pressure steam, and fuel usage were reduced. We also installed a new AR heat exchanger at the MX plant to handle atmospheric residue (AR) production due to additional input of light or heavy oil, reducing GHG emissions by 2,250 tons per year. This installation resolved rundown temperature constraints and reduced the use of high-pressure and medium-pressure steam.

Moreover, by installing a new heat exchanger for cooling water waste heat recovery at the HPC plant, we aim to reduce the amount of low-pressure steam used in the deaerator by preheating the supply temperature of high-purity industrial water, with the goal of reducing GHG by 23,000 tons per year.

HD HYUNDAI OCI

Process Improvement and Waste Heat Recovery System Installation

In May 2023, HD Hyundai OCI reduced GHG emissions and waste generation by improving the cooling process of the carcass reactor. By changing the cooling water in the reactor injector to process water and utilizing the heated process water as boiler inflow water, emissions were reduced by approximately 1,296 tons over seven months, while also reducing waste generation by avoiding damage to the raw material injector.

Furthermore, by installing a system to recover waste heat from circulating water of desulfurization tower in 2020, we save about 3,824 tons of GHG per year by increasing the temperature of Boiler Feed Water (BFW) by 10°C. In June 2023, an automatic filter device was installed in the desulfurization circulating water piping in front of the heat exchanger to remove impurities and improve heat exchange efficiency. This resulted in an increase in the BFW preheating temperature to 66°C, saving an additional 9,942 tons of GHG per year.

HD HYUNDAI AND SHELL BASE OIL

Thermal Efficiency Improvement Project

HD Hyundai and Shell Base Oil carried out a project to recover waste heat and improve thermal efficiency using a new heat exchanger. As a result, we were able to reduce the fuel used in the heating furnace by 227 Nm³ per hour, which is equivalent to a reduction in GHG emissions of approximately 200 tons per month.

HD HYUNDAI COSMO PETROCHEMICAL

Catalyst Replacement and Plant Operations Stabilization

HD Hyundai Cosmo Petrochemical replaced the catalyst and introduced a new auxiliary catalyst in the #2 Naphtha Hydrotreating Unit(NHT) reactor during the major maintenance period in August 2023. This catalyst replacement and injection increased energy efficiency for fuel gas and reduced annual GHG emissions by approximately 1,429 tons.

By establishing a process automation system to monitor the energy usage required for the entire process, we are continuously identifying and reviewing areas where energy efficiency can be improved. Furthermore, we are pursuing a project to stabilize the operation of the separation tower following the Para-Xylene Plus(PXP) process in 2023, achieving a reduction in GHG emissions of approximately 19,000 tons compared to 2022.

Response to Climate Change

Strategy

GHG Reduction Projects

Eco-friendly plant operation

Reviewing the Introduction of Turquoise Hydrogen Manufacturing Technology

We produce hydrogen through Steam Methane Reforming(SMR) technology and inject it into the hydrodesulfurization process. A hydrogen manufacturing plant using SMR technology emits a significant amount of GHG. As part of our efforts to reduce this, we are considering introducing a turquoise hydrogen manufacturing plant using Pulse Methane Pyrolysis (PMP) technology to reduce GHG emissions.

This process shows 10% of GHG emissions compared to the existing SMR process. The carbon black produced instead of CO₂ is transformed into a high-value-added product through HD Hyundai OCI, making the process both economical and environmentally beneficial.

Eco-Friendly Fuel for FBC Boiler

After reviewing the use of eco-friendly fuel in Fluidized Bed Combustion (FBC) boilers, which emit the most GHG among the process, we have been using sewage sludge fuel coal and wood pellets since December 2023. Following the test, we plan to gradually increase the input ratio through soundness inspection, contributing to reducing GHG emissions.






HD HYUNDAI E&F

Eco-friendly LNG Power Plant

HD Hyundai E&F is promoting the construction of a low-carbon power plant using LNG as fuel. With a goal of completion by October 2025, orders for main equipment such as gas turbines and steam turbines and the selection of an EPC company were completed in 2023. Detailed design and environmental impact assessments were also finalized.

A resident information session and public hearing were held to gather feedback on the draft 2023 environmental impact assessment report. After incorporating residents' opinions, a main plan evaluation form was prepared, submitted to the Ministry of Environment, and subsequently reviewed and approved by the Ministry of Trade, Industry and Energy. Construction began in March 2024. By commencing commercial operations in 2026, we expect to reduce GHG emissions by up to approximately 57% compared to fossil fuel-based power generation.

Environmental Impact Assessment Items

Item	Description
Natural environment 	· Marine life
Air environment 	· Weather · Air quality · Odor · GHG
Water environment 	· Water quality · Marine environment
Land environment 	· Land use · Soil
Living environment 	· Eco-friendly circular economy · Noise and vibration · Scenery · Hygiene and public health

CCUS Business

Review the introduction of CCUS technology

We are also reviewing the introduction of Carbon Capture, Utilization, and Storage (CCUS) technology to reduce carbon emissions at our business sites.

We aim to continuously expand our business scope and strengthen our eco-friendly business portfolio. This includes initiatives such as capturing and selling CO₂ generated in the hydrogen manufacturing process(captured 123,000 tons out of 867,000 tons of CO₂ emitted in 2022, captured 149,000 tons out of 843,000 tons of CO₂ emitted in 2023), and exploring technologies for carbon capture and transfer to overseas storage facilities.

Research and Development of Carbon Dioxide Utilization Technology

We are developing technology that uses carbon dioxide generated at business sites as a raw material for producing low-carbon materials. Among these initiatives, we have established precipitated calcium carbonate (PCC) manufacturing technology using process by-products and are conducting empirical research and exploring high-value-added applications with the goal of commercialization. We are also investigating material technologies related to separation and capture that are part of the carbon dioxide utilization pretreatment process. Based on this, we plan to build a carbon neutral solution model that can create synergy with HD Hyundai Oilbank's business.

Response to Climate Change

Strategy

GHG Reduction Projects

Carbon Emissions Reduction From Crude Oil Carriers

We import all of our crude oil via ships, with approximately 55% of total imports brought in through long-term contracts for 10 private vessels. Very Large Crude Oil Carriers (VLCCs) are utilized to load 2 million barrels of crude oil at a time. While using VLCCs is essential to maximize transportation economics, they consume an average of 55 tons/day of heavy marine fuel oil. With the International Maritime Organization (IMO) declaring net zero by 2050 to reduce shipping carbon emissions and beginning to regulate the carbon emissions of all ships, we are putting efforts to mitigate GHG emissions in the maritime transportation process.

HD Hyundai Oilbank-HD Hyundai Marine Solution OceanWise Demonstration MOU

We plan to introduce HD Hyundai Marine Solution's OceanWise route optimization solution to minimize carbon emissions from crude oil import vessels during the crude oil import process. This solution minimizes fuel consumption by optimizing the ship's route based on ocean currents, sea winds, weather, and historical position data. We signed an MOU with HD Hyundai Marine Solution in 2024 and are currently participating in a demonstration project to advance the solution.

Hull Robot Cleaning

Parasitic organisms on ships reduce the fuel efficiency by roughening the surfaces of ships designed for optimal fuel efficiency. Therefore, in 2023, we implemented hull robot cleaning for eight out of 10 ships in the anchorage by attaching a robot cleaner to the hull to remove barnacles attached to the surface. Through this, there was an effect of saving 1 to 3 tons of high sulfur fuel oil (HSFO) per day per VLCC. Calculating with eight VLCCs, fuel usage can be reduced by approximately 4,000 to 7,000 tons per year, approximately 3 to 5% of reduction in fuel consumption compared to the current levels. We plan to continuously identify and implement fuel-saving measures in collaboration with shipowners, who are the regulated parties, to manage carbon emissions as a dedicated shipper.



HD Hyundai Oilbank-HD Hyundai Marine Solution OceanWise Demonstration MOU

Risk Management

Managing Climate Change

GHG Risk Management

As worldwide regulations for GHG emissions become more stringent, they are increasingly recognized as a cost. When making investment decisions, we check compliance with ESG-related regulations to minimize risks associated with GHG emissions and consider emission costs when assessing profitability.

Establishing GHG Emissions Monitoring System

We are constructing our own big data platform through the EQR(Energy Quantum Revolution)-180 Project in collaboration with Palantir Technologies, aiming to innovate productivity based on big data, establish an optimal decision-making structure, and transform the way we work throughout the company's operations.

At the same time, we are carrying out the Carbon-Wise project in connection with EQR-180, aiming to manage the carbon life cycle by securing visibility and transparency of monthly carbon emissions monitoring across company, factory, process, and product levels. In the future, we expect it will provide a starting point for real-time decision-making by monitoring and visualizing changes in carbon emissions, and to be used in a variety of ways to respond to climate change, such as obtaining eco-friendly product certifications, providing environmental impact information for customers, and conducting Life Cycle Assessments (LCAs).

Emissions Trading System

HD Hyundai Oilbank has been designated as a participant in Korea's Emissions Trading System (ETS), a cap-and-trade system aimed at reaching the national GHG reduction target. To abide by the emissions limit, we manage our GHG emissions through regular monitoring and by developing ways to secure additional emission allowances. We actively participate in emissions trading to support the activation of the ETS and secure additional allowances. Despite the anticipated significant reduction in emissions allowances due to the future tightening of the national GHG reduction target, we remain committed to reducing our GHG emissions by adhering to our GHG emission reduction plans.

Response to Climate Change

Risk Management

Managing Climate Change

Managing Environmental Impact of Our Products

Life Cycle Assessment (LCA)

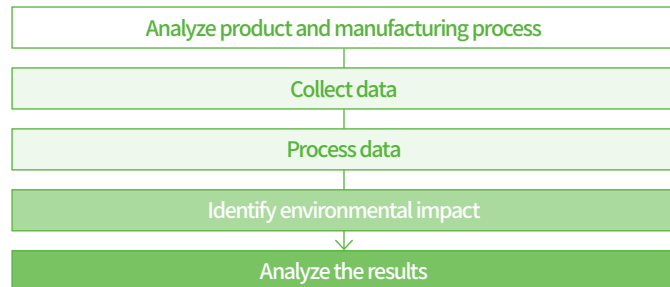
HD Hyundai Oilbank and some of our affiliates are conducting Life Cycle Assessment (LCA) to quantitatively analyze and comprehensively manage the environmental impact of our products.

LCA is a method that quantitatively analyzes the environmental impact occurring throughout the entire production process of a product based on input and output data. This enables a comprehensive management system for various areas such as carbon emissions, water, and resources for each product. We have obtained International Sustainability and Carbon Certification (ISCC) by calculating the carbon emissions of biofuels and are striving to determine the environmental impact of all products provided to customers.

For lubricant products, we plan to expand the scope of life cycle assessment starting with automotive engine oil supplied to automobile manufacturers. Moreover, we plan to actively respond to requests for environmental disclosure information from our customers and the international market by participating in the Life Cycle Inventory (LCI) data project hosted by the Ministry of Environment with major domestic lubricant manufacturers.

In this way, we will continue to quantitatively analyze the environmental impact of products, address areas that require improvement, and communicate transparently with stakeholders.

LCA Process

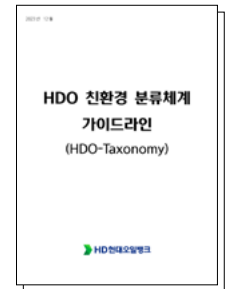


Eco-Friendliness Classification System

Eco-Friendliness Classification System Guidelines

Responding to the strengthening of greenwashing regulations across our business activities, we have established the company's eco-friendly classification system. The HDO-Taxonomy Guidelines, prepared based on the Ministry of Environment's K-Taxonomy Guidelines and Guidelines on Labeling and Advertising of Eco-friendly Business Activities, determine whether the company's investment, procurement, and sales activities are eco-friendly, and establish standards and procedures for identifying such activities.

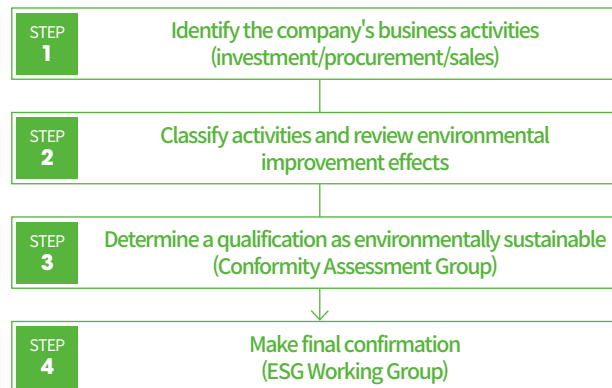
HDO-Taxonomy Guidelines



Eco-Friendly Activity Determination

Activities are determined to be eco-friendly if they contribute to achieving the six environmental goals, including GHG reduction, transition to a circular economy, and pollution prevention and management while meeting legal standards, obtaining third-party sustainability certification, or confirming quantitative environmental improvement effects. The eco-friendliness of an activity is determined through the Conformity Assessment Group, which consists of teams in charge of the company's eco-friendly investment, procurement, and sales.

Eco-Friendly Activity Determination Process



Organizational Structure



Eco-friendly Businesses

Governance

Organizational Structure

Strengthening the Eco-friendly Organization

We secure expertise and strengthen execution capabilities for future growth businesses by enhancing our eco-friendly business organization. We operate dedicated units for new ventures in bio, hydrogen, circular economy, and eco-friendly chemical materials across various business fields. The Future Innovation Team, EV Business Team, and Network Value Creation Team are expanding the electric vehicle charging business based on the gas station network, actively exploring sustainable future eco-friendly businesses. The Central Technology R&D Institute has renamed three research groups of each R&D project to Hydrogen Energy, Green Materials, and Refinery Technology to facilitate organic organizational operations, improving research project expertise and execution power.

Bio Business

- Bio Energy Business Team**
- Bio Business Operation Team**
- Bio Production Team**

- Plan the bio business
- Acquire sustainability certification for bio products
- Procure bio-based raw materials
- Operate biodiesel plant
- Self-supply of biodiesel and export

Circular Business

- Circular Business Team**

- Develop circular economy business using recyclable resources such as waste plastic, end-of-life tire, waste lubricating oil, etc.
- Procure recyclable raw materials
- Promote development of eco-friendly circular products and businesses
- Acquire certification of eco-friendly circular products

Eco-friendly Chemicals and Materials & GHG Reduction Business

- Chemical and Materials Business Team**

- Examine low-carbon fuel and eco-friendly chemical materials business
- Establish mid to long-term GHG reduction strategies for the company and discover and comprehensively manage reduction projects

Hydrogen Business

- Hydrogen Business Development Team**

- Develop clean hydrogen and ammonia-related businesses
- Develop projects related to CCS (Carbon Capture and Storage)
- Review projects related to water electrolysis and fuel cell materials

Eco-friendly R&D

- Central Technology R&D Institute**

- Perform tasks and research related to hydrogen energy, white biotechnology, and CCU
- Strengthen existing business competitiveness

EV Charging & Gas Station Development

- Future Innovation Team**
- EV Business Team**
- Network Value Creation Team**

- Develop eco-friendly businesses that utilize the gas station network
- Expand synergies for electric vehicle charging stations within HD Hyundai Group
- Examine the construction of a total energy station

Eco-friendly Businesses

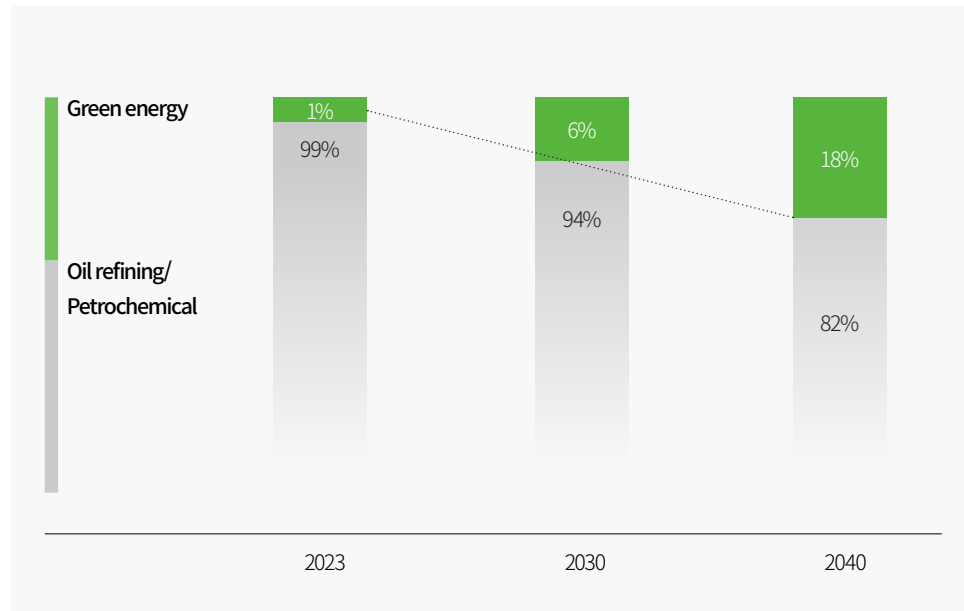
Strategy

Eco-friendly Business Overview

Sustainable Energy

We are preparing for mid to long-term changes in our product portfolio to align with projected energy demand shifts due to climate change. Our focus includes optimizing the efficiency of our existing oil refining business, producing eco-friendly fuels, and expanding the production capability of high-value-added, eco-friendly high-tech materials. Accordingly, by 2040, we aim to increase the proportion of eco-friendly products to 18% (by weight) to achieve HD Hyundai Oilbank's vision of 'Eco-friendly Future with Green Energy.'

Sustainable Energy Roadmap (By weight)



White Bio



- Enter 2nd generation white bio industry in 2024
- Establish a bio ecosystem of 700,000 tons by 2030

The white bio business is an industry that produces various energy sources and chemical materials using renewable biological resources, microorganisms, and enzymes as raw materials. We aim to establish a white biotechnology industry with entirely eco-friendly processes, from procuring raw materials to developing extraction methods. Our focus will be on utilizing non-edible resources and waste by-products, such as used cooking oil (UCO) and by-products from the palm oil refining process.

Circular Economy



- Diversify circular raw materials
- Process 400,000 tons of waste plastic pyrolysis oil by 2030

Starting with waste plastic pyrolysis oil, we plan to expand our business volume and contribute to building a circular economy by utilizing various circular resources. We are considering expanding preprocessing facilities and directly producing pyrolysis oil.

Eco-friendly Chemicals and Materials



- Expansion of chemical and material business

As the HPC begins commercial operations, we are ramping up our eco-friendly chemicals and materials business in collaboration with our petrochemical affiliate, HD Hyundai Chemical. We plan to expand our petrochemical downstream business, focusing on eco-friendly chemical and material businesses such as basic materials, energy materials, and secondary cell materials.

Blue Hydrogen



- Establish clean ammonia based hydrogen production infrastructure
- Construction of clean hydrogen production infrastructure based on CCS

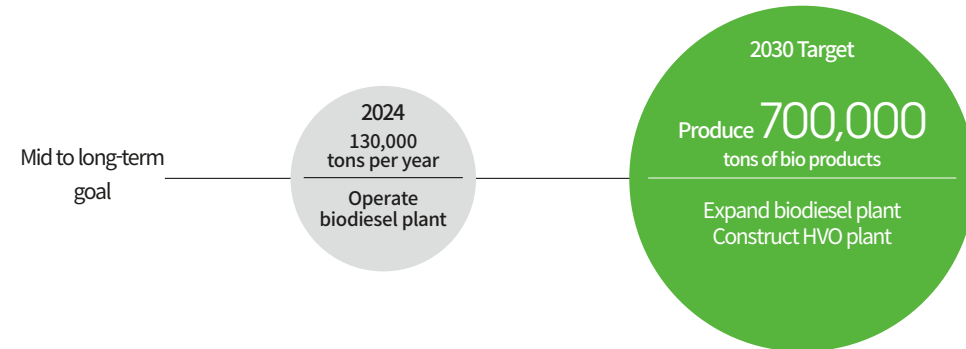
We are currently considering a business to import ammonia from overseas and supply it as carbon-free fuel, or convert it into hydrogen and supply it for carbon-free fuel for power plant, mobility and industrial purposes. We are also considering supplying clean hydrogen by capturing and storing carbon generated from existing hydrogen plants.

Eco-friendly Businesses

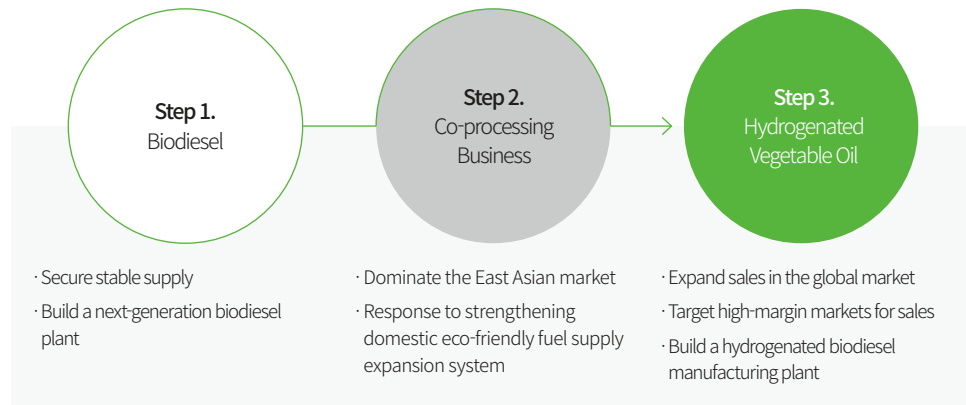
Strategy

Bio Business

We are promoting bio business in line with the government's stance to expand supply of biofuels. As part of our efforts to expand the value chain of eco-friendly products, we intend to produce biofuel and biochemical products with various bio-based raw materials, aiming to produce 700,000 tons of bio products by 2030.



Bio Business Roadmap



Biodiesel

We blend biodiesel with diesel for domestic use every year following the Korean Renewable Fuel Standards (RFS). The blending obligation ratio in 2024 increased 0.5 percentage points from the previous year to 4.0% and is expected to continue to increase in the future. We began commercial operation of a biodiesel-only plant with an annual capacity of 130,000 tons at its Daesan Plant to meet part of our own demand and began full-scale production. This plant has introduced a supercritical process that can produce products without catalysts under high temperature and high-pressure conditions and can produce bioproducts by refining discarded animal and vegetable oils such as used cooking oil, palm oil mill effluent, and palm fatty acid distillates. Currently, we are considering introducing biodiesel production raw materials such as palm fatty acid distillates, a by-product of palm oil refining production in Indonesia or Malaysia, and used cooking oil. Furthermore, we are considering introducing high value-added eco-friendly opportunity raw materials such as animal fat. In cooperation with Lotte Wellfood, we are working to circulate waste resources by using used cooking oil supplied by Lotte Wellfood as a raw material for biodiesel and supplying products produced through this to transportation trucks of Lotte Group affiliates.



HD Hyundai Oilbank – Lotte Wellfood Biodiesel Waste Circular Economy Cooperation

Eco-friendly Businesses

Strategy

Bio Business

Aviation Biofuel

In line with the International Air Transport Association (IATA) agreement to expand the use of sustainable aviation fuel (SAF), we are pursuing an aviation biofuel business to contribute to carbon reduction in the aviation sector. We plan to acquire ISCC EU, ISCC CORSIA, and ISCC PLUS certification and produce the initial volume in 2024. We will then gradually secure production capacity and supply the product to customers worldwide.

Marine biofuel

The International Maritime Organization (IMO) adopted a revised GHG strategy in July 2023, aiming to achieve net-zero emissions for the shipping industry by 2050. In response to this trend of reducing carbon emissions in the shipping sector, we are developing eco-friendly marine biofuel.

Biofuel, anticipated as a next-generation alternative fuel due to its high energy density, can be blended with existing marine fuel. We have enhanced compatibility between HD Hyundai Oilbank's Very Low-Sulfur Fuel Oil (VLSFO) by controlling the properties of biofuel and plan to expand the marine biofuel product line to strengthen product competitiveness.

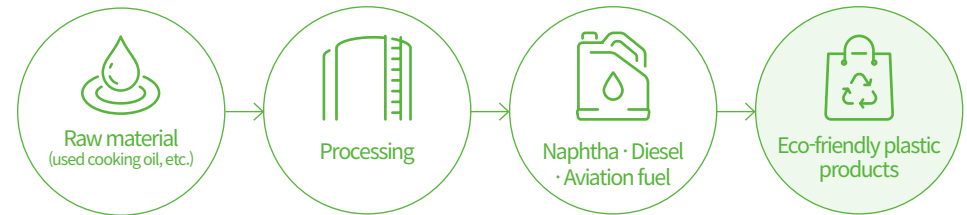
Starting in 2024, we plan to participate in the marine biofuel empirical research project, jointly conducted by government ministries, related organizations, and relevant companies, to promote domestic introduction collaboratively.

Furthermore, our Singapore subsidiary is conducting preliminary research and establishing logistics to enter the marine biofuel market in Singapore at an appropriate time.

Co-processing

We plan to produce biofuel by blending biofuel and fossil fuel at existing oil refinery facilities. Biofuel was introduced into the process in April 2024, and we plan to produce ISCC-certified naphtha, diesel, and aviation fuels.

Starting in February 2024, HD Hyundai Chemical has been putting bio raw materials such as used cooking oil and soybean oil into the existing oil refining process, following Regulatory Sandbox approval for the bio business. We have produced eco-friendly bio-petrochemical products that have received ISCC PLUS certification and are selling these eco-friendly products to companies worldwide. Furthermore, we have entered into a business agreement with CJ CheilJedang to establish a virtuous cycle business for eco-friendly bio-raw materials and plastics. This involves CJ CheilJedang supplying various bio raw materials, and HD Hyundai Chemical producing eco-friendly bio-plastics and selling them as raw materials for food packaging materials of CJ CheilJedang.



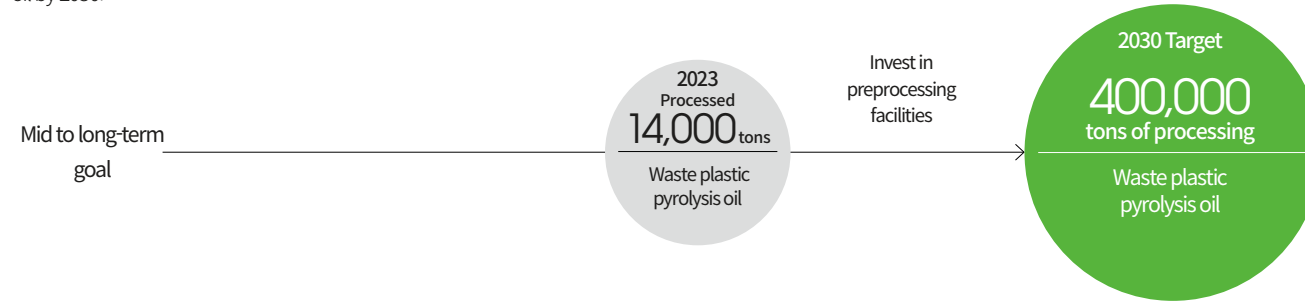
HD Hyundai Chemical – CJ CheilJedang MOU ceremony for eco-friendly bio raw materials and plastic virtuous cycle business

Eco-friendly Businesses

Strategy

Circular Economy Business

Starting with waste plastic pyrolysis oil, we plan to expand our business volume by utilizing various recyclable resources. We are considering expanding preprocessing facilities and directly producing pyrolysis oil. Our plan is to gradually increase the processing volume, aiming to process 400,000 tons of pyrolysis oil by 2030.



Waste Plastic Pyrolysis Oil

Starting with waste plastic, we are forming business partnerships with global petrochemical companies and final product manufacturers to recycle various resources such as ocean bound plastics, end-of-life tires, end-of-life vehicle, and waste lubricating oil. We utilize these raw materials to produce circular products and collaborate with various clients to contribute to the establishment of a circular economy.

Waste plastic pyrolysis oil Since becoming the first domestic oil refinery to acquire ISCC PLUS, we have been selling waste plastic pyrolysis oil-based products to nearby petrochemical companies and the global market. We have also developed a carbon offset project methodology for eco-friendly products produced using waste plastic pyrolysis oil to calculate the carbon emissions reduction effect. This methodology is currently under review by the Ministry of Environment.

Waste tire pyrolysis oil We are also reviewing the introduction of waste tire pyrolysis oil as a new raw material to produce eco-friendly products. Pyrolysis oil will be integrated into the existing oil refinery process to produce circular naphtha, while the by-product slurry oil will be sold to HD Hyundai OCI and transformed into circular carbon black. Due to the absence of domestic commercial pyrolysis oil suppliers, we are searching for overseas suppliers. We have completed the technical review of process impact and are awaiting the initial input.

Re-refined base oil We are considering the introduction of re-refined base oil as a new feedstock to produce eco-friendly products. We are actively developing relationships with overseas re-refined oil suppliers and demand sources for eco-friendly products. We have completed the technical review of process impact and are awaiting the initial input.

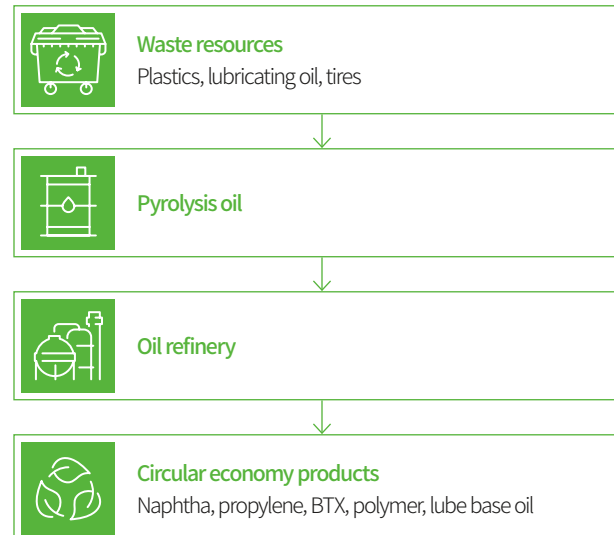
Roadmap for Circular Economy Business Unit: thousand tons

Item	2024	2026	2028	2030
Pyrolysis oil processing volume	30	100	200	400
Purchase of pyrolysis oil	30	100	150	200
Production of pyrolysis oil	-	-	50	200

Note Waste Plastic: Ocean bound plastic · Waste tires · Waste lubricating oil
 Waste Plastic: Ocean bound plastic · End-of-life tires · Waste lubricating oil · End-of-life vehicle

* Marine plastic: waste fishing nets, ropes, etc.

Pyrolysis Oil Treatment



Eco-friendly Businesses

Strategy

Circular Economy Business

Business Agreements and MOUs

Participant	Description
Seoul Metropolitan Government	Recycle plastics from household waste that would otherwise be incinerated or landfilled into pyrolysis oil
Tire industry	Establish the K-black cycle, a circular economy system for waste tires, through strategic business partnerships
Hyundai Department Store	Achieve chemical recycling by converting waste vinyl generated from department stores and outlets into raw materials for petrochemical products
CJ CheilJedang (HD Hyundai Chemical)	Establish a virtuous cycle by selling bioplastic raw materials made from soybean oil and used cooking oil supplied by CJ CheilJedang, along with eco-friendly bioplastics produced by HD Hyundai Chemical for CJ CheilJedang's food packaging materials



Multilateral MOU Ceremony with Seoul Metropolitan Government for the Promotion of Waste Plastic Pyrolysis



Establishment of waste tire circular economy model



MOU Ceremony with Hyundai Department Store for Establishing a Circular Economy

Lubricant Recycling

Recycling Lubricant Barrels

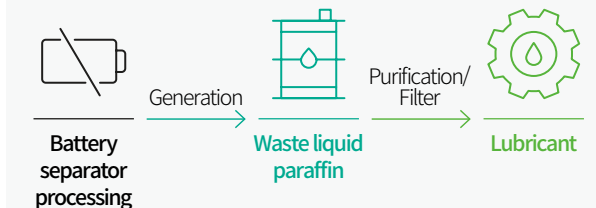
Steel barrels are utilized in the packaging of HD Hyundai Oilbank XTeer products. After being used in the domestic market, the barrels are collected, cleaned, and printed by a specialized company and then recycled to sell lubricant products. We plan to expand the application of recycled barrels, which offer advantages in terms of resource recycling.



Commercialization of Waste Liquid Paraffin

To purify and filter the liquid paraffin used in battery separator formation and apply it to lubricant products, we collaborated with refiners to establish basic property standards for refined liquid paraffin. Product performance evaluations were conducted using our engine dynamometer, confirming that oil consumption, viscosity, and oxidation degree were at the same level as new oil. To ensure stable supply and storage, internal reviews of facilities such as storage tanks are scheduled for application to products by the end of 2024.

Lubricant Product Circular Economy



Eco-friendly Businesses

Strategy

Circular Economy Business

Circular Economy Campaign

Collect Caps Campaign

We conducted a resource recycling campaign called Collect Caps to encourage employees' interest in the circular economy and foster environmental awareness. We collected about 20,000 plastic bottle caps and donated them to an upcycling company so that plastic bottle caps, which cannot be recycled and are discarded, can be used as raw materials to be transformed into new products such as palettes and toothpaste squeezers. The plastic bottle caps collected by employees have the environmental effect of reducing 38.63kg of carbon, which is equivalent to the effect of planting 5.83 pine trees. We will continue to establish a circular economy through various campaigns.



Collect Caps campaign



Paper Towel Recycling Campaign BI:CYCLE

With HD Hyundai affiliates located within the HD Hyundai Group Global R&D Center (GRC), we are conducting a waste paper towel recycling campaign to establish a virtuous resource cycle system. In January 2024, we signed an MOU with Yuhan-Kimberly to promote the recycling of waste paper towels and establish a virtuous cycle for resources. Waste paper towels collected within GRC will be recycled in the Yuhan-Kimberly's process to produce new paper towels. It is expected approximately 21.8 tons of paper towels will be recycled annually through this campaign across GRC, resulting in a reduction of 18.6 tons of GHG emissions and the equivalent of absorbing carbon by 2,041 30-year-old pine trees per year. We will continue our active participation in resource and environmental protection by reducing unnecessary resource consumption and waste.

Zero Disposable Products Challenge

In February 2023, we participated in the Zero Disposable Products Zero Challenge initiated by the Ministry of Environment, aiming to encourage the use of reusable products and raise national awareness about reducing disposable product usage. CEO Youngmin Chu, participating at the recommendation of Korean Air President Keehong Woo, expressed his hope for this positive challenge to spread, emphasizing the importance of passing on a clean environment to future generations. Supported by this societal atmosphere, we plan to implement zero-disposable product initiatives by eliminating paper cups in office spaces, installing tumbler washing machines, and actively engaging in environmentally beneficial activities.



BI:CYCLE campaign



Zero Disposable Products Challenge

Eco-friendly Businesses

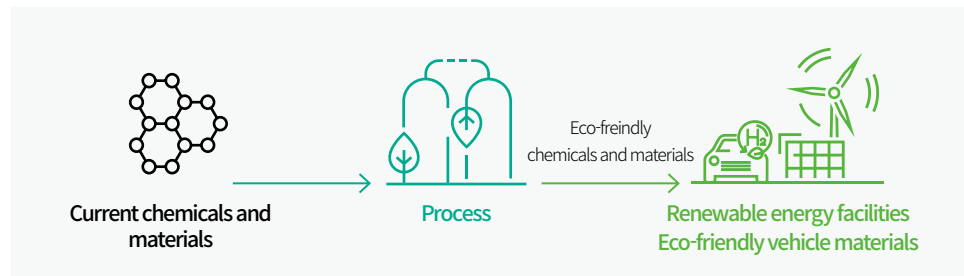
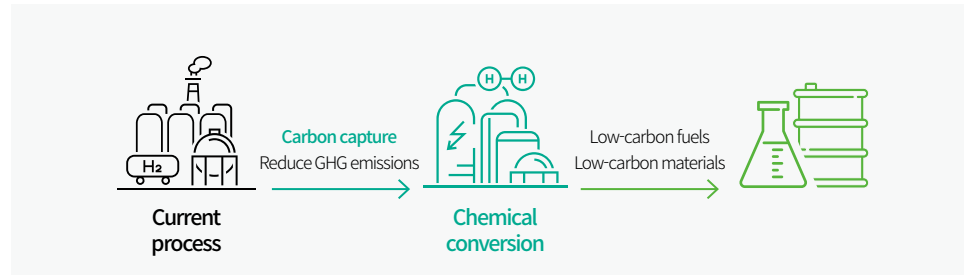
Strategy

Eco-friendly Chemicals and Materials

Low-Carbon Fuels and Materials

We are actively working to reduce GHG emissions and aim to take the lead in overcoming the climate crisis by capturing carbon dioxide and utilizing it as a raw material for our chemical and material businesses.

To achieve this goal, we are exploring technologies for capturing carbon dioxide generated at our workplaces, converting it into low-carbon fuels and materials, and creating synergy by integrating these technologies with our existing businesses. Building upon our existing chemicals and materials business, we intend to expand into areas such as renewable energy and eco-friendly vehicle materials to broaden our eco-friendly chemicals and materials business portfolio.



Hydrogen Fuel Cell and Water Electrolysis Materials

With the global trend toward achieving carbon neutrality, green hydrogen is increasingly recognized as a clean energy source.

Green hydrogen is a clean energy source produced through a water electrolysis system, and the role of the electrolyte membrane is very important in ensuring sufficient production, economic efficiency, and system safety. In line with this transition, we are developing high-performance, high-durability electrolyte membranes and promoting the business of Polymer Electrolyte Membrane (PEM) and its core material, expanded Polytetrafluoroethylene (e-PTFE).

We plan to expand our research and development facilities related to electrolyte membranes and prepare for product commercialization, including customer evaluation and certification.

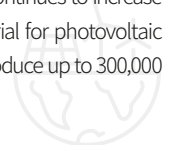
Internally, we are establishing an infrastructure to evaluate the performance and durability of electrolyte membranes for fuel cells and water electrolysis, and are optimizing based on the results derived through self-evaluation.

Through continuous technological innovation, we aim to strengthen our technological competitiveness and contribute to the production of green hydrogen.

FOCUS ON

HD Hyundai Chemical Photovoltaic Material Production

As demand for renewable energy increases, the demand for photovoltaic modules continues to increase globally. HD Hyundai Chemical produces ethylene-vinyl acetate (EVA), a key material for photovoltaic modules due to its excellent adhesion and light transmittance. Currently, HPC can produce up to 300,000 tons of EVA per year, which is the largest single production line capacity in Korea.



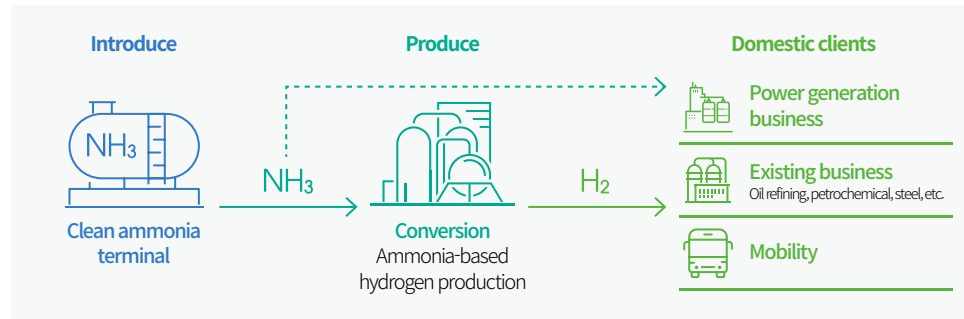
Eco-friendly Businesses

Strategy

Hydrogen Business

Clean Hydrogen Business

The importance of clean hydrogen as a new energy source is increasingly recognized as global issues such as climate change and energy supply intensify. To address this, the government is promoting the expansion of the hydrogen ecosystem by scaling up and broadening the hydrogen economy while establishing appropriate infrastructure and systems. As an energy company, HD Hyundai Oilbank is committed to promoting clean hydrogen and ammonia businesses to establish a hydrogen society. We are currently developing a step-by-step strategy to make this vision a reality.



Strategic Business Partnership

To construct hydrogen infrastructure, HD Hyundai Oilbank is reinforcing collaborations with Air Products, one of the top three global industrial gas companies with expertise in related projects. We are currently discussing business collaborations aimed at introducing clean ammonia into the country, which includes ammonia terminals and ammonia-based hydrogen production.

Additionally, in March 2021, we signed an MOU with Aramco to jointly explore clean ammonia and clean hydrogen related businesses. We are continuously collaborating on projects and joint R&D related to clean hydrogen and ammonia.

Hydrogen Transportation and Storage

Development of Ammonia Decomposition Catalyst

We have developed catalytic decomposition technology to convert ammonia back into hydrogen, which is being considered as a means of transporting clean hydrogen. Four patents have been applied for this development catalyst, and overseas patent applications are also being considered. We are conducting empirical research in collaboration with HD Korea Shipbuilding & Offshore Engineering regarding the use of these catalysts, aiming to increase the utilization of ammonia and contribute to building an ammonia-hydrogen ecosystem.

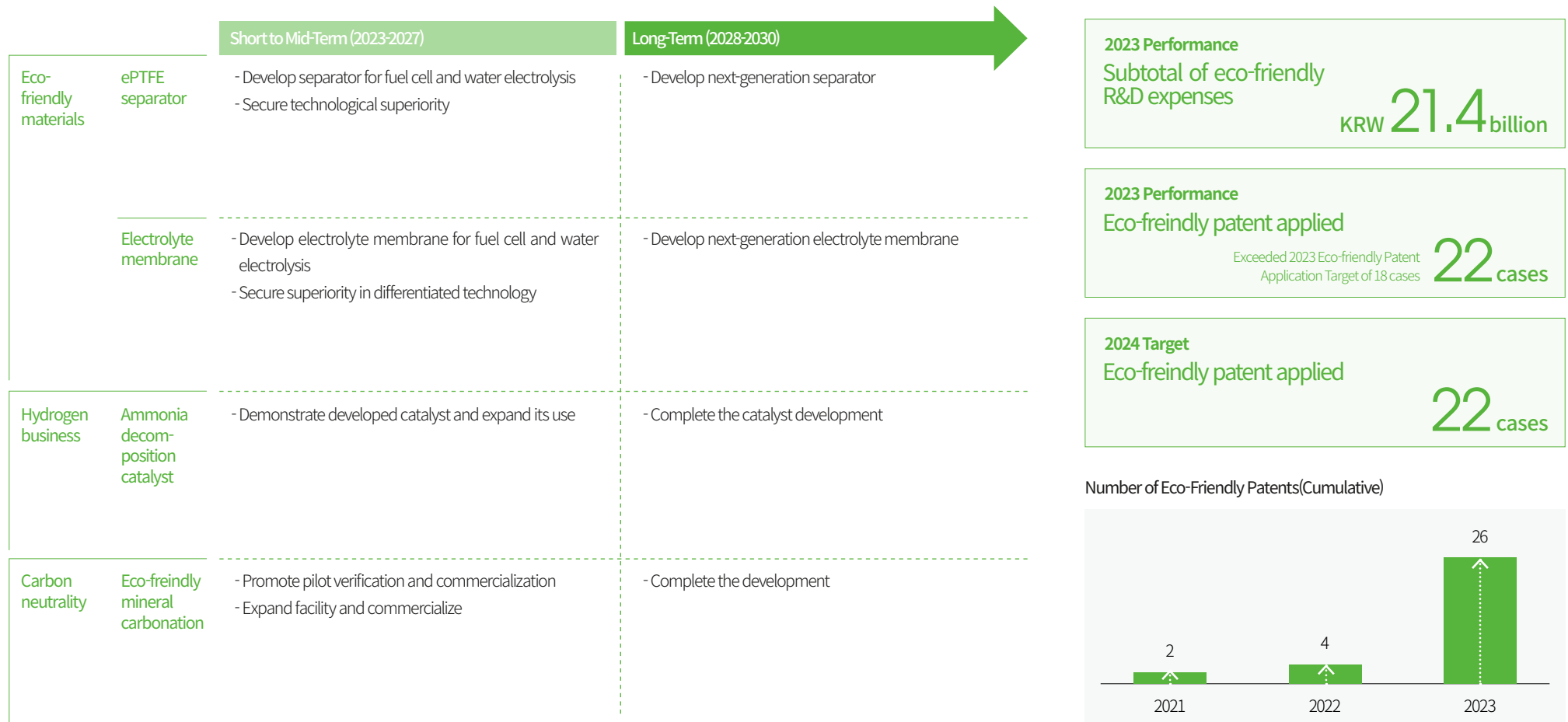


Eco-friendly Businesses

Strategy

Eco-friendly R&D Roadmap

We strive to develop eco-friendly R&D in terms of eco-friendly materials, hydrogen, and carbon neutrality for sustainable energy. To concentrate our R&D capabilities effectively, we are establishing an eco-friendly R&D roadmap that incorporates individual strategies tailored to each development stage.



Eco-friendly Businesses

Strategy

Green Energy and Charging Stations

Building Green Energy Infrastructure

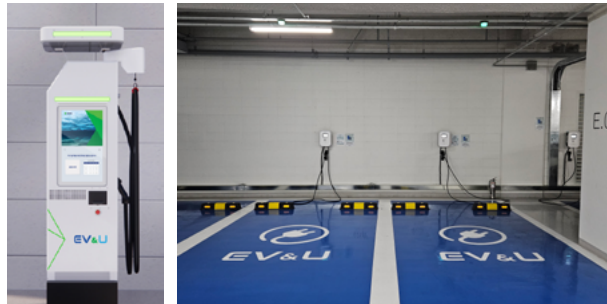
EV Charging Station

Our electric vehicle charging business is currently in the preparation stage, with a planned launch in the first half of 2024. We plan to build a 200kW ultra-fast charging network to provide differentiated services compared to other companies and enhance the value of gas stations as energy stations. In the first half of the year, we plan to build 40 electric vehicle charging stations at gas stations in the metropolitan area, where supply is insufficient compared to demand. In the second half of the year, we plan to build an ultra-fast charging network at 30 additional locations, including in the metropolitan area and major cities.

In addition to gas stations, we plan to expand the electric vehicle charging network to include Seoul Office, Seamarq Hotel, and Yongin Central Technology R&D Institute. We will continue to expand synergies for eco-friendly businesses within the HD Hyundai Group to build a comprehensive electric vehicle charging network.

RV Dump Station

As camping culture spreads, the number of RV users is increasing despite the lack of basic infrastructure. Household sewage and wastewater generated from camping cars are often disposed of in public restrooms, forests, or open fields, causing serious environmental problems. In response, we installed a camping car sewage treatment facility at a gas station for the first time as an oil refinery at the Gangneung Samteo gas station in 2022. We were selected as the final operator in the Korea Tourism Organization's Private RV Infrastructure Construction Support Project Contest in 2023. With full government funding re-issued, we completed the installation of additional RV dump stations in 10 locations across the country in collaboration with the Korea Tourism Organization. We intend to continue strengthening collaboration with the Korea Tourism Organization to promote eco-friendly camping culture by utilizing the gas station platform.



Installation of EV chargers and Seoul Office EV charging equipment



HD Hyundai Oilbank – Korea Tourism Organization Private RV Infrastructure Construction Support Project MOU Ceremony, RV dump station



Eco-friendly Businesses

Strategy

ISCC

The International Sustainability and Carbon Certification (ISCC) is an international certification system for sustainable and low-carbon products that complies with the EU's Renewable Energy Directives. HD Hyundai Oilbank has acquired ISCC certification for bio and waste plastic products to meet expectations for eco-friendly products and has plans to acquire additional certification.

ISCC Certifications

ISCC EU	<ul style="list-style-type: none"> · Certification scheme that verifies compliance with the EU's Renewable Energy Directive (RED) regulations for biomass and bioenergy · Required for export of biofuels to the EU market
ISCC PLUS	<ul style="list-style-type: none"> · Voluntary certification system for bioenergy and petrochemical products in regions outside the EU
ISCC CORSIA	<ul style="list-style-type: none"> · Aviation fuel certification program that certifies fuels that meet the requirements for CORSIA* Eligible Fuels (CEF)

* Carbon Offsetting and Reduction Scheme for International Aviation: a system that calculates the amount of GHG emissions from international aviation based on 2019 data, and offsets excess amount through credit purchases

ISCC Acquisition Performance and Plan

2023 Performance

HD Hyundai Oilbank

- Diversified ISCC PLUS-certified raw materials: pyrolysis oil (waste plastic, end-of-life tires, etc.), re-refined base oil, soybean oil, UCO, animal fat, etc.
- Expanded ISCC PLUS-certified products: naphtha, propylene, hydrowax, carbon black raw materials, etc.

HD Hyundai Chemical

- Expanded ISCC PLUS-certified products: 10 types including naphtha, aromatic, monomer, and polymer
- Diversified ISCC-certified raw materials: pyrolysis oil, soybean oil, UCO, palm oil, animal fat, etc.

HD Hyundai Cosmo Petrochemical

- Acquired ISCC PLUS: BTX-related products (Dec 2023)
- Added ISCC PLUS-certified raw material: bio and bio-cycled naphtha

Overseas Network

Shanghai Subsidiary

Our Shanghai subsidiary is conducting an eco-friendly business using recycled semi-finished products based on waste resources and has acquired ISCC EU and ISCC PLUS certifications.

Singapore Subsidiary

Our Singapore subsidiary acquired ISCC EU and ISCC PLUS certification for the first time in December 2021 for trading of marine biofuel, biofuel, and circular products, and is maintaining them through renewal.

2024 Achievements and Plans

- Expand the ISCC PLUS product line and secure product sales outlets
- Completed acquisition of ISCC PLUS related to co-processing (March 2024)
- Acquire ISCC EU and expand the certified product line
- Completed acquisition of ISCC EU related to co-processing (March 2024)
- Promoted biodiesel plant ISCC EU acquisition (2H 2024)
- Acquire ISCC CORSIA
- Completed acquisition of ISCC CORSIA for co-processing (April 2024)



Environmental Pollutant Management

Governance

Organizational Structure

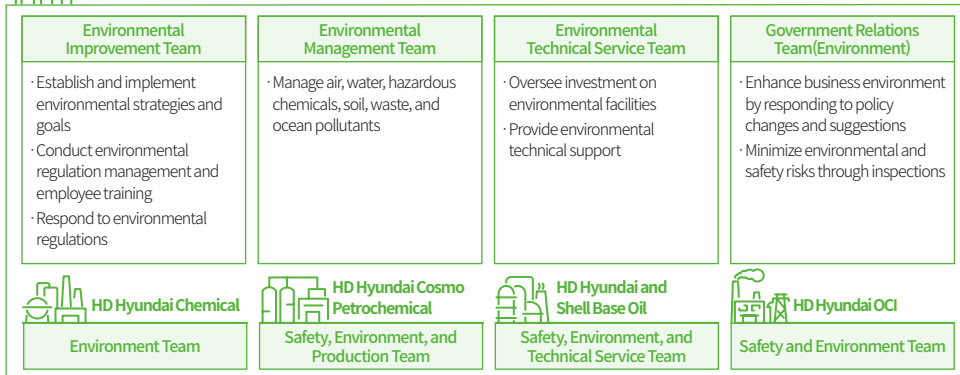
Environmental Management Governance

Environmental Management Organization

HD Hyundai Oilbank's dedicated environmental organization consists of an environmental department, a Government Relations Team(Environment), and an Environment Team for each affiliate. The Environmental Department, divided into Improvement, Management, and Technical Service Teams, serves as a control tower for company-wide environmental management, setting environmental management standards, and diagnosing environmental risks.



HD Hyundai Oilbank Environmental Management Organization



Environmental Management Action Committee

At HD Hyundai Oilbank, we operate an Environmental Management Action Committee where the dedicated environmental teams of each affiliate meet every month to share major environmental issues, discuss plant pollutant management measures, environmental investments, policies, and report the outcomes of these discussions to the CSO(Chief Safety and Environment Officer).

Item	Description
Composition	Environmental managers and personnels
Frequency	Monthly
Discussion topic	Share information on environmental issues, discuss joint measures to respond to environmental policies and issues, and seek efficient investment through cooperation

Strategy

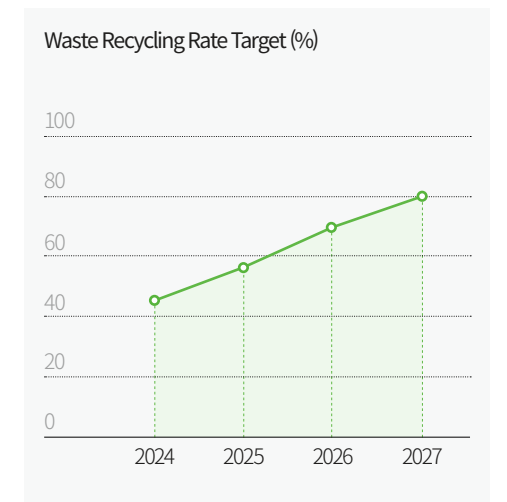
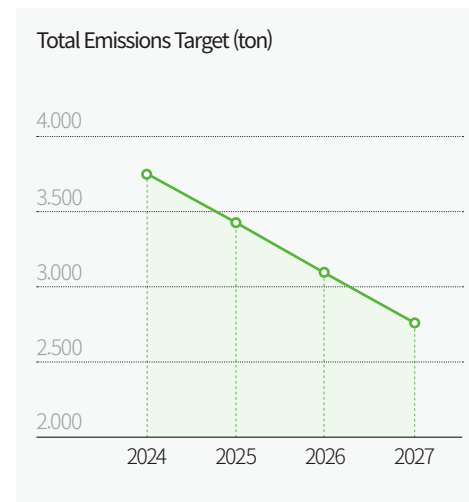
Environmental Management System

Environment Key Implementation Strategy

Mid to Long-Term Goals for Environmental Management

Item	Description	2024	2025	2026	2027
Air	Total emissions (ton) (TSP, SOx, NOx)	3,743*	3,406	3,100	2,820
Waste	Recycling rate (%)	48	59	70	81
Environmental compliance	Number of sanctions imposed	0	0	0	0

* This data displays the annual quota for 2024 authorized by the Ministry of Environment. HD Hyundai Oilbank strives to keep air pollutant emissions below annual quota in the mid to long term.



Environmental Pollutant Management

Strategy

Environmental Management System

Environmental Management System

Environmental Policy

[Read the full environmental policy](#)

HD Hyundai Oilbank and our affiliates have established an environmental policy containing efforts and commitments to reach the highest environmental level. We strive to minimize our impact on the environment based on this policy.

ISO 14001 Certification

We have acquired and are maintaining ISO 14001, an internationally standardized environmental management systems certification, and have established an advanced environmental management system based on this certification.

ISO 14001 Certificate



Integrated Pollution Prevention and Control System

We have obtained Korea's Integrated Pollution Prevention and Control permits and established an environmental management system that comprehensively considers environmental and health impacts. Based on this, we manage pollutants generated at our business sites more effectively and minimize pollutant emissions by investing in the latest environmental facilities.

Korea's Integrated Pollution Prevention and Control Permit Compliance System

We are in the process of establishing a system that allows us to invest in environmental facilities to comply with relevant laws and effectively reduce pollutants. This involves developing our own AI platform that automates the post-control of permits and monitors any changes to permits. Additionally, we have reinforced a legal compliance system that includes training and work processes to ensure compliance with integrated environmental laws.

Strengthening Post-Environmental Control

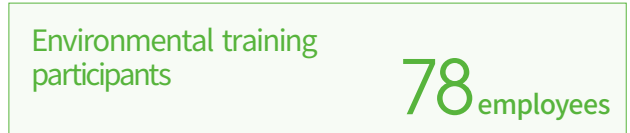
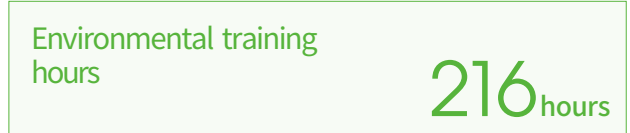
We are developing our integrated Pollution Prevention and Control IT system using EQR-180, a big data platform being developed through collaboration between HD Hyundai and Palantir Technologies. We aim to efficiently manage massive amounts of post-environmental control data, including process operation data, and prevent errors caused by human errors.

Integrated Pollution Prevention and Control Permits Briefing Session

We held an internal briefing session to raise awareness about integrated permits and its management. During the session, we explained related details and conditions to ensure all employees comply with environmental laws and permit requirements.

Environmental Awareness Training

To instill the environmental management mindset and improve the pollution handling skills of our employees, we conduct monthly hands-on training sessions covering environmental fundamentals, systems, and various pollutant management techniques to engineers in environmental department.



* As of 2023 cumulative basis

On-site Environmental Training in Preparation for Heavy Rain

To prepare for local heavy rains and typhoons during the rainy season, we conducted on-site management training on non-point pollution during rainfall to prevent environmental accidents. We provided training on CSS Sump's appropriate operation standards and accident cases to prevent rainwater from leaking into external large sumps within the process area and reinforced its management.

Environmental Pollutant Management

Strategy

Air Pollutant

Air Pollutant Monitoring

We manage pollutants by applying self-management standards that are more strict than legal standards. If it exceeds our internal standards, we respond immediately by taking measures in accordance with emergency procedures, such as increasing the amount of chemical input and reducing the process load.

Flare Stack Total Calorimeter Installation Management

We operate a flare stack calorimeter measuring device to monitor the occurrence and complete combustion of related substances.

Telemonitoring System (TMS) Management

To measure emissions of major pollutants in real-time, we are expanding the application of the telemonitoring system (TMS) to small-scale outlets starting in 2020 and complying with self-management standards through regular monitoring. For existing measuring devices, we maintain optimal performance through inspection according to the replacement cycle. We plan to gradually install additional TMS in outlets of a total of 43 facilities (currently 12) by 2025 to strengthen the monitoring of air pollutants.

Strengthening Environmental Risk Management at Gas Stations

We organized a cross-functional team (CFT) within the PM Business Division to prevent environmental risks and strengthen on-site action capabilities by systemizing the management process at directly managed business sites. We have produced and distributed a facility inspection and emergency response manual to directly-managed gas stations. Through this manual, we would like to minimize the environmental and safety risks that may occur at the gas station by emphasizing the inspection of gas station facilities such as gas pumps and oil tank manholes. Furthermore, we aim to prevent all environmental risks at directly-managed business sites in advance by developing a regular training process for all consignment operators and establishing a system to regularly monitor the implementation of the manual.

Air Pollutant Reduction Activities

Additional Installation of Air Pollutant Reduction Facilities

In 2023, we installed additional facilities, including a flue gas desulfurization facility and a filtration dust collection facility to reduce dust at the power generation facility. Moreover, low-NOx burners and selective non-catalytic reduction (SNCR) facilities were installed at process heating facilities across all our business sites, installing prevention facilities to reduce NOx emissions in all our heating facilities. Additionally, we installed three vapor combustion units (VCUs) to completely incinerate VOCs generated from tanks at HD Hyundai Oilbank and HD Hyundai Cosmo Petrochemical.

To reduce the emission of organic compounds into the atmosphere from the top of the UG storage tank at the Distribution center, we completed the reinforcement of eight tanks out of a total of 14 by 2023, with plans to double sealing equipment and apply additional gaskets to the internal floating roof by 2024, continuously strengthening our facilities.

Air Pollutant Reduction Facilities Status

Item	Description
NOx	ULNB, SCR, SNCR
SOx	Furnace desulfurization, flue gas desulfurization, scrubber
Dust	Filtered dust collection, electric dust collection
VOCs	VCU, VRU

Leak Detection And Repair (LDAR) System

We have established a Leak Detection and Repair (LDAR) system to prevent accidents caused by hazardous air pollutants (HAPs) emissions and manage leak sources. We manage HAPs and VOCs under the Clean Air Conservation Act, as well as under the Pollutant Release and Transfer Register (PRTR). In 2023, we completed the construction of a new system at HD Hyundai Chemical's new plant and continually updated and managed existing plant systems.

Environmental Pollutant Management

Strategy

Waste

Waste Disposal Management

Waste Storage and Disposal

We operate waste storage facilities following legal waste storage standards, including preventing leachate leaks and installing smoke detectors and CCTVs to monitor fires and external leaks 24 hours.

To improve the waste recycling rate, we are discovering new recycling companies for waste insulation materials, waste soil, waste absorbents, and wastewater treatment sludge that were previously landfilled and converting them to recycling. We will continue to reduce landfill waste and increase the recycling rate.

Water Resources

Water Use and Wastewater Treatment

Self-Production and Real-Time Monitoring of Water

We collect our raw water and produce water through a purification process.

Water usage is monitored in real-time, and water production is adjusted according to use volume for optimal management.

Seawater Desalination

We are actively participating in securing water for the Daesan Industrial Complex as the main user of the seawater desalination project conducted by K-Water to resolve the shortage of industrial water.

When water is supplied through the seawater desalination facility, which is scheduled to be completed in March 2025, it is expected that the water shortage in the complex will be resolved and stabilize the agricultural water supply to local farmers.

Wastewater Quality Management

To comply with legal standards and relevant laws, we are installing and operating optimal prevention facilities and continuously carrying out activities to reduce water pollutants.

We also monitor the concentration of water pollutants through TMS and effluent collection.

Monitoring system improvements

Strengthen monitoring by installing analyzers in wastewater treatment process

Wastewater treatment plant operator training

Conduct training led by wastewater treatment operation experts to enhance the environmental capabilities of operators.

Self-management standards

Establish and comply with strengthened internal management standards compared to legally permitted standards

Improving Wastewater Treatment Process Efficiency

We are continuously carrying out wastewater treatment process improvement activities to minimize the environmental impact of our business activities and protect water resources.



HD HYUNDAI OCI

Water Savings Through Process Monitoring

HD Hyundai OCI installed additional monitoring equipment to save water. Electrical conductivity measurement equipment was installed and operated in a wastewater discharge facility (absorption tower), contributing to water consumption savings of up to 400 tons a day.

Improve wastewater treatment process

Improve sludge treatment facility

Improve oil-water separation facilities

Improve physical and chemical processing facilities
(chemical reaction tank, air flotation tank)

Environmental Pollutant Management

Strategy

Hazardous Chemical

Hazardous Chemical Discharge Management

Chemical Substance Training

We provide semiannual training to all workers at the Daesan Plant on topics such as information on chemicals being handled, emergency response methods, and how to wear personal protective equipment to improve expertise in handling chemicals. We provide training every two years for on-site workers and supervisors who handle chemicals to enhance their skills in proper handling methods and facility management.

Refining Hazardous Chemical Handling Operations

To prevent chemical accidents, we installed shatterproof shields in facilities handling corrosive substances like sulfuric acid, and flange covers on pipe flanges. Furthermore, we strengthened worker safety by mandating the wearing of face shields and fume hoods when entering the process. We plan to continue to strengthen hazardous chemical management with new management measures and expand accident prevention activities.

Chemical Accident Joint Drill

We conducted training under a sulfuric acid leak scenario in collaboration with our affiliates, the National Institute of Chemical Safety, and the Seosan Joint Chemical Disaster Prevention Center, and identified improvements to enhance our crisis response capabilities to leak accidents.



Chemical Accident Joint Drill

Evacuation plan

Our plan for evacuating residents in the event of a hazardous chemical leak was created by calculating the potential damage range using factors such as the volume of the leak, duration of the leak, and weather conditions.

Evacuation Method

- ① Deliver emergency alerts through landlines, village broadcasting, and emergency text transmissions.
- ② Gather at the village hall and proceed to an external evacuation location via car or shuttle bus, depending on the scale of the accident. If one's home is closer to an external evacuation area outside the affected zone, individuals can proceed to their respective homes.
- ③ Listen to disaster broadcasts via radio, television, etc.

Evacuation location (Seosan City)

Scope of influence	Within 5km range	Over 5km range
Evacuation location	Daesan Elementary School/Daesan High School	Seosan Middle School /Seosan High School

MOU to Reduce Benzene Concentration in Daesan

As members of the Regional Chemical Safety Council, HD Hyundai Oilbank, HD Hyundai Chemical, and HD Hyundai Cosmo Petrochemical have signed an MOU with Lotte Chemical, SEETEC, LG Chemical, and KCI to reduce benzene concentration in the Daesan area. We share the results of the inspection of benzene handling business sites and impact analysis on nearby villages and discuss reducing benzene emissions with local residents' representatives, the Ministry of Environment, the Korea Institute of Chemical Safety, and Seosan City.

Ensuring Chemical Accident Prevention and Management Plan

We established an internal inspection team with an external agency and our environmental team to ensure the implementation of the chemical accident prevention and management plan. We also provided training to hazardous chemical managers in the operating team to improve their understanding of the plan. Interviews were conducted with plant managers, heads of division, and team leaders, and documents and on-site inspections were carried out. The inspection result was 89.7 points, exceeding the compliance standard by 60 points.



Ensuring chemical accident prevention and management plan

Environmental Pollutant Management

Strategy

Soil Environment

Soil Pollution Management

Pipe Leak Management

The leakage inspection cycle required by the Soil Environment Conservation Act is eight years. However, to prevent pipe leakage, we conduct internal pipe inspections annually for gas stations over 10 years old. If a pipe leak is discovered, we immediately report it to the relevant local government. In case of confirmed soil contamination, we strive to minimize damage by carrying out purification work before contaminants spread. We also installed the Hyundai Homes system at directly-managed gas stations to minimize pipe leakage. The system, a patented eco-friendly technology, detects leaks by attaching a sensor to the pipe connected to each gas pump. When a leak is confirmed, an alarm is issued to immediately stop using the gas pump and quickly replace the leaking pipe, preventing soil pollution.

Gas Pump and Piping Replacement

Submersible pumps pose a risk of water and soil pollution, especially when oil leaks, due to the constant pressure within the pipes. We are currently in the process of replacing submersible pumps with suction type pumps at our directly-managed gas stations. These suction pumps have a lower risk of leakage, helping to mitigate potential environmental hazards.

Marine Environment

Marine Pollution Prevention

We actively identify risks in advance through continuous monitoring and improve prevention facilities and accident response systems to prevent marine pollution accidents.

Marine Pollution Control Drill

We conduct marine pollution prevention drill at least twice a year. In 2023, we conducted emergency response training for marine pollution accidents under a Hazardous and Noxious Substances (HNS) leak scenario with HD Hyundai Chemical and HD Hyundai OCI. The training assumed a civil complaint resulting from a pollution accident in which heavy oil leaked into the sea during heavy oil warehousing operations. Following emergency response management regulations, each affiliate underwent the process of accident reporting, emergency measures, dissemination, control, recovery, and investigation, improving the organization's crisis response ability to marine pollution accidents.

Installation of Oil Detector for Rainwater Monitoring

To prevent marine leak accidents, we operate an oil detector in the rain drain. We have set level 2 response measures in case of an oil spill detection, and established emergency measures.

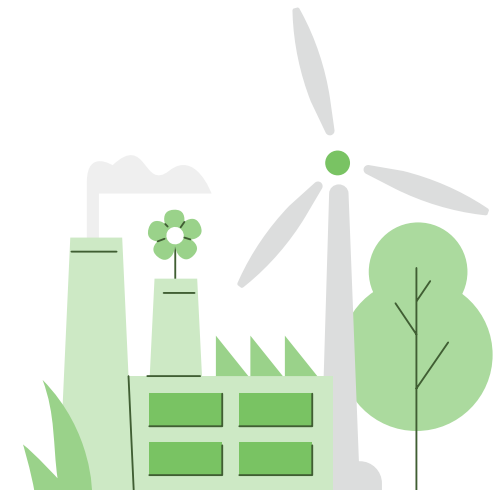


Marine pollution control training

HD HYUNDAI CHEMICAL

Selected as a Good Payer of Marine Facility Pollution Control Contributions

HD Hyundai Chemical was selected by the Korea Maritime Environment Management Corporation as a responsible contributor to the 2023 marine facility pollution control fund. In accordance with the Marine Environment Management Act, the contribution required for response measures to prepare for marine oil spill accidents was paid proportionally to the amount of crude oil imported in the previous year. An appreciation plaque was awarded to the company for its clean compliance record and significant contributions to prevention measures through voluntary and timely reporting.



Environmental Pollutant Management

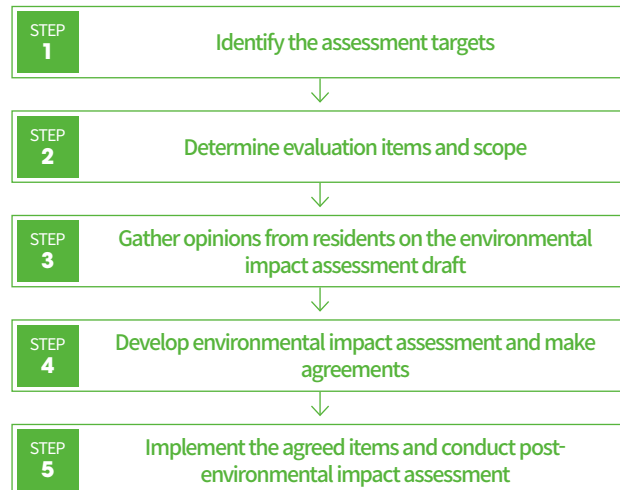
Risk Management

Environmental Impact Assessment

Worksite Environmental Impact Assessment

We plan to conduct an environmental impact assessment before carrying out the project to proactively identify and minimize the environmental impact. Through this, we identify the negative impacts that the project may have on the local community and environment, review possible problems, and establish and implement response and reduction measures. Furthermore, we strive to minimize the environmental impact by continuously monitoring the environmental impact even after the end of the project and conducting a post-environmental impact assessment.

Environmental Impact Assessment Process



Environmental Compliance

Environmental Compliance

Environmental Compliance Self-Assessment

We conduct quarterly environmental compliance assessments based on a checklist for all teams subject to environmental laws and regulations.

Company-Wide Environmental Risk Assessment and Cross-Checking

To discover environmental risks in advance, we conduct regular on-site environmental inspections and semi-annual cross-inspections of affiliates. We prevent environmental accidents by sharing and cross-checking discovered environmental risks across the company. In 2023, we conducted a risk assessment twice through external experts to check environmental permits and ensure on-site environmental facilities met legal standards and identify risks. This assessment was repeated in early 2024 to verify improvements and address any deficiencies. We will seek to internalize capabilities and fundamentally resolve risks through manual self-inspection and regular environmental assessment.

Environmental Law Review Process



HD HYUNDAI CHEMICAL

Environmental Laws and Regulations TF

HD Hyundai Chemical operates a TF dedicated to environmental laws to prevent environmental accidents and minimize the risk of violations. We plan to minimize environmental risks by checking the consistency of permits, drawings, and sites with the TF as the center, and improve the level of environmental management by providing employee training.

TF Operation Plan

- Conduct detailed inspections on permits and sites through environmental law experts
- Perform structured external consulting (integration law, Chemical Substances Control Act, etc.)
- Identify gas leak points for accident prevention
- Conduct environmental hazards and work environment improvement activities
- Discover trends in environmental laws and make regulatory suggestions

FOCUS ON

Investment in Odor Reduction Facilities

We are continuously working to reduce odors that may occur during the processes. We are actively improving and investing in facilities to reduce odor, such as improving Regenerative Thermal Oxidizer (RTO) facilities and installing catalytic oxidation facilities. We strengthened odor monitoring by installing a real-time automatic odor measuring device and purchasing additional portable odor collectors.

Environmental Pollutant Management

Metrics and Targets

Environmental Management Goals and Performance

Environmental Management Vision

Become an “Eco-Friendly Company” by enhancing the environmental management system and fostering environmental awareness among all employees

Goal

Establish an integrated environmental system and achieve zero environmental accident

Enhance competitiveness of eco-friendly site

Initiatives

Task	2023 Target	2023 Performance	Task	2024 Target
Company-wide integrated environmental management	<ul style="list-style-type: none"> Establish an integrated environment management control tower of all affiliates Develop an integrated licensing compliance system Conduct environmental risk diagnosis Form an integrated environmental management network 	<ul style="list-style-type: none"> Held 12 Environmental Management Action Committee meetings Conducted environmental risk diagnosis twice by external experts Implemented cross environmental inspection of affiliates 	Establish a workplace with zero environmental accidents	<ul style="list-style-type: none"> Resolve risks through preemptive legal response, such as self-inspection
Environmental management system	<ul style="list-style-type: none"> Develop and enforce on-site management standards Improve safety measures for chemical handling operations Update the HAPs management system Conduct chemical accident prevention consulting Strengthen the monitoring of legal trends 	<ul style="list-style-type: none"> Mandated wearing of face protection and fume hood Updated the HAPs management system Completed chemical accident prevention and management plan consulting Introduced a legal monitoring newsletter 	Enhance affiliate environmental integration system	<ul style="list-style-type: none"> Establish an efficient integrated management system through cooperation, communication, and support of affiliates
Optimal environmental investments	<ul style="list-style-type: none"> Conduct consulting and investment to improve wastewater treatment efficiency Invest in reducing air pollutant generation Strengthen monitoring, including additional installation of air TMS and improvement of water quality TMS facilities Provide environmental technical support (including affiliates) 	<ul style="list-style-type: none"> Improved facilities such as wastewater treatment plant oil-water separation facilities Installed boiler flue gas desulfurization (FGD) Jointly installed storage tank vapor combustion unit (VCU) with affiliates Installed and improved air and water quality TMS 	Strengthen environmental expertise of all employees	<ul style="list-style-type: none"> Improve environmental awareness and professionalism among employees through effective environmental education
			Enhance environmental management system	<ul style="list-style-type: none"> Establish an integrated Pollution Prevention and Control IT system using EQR-180
			Reduce pollutants by applying optimal environmental technology	<ul style="list-style-type: none"> Apply optimal pollutant reduction technology

Biodiversity

Governance

Biodiversity Conservation

Biodiversity Conservation System

Biodiversity Protection Policy

Recognizing the critical importance of biodiversity protection, we have developed this policy by referring to the Convention on Biological Diversity adopted by the international community under the leadership of the United Nations Environment Programme (UNEP) and Guidelines for Applying Protected Area Management Categories.

Our Biodiversity Protection Policy applies to all our business sites and employees and is recommended to local communities, customers, and suppliers. The direction and objectives of this policy, along with its implementation, will be deliberated within the ESG Working Group, comprising executives responsible for ESG matters. We are committed to ensuring responsible governance by consistently managing and overseeing biodiversity concerns.

We are dedicated to achieving No Net Loss (NNL)¹⁾ and Net Positive Impact (NPI)²⁾ regarding biodiversity, conducting biodiversity impact assessments, and actively promoting biodiversity protection initiatives guided by this policy.

1) Forming a value chain structure that operates the business without harming biodiversity.
 2) Recovering biodiversity through investments and activities to preserve, restore, and expand biodiversity.

Risk Management

Biodiversity Impact Assessment

Biodiversity Impact Assessment Overview

We implement a biodiversity impact assessment process based on the TNFD LEAP approach to identify the dependence and impact on natural capital, focusing on the industries and major business sites to which the company belongs, and to identify biodiversity risks that may arise during business operations. We plan to reflect this when establishing future risk reduction plans.

Biodiversity Impact Assessment Process

Step	Set a management scope	Determine natural capital dependency and impacts	Identify the current status of biodiversity near business sites	Promote biodiversity disclosure and conservation activities
	Establish the scope of biodiversity management by identifying industries and business sites	Use the Encore tool to determine the dependency and impact of natural capital in the oil refining industry	Identify endangered species and biodiversity protection areas near business sites	Disclose biodiversity impact assessment results and promote biodiversity conservation activities
Tool	Lay the groundwork for identifying value chains and assessing biodiversity impacts based on the global approach presented by the TNFD	Encore Assess the industry's dependence on and impact on nature based on global industry classification standards	IBAT Identify biodiversity information for the analysis area based on the global biodiversity database	Select information to be disclosed and establish a foundation for future risk reduction strategies in response to the TNFD
Data	<ul style="list-style-type: none"> Applicable industries <ul style="list-style-type: none"> - Oil & Gas Refining & Marketing Applicable business sites <ul style="list-style-type: none"> - Daesan Plant, Seoul Office 	<ul style="list-style-type: none"> 5-level evaluation results of dependency-related indicators 5-level evaluation results of impact-related indicators 	<ul style="list-style-type: none"> Number of IUCN¹⁾ endangered species near business sites Types of endangered species near business sites Number of WDPA²⁾ zones Number of KBA³⁾ zones 	<ul style="list-style-type: none"> Results of comprehensive biodiversity risk analysis Results of prioritization of disclosure targets

1) International Union for Conservation of Nature
 2) World Database on Protected Areas
 3) Key biodiversity areas

Biodiversity

Risk Management

Biodiversity Impact Assessment

Biodiversity Impact Assessment Results

Protected species and protected areas based on IBAT¹⁾

(based on 50km radius)

Item	Daesan Plant	Seoul Office	
IUCN ³⁾	Critically Endangered	5	5
	Endangered	37	36
	Vulnerable	51	52
	Near Threatened	37	36
	Least Concern	714	775
WDPA ⁴⁾	National	91	254
	Ramsar	2	2
KBA ⁵⁾	Important Bird And Biodiversity Areas	7	8

Endangered species designated by the Ministry of Environment²⁾

(based on administrative district)

Classification	Daesan Plant	Seoul Office
Birds	Golden eagle, yellow-billed egret, black-faced spoonbill and 35 other	Bee hawk, bird hawk, hornbill, owl, white-throated plover
Mammals	Otter, leopard cat	Leopard cat, flying squirrel
Amphibians	Boreal digging frog	Boreal digging frog
Embryophytes	Ranunculus katusensis	Euryale ferox
Insects	Copris tripartitus Waterhouse	-
Invertebrates	Milky fiddler crab	-
Total	41	9

Biodiversity Impact Assessment Result Analysis

We are assessing the biodiversity status near our two major business sites selected in consideration of our value chain using the TNFD LEAP framework. Utilizing the IUCN Red List and the Ministry of Environment's endangered species list, we identified the status and population distribution of endangered species and major biodiversity conservation areas surrounding our business sites. We will continue to monitor and manage changes in species distribution by regularly conducting biodiversity assessments. Using the Encore Tool, we determined the level of dependency on and influence of natural capital by indicators specific to the oil refining industry. Among the 11 factors affecting the ecosystem, five areas, including water use and GHG emissions, were found to be impacted by the oil refining industry. Out of 21 dependency-related indicators, the oil refining industry is identified to be dependent on eight indicators, including groundwater and surface water. We plan to continuously identify and recognize biodiversity-related indicators across the company, reflecting them in future measures to reduce biodiversity risks and upgrade our biodiversity disclosure system.

Dependency on and impact of natural capital in the Oil & Gas Refining & Marketing industry⁶⁾

Item	Ecological Indicators	Rating
Dependency (8)	Groundwater	Low
	Surface water	Low
	Water quality	Low
	Bio-remediation	Very low
	Filtration	Very low
	Climate regulation	Very low
	Flood and storm protection	Normal
	Mass stabilization and erosion control	Low
Impact (5)	Water use	Very high
	GHG emissions	High
	Non-GHG air pollutants	High
	Water pollutants	Low
	Soil pollutants	Low

1) Source: IBAT

2) Source: Ministry of Environment and National Institute of Ecology statistical data on endangered wild animals

3) International Union for Conservation of Nature

4) World Database on Protected Areas

5) Key biodiversity areas

6) Source: Encore

Biodiversity

Risk Management

Biodiversity Conservation Activities

MOU with Seongnam City for Mutual Cooperation in ESG Environment Field

HD Hyundai Oilbank, together with Seongnam City, the location of HD Hyundai Global R&D Center(GRC), signed an MOU for mutual cooperation in the environmental field. HD Hyundai Oilbank, along with three affiliates(HD Korea Shipbuilding & Offshore Engineering, HD Hyundai XiteSolution, and HD Hyundai Electric) and five companies based in Seongnam City, participated in the agreement to collaborate organically on environmental preservation and the creation of environmental value.



MOU with Seongnam City for Mutual Cooperation in ESG Environmental Field

Contributing to the Population of Flying Squirrels

We collaborated with HD Hyundai's affiliates, HD Korea Shipbuilding & Offshore Engineering and HD Hyundai Electric, along with the MaengSan Eco Center in Seongnam City, to increase the population of flying squirrels. The flying squirrel is classified as a Level II endangered wild species, and its traces have been monitored since 2022 through Seongnam City's natural environment monitoring activities. Approximately 40 artificial nests have been installed in Maengsan Mountain to boost the flying squirrel population, with plans for ongoing monitoring. We will continue implementing activities to promote biodiversity, which has become a significant focus for sustainable management.



Activity to increase the population of flying squirrels

100 Days of Planter* Project

We initiated a campaign called the 100 Days of Planter Project, targeting employees to enhance their interest in protecting the ecological environment. This campaign involves growing seeds of native trees, such as oak trees, into seedlings over 100 days at work or home and then planting them in Noeul Park—an ecological park formerly a landfill and difficult for plants to grow naturally. Around 100 executives and employees participated as planters, nurturing approximately 200 saplings, which were then personally planted in Noeul Park, adding significance to the event. Upon maturity, these planted seedlings are expected to contribute to a carbon reduction effect of approximately 40 tons over their lifecycle. We remain committed to conducting various activities aimed at resource conservation.



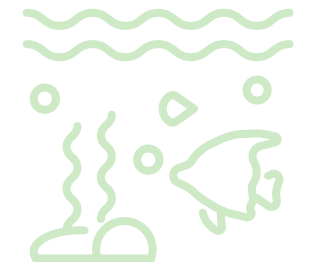
100 Days of Planter Project

*A term that combines "plant" and "butler," referring to individuals who care for pet plants

HD HYUNDAI CHEMICAL

Mudflat Function Improvement Project

HD Hyundai Chemical is currently conducting research aimed at enhancing the mudflat functionality of the Hyundai Daejuk General Industrial Complex. We plan to spread clam spat and conducting health evaluations for the utilization of mudflat fishing grounds, with the goal of improving the mudflat function near the factory and providing a sustainable source of income for local residents.





SOCIAL

GREEN VALUE WITH PEOPLE & SAFETY

Employees	50
Human Rights Management	56
Health and Safety	59
Local Communities	68
Suppliers	72
Customers	76
Quality Management	78
Information Security and Privacy	80

Employees

Strategy

Human Resource Management

Talent

HD Hyundai Oilbank's Ideal Talent

The ideal talent pursued by HD Hyundai Oilbank embodies the company's four core values: innovation, challenge, respect, and safety.

Leading Innovations

Those who propose new and creative alternatives through flexible thinking, continuously strive for improvement and actively seek knowledge and technology to drive innovation.

Fearless Challenges

Those who consistently challenge limits to create new value, embracing failure as part of a culture of fearless exploration.

Mutual Respect

Those who respect diversity, foster open communication, leverage diverse perspectives as valuable resources, and demonstrate teamwork to achieve common goals across boundaries, taking responsibility for personal growth while supporting colleagues.

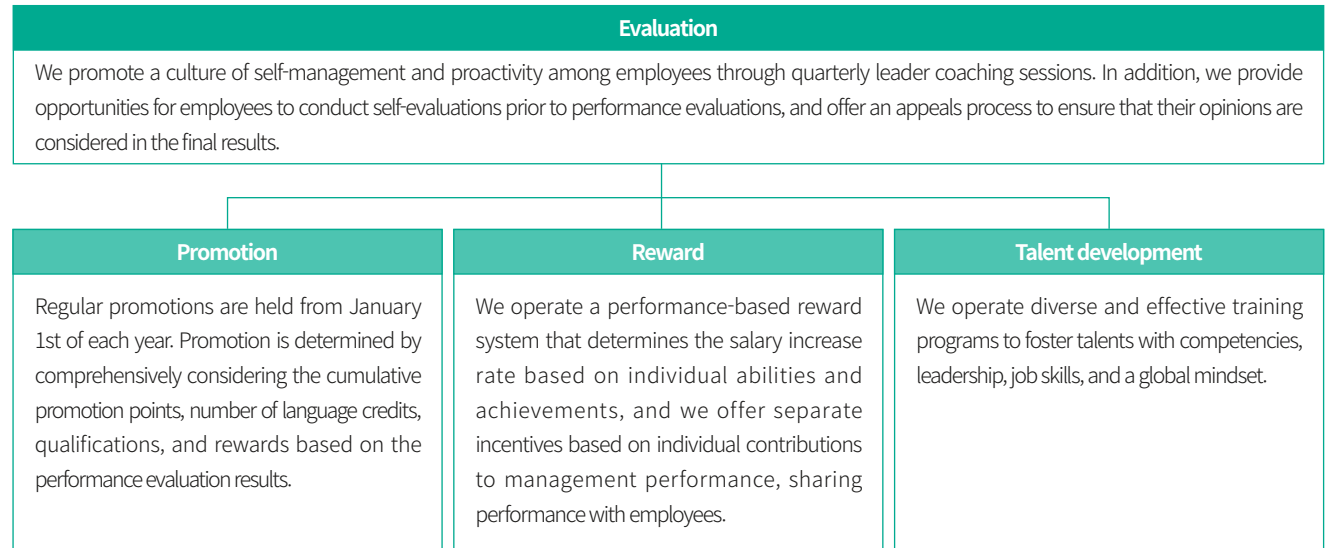
Safety for All

Those who prioritize safety, actively share concerns, and promote safety in products and services for the well-being of customers, society, and humanity.

Evaluation and Rewards

Employee Evaluation System

We conduct objective and fair performance evaluations every year, and the evaluation results are used for the promotion, reward, and career advancement of hardworking employees.



Talent Development

To respond closely to changes in the business environment, it is important to proactively secure and nurture leaders. We have introduced a leadership session system to select and manage successors more effectively based on the leadership profile established for the purpose of strengthening human resource development.

Breaking away from the qualitative data-based selection method, the leadership session system builds an individual position suitability assessment simulator based on quantitative data, through which successors for each position can be pre-verified. Through this, we support the preemptive identification and supplementation of the lacking competencies of each candidate group to build a foundation for the growth of the company and employees simultaneously.

Employees

Strategy

Human Resource Management

Employee Benefits

<p>WORK</p> <p>Work from home and Flextime Counseling center (in-person/online)</p>	<p>LIFE</p> <p>Congratulatory/condolences money and leave Personal pension and housing loan support</p>	<p>WELLBEING</p> <p>Welfare points Recreational facilities and club activities support</p>
<p>HEALTH</p> <p>Regular and comprehensive health checkups Medical expenses (infertility, prosthetics, etc.)</p>	<p>CARE</p> <p>Children tuition reimbursement In-house daycare and maternity care center</p>	<p>ENGINEER</p> <p>Company housing or housing expenses support Seoul Office remote work</p>

Flextime

We offer a flexible work schedule known as Flextime, allowing employees to adjust their work hours independently, promoting a better work-life balance and enhancing efficiency. To further assist employees who reside far from the Daesan Plant and to facilitate their use of Flextime, we have additionally implemented a 12 o'clock clock-out system on Fridays.

Encouraging Vacation Days

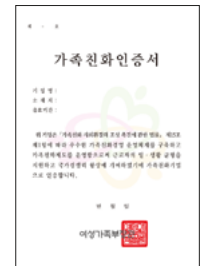
We have implemented a vacation self-approval system, allowing our employees to use their vacation days at their discretion without requiring approval from their supervisors. We also provide dozens of in-house clubs to enable our employees to enjoy various hobbies and leisure activities. Moreover, we operate a Leader Off Day for team leaders, allowing them to take one day off per month to recharge.

Employee Health Care and Support

We conduct a thorough health assessment for employees and provide partial medical expense coverage for employees and their families within an annual limit. Additionally, to promote the health of its members, the company supports various sports activities and operates internal counseling programs like 'Counseling Plus' (Daesan Plant) and 'Mind Cafe' (Seoul Office) where professional counselors are available to discuss stress, relationships, and personal concerns. Moreover, HD Hyundai Group offers remote counseling services, along with various programs to enhance employee health.

Family-Friendly Benefits

In order to ease the burden of giving birth and raising children, HD Hyundai Oilbank is actively striving to balance work and family life by providing infertility treatment expenses and infertility treatment leave, introducing a system for shortening working hours applicable to pregnancy and child-rearing, providing congratulatory money for the birth of a child, providing tuition and medical expenses for children, and operating a maternity care room, an infant rest room, and a daycare center. In addition, HD Hyundai Group aims to increase the diversity and inclusion of the organization and ultimately strengthen its corporate competitiveness through the introduction of the maternity protection and childcare support program established with the aim of securing excellent female talents and contributing to solving the problem of low birthrate in society.



Obtained family-friendly certification (2022)

Pregnancy/Childbirth
Congratulatory money

KRW **5** million each

Special maternity leave

30 days

Childcare leave

6 months

Infertility treatment

5 days of working from home



In-house club activities



Dreamboat Daycare Center

Employees

Strategy

Human Resource Management

Corporate Culture Innovation

Horizontal Organizational Culture

HD Hyundai Oilbank has established an efficient work culture that allows horizontal and quick decision-making through the reorganization of the position integration system introduced in 2022.

Bettering Work Environment

All subsidiaries in the Seoul office are implementing a system in which staff members choose their own workspace that suits individual preferences and tasks. Starting with the pilot operation of 'Engineer Seoul Office Remote Work' using the initial shared office, we have confirmed that employee satisfaction has improved, and from 2023, we have been operating it on a regular basis. In addition, the new main building of the Daesan Plant, which was completed in February 2023, is striving to improve the work efficiency and work environment of employees by expanding the rest area.

Corporate Culture Improvement Activities

As part of our ongoing efforts to foster a positive corporate culture, we held the 2022 Corporate Culture Conference. With a focus on establishing a horizontal culture where employees actively participate and seek solutions through mutual discussion, we are conducting group-wide workshops for CEOs, executives, and employees starting in 2023. Furthermore, we organize various activities such as ice cream sharing events, Leader-off Day, and providing photo booths for employee weddings to promote the Group's core values.



Daesan Plant's new main building rest area



Seoul Office's office space (Hot-desking)

Diverse Corporate Culture Programs

We conducted various programs to improve communication opportunities between employees and create a flexible and enjoyable working atmosphere.

K-League Viewing Event

To provide employees with opportunities for family leisure activities and enhance their sense of belonging to the company, an Ulsan HD K-League viewing event was organized.



Pork Belly Day to Overcome Heat

The CEO, plant leader, executives, and labor union leaders served as daily chefs, grilling pork belly onsite to support employees working in intense heat.



E-Sports Olympics Season 2

The E-Sports Olympics was held to create an atmosphere where employees can work happily, strengthen communication, and foster teamwork among various employees.



One-Day Pub in Daesan Plant

We operated a daily pub for employees and their families residing in company housing, with over 400 participants.



Employees

Strategy

Human Resource Development

Talent Development and Career Advancement

Training System

Employees who excel in their professional competencies play a critical role in propelling HD Hyundai Oilbank's growth into a global energy company. To support this, we've established a training system for professional competency and career management, ensuring continuous growth and skill enhancement.

All Employees	Training of new executives, team leaders, and section leader	Leadership training for executives and team leaders	Group core talent training	
	New hire orientation	Promotion training	Mentoring	
Job Training	Online Job Training		Engineer Job Training	
Global	Study abroad		Overseas technical training for engineers	
	Foreign language learning program			
Other	Legally mandated education	Graduate tuition reimbursement	Online reading communication	Outsourced training

Enhancing Job Expertise

Online and Offline Job Training

We provide training for our employees to enhance their job expertise and develop the professional knowledge and competencies required for their work. We have developed well-structured curricula for nine fields, including chemical engineering, machinery, and safety. Our video courses on chemical engineering have been specifically self-designed in order to benefit our engineers. In 2023, we conducted 51 rounds of process-related job training for engineers and site operators, totaling 451 hours.

Engineer Job Wiki

To improve the job expertise of engineers and access to job-related information, we established the Engineer Job Wiki based on the engineer job textbook produced in 2022. In line with the original meaning of the wiki as a tool for joint knowledge accumulation, all engineers have the right to write and edit content, facilitating the sharing and accumulation of information. A shortcut to the job wiki has been added to the main screen of the company's groupware to enhance accessibility. We plan to continue advancing it to help many engineers improve their job competencies.

Securing Global Competitiveness

We provide technical training for engineers at leading overseas companies like UOP and AspenTech to enhance their expertise and stay updated on global industry trends. Through partnerships with language education firms, we offer a foreign language support system accessible to all employees, along with ongoing online language courses for self-improvement. We also nurture future leaders through participation in the Group's talent development program.

Job-specific training – for Logistics & Terminal Operation Team Workers

Training was provided to members of the Logistics & Terminal Operation Team to raise compliance awareness and enhance services related to logistics and land transportation. This included training on the concept of illegal dispatch to mitigate legal risks in the distribution center, as well as precautions, communication to improve service work, and cardiopulmonary resuscitation (CPR) training. Regular training and communication will be conducted to prevent risks in the distribution center.



Legal Risk Prevention Education



CPR Training

Employees

Strategy

Labor Relations and Communication

Employee Communication

HD Hyundai Oilbank and our energy affiliates are actively engaging in various communication activities to foster a collaborative atmosphere and cultivate a sense of belonging and pride among employees.

Conversation with the CEO

We organized a Conversation with the CEO to revitalize our organizational culture and facilitate direct communication between the CEO and employees. Creating a comfortable and lively atmosphere, employees were encouraged to freely express their opinions and provide feedback to management or suggest improvement plans on the spot.

Change Agent Program

To cultivate a positive organizational culture and actively engage in change management by each team and position level, we select Change Agents among volunteers to drive positive changes within the organization. Monthly sessions are held to discuss dissemination of the HD Hyundai Core Values, fostering a positive corporate culture through regular communication activities.

* Change Agent: A program that facilitates change by constantly identifying tasks that need to be done and managing them

PM Business Division's Communication Activities

Under the supervision of the PM Planning Team, the PM Business Division visited 15 branches across the country as of the end of 2023 to share major pending issues of the company and division and to listen to the suggestions and difficulties of the division members. In 2024, to expand communication also with related teams, we plan to form an on-site communication group to promote meetings by region, and we plan to boost communication in various ways, such as conducting regular exchange meetings using communication platforms, such as Kakao Work video conference, Blue Talk, Dooray, etc.



A conversation with the CEO



HD HYUNDAI OCI employee communication program

Invitation to an Autumn Day

HD Hyundai Oilbank and HD Hyundai Chemical held a family invitation event to foster a sense of unity within the HD Hyundai Oilbank family, where both parents and employees could participate. About 60 employees participated in the event, spending two days and one night touring the workplace with their parents and visiting the reclaimed land of Hyundai Seosan Farm and nearby Sudeoksa Temple. We plan to continue carrying out various activities to promote a sense of belonging and pride.

HD HYUNDAI CHEMICAL

Face-to-Face Exchange Meeting

HD Hyundai Chemical operates Face-to-Face Exchange Meetings, which include CEO meetings, employee surveys, management briefings, and group sports activities to revitalize the organizational culture. This provides opportunities for the company and employees to communicate, enabling us to listen to various complaints of employees through pre-surveys and make improvements.

HD HYUNDAI OCI

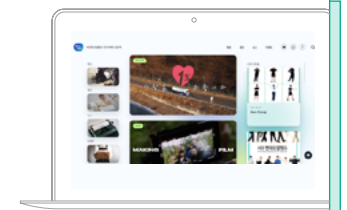
Employee Communication Activities

To encourage communication between executives and employees and build a mutually beneficial organizational culture, HD Hyundai OCI held a meeting for each position hosted by the CEO, a management status briefing, a briefing session on HD Hyundai's value system, and a communication enhancement program in which all employees participated under the themes of communication skills, intergenerational understanding, conflict management, and cooperation.

FOCUS ON

HD Hyundai Oilbank's Media Platform, Blue Talk!

HD Hyundai Oilbank has launched Blue Talk, a media platform that allows users to conveniently view various content, mainly in videos, by integrating existing internal and external communication channels such as newsletters, YouTube, Instagram, Facebook, and press releases. Blue Talk is designed as a space where anyone can easily view videos and texts by curating various contents, making it a place for free communication and exchange of information.





Employees

Strategy

Labor Relations and Communication

Labor Relations

Labor Union

Founded in 1988, the HD Hyundai Oilbank Labor Union consists of 36 executive officers including 4 time-off workers and a total of 31 union delegates. We ensure that employees have the right to freely join the labor union and participate in labor relations activities. As of December 2023, all 1,129 eligible employees have joined union members.

Labor Council

We operate labor councils composed of no more than six members for each business site. These labor councils are held regularly on the second Friday of March, June, September and December every year. In 2023, we held the council four times, which resulted in 13 agreements.

Collective Bargaining Agreements

We adhere to the collective agreements and labor-related laws that have been signed with the labor union. However, to ensure more stable labor relations, the collective agreement specifies that the company must consult with the union before taking any action that may significantly affect employment security or major business changes, such as mergers, transfers, or divestitures.

Labor-Management Cooperation Program

We conduct a management briefing session for labor union leaders, including executive committee members and delegates, semiannually under the supervision of the head of the Safety and Production Division. In addition, we build a win-win culture through workshops for labor-management executives, including union executives and site team leaders.

Metrics and Targets

Human Resource Management Goals and Performance

We have set goals for structured human resource management and aim to effectively oversee our human resources, which are the primary assets of HD Hyundai Oilbank.

STEP	Human Resource Management Goals (Short-Term)	2023 Performance	Plans (Mid to Long-Term)
Boost organizational communication	Expand communication activities using various channels by position and organization	Conduct a conversation with the CEO in a small group	Continue implementation
Enhance employee competencies	Reinforce job expertise and recruit excellent talent	Provide job rotation opportunities including affiliates and diversify the recruitment process	Expand rotational work and promote company recruitment
DX (Digital Transformation)	Enhance work efficiency through HR data automation and establish of scientific HR policies	Establish an HR data analysis process utilizing EQR-180 and incorporate it into policy	Enhance EQR-180 within HR Processes
Internalize corporate culture values	Internalize HD Hyundai Group's core values	<ul style="list-style-type: none"> Conduct workshops to internalize the value system of all executives of the oil industry Conduct the value system metaverse training for employees Review the metaverse training by team and sign a Code of Conduct 	Conduct continuous training and promote core values

Human Rights Management

Governance

Organizational Structure

Human Rights Management Organization

HD Hyundai Oilbank and our energy affiliates have established a Human Rights Management Subdivision within the ESG Working Group under the ESG Committee to promote human rights management. The division, chaired by the Chief ESG Officer and comprised of executives from related organizations such as HR, Safety, Legal Affairs, PR and Procurement is dedicated to ensuring human rights management across the company.

Human Rights Management Governance



Strategy

Human Rights Management System

At HD Hyundai Oilbank, we respect the dignity and human rights of our stakeholders. Through the 2022 Human Rights Management Declaration, we declared that we will actively practice human rights management that values human dignity and values, respects human rights, and fulfills our social responsibilities to all our stakeholders. We have established policies on the protection and promotion of the human rights of our stakeholders, and we are implementing human rights management activities based on the Human Rights Regulations. This regulation outlines rules for stakeholders, such as the prohibition of discrimination, compliance with working conditions, prevention of workplace bullying and sexual harassment, and responsible supply chain management. In 2024, we plan to continue to establish various systems to strengthen the integrity of human rights management, such as updating the Declaration of Human Rights Management to reflect the characteristics of our business. We will take the lead in actively promoting human rights management for all stakeholders, including employees, suppliers, supply chains, local residents, and customers.

[Human Rights Management Declaration](#)

[Human Rights Regulations](#)

HD HYUNDAI CHEMICAL

Disability Inclusion and Support

Since 2021, HD Hyundai Chemical has signed contracts with two standard workplaces for persons with disabilities, contributing to the stability of workplaces and vocational rehabilitation facilities for persons with disabilities and supporting their economic independence.

Human Rights Management Activities

Employee Diversity

Increasing the Number of Female Employees and Leaders

To enhance diversity and inclusion, and ultimately strengthen our competitiveness, HD Hyundai Group announced a plan at the end of 2023 to increase the recruitment of women and foster female talent to support childbirth and childcare. We aim to raise the proportion of female employees to 30% by 2030 and increase the ratio of female leaders. As of the end of 2023, we have a total of 12 female leaders, including five team leaders and seven section leaders, and we aim to further diversify our leadership by actively fostering female talent. Furthermore, we aim to expand the maternity protection and childcare support system from 2024 to support female employees in balancing work and family.

Current status of women leaders



Quantitative goals: In addition to securing 15 female managerial roles (team leaders and section leaders) by 2030 (12 as of 2024)

Human Rights Training

We conduct annual training sessions covering topics such as sexual harassment prevention and disability awareness to enhance employees' understanding of human rights. Workplace harassment guidelines were established in 2019, and since 2022, workplace harassment training has been integrated into the mandatory training for all employees.

Human Rights Management

Risk Management

Human Rights Impact Assessment

Human Rights Impact Assessment Overview

In 2022, HD Hyundai Oilbank introduced a human rights impact assessment based on the guidelines of the National Human Rights Commission (NHRC) to establish a human rights-centered management system in accordance with HD Hyundai Group's ESG management plan. In 2023, we commissioned an evaluation from a specialized human rights management agency and conducted an objective assessment to enhance the evaluation. In addition to the NHRC guidelines, we developed new management indicators compliant with global standards such as UNGP¹⁾ and established a business management item reflecting the characteristics of our oil refining business. The assessment results are reported to the ESG Working Group and serve as a key indicator to proactively prevent potential human rights management risks and advance human rights management.

Human Rights Impact Assessment Schedule



For a more detailed assessment, we created a new index using NHRC standard assessment items and the global standard UNGP RF²⁾. The indicators are categorized into management and business, with the management index including items for diagnosing human rights risks in the general business environment, and the business index containing items for identifying human rights risks in specific business operations. In particular, in the environmental analysis stage for human rights impact assessment, evaluation indicators were developed by defining employees, suppliers, supply chains, local residents, and customers as stakeholders vulnerable to human rights risks. The results of the human rights impact assessment, conducted using advanced evaluation indicators, will be reported to the ESG Working Group and utilized as key indicators for advancing human rights management and mitigating potential risks related to human rights management for the company and our energy affiliates in the future.

1) UN Guiding Principles on Business & Human Rights

2) UN Guiding Principles on Business & Human Rights Reporting Framework

Human Rights Impact Assessment Process



Assessment Results

The results of the human rights impact assessment are as follows, and we plan to advance the human rights management roadmap in 2024, improving it step by step based on the assessment results.

Item	Items Requiring Improvement	Improvements Made
Human Rights Management System	· Revision of Declaration of Human Rights Management necessary to reflect international regulations and business characteristics	· Scheduled to revise the Declaration of Human Rights Management through expert consultation in 2024
Remedial Process	· Stakeholder linguistic constraints and lack of monitoring and promotion of related policies	· Strengthened internal and external publicity and improved the overall remedy process
Plant safety	· Additional protection device required · Regular communication activities are necessary to raise the safety awareness of suppliers	· Currently reviewing gradual investment plan to secure devices · Conducted regular communication activities (Planned to be held every year after the initial implementation in 2023)



Human Rights Management

Risk Management

Grievance Handling System

HD Hyundai Oilbank and our energy affiliates operate a grievance handling system to foster a culture of respect among our members, in compliance with antibullying and harassment principles. To facilitate easier employee access, we have added a grievance reporting channel on the main page of our internal groupware and established a process to enhance the anonymity and privacy of reporters.

Upon receiving a report of human rights violation through the reporting channel, we conduct a detailed investigation of the facts, and if deemed necessary, involve a female lawyer in the investigation process. Based on the investigation results, appropriate measures are taken to discipline offenders and protect victims.

No grievances were submitted through our official channel in 2023. Nevertheless, we remain committed to various efforts to protect human rights in our workplace and ensure a safe working environment through continuous communication and promotion.

Workplace Basics Compliance Campaign

Our Safety and Production Division is conducting the Workplace Basics Compliance campaign for the division members to lower barriers to grievance consultation and encourage grievance handling.

We conduct prevention training and regular anonymous surveys and counseling on a total of 11 basic workplace issues, including the prohibition of workplace harassment and sexual harassment, and strict measures are taken after verifying the facts of the contents received through the surveys. In 2023, a total of 12 grievances were filed, with a 100% handling rate for human rights-related grievances.

Metrics and Targets

Human Rights Management Goals and Performance

Aligned with HD Hyundai Group's human rights management principles, we aim to establish human rights management goals for each stage and effectively monitor the results to achieve them.

STEP	Human Rights Management Goals (Short-Term)	2023 Performance	2024 – 2026: Internalization of human rights management	After 2027: Establishment of human rights management
Governance	Compose the human rights management governance system	Ensure stable operation of the Human Rights Management Subdivision under the ESG Working Group	Strengthen the operation of the Human Rights Management Subdivision (updating the Human Rights Management Declaration, etc.)	Continue the operation of the Human Rights Management Subdivision
Management System	Establish human rights management roadmap	Conduct human rights due diligence (human rights impact assessment)	Set mid-to long-term goals for human rights management	Promote a culture of respect for human rights company-wide
Disclosure	Share human rights management information with both internal and external stakeholders	Disclosed in the Integrated Report	Extend family-friendly certification (expires in Nov 2025)	Continue family-friendly certification renewal (every 3 years)
Training	Conduct human rights trainings for all employees	Conduct human rights trainings for all employees	Continue human rights training for all employees, including specialized sessions for management personnel	Continuation of human rights training
Assessment	Conduct regular human rights impact assessments and enhance the assessment	Improve the reliability of assessments (led by specialized ESG institution)	Conduct human rights impact assessment regularly	Expand human rights impact assessment targets (bio, petrochemical, lubricants, etc.)

Health and Safety

Governance

Organizational Structure

HD Hyundai Oilbank and our energy affiliates prioritize health and safety through a dedicated organization. We develop plans on major safety matters through our Affiliated Company Safety Council and obtain approval from the Board of Directors and the Occupational Health and Safety Committee.

Health and Safety Decision-Making System(Applies to HD Hyundai Oilbank and Affiliates)

<p>Board of Directors</p> <ul style="list-style-type: none"> · Establish and approve the health and safety plan at regular board meetings. · Report organization and facility status · Review and approve the budget formulation and execution results 	<p>Occupational Health and Safety Committee</p> <ul style="list-style-type: none"> · Collect feedback from the employees on health and safety matters quarterly · Review and approve enactment/revision of safety regulations, on-site hazards improvements, and major health and safety issues 	<p>Affiliated Company Safety Council</p> <ul style="list-style-type: none"> · Share best practices on safety management every quarter among the HD Hyundai Oilbank and affiliates · Revise and improve unreasonable regulations
--	--	--

Health and Safety Organizations*

<p>EHS Management Team</p> <ul style="list-style-type: none"> · Manage tasks related to the Serious Accidents Punishment Act · Ensure compliance with health and safety laws · Occupational health and safety licensing related work (PSM/SMS) · Implement initiatives to foster a safety culture · Identify risk factors in the processes and manage investments in process facility · Monitor health and safety compliance 	<p>Health and Safety Team</p> <ul style="list-style-type: none"> · Manage facilities and ensure compliance related to fire and hazardous items · Supervise dangerous work and conduct emergency response · Ensure health and safety of employees and suppliers
---	--

* Each energy affiliate has a different organizational name, but the roles and responsibilities are consistent

Health and Safety Management Policy

[Health and Safety Management Policy](#)

Recognizing safety, health, and environment as our top core values, we announced a safety and health management policy signed by the Chief Safety Officer (CSO) to minimize possible negative impacts in all management activities. The Health and Safety Management Policy applies to all workers, including regular employees and contractors, working within all of our business sites. It is prepared to include the health and safety of stakeholders such as local communities and consumers.

We established the Health and Safety Code of Conduct that applies to all our suppliers to execute a responsible health and safety management.

Supplier Health and Safety Code of Conduct

[Supplier Health and Safety Code of Conduct](#)

<p>1 Occupational safety</p>	<p>5 Physically demanding work</p>
<p>2 Emergency preparedness</p>	<p>6 Facility safety</p>
<p>3 Occupational accident and disease prevention</p>	<p>7 Sanitation facility, cafeteria, dormitory management</p>
<p>4 Management of harmful factors in the work environment</p>	<p>8 Health and safety training</p>

Health and Safety

Strategy


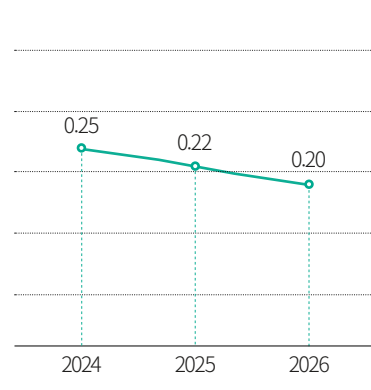
Health and Safety Management System

Health and Safety Strategy

Mid to Long-Term Goals for Health and Safety Management

We shifted our safety management paradigm from regulation and inspection-centered approaches to a self-discipline prevention system. We also established a roadmap to prevent serious accidents by integrating advanced safety technologies in the mid to long term. Through the implementation of the Four Major Strategies of the Roadmap for Preventing Serious Accidents, we aim to further reduce the lost time injury rate (LTIR) among our employees and suppliers.

Four Major Strategies of the Roadmap for Preventing Serious Accidents

The Four Strategies	Establish self-discipline centered on risk assessment	Apply a smart safety technology	Promote safety awareness and culture through participation and cooperation	Reorganize safety management governance
Stakeholders	Employees 		Suppliers 	
LTIR Target				

Energy Affiliates

<h4>HD Hyundai Chemical</h4> <ul style="list-style-type: none"> · Establish an autonomous EHS culture · Strengthen compliance with EHS laws · Conduct risk assessments (CTO) · Improve the level of safety management system (SMS) · Achieve zero legal risks related to fire and hazards · Establish integrated environment 2.0 system 	<h4>HD Hyundai Cosmo Petrochemical</h4> <ul style="list-style-type: none"> · Establish a safe workplace environment · Achieve zero safety and environment compliance risks · Strengthen the safety and environment organization's capabilities
<h4>HD Hyundai and Shell Base Oil</h4> <ul style="list-style-type: none"> · Establish an autonomous safety culture · Strengthen process safety management · Comply with health and safety laws · Strengthen the implementation of carbon neutrality 	<h4>HD Hyundai OCI</h4> <ul style="list-style-type: none"> · Comply with health and safety laws · Conduct and internalize risk assessments · Establish an autonomous safety culture · Strengthen ESG management activities

Health and Safety

Strategy

Health and Safety Management Activities

Process Safety Management

Process Safety Management (PSM)

At HD Hyundai Oilbank, we operate a PSM program to prevent serious industrial accidents caused by fire, explosion, and leakage of hazardous substances. We are making every effort to prevent process accidents through systematic diagnosis and active investment in facilities. We have established a system for the 12 elements of process safety management by training safety experts for each team, and we maintain the highest level (progressive grade) of process safety through annual self-audits. For continuous development of process safety management, we conduct regular monitoring processes every quarter according to process facility changes to strengthen the management level.

Process Safety Event (PSE) Management

HD Hyundai Oilbank manages process safety events by classifying them according to global sustainability information disclosure guidelines, SASB standards, and internally established standards. We classify them based on accident type and size, forming an investigation team and conducting detailed investigations for those categorized as Tier 2 or higher.

Risk Identification and Improvement

We conducted an event aimed at identifying risk factors to enhance safety awareness and foster a safe workplace. Through this, we identified over 400 significant and minor risk factors deemed to require improvement. Remedial measures are currently underway to address these issues.

HD HYUNDAI CHEMICAL

HD Hyundai Chemical has been enhancing the process safety capabilities of its employees through competency enhancement training for each position level. Regular evaluation of the implementation status of the process safety report has enabled us to maintain the progressive grade of the PSM system, operating at the highest level of process safety management in the industry and placing us in the top 4% of PSM target business sites

HD HYUNDAI AND SHELL BASE OIL

HD Hyundai and Shell Base Oil maintains a progressive-grade business site, with the highest level of process safety management. We steadily raise the level of management through self-audits in collaboration with external experts to ensure the reliability of process safety management. In 2023, we re-evaluated the process risk assessment for all processes, controlled, and improved risk factors, maintaining an accident-free workplace.

HD HYUNDAI COSMO PETROCHEMICAL

HD Hyundai Cosmo Petrochemical attends the International Industrial Safety Expo annually. We also visit the business sites of our affiliates, domestic and international peers, and advanced safety management companies such as Germany's BASF, Japan's Cosmo Oil, and Czech Republic's Skoda Auto to actively discover best practices in safety management and incorporate advanced technologies.



Japan Cosmo Oil



Czech Republic Skoda Auto

HD HYUNDAI OCI

HD Hyundai OCI listens directly to the opinions of on-site workers to discover and settle site-centered risk factors, establishing improvement plans after identifying harmful risk factors in the process and make investments in improving safety facilities.



Installation of shatterproof cover for all HCl lines



Installation of K-301 and 302 inspection platforms



Installation of safety footrest for XV-4181 inspection



Installation of safety cradle for vehicle work

Health and Safety

Strategy

Health and Safety Management Activities

Establishing a Safety Culture

Safety Environment Performance Evaluation

We integrated the SHE Index into the KPIs of executives and team leaders to foster a culture of safety, environment, and health management, promoting participation in PSM activities.

Evaluation Items	Details
Safety accidents	Ensure no injury, fire, explosion, environmental accident
PSM engagement	PSM interview scores and participation in interview training
Completion of improvement measures	Complete improvement recommendations resulting from internal inspection
Compliance with safety rules	Ensure compliance with the 12 major safety rules
Safety culture	Conduct safety meetings
Health and safety education	Completion of supervisor education and regular worker education

Safety Awareness Activities

Every month, the CSO of HD Hyundai Oilbank issues a Safety Letter to employees to prevent safety accidents, conveying management's commitment to health and safety. We recognize the effectiveness of accident prevention by selecting and rewarding employees and suppliers who have contributed to the prevention of accidents, such as discovering and eliminating on-site risk factors in advance. We continue to encourage them to set an example for others. The CSO sends a daily text message to all suppliers in the Daesan Plant with information about on-site safety management, creating an atmosphere to raise safety awareness.

Regular Maintenance Workshop for Accident-Free Workplace

HD Hyundai Oilbank and our energy affiliates held a workshop to express their commitment to achieving zero accidents for regular maintenance before the large-scale regular maintenance at the Daesan Plant. To prevent accidents during the regular maintenance period, we presented the cause and measures to prevent recurrence of the accident cases. We shared the safety management plan of the company and the safety management plan of our suppliers, pledging our commitment to completing the regular maintenance and achieving zero accidents.

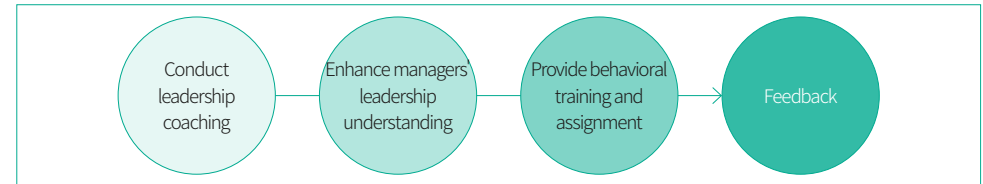


Regular maintenance workshop for accident-free workplace

Safety Leadership Coaching Program

We implement a coaching program for executives, team leaders, and managers at major business sites, facilitated by safety coaching experts. Through this program, we selected five safety leadership competencies and established safety leadership codes of conduct tailored to managerial roles for each competency. We also developed educational videos emphasizing the importance of leadership, practical methods, and tips, and delivered five online training sessions in 2023.

Coaching Program Operation Process



Safety Leadership Competency

- Present goals and vision
- Hazard prediction
- Visible on-site management
- Safety performance management and improvement
- Safety motivation

Tasks

- Establish safety goals and performance management
- Conduct critical task observation (CTO) job risk assessment training
- Conduct on-site observation training with employees with less than 5 years of experience
- Enhance the effectiveness of safety meeting implementation measures
- Conduct departmental safety management inspection and feedback



Online safety leadership competency training



CTO job risk assessment Training

Health and Safety

Strategy

Health and Safety Management Activities

Establishing a Safety Culture

Safety Communication Channels

HD Hyundai Oilbank and our energy affiliates operate various safety communication channels for direct communication with employees and suppliers.

HD HYUNDAI OILBANK

HD Hyundai Oilbank has opened a safety communication channel where employees and suppliers can communicate directly with the health and safety organization. Anyone can report unsafe site conditions or violations of laws and regulations through the channel, and in 2023, we completed a total of 14 measures that needed improvement. Opinions on improvements to work methods and safety regulations and procedures can also be submitted, and rewards are given semiannually for proposals that result in excellent accident prevention effects.



HD HYUNDAI CHEMICAL

HD Hyundai Chemical shares examples of safety activities and improvements in risk factors through Safety Environment Meetings aimed at fostering a safety culture. We also operate various communication channels, such as supplier council meetings, CEO meetings, and a health and safety suggestion box, to gather safety-related feedback from all suppliers and address any risks.

HD HYUNDAI AND SHELL BASE OIL

HD Hyundai and Shell Base Oil encourages interest in on-site safety by discovering and rewarding near-miss accidents.

HD HYUNDAI COSMO PETROCHEMICAL

HD Hyundai Cosmo Petrochemical operates the KakaoTalk business channel to listen to the health and safety opinions of workers and strengthen process safety management. QR codes were posted throughout the Daesan Plant and Seoul Office to enhance communication accessibility for the members. We also hold monthly safety meetings for personnel in the operating team to prevent safety accidents by listening to related opinions and conducting improvements.

HD HYUNDAI OCI

HD Hyundai OCI conducts bimonthly safety inspection meetings to raise safety awareness and check the performance of safety activities, forming a safety inspection team to discover risk factors and implement improvement measures.

Safety Culture Level Diagnosis

We conduct a diagnosis for our employees to understand the level of shift in safety culture. Following the first diagnosis in 2021, the second diagnosis was conducted in December 2023. Nine key indicators of safety culture and related variables, such as safety competence, safety motivation, and safety behavior, were surveyed.

As a result, scores increased for all key indicators, with an average score of 67 for all items, an increase of 15 points compared to the average score for the primary diagnosis. The item that showed the biggest increase in scores was management's commitment to safety, with 45% of respondents believing that management cares about and is willing to address safety-related issues. We are making various efforts to promote safety proposal activities, and respondents said that they ensure that the company's supervisors strictly comply with safety regulations and procedures. Based on the results derived from the level diagnosis, we will identify the causes for items that received low scores to enhance the level of safety culture and continuously improve them.

Safety Culture Level Diagnosis Results

Factor	1st (2021)	2nd (2023)	GAP
Overall average	52	67	▲ 15
Management's commitment to safety	45	65	▲ 20
Compliance with safety regulations and procedures	53	65	▲ 12
Incident management	55	69	▲ 14
Safety management organization's capabilities	48	63	▲ 15
Safety suggestions	51	65	▲ 14
Safety education and training	56	69	▲ 13
Supervisors' safety leadership	51	66	▲ 15
On-site safety management activities	53	65	▲ 12
Supplier support	59	73	▲ 14

Health and Safety

Strategy

Health and Safety Management Activities

Establishing a Safety Culture

Safety Awareness Training Program

HD Hyundai Oilbank has organized a health and safety job training curriculum to strengthen the safety competency of employees and spread a safety culture. Employees are required to complete training courses required for each position, such as health and safety-related laws, accident investigation, and risk assessment. We provide safety mindset training for senior managers to cultivate leadership in safety for next-generation managers. In 2023, we operated a total of three safety awareness training programs with topics such as work permit procedures, safety regulations, work safety rules, risk assessment, and accident cases to prevent accidents by improving the safety awareness of on-site employees. Every quarter, each team conducts its safety training tailored to the site situation and the characteristics of the team to cultivate autonomous on-site safety management capabilities.



Safety mindset training for senior managers

Spreading Safety Culture

HD Hyundai Oilbank and our energy affiliates are conducting health and safety campaigns to encourage employees and suppliers to comply with and practice safety rules, enhancing the level of safety awareness. Eleven campaigns were held, including a campaign to wear protective equipment, a pre-work tool box meeting (TBM), a campaign to follow basic safety rules, and a campaign to prevent major work accidents in preparation for large-scale regular maintenance at the Daesan Plant.



Regular maintenance and work accident prevention campaign



Wear protective equipment campaign

Disaster Response Korea Safety Drill

HD Hyundai Oilbank and our energy affiliates participated in the 2023 Disaster Response Korea Safety Drill hosted by the Ministry of the Interior and Safety. A total of 250 people from 26 organizations, including Seosan City Government, Seosan Fire Station, and nearby petrochemical companies, participated in this drill, developing a realistic sense of how to deal with various crises against the backdrop of a complex disaster situation caused by a large-scale chemical explosion.



Disaster Response Korea Safety Drill

HD HYUNDAI CHEMICAL

Competency Building Training for Each Position

HD Hyundai Chemical identified vulnerable factors at each position level and conducted nine competency enhancement training based on them. In 2024, we will continue to organize necessary safety training and customized curriculum for each position, striving to cultivate internal and external safety knowledge by utilizing expert instructors in each field.

- Risk assessment training
- Weekend operator training
- Serious accident cases and lessons training
- Training led by the Seosan Serious Accident Prevention Center Director
- Safety leadership training
- Basic process risk assessment training
- Advanced process risk assessment training
- Writing and management training on operating procedures
- Occupational health training for supervisors

Employee Health Management

HD Hyundai Oilbank and our energy affiliates provide first aid training and health consultation for health management to improve employees' ability to respond to emergencies. Consultation is provided to prevent metabolic syndrome, cerebrovascular disease, heat-related illness, and job stress. Those who are found with signs receive medical examination and follow-up support to ensure a safe and healthy life.

Health and Safety

Risk Management

Health and Safety Risk Management

Occupational Health and Safety Management Systems (ISO 45001)

Acquiring ISO Certification

We completed the ISO 45001 renewal audit in 2023 and continue to operate the safety and health management system. Through an internal audit conducted annually, we check compliance and implementation of the company-wide safety and health management system based on the PDCA Cycle¹⁾. This includes identifying overall risks related to health and safety and selecting issues for improvement.

To prevent risk factors identified from the risk assessment results for certification renewal, we implemented improvement tasks such as conducting pre-work risk assessments, monitoring legal compliance for business sites other than the Daesan Plant, and securing Material Safety Data Sheets (MSDS) before introducing substances requiring special treatment. Through these efforts to achieve zero safety and health risks, we have reduced our Lost Time Injury Rate (LTIR) from 0.1 in 2022 to 0.05 in 2023.



ISO 45001 Certificate

1) Plan-Do-Check-Act phases

Risk assessments

Process Risk Assessment

We utilize various methods such as HAZOP, K-PSR, and Check List to conduct our process risk assessment. By calculating the size of the damage and performing quantitative risk assessment, we predict the occurrence of process accidents. Using this information, we develop specific emergency control plans for each department to effectively respond to any potential risks.

Item	Assessment Cycle
	Every 4 years for each process
HAZOP*	When establishing or expanding process facilities
	When changing a major part of the process
K-PSR	Every 4 years for each process
Check List	When simple changes have been made to the process

*HAZOP: A risk assessment technique that identifies existing risk factors in processes and operational issues that can hinder efficiency, aiming to eliminate their causes

Process Risk Assessment Process



Through regular risk assessments conducted every four years for each process using the HAZOP method, a total of 36 cases have been identified as of 2023. As of May 2024, we have already taken action on 13 cases and are currently in the process of implementing measures for the remaining 23 cases.

Process Risk Assessment Results

Item	Improvement Recommendations	Completed	In Progress
HAZOP	36 cases	13 cases	23 cases

Health and Safety

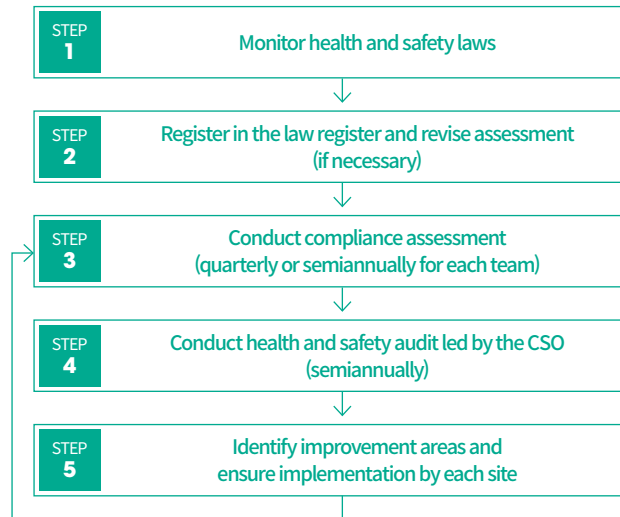
Risk Management

Health and Safety Risk Management

Safety Compliance and Safety Inspection Activities

Health and Safety Compliance System

We are building a health and safety compliance system to achieve zero risks in health and safety compliance. We constantly check for revisions and enactments to relevant laws and conduct compliance evaluations to ensure their implementation.

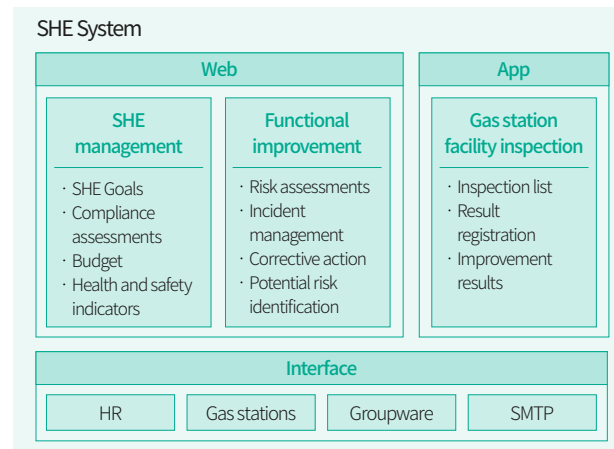


Comprehensive Diagnosis of Compliance with the Serious Accidents Punishment Act

HD Hyundai Oilbank and our energy affiliates conducted a comprehensive diagnosis to understand the overall status of fulfilling the obligation to ensure health and safety under the Serious Accidents Punishment Act. We checked the adequacy of compliance levels with the obligation, and conducted interviews with the dedicated health and safety organization to confirm specific facts, assuming a serious accident occurs. We plan to manage related risks through the reconstruction of the response system under the Serious Accidents Punishment Act.

Advance SHE system

HD Hyundai Oilbank and our energy affiliates have advanced the SHE system to monitor the implementation of the Serious Accidents Punishment Act and have improved accessibility so that all employees can easily check health and safety information.



Safety Inspection Activities

Company-wide health and safety audits	Identify the level of implementation of health and safety laws and regulations and derive improvement plans to eliminate safety and health risks
Regulatory compliance TF activities	Inspect and monitor whether the site is properly operated in accordance with relevant laws
Departmental safety managers and regional safety supervisors	Appoint for intensive management of high-risk places and materials and quick decision-making in case of emergency
Mock inspection on areas applicable to the Occupational Safety and Health Act	Inspect the level of compliance with the Occupational Safety and Health Act and prepare for institutional inspections
Affiliate Cross Safety Checks	Conducted by health and safety personnel of each company on other affiliates' workplaces (67 improvement measures identified and completed)
Joint Inspection of Firefighting and Hazardous Materials Facilities and Emergency Response Drills	Conduct inspection and training to prevent fire and explosion hazards

Respond to the Serious Accidents Punishment Act

As the scope of application of the Serious Accidents Punishment Act will be expanded to business sites with more than 5 to 50 full-time employees, starting January 2024, our energy affiliates have carried out various activities in preparation.

HD HYUNDAI AND SHELL BASE OIL

Audit on the Serious Accidents Punishment Act

Establish regulations related to laws and improve risks (30 improvement measures identified and in progress)

HD HYUNDAI COSMO PETROCHEMICAL

Consulting on the Serious Accidents Punishment Act

Review the adequacy of work risk assessment through consulting with external experts and improve harmful risk factors

Health and Safety

Metrics and Targets

Health and Safety Management Goals and Performance

Health and Safety Management Vision

Goal

Tasks

Become a "Safety Well-being Company" by advancing safety awareness and internalizing safety behavior.

Zero safety accidents

Task	2023 Goals	2023 Performance	Task	2024 Goals
Comply with safety laws	<ul style="list-style-type: none"> Distribute legal compliance guidebook Conduct legal compliance evaluations (quarterly at Daesan Plant and Central Technology R&D Institute, semi-annually at other business sites) Conduct semiannual health and safety audits Conduct on-site legal risk self-inspections 	<ul style="list-style-type: none"> Revised and distributed 100 copies of the legal compliance guidebook Completed legal compliance assessment for all business sites Conducted health and safety audit (1H: April to June, 2H: September to November) Conducted on-site inspection for each of the eight selected risk factor themes 	Comply with safety laws	<ul style="list-style-type: none"> Conduct legal compliance assessments Reorganize the health and safety audit system Legal Compliance TF activities Conduct a mock inspection of the Occupational Safety and Health Act
Conduct risk assessments	<ul style="list-style-type: none"> Perform risk assessment implementation diagnosis and consulting Provide professional training on job safety analysis (JSA) 	<ul style="list-style-type: none"> Implemented facility team risk assessment consistency diagnosis (May) Provided JSA training for employees with less than five years of safety management experience (June) 	Achieve Progressive grade on PSM	<ul style="list-style-type: none"> TF activities in preparation for PSM grade evaluation Monitor change management procedures Conduct preventive inspections by disaster type using statistics Consult to improve the health and safety level of suppliers
Establish a safety culture	<ul style="list-style-type: none"> Introduce the EHS Index Operate a safety leadership coaching program Enhance company-wide SHE system Operate safety education curriculum by position Implement benchmarking of overseas advanced companies Provide technical guidance on construction disaster prevention for suppliers Hold TBM competition for suppliers Conduct regular maintenance and accident-free workshops 	<ul style="list-style-type: none"> Introduced EHS Index for manager performance evaluation Conducted six sessions of coaching to improve manager safety leadership Upgraded SHE system to strengthen monitoring of health and safety obligations implementation Operated safety education curriculum by class (10 times) Conducted safety management benchmarking for Japan's Cosmo Oil (February), Germany's BASF (October), and Czech Republic's Skoda Auto (October) Provided disaster prevention technical guidance for suppliers without a safety manager (75 times total in 2023) Engaged 17 suppliers in the TBM competition, awarding 10 companies including one grand prize winner and three excellence prize winners Hosted a accident-free workshop to enhance safety management for regular maintenance employees and suppliers (July) 	Establish a safety culture	<ul style="list-style-type: none"> Operate SHE Index Operate training programs to improve employee safety awareness Operate safety communication channel Implement health and safety win-win cooperation project activities with suppliers

Local Communities

Governance

Organizational Structure

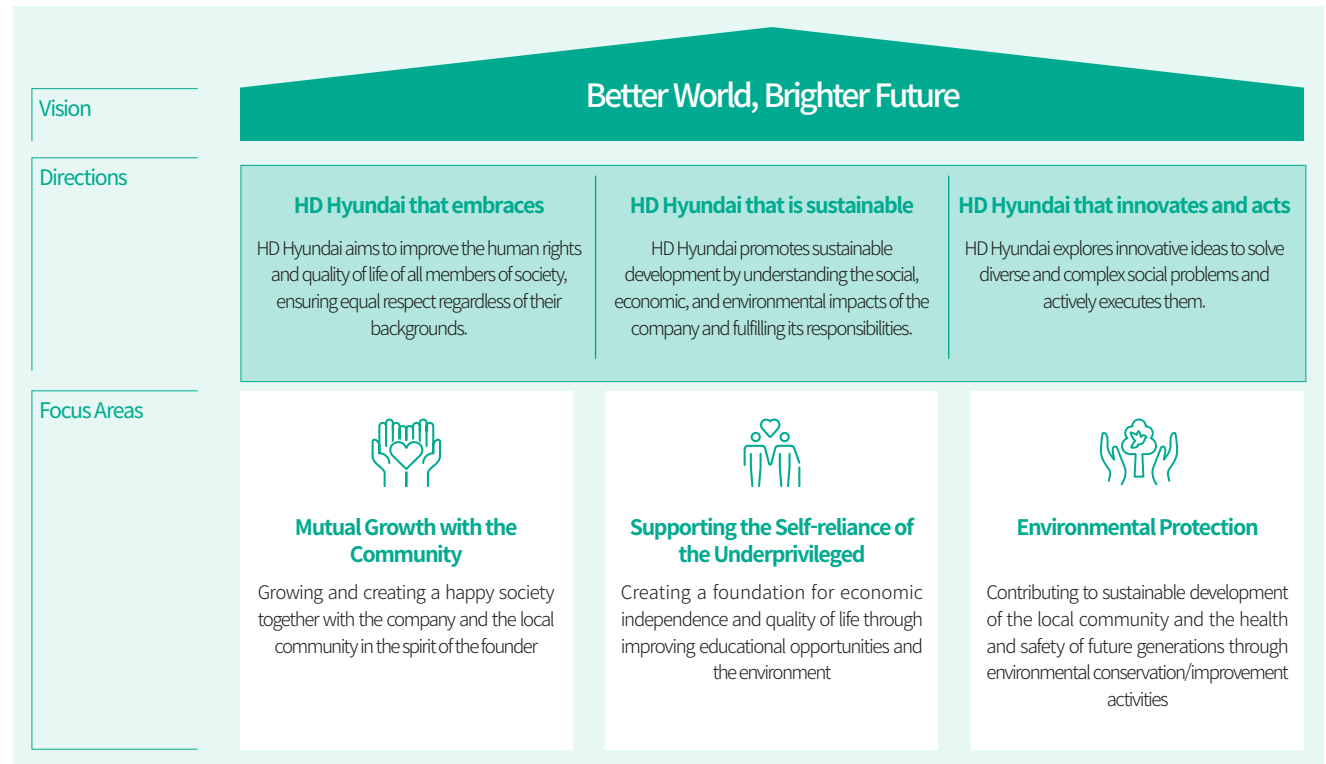
HD Hyundai Oilbank is actively engaging in social contribution initiatives, spearheaded by the PR Team and Public Affairs & Communication Team, to fulfill corporate social responsibilities and benefit the local communities surrounding our business sites. We actively participate in the Group's Social Contribution Council and collaborate with other affiliate companies to create synergies in our social impact endeavors.



Strategy

Social Contribution Policy

Through our participatory social contribution activities, which involve all our employees, we aim to support the mutual development of local communities, provide assistance to the underprivileged, and promote independence for future generations.



Local Communities

Strategy

HD Hyundai 1% Nanum Foundation

Happiness Sharing Volunteer Program

Since 2005, HD Hyundai Oilbank employees have actively participated in the Happiness Sharing Volunteer Program, offering their time and assistance to homes and social welfare facilities in need. For every hour volunteered by our employees, a designated amount of money is donated by the company through a matching grant to beneficiary families and social welfare facilities, supporting KRW 2 million worth of requested items. This initiative contributes to creating a more compassionate and caring world.



Heating Cost and Oil Support Project

HD Hyundai Oilbank has provided heating subsidies since 2005 to ensure the elderly living near the Daesan Plant can stay warm in winter. In 2023, amidst soaring prices and cold waves, we provided heating expenses to 31 senior citizen centers in Daesan-eup with the 1% Nanum Foundation. In addition, we conducted a project to provide heating oil for energy-vulnerable households and social welfare facilities nationwide, supporting 13,050 households and 2,514 facilities with KRW 10 billion in heating oil.



Heating cost assistance for low-income households | Heating oil support business

Social Contribution Vision Linked Activities

Mutual Growth with the Company

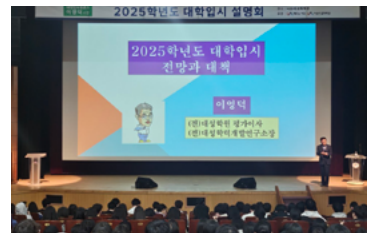
Local Rice Purchase Project

Since 2003, we have conducted a local rice purchase business to improve the competitiveness of local farmers and stabilize their living income. We purchase KRW 1 billion worth of rice from local farmers and deliver 23,934 10 kg bags of white rice annually to low-income households and social welfare organizations in 15 cities and counties in Chungcheongnam-do.



Local Talent Development Program

Established in 2006, the HD Hyundai Oilbank Scholarship Program has selected about 100 scholarship recipients in Seosan, Dangjin, and Taean in 2023 and awarded scholarships. We also conduct various support activities for local talents, such as holding University entrance information session and job fairs, to address limited access to information in the region.



Community Safety Promotion Project

Since 2005, we have been supporting four public interest organizations in the region, including the Daesan-eup Volunteer Fire Brigade, Citizen's patrol, Korean Red Cross Daesan life guard, and Daesan Junior Chamber, to sponsor firefighting, crime prevention, maritime safety, epidemic prevention activities, and donate facilities to foster safe environment in community.

Campaign to Establish an Advanced Transportation Culture

In cooperation with Daegu Provincial Police Commission, and the Daegu Metropolitan Police Agency, we conducted a campaign to establish an advanced transportation culture. For two weeks, eight directly-managed gas stations in the region collected opinions from drivers to prevent traffic accidents and drunk driving. The collected opinions will be reflected in policies to improve the traffic safety environment within the region.



Local Communities

Strategy

Social Contribution Vision Linked Activities

Supporting the Self-reliance of the Underprivileged

Senior Center Facility Improvement Project

Together with the HD Hyundai 1% Nanum Foundation, we carried out a project to support wall-mounted chairs for senior citizens to improve the facility environment and promote the welfare of the elderly. KRW 200 million worth of wall-mounted chairs were provided to 200 facilities for the elderly to make facility furnished to prevent sedentary lifestyle.



Sound Keeper Campaign

Since 2005, we have been delivering the kindness of our employees to our underprivileged neighbors through volunteer activities involving employees and their families. Due to the high number of cases where deaf children drop or lose their external devices after cochlear surgery, we produced 3,260 hair nets that can store external devices and delivered them to deaf children.



Donation of LED Lighting Fixtures to Welfare Facilities

With the HD Hyundai 1% Nanum Foundation, we supported the replacement of high-efficiency LED lighting fixtures at four welfare facilities for children and the elderly in Seosan. LED lighting is energy-efficient and long-lasting, reducing electricity bills, improving illumination, and reducing environmental pollution, enabling children and the elderly to use the facility more comfortably.



Environmental Protection

Sea-Caring Project

To preserve the marine ecosystem and restore depleted fish stocks in nearby fishing grounds, we have been releasing rockfishes and olive flounders in the waters near the Bigyeongdo in front of Samgilpo, Chungcheongnam-do. Based on the olive flounder release event, Samgilpo has grown into the largest collection area in Korea. To create a basic environment where various marine resources can grow, we also make efforts to preserve marine resources by releasing shellfish, and cleaning up seashores.



Hwagok Reservoir Park Project

We carry out facility maintenance and aesthetic improvement activities at the Hwagok Reservoir near the Daesan Plant every year. In celebration of its 50th anniversary, we are working with our employees to clean up the environment in the reservoir and improve its aesthetics through tree planting, as well as developing it into an eco-friendly park for local residents to use by creating sports facilities and shelters.



Activities Aimed at Creating Value

Joint Operation of Youth Soccer Program

Since 2020, we have collaborated with the K League to jointly operate a youth soccer program. In 2023, we recruited 30 promising young soccer players for the fourth year of the Dream Assists program. Through this initiative, these talented individuals had various opportunities to further develop their skills, such as one-on-one mentoring from current and former professional soccer players and overseas training camps.

Making a Reading Table of Love

We produced 735 Reading Tables of Love so that teenagers can develop the habit of reading with a good posture and delivered warm hearts by donating to a total of 12 places: 2 domestic middle and high schools, 7 child welfare facilities, and 3 schools in the Philippines and Myanmar.



Sending Advertisement and Campaign

While installing digital signage on the top of gas stations' self-service pumps to transmit advertisements, we deliver useful and diverse values to customers visiting gas stations by displaying public service announcements and campaigns alongside commercial advertisements.



Local Communities

Strategy

FOCUS ON

Recognized for Corporate Social Responsibility in the Community

In December 2023, we were honored to be selected as a company for the 2023 Corporate Social Responsibility in the Community, recognizing the contributions of companies and institutions dedicated to revitalizing local communities and setting an example in responsible activities by the Ministry of Health and Welfare and the Korea National Council on Social Welfare. In line with the ESG trend, 25 items were selected after screening, with our activities such as the Local Rice Purchase Project and the Sea-Caring Project receiving particularly excellent evaluations.



Metrics and Targets

Performance and Goals

2023 Performance

- Received certification for corporate social responsibility in the community
- **Improved educational environment**
 - Provided scholarship for local students (2003-, KRW 59 million per year)
 - Held a college entrance examination seminar (2011-)
- **Cultural experience support**
 - Dream Concert (yearly)
- **Supported welfare facilities**
 - Kimchi sharing (2012-)
 - Purchased and donated local rice (2003-)
 - Purchased and donated local produce (2016-)
- **Senior center facility improvement project (yearly)**
- **Supported public interest organizations activities (2005-)**
- Sea-Caring Rockfish Releasing Project (2003-)
- Hwagok Reservoir Park Project (Monthly, excluding winter)

2024 Plans

- Maintain certification for corporate social responsibility in the community
- **Improve educational environment**
 - Continue the existing projects
 - Expand the scale of the scholarship program and establish a career exploration program (university tour program, etc.)
- **Expand the support for cultural experiences**
 - Increase more projects, such as watching sports
- **Expand the support for welfare facilities**
 - Continue the existing projects
 - Develop projects to support facilities for persons with disabilities
 - Promote old vehicle replacement project with a welfare organization
- **Expand the senior center facility improvement project**
- **Support revitalization of local commercial areas**
- Continue Sea-Caring Rockfish Releasing Project
- Continue Hwagok Reservoir Park Project
- Conduct Christmas service at local orphanage

Mid- to long-term plan(after 2025)

- Maintain certification for corporate social responsibility in the community
- **Improve educational environment**
 - Continue the existing projects
 - Discover educational programs for local students
- **Continue cultural support and expand future generation support programs (more than two projects)**
- **Strengthen support for welfare**
 - Continue the existing projects
 - Health support for persons with disabilities, etc.
- **Review the expansion of the number of support routes for senior facility improvement projects**
- **Review the expansion of mutual growth projects with local communities (support for public interest and welfare organizations, etc.)**
- Explore increasing fish species
- Expand Hwagok Reservoir Park Project, such as planting trees

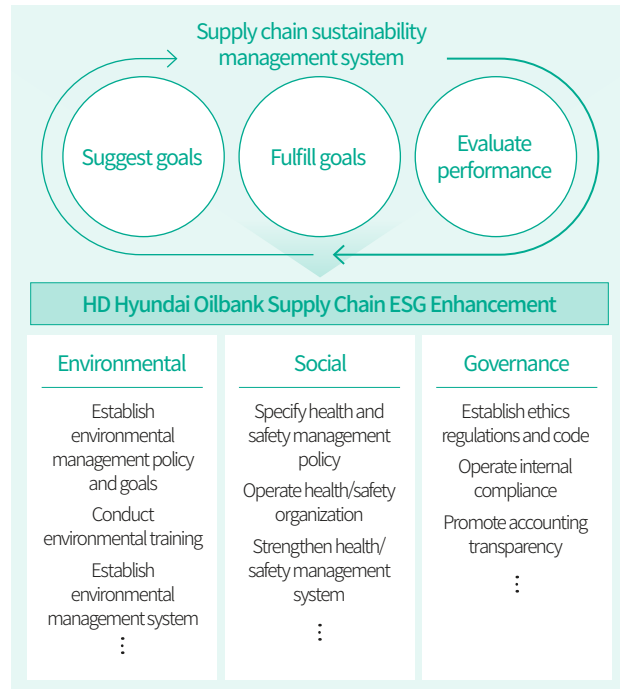
Suppliers

Governance

Supplier Management System

Establishment of Supplier ESG Management System

We are upgrading the ESG risk management system for suppliers in the procurement department and continuously improving our management process. This includes identifying, diagnosing, and evaluating ESG risks of suppliers through external consulting, and supporting them in implementing improvements. We are continuously strengthening ESG risk management for suppliers by monitoring ESG-related trends and providing necessary information and guidelines. In 2024, we plan to expand communication with suppliers by holding more meetings.



Strategy

Supplier Management

Strengthening Supplier Management

Integrated Procurement System

HD Hyundai Oilbank has established a new integrated procurement system, HOPS*, to enhance the efficiency of procurement operations and to ensure transparent and fair transactions. We conduct purchases and contracts through this system, integrating information such as credit, finance, and ESG from external organizations for improved procurement operations.

* HD Hyundai Oilbank Procurement System

Supplier ESG Self-Assessment

To promote voluntary ESG management improvements, we require suppliers to conduct ESG self-diagnosis in the procurement system when registering as a supplier or submitting a quote. This self-diagnosis comprises 26 self-assessment indicators covering the areas of environment, society, and governance. Suppliers can identify their ESG management levels and derive improvement measures through this self-diagnosis. We plan to actively support self ESG diagnosis to effectively enhance the ESG management level of suppliers beyond mere diagnosis.

Activities to Strengthen Supplier Management

Our procurement department conducts internal ESG training sessions for procurement department employees to enhance their understanding of sustainable management, awareness, and competency on ESG-related issues, with a completion rate of 100%.

Furthermore, we are continuously monitoring domestic and international trends to comply with ESG-related risks. We are also exploring ways to achieve mutual growth with our suppliers through the sharing of relevant information and impact analysis.

Supplier ESG Management Compliance Pledge

We have established a Code of Conduct for Suppliers to ensure a healthy and sustainable supply chain. This code includes items related to and to protect human rights, safety and health, environment, ethics, and business management. Suppliers express their commitment to establishing a safe work environment, respecting the human rights of employees, and practicing environmental responsibility and ethical management through a compliance pledge. We also demand that all suppliers strive to comply with a sound and fair trade and to establish an ethical corporate culture by mandating pledges to practice ethical management and comply with fair trade standards. We will continue to carry out various activities for mutual growth with suppliers, including supporting and monitoring matters necessary in complying with the regulations pledged by suppliers.

[Supplier Code of Conduct](#)

Maintaining a Virtuous Cycle for Supplier Management

Recognizing the importance of building a sustainable supply chain, we have added new items related to strengthening ESG management for suppliers to our KPI. We are working from various angles for mutual growth with our suppliers.



Suppliers

Strategy

Supplier Management

Supplier Support System

Certification Cost Assistance Program

Since 2020, we have been assisting 50% of the health and safety management systems (ISO 45001 and KOSHA 18001) certification costs for in-house suppliers, and also provide support for risk assessment fees and safety and health certification support system. We encourage suppliers to autonomously establish safety management systems through various support systems and contribute to the establishment of a health and safety system for suppliers by actively reflecting on supplier regular evaluations once certification is obtained.

Delivery price indexation system

The delivery price indexation system is a system where a company signs a written agreement based on the Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small-Medium Enterprises to adjust the delivery price indexation with changes when the price of the main raw materials of the goods delivered to the outsourced company fluctuates above a certain level. Through this system, we aim to stabilize the management of suppliers and implement mutual growth management by adjusting delivery prices for changes in raw material prices that was unpredictable at the time of signing the contract.

Supplier Payment Policy

To ensure our suppliers can manage their funds effectively, we conduct monthly payments, allowing them to predict the deposit date.

Supplier Health and Safety Management Support

Health and Safety Compliance Consulting

We select 36 suppliers performing major risk tasks to inspect compliance with the Occupational Safety and Health Act and conduct health and safety law compliance consulting on a semiannual cycle. Based on the consulting results, we provide improvement activities such as special safety education for workers, posting purport of occupational health and safety laws, and training for site managers and safety managers. We also plan to establish a system for implementing the Serious Accidents Punishment Act for suppliers.

HD HYUNDAI CHEMICAL

Daily Award for Best Practices in Safety Activities

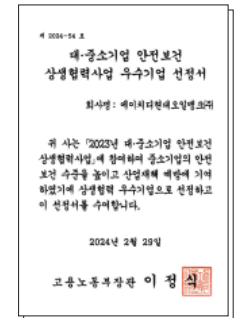
HD Hyundai Chemical provided daily rewards to suppliers that actively took action and expressed willingness for improvement during the regular maintenance period for site safety. Awards were paid in installments to 40 workers of suppliers, serving as an opportunity to raise workers' interest and efforts to establish a safety culture.



HD HYUNDAI OILBANK

Selected as an Excellent Company for Health and Safety Mutual Cooperation Projects

We were selected as an excellent company for safety and health mutual cooperation projects by the Korea Occupational Safety and Health Agency in recognition of our efforts to strengthen safety management capabilities for mutual growth with suppliers. Moving forward, we will continue to support from various angles to strengthen safety management and prevent safety accidents of our suppliers, continuing our efforts to create safe workplaces.



Work Risk Assessment Consulting

Implemented for five in-house suppliers that undertake major risk tasks to identify work risk factors and enhance the capability to implement safety measures

Safety Equipment Support

Provided protective equipment and gas concentration meters to ensure safe field work

Safety Manager Appointment Cost Assistance

Mandated all suppliers to appoint a legal safety manager, and a cost of KRW 4 million was provided per company to support the improvement of their own safety management capabilities

Suppliers

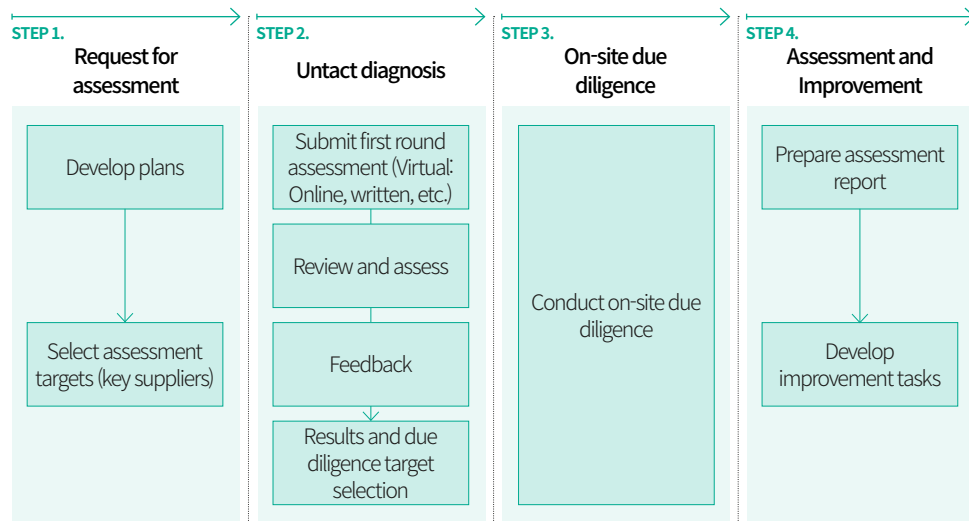
Risk Management

Supplier Risk Management

Supplier ESG Assessments

HD Hyundai Oilbank conducted a supplier ESG evaluation and identified improvement tasks and phased improvement measures with the evaluation results. We aim to further advance the ESG management of suppliers by implementing these tasks and ultimately strengthening our response abilities to global ESG regulations and policies.

ESG Risk Assessment Process



Supplier ESG assessments are conducted according to key items and detailed metrics for each ESG area, with the overall ESG rating classified into seven sections. Between 2022 and 2023, we assessed 165 out of 220 companies through untact evaluations, on-site due diligence, and establishment of improvement tasks.

Among 41 companies with lower grades (grades 6 to 7), 18 were selected for ESG consulting support from external agencies to address deficiencies. Three of these companies improved their grades significantly within a short period of time. We will continue to monitor and manage other suppliers, encouraging them to improve their ESG ratings and advance ESG management levels.

Supplier ESG Consulting

HD Hyundai Oilbank selected 18 suppliers after supplier ESG assessment and provided consulting to factors in need of improvements based on the analyzed results. Through activity, we aimed to develop mid to long-term improvement tasks, establish a roadmap that can be implemented, and lead practical ESG management improvements for suppliers.

We determined the 'Common tasks' by selecting tasks that were assigned to the majority of the 18 suppliers.

We established a step-by-step road map to provide vivid solutions to their tasks. We aim to enhance the ESG management of our suppliers by continuously working together on established short-term priority tasks, mid to long-term response plans, and long-term plans.

Supplier ESG Improvement Tasks

 <p>Environmental</p>	<ul style="list-style-type: none"> · Establish environmental management policy and goals · Conduct environmental training · Establish an eco-friendly operating system · Establish environmental management system · Monitor environmental policy
 <p>Social</p>	<ul style="list-style-type: none"> · Expand social contribution activities · Specify health and safety management policy · Conduct regular health and safety management performance evaluations · Operate a health and safety organization · Strengthen a safety and health management system · Establish health and safety prevention system (industrial accident management)
 <p>Governance</p>	<ul style="list-style-type: none"> · Promote accounting transparency (loan management) · Establish ethics regulations and code · Conduct ethics training · Promote a whistleblowing and protection system · Operate internal compliance · Disclose ESG management information

Suppliers

Risk Management

Supplier Risk Management

Supplier Safety Management

We apply stricter health and safety management regulations for suppliers compared to current safety laws. Continuous on-site inspections ensure compliance, and monthly council meetings provide a platform for suppliers to voice their concerns. In 2023, 12 council meetings were held, addressing 18 requests from suppliers, with 17 completed and one in progress.



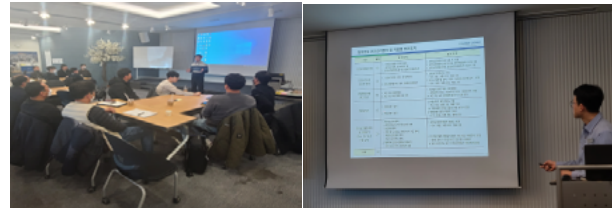
Pre-Safety Assessment

Pre-safety assessments focus on 16 detailed indicators across five items: health and safety management system, organization structure and operation, industrial accident level, risk assessment, and health and safety activity planning and implementation performance. In 2023, pre-safety assessments were conducted for 201 suppliers for 82 contracts, with one company restricted from bidding due to ineligibility.

Suppliers Communication Channels

Supplier Safety Management Workshop

To prevent accidents during the final sales stage, we regularly convene meetings with our gas station business suppliers. In these sessions, we share safety inspection results, discuss challenges, and exchange tips related to safety management. Through these efforts, we aim to prevent accidents that may occur during the final consumption stage.



Supplier Safety Management Workshop

Supplier Grievance System Status

HD Hyundai Oilbank frequently visits key suppliers to address their grievances. Immediate action is taken upon receiving a complaint, including reviewing solutions and monitoring to prevent recurrence. We are also considering the introduction of an official grievance handling channel to unify the process.

Metrics and Targets

Human Rights Management Performance and Targets

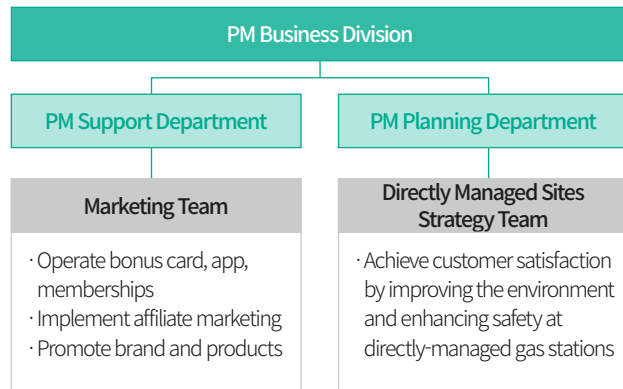
2023 Performance	Included ESG factors in supplier registration and regular evaluation
	Built supplier sustainability risk management system
	Enhanced supplier ESG evaluation system
	Conducted ESG management assessment for 165 suppliers
	Conducted ESG consulting for 18 suppliers
2024 Target	Supplier ESG assessment and consulting <ul style="list-style-type: none"> Expanding evaluation targets and scope to strengthen suppliers' ESG management Expanding suppliers to support ESG consulting
	ESG performance management system <ul style="list-style-type: none"> Monitor suppliers' ESG activities and improvements Check and improve suppliers due diligence procedures Expand the use of ESG assessment results and review awards
	Supplier ESG management support <ul style="list-style-type: none"> Improving ESG awareness through ESG training for suppliers Support voluntary improvement activities through sharing ESG management guides and best practices Monitor and encourage improvements through visits and due diligence to key suppliers

Customers

Governance

Organizational Structure

HD Hyundai Oilbank aims to enhance the company's brand image and improve service quality at gas stations through partnerships and various events. In 2023, we restructured the organization to better manage directly-operated stations, incorporating a Channel Infrastructure Management Team into the Directly Managed Sites Strategy Team and implementing three new directly-managed branches (central, southern, and northern). We are committed to improving customer satisfaction by enhancing the environment and safety management at these stations.



Strategy

Customer Satisfaction Programs

Creating Sustainable Value

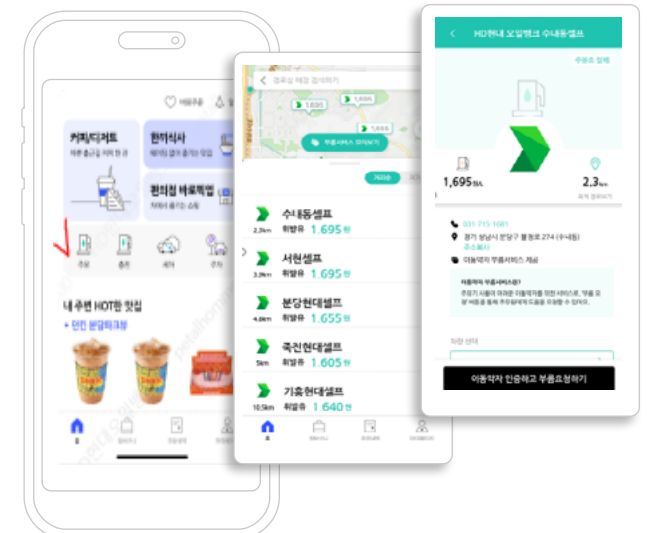
Electronic Receipt Management System Within the Car& App

To promote ESG values, we have established a system for issuing electronic receipts to customers at directly-managed and privately-managed gas stations. Customers who apply for an electronic receipt through HD Hyundai Oilbank's bonus card app, Car&, will have their receipts issued and managed within the app, earning carbon neutral points provided by the Korea Environment Corporation. We expect each customer can receive up to KRW 70,000 per year in Carbon Neutrality Action Points through this service, resulting in an annual paper receipt cost reduction of KRW 0.2 billion and creating a positive environmental impact with 100,000 valid Car& app members.



Calling Service for People With Limited Mobility

Recognizing the challenges faced by 150,000 people with limited mobility at self-service gas stations, we collaborated with the Good Technology Convergence Society under the Ministry of Science and ICT to develop a process that allows these individuals to call employees and receive fueling services conveniently via a Good Technology App at directly-managed gas stations. This service aims to enhance the convenience and satisfaction of our customers with limited mobility, creating sustainable value.



Customers

Strategy

Customer Satisfaction Programs

Differentiate Customer Experiences

PARTS Oilbank

We opened PARTS* Oilbank at a directly-managed gas station in Yongsan-gu, using the popular game KartRider theme, and introduced an exclusive membership to maximize communication with customers and provide various service values.

* PARTS: A brand launched with Nexon and Peaches, representing a fusion of multiple parts



New Payment Service Partnership

To improve customer convenience, we introduced the simple payment service TossPAY as a quick payment method for the Car& app through a partnership with the financial platform Toss.



Launch of Subscription Product

We launched a combined product that offers our gas and car wash services on the SKT subscription service, T Universe, through a partnership with SK Telecom to provide various benefits to customers and promote our platform.



Risk Management

Managing Customer-Related Risks

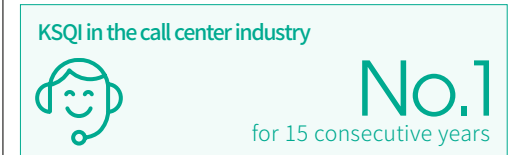
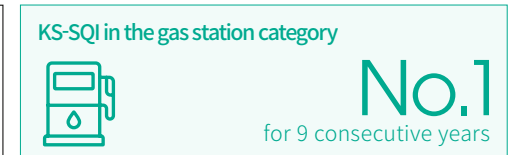
Awards for Enhanced Customer Communication and Service Quality

Establishing Various Communication Channels

We are strengthening communication with customers through various channels such as the customer center, website, and ARS, providing consultation services based on the principles of “Speedy, Easy and Simple”. To improve customer satisfaction services through quick complaint handling, we are continuously improving by preparing and managing manuals for each type of complaint.

Customer Service Awards

As a result of these efforts, HD Hyundai Oilbank has been recognized for its excellent performance by various organizations that conduct quality assessments related to customer service. We have been selected as the No. 1 Excellent Call Center in the refinery category for 15 consecutive years based on KSQI*, an index indicating the degree of customer experience with service quality. We have also been selected as No. 1 in the Customer Satisfaction Call Center category, which evaluates companies highly for their empathy among excellent call centers. Furthermore, we have been No. 1 in the KS-SQI** gas station category for nine consecutive years, recognized for enhancing our image through improved service quality at gas stations. In 2024, we aim to continue providing differentiated customer satisfaction services, striving to be No. 1 in the KSQI Refinery category for 16 consecutive years and No. 1 in the KS-SQI gas station category for 10 consecutive years through improved service quality and communication with customers.



*Korean Service Quality Index

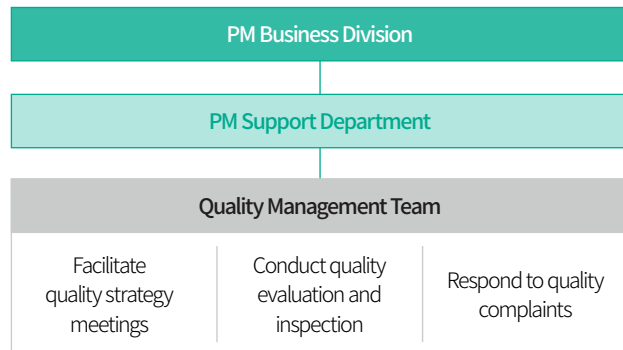
**Korean Standard Service Quality Index

Quality Management

Governance

Organizational Structure

As product quality is crucial for customer satisfaction, at HD Hyundai Oilbank, we strive to maintain reliable quality for our customers. Our Quality Management Team conducts various activities for quality innovation, including quality management training sessions for related team managers and directly-managed gas station owners.



The team convenes a company-wide quality strategy meeting bimonthly to make critical decisions regarding quality control, brand enhancement, and measures to prevent and address quality complaints.

Strategy

Quality Control System

Quality Management System

Quality Management System and Certification

We operate internationally standardized quality management systems, renewing ISO 9001 certification annually. We identify factors that can cause quality risks throughout the entire life cycle, from product production to sales, and implement corrective measures to prevent recurrence when quality risks occur.

Our effective quality control has earned us certifications for suitable quality in fuel inspections conducted annually by the Ministry of Environment and the Ministry of Trade, Industry, and Energy (Korea Petroleum Quality & Distribution Authority) for gas stations. Furthermore, under the supervision of the Korea Petroleum Quality & Distribution Authority, we have consistently ranked top in the Fuel Oil, LPG, and Asphalt Accuracy Comparison Test among domestic refineries and laboratories in various petroleum companies, achieving top rankings in all types and categories every year from 2014 to the present.



Quality Control Activities

Mobile Lab Truck

We have developed our own mobile lab vehicle equipped with the latest experimental equipment to enhance product quality at our affiliate gas stations, effectively respond to complaints, and control sales of abnormal oil. We are dedicated to building customer trust by promptly responding to quality complaints. Instead of solely collecting samples and handling the matter internally, we actively engage with customers to analyze the product together and provide a detailed explanation of the results.

Customer Quality Support Center

To actively address various quality complaints, we operate customer quality support centers with the latest experimental analysis equipment in Pangyo, Gunsan, and Busan. These centers not only collect samples and perform quality evaluations but also promptly communicate the results to relevant teams and customers. In addition, they take on technical responsibilities, such as mitigating quality risks during the distribution stage.

Disclosure of Hazard Information

For the health and safety of our customers, we strictly comply with health and safety regulations and provide hazardous material information on our products and services.

Quality Management

Strategy

Quality Control Activities

Quality Training

We conduct biannual quality training sessions for our sales associates and gas station owners, emphasizing product quality assurance and counterfeit oil prevention. We aim to extend this training to distributors in 2024. To enhance comprehension of our quality training program, we actively utilize teaching materials such as booklets, calendars, and promotional items to elevate the quality of training.

Risk Management

Quality Risk Management

Quality Risk Prevention Activities

Quality Inspection

At HD Hyundai Oilbank, we rigorously conduct quality inspections that meet legal standards throughout the entire product distribution cycle, from the production stage to gas stations and charging stations. We strive to maintain strict control over product quality and supply products that are trusted by customers by carrying out continuous preliminary quality inspections throughout the year.

As a result of these efforts, we achieved the lowest rate among domestic refiners in the abnormal oil detection inspection organized by the Korea Petroleum Quality & Distribution Authority in 2023. We are putting forth all our efforts to also achieve the first place in 2024 to supply safe products that customers can use with confidence.

Lowest detection rate for abnormal petroleum in 2023



No. 1 refinery in Korea

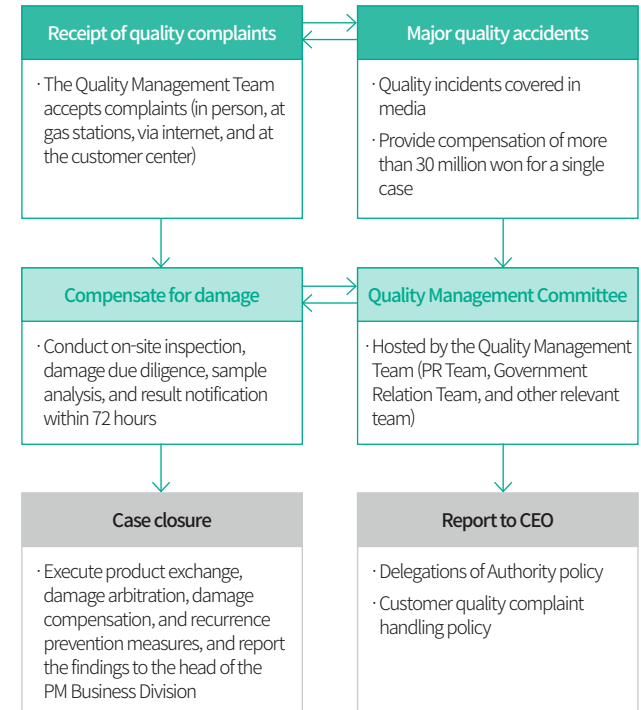
Quality Control Process

Quality Management Regulations

We enforce strict quality management in accordance with our quality policy and detailed regulations.

Quality Complaint Response System

When a quality complaint arises, we adhere to the customer quality complaint handling process and implement measures to address the situation and provide compensation for any damages incurred.



Information Security and Privacy

Governance

Organizational Structure

Our dedicated Information Security Team establishes and operates an administrative and technical information security management system, including investing in strengthening company-wide information security, raising employees' security awareness, diagnosing vulnerabilities, and establishing security policies. The Chief Information Security Officer (CISO) plays a key role in strengthening internal information security by establishing corporate information protection strategies, reporting and implementing them directly to management, and solely executing budgets related to information security. Furthermore, we collaborate with external specialized security companies to respond flexibly and act quickly against internal and external security threats, improving the overall level of information security by closely collaborating with the Group's information security organization.

Information Security and Privacy Organization

Information Security Organization	Privacy Organization
<p>Information Security Director</p> <ul style="list-style-type: none"> Oversee the company's information security Convene a meeting and develop agenda for the Information Protection Committee 	<p>Privacy Director</p> <ul style="list-style-type: none"> Oversee the company's privacy Handle any personal information-related infringements
<p>Information Security Manager</p> <ul style="list-style-type: none"> Establish and carry out an information protection plan Manage all matters in case of emergency 	<p>Privacy Manager</p> <ul style="list-style-type: none"> Develop and implement a privacy plan Review privacy policies of related organizations
<p>Information Security Personnel</p> <ul style="list-style-type: none"> Prevent and support information security incidents Check and improve technical security vulnerabilities 	<p>Privacy Personnel</p> <ul style="list-style-type: none"> Handle personal information-related complaints Conduct audits by external personal information processing companies

Strategy

Information Security and Privacy Management System

Information Security and Privacy Management System Certification

We maintain certification for our information protection and privacy management system, ensuring strict compliance with relevant laws and regulations. Annually, we undergo inspections of our information security management system conducted by an external security consulting company to address any deficiencies. Since 2017, we have upheld the Personal Information Management System (PIMS), and as of 2020, we have maintained certification for the Personal Information & Information Security Management System (ISMS-P)*. In 2023, we renewed our certification to securely protect the personal information of our Bonus Card customers. We will continue to assess the proper operation of our management system regularly to ensure compliance with the Personal Information Protection Act and related laws.



*A certification system that verifies corporate measures and activities align with standards for protecting information and privacy

Information Security and Privacy Education and Training

We regularly conduct information protection education and training for employees. In 2023, online privacy training was provided to all employees, along with online-based training for employees across our global network, branch offices, and temporary workers, covering cases of personal information leak and misuse that pose a risk to corporate management. To enhance employees' security awareness, we conducted four malicious email simulation drills throughout the year. Employees identified as posing risks in these drills received separate security training to prevent recurrence, and we publish monthly information security newsletters containing the latest hacking cases and security rules. In 2024, we will continue these efforts to raise and internalize the security awareness of our employees through privacy and information security training and newsletters.



*On a consolidated basis of energy affiliates

Information Security and Privacy

Risk Management

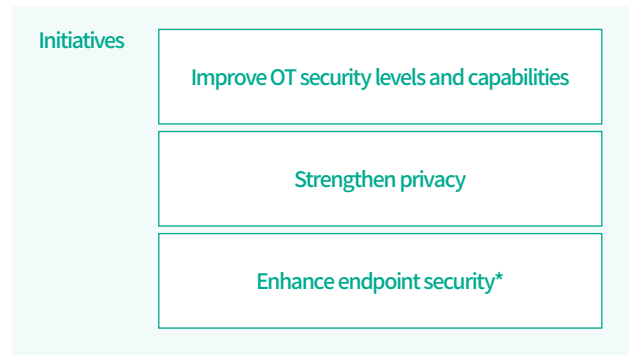
Information Security Risk Management

Information Security Monitoring

At HD Hyundai Oilbank, we have implemented a range of security systems to effectively detect information security risks and prevent both internal and external hacking threats and abnormal activities. To protect against external hacking attempts and unauthorized access, we utilize a DDoS protection tool, web application firewall, and Intrusion Prevention System (IPS). We also have developed our own defense system for external emails, specifically designed to counter Advanced Persistent Threats (APTs).

To address the risk of deliberate data leakage by insiders, we employ data leakage prevention and media control systems. In addition, we analyze internal network traffic to identify any abnormal behavior that may pose a security risk.

All system logs are collected and continuously monitored in real-time by our security control and analysis system, which operates around the clock. We are continuously advancing our security tools and technologies to effectively respond to increasingly intelligent and sophisticated security threats.



* Endpoint security: A set of methods and techniques designed to safeguard end-user devices such as desktops, laptops, and phones from malicious software.

Security Incident Response

Vulnerability Diagnosis and Security Incident Response

We conduct annual mock security incident training, including mock hacking and vulnerability diagnosis on external websites biannually, to enhance our timely response capabilities in case of accidents and identify potential weaknesses in our systems. This allows us to take proactive measures to mitigate risks.

As part of our commitment to protecting the rights and interests of information subjects, we maintain liability insurance to compensate for any damages caused by security infringement incidents.

Processing of Personal Data

We are dedicated to safely managing personal information and continually enhancing its protection. We have implemented a personal information detection system to facilitate the management of personal data files, including deletion and encryption, and we are raising awareness among our employees about the importance of safeguarding private data. We also have established a separate network for our personal data processing system and conduct regular checks on external personal information processing companies at least once a year to minimize risks. We maintain ongoing monitoring and management practices to ensure compliance with relevant laws.

Metrics and Targets

Information Security and Privacy Goals

Information Security and Privacy Core Tasks

In 2023, we conducted various activities to strengthen information security and privacy, and we plan to continue developing these efforts by establishing and implementing key tasks throughout 2024.

Goal

Provide IT environment that can smartly handle necessary tasks as needed

	2023 Performance	2024 Target
Enhance OT security	Completed process network old firewall replacement	Enhance OT security
Strengthen privacy	Renewed ISMS-P certification	Protect customer data by maintaining ISMS-P certification
Enhance endpoint security	Built a PC data backup system	Upgrade security systems related to access control

GOVERNANCE

GREEN LEADERSHIP WITH TRANSPARENCY

Governance	83
Business Ethics	86
Compliance	89
Risk Management	91

Governance

Board Leadership

Roles and Composition

Our Board of Directors ensures management transparency and enhance the value of companies through strategic decision-making, advice, and monitoring of overall management matters. The board appoints CEO, oversee the execution of management duties, and provide input on suggestions. HD Hyundai Oilbank is committed to achieving management transparency and efficiency through board activities and enhancing trust among shareholders and investors in the market.

Our board consists of six members, including two inside directors elected at the general shareholders' meeting, one non-executive director, and three independent directors, with the CEO serving as the chairman.



Item	Name	By gender	Term	Committee Activities	Career	● Chairman (As of April 2024)
CEO (Chairman of the Board)	Youngmin Chu	Male	2 years	Independent Director Nomination Committee ESG Committee	CEO of HD Hyundai Oilbank	
Inside Director	Myung-Joon Song	Male	2 years	Independent Director Nomination Committee	Head of Management Support Department, HD Korea Shipbuilding & Offshore Engineering	
Non-executive Director	Ahmed S. Almulhem	Male	2 years	ESG Committee	Director, Asia Fuels Department, Saudi Aramco (2023-) Saudi Aramco Chief Downstream Transition Officer (2021-2023)	
Independent Director	Hyun-Woong Kim	Male	3 years	Audit Committee Independent Director Nomination Committee Internal Transaction Monitoring Committee ESG Committee	Managing Partner, Barun Law LLC Independent Director, Hotel Shilla (2022-) Minister, Ministry of Justice (2015-2016) Chief Prosecutor, Seoul High Prosecutors' Office (2015)	
	Hoon Hahn	Male	3 years	Audit Committee Independent Director Nomination Committee Internal Transaction Monitoring Committee ESG Committee	Collaboration Professor, Graduate School of Engineering Practice, Seoul National University Vice President, KT Management Planning Division (2014-2015) Director, SpaceN (2012-2014) CEO, KT Networks (2009-2011)	
Independent Director	Sun-Hwa Choi	Female	3 years	Audit Committee Independent Director Nomination Committee Internal Transaction Monitoring Committee ESG Committee	Associate Professor, Seoul National University Business School Independent Director, Kiwoom Securities (2021-) Assistant Professor/Associate Professor, College of Business Administration, Sungkyunkwan University (2017-2020) Assistant professor, Lancaster University Management School (2011-2018) Supervisory Senior, KPMG Korea	

Governance

Board Leadership

Board Transparency

According to the regulations of the Independent Director Nomination Committee, the majority of its members must be independent directors. HD Hyundai Oilbank adheres to this requirement by including two inside director and three independent directors on the committee, ensuring a fair selection process for nominees.

Directors are appointed through a shareholder vote at the general shareholders' meeting, as stipulated in Article 382 of the Commercial Act. Inside directors are appointed based on board recommendations, while independent directors are selected from among nominated candidates by the independent Director Nomination Committee, as specified in Article 542-8 of the Commercial Act. The term of directors is three years or less, as outlined in the company's Articles of Incorporation.

Board Diversity and Expertise

HD Hyundai Oilbank considers a balanced expertise mix essential for management decision-making when appointing board members, encompassing fields such as energy, chemicals, law, corporate management, accounting and finance, and global networks. Each director brings rich experience and knowledge to their respective expertise, enabling rational decision-making for company and business operations. In 2022, we appointed a female independent director to enhance diversity in the Board of Directors, considering factors such as gender, age, professional competency, and experience.

Board Skills Matrix (BSM)

(As of April 2024)

	Youngmin Chu Inside Director	Myung-Joon Song Inside Director	Ahmed S. Almulhem Non-Executive Director	Hoon Hahn Independent Director	Sun-Hwa Choi Independent Director	Hyun-Woong Kim Independent Director
Leadership	●	●	●	●	●	●
CEO experience	●			●		
Risk Management	●	●	●	●	●	●
Finance and Accounting		●			●	
Sales and Marketing	●		●			
Laws and Regulations						●
Appointment Year	2024	2023	2024	2024	2022	2022
By gender	Male	Male	Male	Male	Female	Male

Board Committees

[HD Hyundai Oilbank Website_Board of Directors](#)

To ensure the independence, expertise, and efficiency of the Board of Directors, HD Hyundai Oilbank has established four board committees: the Audit Committee, Internal Transaction Monitoring Committee, Independent Director Nomination Committee, and ESG Committee. These committees operate in compliance with the company's Articles of Incorporation and board regulations, each adhering to its specific set of regulations and guidelines in carrying out its responsibilities.

Composition and Roles of Committees under the Board of Directors

(As of April 2024)

Audit Committee	Hyun-Woong Kim Hoon Hahn Sun-Hwa Choi (Chairman)	<ul style="list-style-type: none"> Responsible for the company's accounting and auditing Request for sales data and investigate the company's financial status Handle matters outlined in laws and regulations and matters delegated by the BOD Hold the right to appoint, change, and dismiss auditors
Internal Transaction Monitoring Committee	Hyun-Woong Kim Hoon Hahn (Chairman) Sun-Hwa Choi	<ul style="list-style-type: none"> Review and approve large-scale internal transactions in accordance with the Fair Trade Act
Independent Director Nomination Committee	Youngmin Chu Myung-Joon Song Hyun-Woong Kim (Chairman) Hoon Hahn Sun-Hwa Choi	<ul style="list-style-type: none"> Nominate candidates for independent directors to be appointed at the general shareholders' meeting
ESG Committee	Youngmin Chu (Chairman) Hyun-Woong Kim Hoon Hahn Sun-Hwa Choi Ahmed S. Almulhem	<ul style="list-style-type: none"> Determine the company's ESG management directions and examine key ESG issues

Governance

Board Operation

Board Activities

The Board of Directors holds both regular quarterly meetings and special meetings convened as necessary. Directors receive notifications one month in advance for regular meetings and two weeks in advance for special meetings, with preliminary briefing sessions held to facilitate thorough review of agenda items. In 2023, a total of 8 board meetings were held, with a 100% attendance rate for all inside, independent, and non-executive directors.

Competency Development

HD Hyundai Oilbank regularly conducts both internal and external training for independent directors, enhancing their knowledge and expertise.

Independent Director Training Status

Date	Details
June 2021	Major revisions of laws and regulations in 2021, the role and responsibilities of the Audit Committee, changes in the market environment, and ESG
September 2022	Recent decisions of the Audit Committee and implications for management/Audit Committee regarding corrupt cases
September 2023	ESG trends, ESG disclosure standards, and measures to respond to mandatory ESG disclosure

Executive Evaluation

When evaluating management performance, we consider not only quantitative indicators such as sales and operating profit, but also non-quantifiable indicators such as leadership, work expertise, and scope of responsibility. We have separately established ESG KPIs and set sustainability KPIs for the CEO of each company, continuously monitoring the goal achievement.

Executive Remuneration

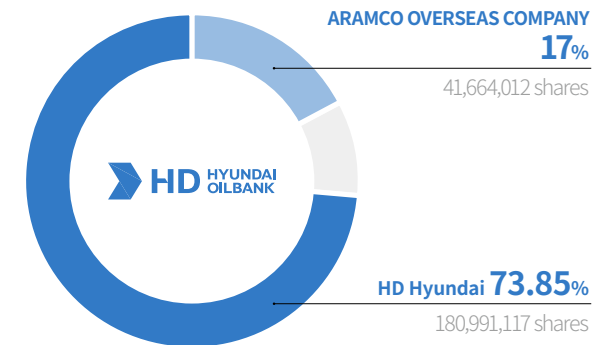
Executive remuneration consists of management performance bonuses and long-term performance bonuses. Management performance bonuses are paid at the beginning of the following year, considering quantitative indicators such as the company's sales and operating profit for the year, as well as leadership and expertise to achieve management performance. To prevent management's decision-making limited to short-term performance and maximize long-term corporate value, the long-term performance bonus, established at the end of 2023, is calculated by comprehensively considering indicators such as organizational evaluation and net profit during the grace period of over three years. To ensure independence, independent directors and Audit Committee members are paid a flat base salary without a performance salary.

Protecting the Rights of Shareholders

Dividend Policy and Shareholder Status

HD Hyundai, the largest shareholder of HD Hyundai Oilbank, owns 180,991,117 shares as of the end of 2023. We consider various factors, including the financial structure and dividend stability and established conditions that allow for the payment of interim dividends with the approval of the board based on management circumstances. Interim dividends were implemented in July 2023 in accordance with Article 462-3 of the Commercial Act and Article 49 of HD Hyundai Oilbank's Articles of Incorporation.

Shareholders With 5% Or More



Business Ethics

Governance

Business Ethics System

HD Hyundai's Business Ethics Structure

[HD Hyundai Ethical Management Website](#)

Our ethical management is rooted in ethical standards such as the HD Hyundai Group's Charter of Ethics and Code of Conduct. We operate an ethical management practice program to internalize ethical principles and promote employees' ethical awareness through training and promotion.



Charter of Ethics

[HD Hyundai Charter of Ethics](#)

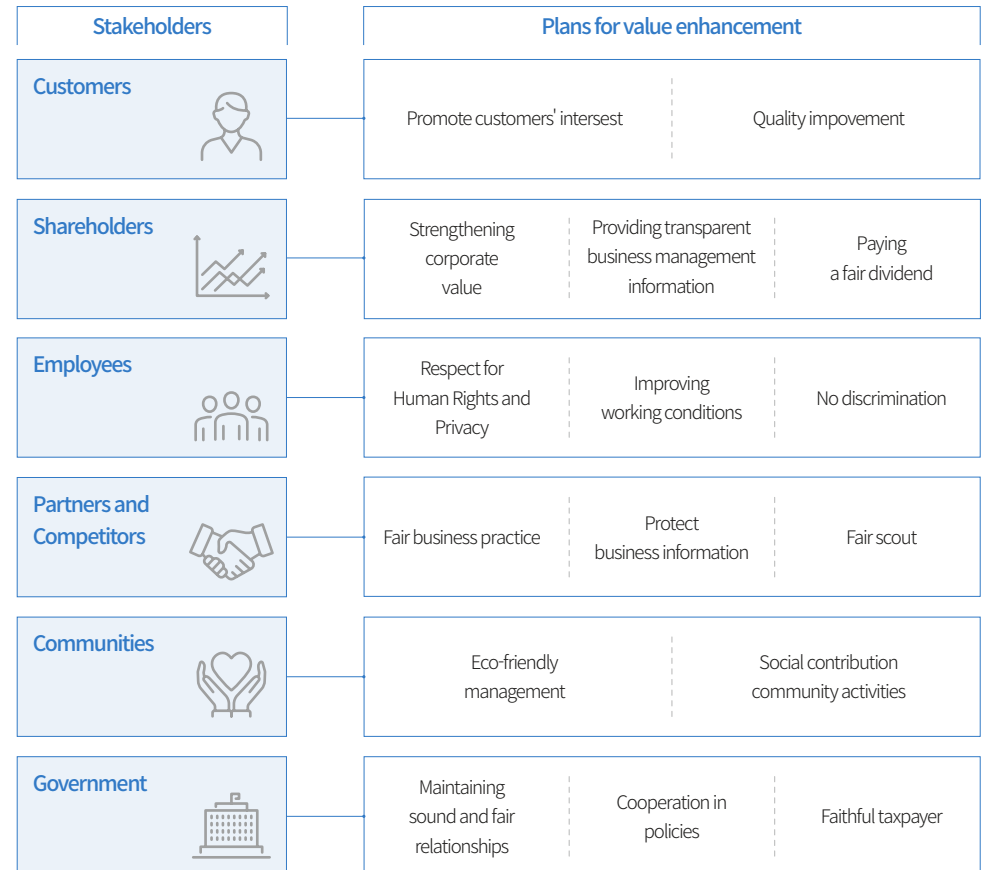
HD Hyundai declared a Charter of Ethics based on its management philosophy in 2005, revising the Charter of Ethics in 2023 to reflect the company's core values. Since being incorporated into HD Hyundai Group in August 2010, HD Hyundai Oilbank and our affiliates have adhered to the Group's Charter of Ethics.

Code of Conduct

We have strengthened ethical management practices by refining each sector of the Charter of Ethics and establishing the Code of Conduct and Business Ethics Guideline, providing employees with reference points for ethical decision-making in practical business operations. Furthermore, the Code of Conduct for Business Partners outlines the responsibilities of supplier employees, ensuring effective ethical management across our business relationships.

Business Ethics Direction

Through ethical management practices, we strive to become a company that customers and partner companies want to do business with, a company that investors want to make an investment in, a company that employees want to work for, and a company that fulfills its responsibility for the nation and communities.



Business Ethics

Strategy

Business Ethics Activities

Business Ethics Action Programs

HD Hyundai Oilbank and our affiliates are carrying out various activities to practice transparent and fair management based on the ethical standards.

Commitment to Business Ethics Management	Mandate the submission of a pledge of commitment to business ethics to employees and suppliers every year
Conflict of Interest Reporting	Require annual submission of interest statements from both employees and suppliers
Clean Notice System	Return any gifts received by employees from stakeholders, donating them to social welfare organizations
Clean National Holiday Campaign	Send holiday letters to suppliers, advising against providing gifts or money, and instructing employees not to accept them
Ethical Violation Reporting and Whistleblower Protection System	Operate a reporting and reward system to prevent unethical behavior
Business Ethics Self-Evaluation	Conduct regular self-inspections to ensure compliance with ethical management practices through surveys
Business Ethics Field Sessions	Assess the level of ethical management practices, gather opinions on areas requiring improvement, and ensure their implementation
Training and Promotion of Business Ethics	Conduct annual collective and online training sessions on ethical management

2023 Business Ethics System Performance



*On a consolidated basis of energy affiliates

Business Ethics Reporting Channel

Through the operation of a 24/7 online reporting system on the Group's Business Ethics website, we receive reports on unethical acts such as bribery and abuse of authority and power. Reports can also be submitted via phone, fax, email and postal mail.

We ensure the anonymity of the reporters and report details and provide rewards based on our internal rewarding standards for reporters.

In 2023, we received a total of eight reports through this system. Investigations were conducted on five cases suspected of unethical behavior. Two cases were found to be violations, and disciplinary measures were taken against the relevant employees following our internal regulations and procedures. The remaining three complaints were transferred to the relevant teams, and appropriate actions have been taken.



Business Ethics

FOCUS ON

Business Ethics TF to Help a Transparent and Healthy Company Life

Business Ethics TF Vision

Prevent ethical risks through employees' voluntary participation

To facilitate the smooth implementation of ethical management practices across HD Hyundai Oilbank and its affiliates, especially considering the distance between business sites, an Business Ethics TF was established in October 2023.

This TF operates independently from the HD Hyundai Group's Business Ethics organization and falls directly under the supervision of the Safety and Production Division. It focuses on mitigating ethics-related risks in the workplace by conducting preliminary inspections of ethical management practices.

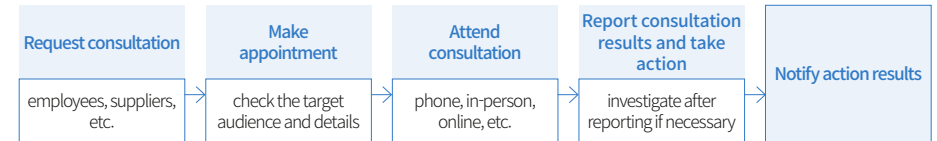
Business Ethics TF

Business Ethics Consultation Office	<ul style="list-style-type: none"> · Act as a communication channel for ethical management on-site · Provide on-site ethical management consultation services
Business process inspection	<ul style="list-style-type: none"> · Advice on improving existing business processes · Advice on job manual revision
Key Man operation for ethical activities	<ul style="list-style-type: none"> · Hold a Key Man council meeting twice a month in each team · Review self-control improvements
Conduct ethical management training	<ul style="list-style-type: none"> · Conduct regular and occasional training for employees and suppliers
Announcement of violation cases	<ul style="list-style-type: none"> · Announce ethical management violation cases of the companies of HD Hyundai Group
Supplier ethics conference and ethical awareness activities	<ul style="list-style-type: none"> · Hold an ethics meeting with in-house suppliers once a month · Produce and distribute ethical management pocket book · Conduct an ethical management promotion broadcast once a month

Business Ethics Consultation Office

The Business Ethics TF operates an ethical management consultation office to proactively identify ethics-related issues through consultations and take appropriate action. We conduct both occasional and regular consultations to address ethical conflicts, irrationalities, and inefficient work practices in the workplace. As of 2023, we have received a total of 29 cases, out of which 27 have been resolved, with two currently in process.

Consultation Process

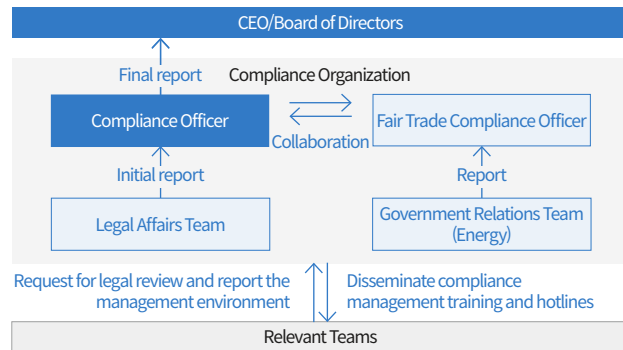


Compliance

Governance

Organizational Structure

In 2018, HD Hyundai Oilbank established compliance control standards and appointed the head of the Legal Affairs Team as the compliance officer. With the introduction of the Fair Trade Business Regulations and Fair Trade Compliance Guidelines, we further enhanced our compliance efforts by appointing a Fair Trade Compliance Officer and establishing our own compliance system. We contribute to raising compliance awareness and preventing potential legal violations in our management activities through compliance program (CP). These programs involve regular reporting on the status of compliance management to the board every year and setting practice standards for compliance with fair trade laws.



Compliance and Anti-Corruption Manager Appointment

In accordance with Article 9 of the Compliance Control Standards and Article 10 of the Anti-bribery Management System, the appointment of compliance support/anti-bribery managers for all teams was completed in February 2024. These managers are tasked with assisting compliance officers in conducting compliance risk assessments and providing compliance training.

Strategy

Compliance Management

Compliance Policy

We are continuously developing, revising, and managing compliance regulations for HD Hyundai Oilbank and our affiliates to ensure adherence to compliance management. To reinforce anti-corruption principles both internally and externally, we have introduced new anti-corruption policy, reported them to the board, and established operating regulations for an anti-corruption management system specifically designed to uphold anti-corruption practices within the company.

[Anti-Corruption Policy](#)

Anti-bribery Management Systems

HD Hyundai Oilbank and our affiliates are aiming to obtain certification for anti-bribery management systems (ISO 37001) in the first half of 2024. To achieve this, we conducted a gap analysis between our current anti-bribery system and international standards, with plans to address any deficiencies identified based on the analysis results.



Employee Compliance Training Program

Throughout the year, we conduct various training programs to ensure that our employees comply with fair trade laws in their work.

Fair trade training is conducted at least once a year for teams closely related to fair trade in the PM Business Division. We also provide specialized training for new hires and assigned employees to ensure they quickly familiarize themselves with fair trade principles. Furthermore, we support our employees by covering the expenses for on-site or online training organized by external organizations. We also feature a "Fair Trade in My Hands" column in the company newsletter to enhance employees' knowledge and skills related to fair trade practices. We also conduct in-depth training once a year on US antitrust law and government contract law, particularly regarding previous US military bid rigging incidents. Regular compliance training is also held twice a year for employees and our energy affiliates. In the first half of 2024, all employees received training on the importance of ethical compliance management, relevant laws, and internal regulations.

2023 Fair Trade Training Details

Fair Trade Compliance Inspection	· Inspected unfair joint acts within the Central and Southern Retail Department and the Corporate Business Department
Fair Trade Compliance Training	· Conducted inspections and provided fair trade law training for all branches of the PM Business Division, Corporate Business Department, and PM Planning Department
Fair trade training related to the previous US military bid rigging	· Provided training on the prohibition of unfair joint acts, such as bidding and information exchange collusion, for CEO, a head of PM Business Division, and Corporate Business Department employees

Compliance

Risk Management


Compliance Risk Management

Internal Supervision of Fair Trade

We established an internal fair trade supervision system to quickly identify and improve fair trade risks that may occur during work, supporting proper decision-making through review by compliance team in situations requiring special attention.

Through a company-wide investigation of subcontracting transactions, we minimize legal risks in relationships with suppliers by assessing factors such as industry relevance, item characteristics, and supplier standards. We also actively identify and address fair trade-related risks through a hotline and Fair Trade Reporting Channel for reporting fraudulent transactions.

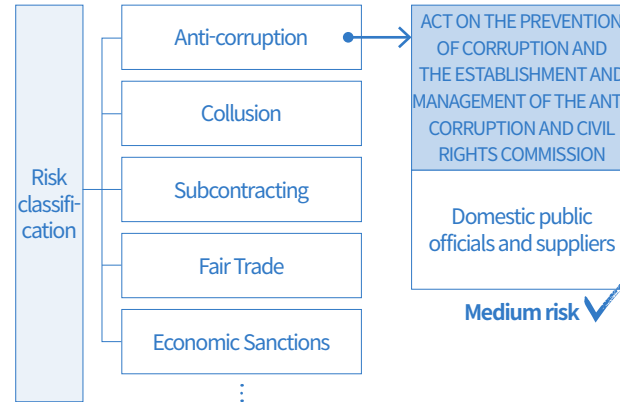
Fair trade reporting channel



mbpooh@hd.com
heojal2@hd.com

Compliance Risk Assessment

Since 2022, we have been conducting compliance risk assessments, with all teams undergoing assessments after appointing compliance and anti-corruption managers in 2024. These assessments refine compliance risk identification for each team by specifying the contents of the assessment management table and segmenting risk categories.






Following the 2024 risk assessment, on-site inspections were conducted for 'medium or higher' risk teams, and compliance training was provided for all teams to enhance awareness of compliance control. The results of risk assessments, training, and control are reported annually to the Board of Directors as part of our efforts to strengthen our risk management system.

Metrics and Targets

Compliance Goals and Performance Management

We have selected the top three fair trade issues under "Fair-Legitimate Management" as our vision. Our goal is to achieve zero fair trade risk by actively implementing fair trade activities based on detailed goals and management indicators for each task.

Fair-Legitimate Management			
Goal	Achieve zero fair trade risk		
Initiative	 Internalize fair trade compliance	 Establish transparent management disclosure system	 Establish a pre-inspection system for distributor and subcontracting transactions
Goal	Training completion rate / Inspection completion rate 100%	Violations 0 case	Action rate 100%
Indicator	Training & Inspection completion rate of Fair Trade Act subjects	Number of disclosure manual violations	Percentage of improvement actions taken after inspection

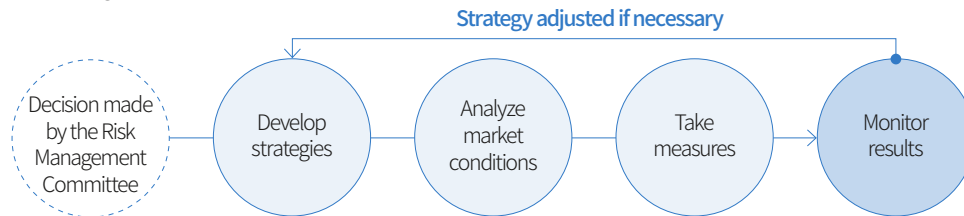
Risk Management

Governance

Risk Management System

To address various risk factors such as oil prices, foreign exchange, and compliance, we predict and monitor risks in the business team and manage them thoroughly. To ensure timely response to risks, the Risk Management Committee, chaired by the CEO, operates quarterly for oil prices and annually for foreign exchange on a regular basis, and as needed on an ad hoc basis, to manage profits and losses stably.

Risk Management Process

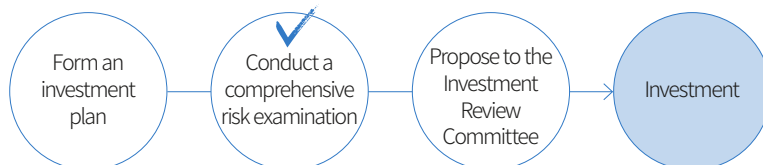


Sustainability-related Risk Assessment Prior to Investments

When assessing investment projects, we thoroughly evaluate sustainability-related risks including environmental, safety, tax, and legal compliance. Additionally, to manage risks associated with GHG emissions, we incorporate the costs of these emissions into our economic assessments.

Major investments are reviewed by the Investment Review Committee, incorporating input from relevant teams on each risk, and analyzing the profitability of investment scenarios considering various risks. After one year, the team overseeing investment execution conducts follow-up assessments, focusing on performance, progress, and profitability.

Safety, environment, and tax laws, GHG emission cost, etc.



Internal Accounting Management System

We operate an internal accounting management system to ensure the reliability of financial statements. Starting in 2023, HD Hyundai will undergo audits for our consolidated internal accounting management system due to the revision of the law on external audits of corporations. Therefore, the Group shares internal accounting operations directions and major issues related to internal accounting policies and conducts regular training for employees and independent directors. In order to effectively respond to this new change, HD Hyundai Oilbank and our subsidiary companies have completed the upgrade of our internal accounting management systems.

Internal Accounting Management System Procedure

Establish an operation evaluation plan	<ul style="list-style-type: none"> Re-select core controls considering quantitative and qualitative data based on the previous year's financial statement Report key schedules such as deficiencies improvement plans and inspection directions to the Audit Committee
Conduce control activity evaluation (3 times/year)	<ul style="list-style-type: none"> Review and evaluate control activities Assess the appropriateness of response to the organizational and process changes
Change management (4 times/year)	<ul style="list-style-type: none"> Monitor internal and external changes to identify the impact on the company's internal accounting and establish/examine related controls
Audit and report to the internal accounting management system	<ul style="list-style-type: none"> Receive an audit by an external firm to evaluate the company's systems and operations. Report the audit results to the general shareholders' meeting, the BOD, and the Audit Committee

FOCUS ON

Big Data System for Monitoring Oil Price and Margin Risk Management

Using the EQR-180, HD Hyundai Oilbank has developed a big data system capable of monitoring price trends and daily price characteristics of international crude oil and products. This enables us to track changes in indicators that serve as references for risk management as prices fluctuate, and to receive timely notifications of significant changes. Moreover, it facilitates continuous risk monitoring by storing and managing historical data obtained from analyzing indicators in an archive. With this system in place, a small team can efficiently monitor diverse prices and incorporate them into our risk management strategies.



Risk Management

Strategy

Risk Management

Risk Management Committee	Finance	International oil prices and product prices	Crude oil transportation typically takes about 1 to 2 months, exposing us to price fluctuations during this timeframe. To mitigate this risk, we implement price adjustments for purchased crude oil and employ hedging strategies through forward transactions. Additionally, to prevent profit reduction due to falling petroleum product prices, we hedge the operational margins associated with crude oil procurement. Additionally, we have institutionalized hedging for transactions that require the stabilization of profits and losses. Furthermore, when promoting a new business due to business expansion, we review the risks that occur in terms of company-wide risks and effectively develop response measures.
		Foreign Exchange	As our import of raw materials and export of products is conducted in foreign currency, we are directly exposed to the risk of exchange rate fluctuations. To minimize this risk, the Risk Management Committee establishes an optimal hedging strategy to address exchange rate fluctuations. Subsequently, the foreign exchange risk management team actively executes hedging activities in areas with risk exposure.
ESG Committee	Sustainability-related	Environmental	To enhance our company's environmental management, we reorganized our existing environmental teams into departments, each consisting of three teams based on their work characteristics: environmental improvement, management, and technical service. We established the Environmental Management Action Committee to address major environmental issues through the monthly meetings and formed a dedicated GHG management organization to enhance our abilities to combat climate change and reduce our carbon footprint. In addition, we are actively investing in pollution reduction facilities and minimizing the environmental impact of our business activities by obtaining ISO 14001 certification.
		Health and Safety	The Crisis Management Committee, Occupational Health and Safety Committee, Affiliated Company Safety Councils, Supplier Health and Safety Councils, and Plant Operation Risk Committee (PORC) collaborate to discuss safety risks and establish various regulations, including the Crisis Management Committee Operating Regulations, Emergency Response Management Procedure, and Accident Control Procedure. Various risk assessments are conducted to identify potential hazards in the workplace, and training and emergency response drills are organized to enhance the ability to respond to such risks.
		Product Quality	We conduct regular quality strategy meetings and maintain a dedicated Quality Management Team to identify and address factors that may pose quality risks throughout the entire product life cycle, and renew our ISO 9001 certification annually to demonstrate our adherence to international standards of quality management. To eliminate quality risks at the distribution stage, the relevant information is immediately shared at all HD Hyundai Oilbank gas stations in case of natural disasters or quality issues. Moreover, we manage risk in advance by providing regular quality training, quality calendars, and quality pamphlets to raise quality awareness among all employees.
		Ethics and Compliance	Our employees proactively prevent risks by engaging in consultations regarding compliance programs and undergoing assessments for fair trade risks that may arise during operations. We have implemented an internal monitoring system to ensure that bid contracts with a relatively high risk of violating the Fair Trade Act are conducted exclusively through the Bidding Committee, guaranteeing transaction transparency. This approach includes pre-assessments, voting by the Board of Directors, and accurate disclosure of transactions between affiliates. Moreover, we foster an ethical management environment by providing fair trade training to raise awareness among employees with ethics and compliance practices.
		IT	We collaborate with the Group's information security organization and external security companies to effectively and promptly respond to internal and external security threats. Our activities include monitoring, vulnerability diagnosis, implementing a separate network for our personal information processing system, and conducting training and drills to prevent risks and enhance our response capabilities. For safe computerization, we strive to prevent information security risks during the integration and innovation process of new IT technologies such as cloud computing, big data, and artificial intelligence.





APPENDIX

ESG Data	94
GRI Standard Index	107
SASB Index	110
TCFD Index	112
Stakeholder Communication	114
Initiatives and Associations / Certificates	115
GHG Verification Statement	117
Third-Party Assurance Statement	118



ESG Data

Financial Performance

(Unit: KRW million)

Item	58th Term	59th Term	60th Term
Condensed Consolidated Statement of Financial Position	(End of Dec. 2021)	(End of Dec. 2022)	(End of Dec. 2023)
Current assets	5,536,922	6,366,227	6,286,142
Non-current assets	12,652,150	13,369,156	13,382,852
Total Assets	18,189,072	19,735,384	19,668,994
Current liabilities	5,238,728	5,344,672	5,618,318
Non-current liabilities	7,226,544	7,463,890	7,610,709
Total Liabilities	12,465,272	12,808,561	13,229,028
Equity attributable to owners of the parent	4,714,917	5,828,396	5,386,889
Non-controlling interests	1,008,884	1,098,426	1,053,077
Total Equity	5,723,801	6,926,823	6,439,966

(Unit: KRW million)

Item	58th Term	59th Term	60th Term
Consolidated Income Statement	Jan.1 - Dec. 31, 2021	Jan.1 - Dec. 31, 2022	Jan.1 - Dec. 31, 2023
Revenue	20,801,543	34,955,040	28,107,830
Cost of sales	19,160,684	31,493,832	26,793,792
Gross profit	1,640,858	3,461,208	1,314,038
Selling and administrative expenses	547,305	671,414	697,339
Operating income	1,093,554	2,789,794	616,699
Financial income	35,061	263,900	201,116
Financial costs	277,950	616,126	555,381
Other non-operating income	350,789	1,240,415	711,469
Other non-operating expenses	426,779	1,412,355	761,628
Share of profit (loss) of associates and joint ventures	-30,014	-59,438	4,233
Profit before income tax	744,660	2,206,190	216,508
Income tax expense	253,591	573,488	60,889
Profit	491,070	1,632,702	155,619
Equity attributable to owners	342,218	1,484,258	147,044
Non-controlling interests	148,852	148,444	8,575
Basic earnings per share (unit: KRW)	1,334	5,994	538

ESG Data

Non-Financial Performance - Environment¹⁾

HDO: HD Hyundai Oilbank | HDC: HD Hyundai Chemical | HSB: HD Hyundai and Shell Base Oil | HOC: HD Hyundai OCI | HCP: HD Hyundai Cosmo Petrochemical

Greenhouse Gas Emissions²⁾

Item	Unit	2021		2022		2023								
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total			
GHG emissions ³⁾	Total GHG emissions (Scope 1+2)	tCO ₂ e	7,510,616	9,165,325	6,826,864	10,208,664	6,388,610	2,318,426	N/A	368,691	N/A	9,075,727		
	Total	tCO ₂ e	6,610,164	7,650,486	5,872,369	7,782,328	5,504,972	1,234,336	N/A	329,730	N/A	7,069,038		
	Direct GHG emissions (Scope 1)	By type of GHG ⁴⁾	CO ₂	tCO ₂ e	6,581,074	7,616,624	5,842,431	7,745,006	5,475,680	1,228,494	N/A	329,566	N/A	7,033,740
			CH ₄	tCO ₂ e	23,207	27,489	24,497	30,866	23,660	5,155	N/A	66	N/A	28,881
			N ₂ O	tCO ₂ e	5,883	6,373	5,441	6,456	5,632	687	N/A	98	N/A	6,417
Indirect GHG emissions (Scope 2)	tCO ₂ e	900,452	1,514,839	954,495	2,426,336	883,638	1,084,090	N/A	38,961	N/A	2,006,689			

Item	Unit	2021		2022		2023					
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	
GHG emissions intensity ⁵⁾	tCO ₂ e/ KRW billion		313.77		185.62	216.77	401.81		N/A	1,097.29	N/A

Energy Use²⁾

Item	Unit	2021		2022		2023							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Energy use	Total energy consumption	TJ	80,735	107,750	77,054	133,075	75,299	38,909	N/A	4,216	N/A	118,424	
	Direct energy	Fuel	TJ	63,581	80,725	57,982	91,644	57,645	21,731	N/A	3,402	N/A	82,778
		Electricity	TJ	15,117	21,539	17,387	30,032	15,809	10,098	N/A	814	N/A	26,721
	Indirect energy	Heat (steam)	TJ	2,037	5,486	1,685	11,399	1,845	7,080	N/A	0	N/A	8,925
		Renewable energy use	TJ	0.09	0.13	0.1	0.18	0.1	0.91	N/A	0.08	N/A	1.09

Item	Unit	2021		2022		2023					
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	
Energy usage intensity ⁶⁾	TJ/KRW billion		3.37		2.1	2.55	6.74		N/A	12.55	N/A

1) Data based on Daesan Plant (GHG emissions data includes directly-managed gas stations, distribution centers, Central Technology R&D Institute, and Seoul Office.)

2) Emission data are based on the GHG Emissions and Energy Consumption Statement (rounded up by the first decimal point)

- 2022 data were corrected to the value verified by the Ministry of Environment

- HD Hyundai Oilbank's GHG emission data calculated including data of HD Hyundai and Shell Base Oil and HD Hyundai Cosmo Petrochemical

3) HD Hyundai OCI's GHG emissions in 2021 and 2022 were corrected due to data error

4) HFCs, SF₆, PFC, NF₃ are not applicable

5) GHG emissions intensity = GHG emissions ÷ sales of each company (In the case of HD Hyundai Oilbank, sales of HD Hyundai and Shell Base Oil and HD Hyundai Cosmo Petrochemical are combined)

6) Energy usage intensity = Energy consumption ÷ sales of each company (In the case of HD Hyundai Oilbank, sales of HD Hyundai and Shell Base Oil and HD Hyundai Cosmo Petrochemical are combined)



ESG Data

Non-Financial Performance - Environment¹⁾

Air Pollutants

	Item	Unit	2021		2022		2023					
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total
Air pollutants emissions	Nitrogen oxides (NOx)	kg	2,965,876	4,102,562	2,892,337	3,769,526	1,543,556	411,524	14,519	162,162	212,013	2,343,774
	Sulfur oxides (SOx)	kg	1,766,239	2,009,724	1,699,037	1,960,666	1,140,055	5,290	7,192	264,012	1,354	1,417,903
	Particulate matter (PM)	kg	49,189	80,498	34,089	52,908	33,736	208	108	2,862	4,572	41,486
	Volatile organic compounds (VOCs) ²⁾	kg	189,163	315,768	36,075	309,936	2,557	100,919	N/A	N/A	30,640	134,116
	Hazardous Air Pollutants (HAPs) ²⁾	kg	5,489	59,374	4,551	134,284	207	42,115	N/A	N/A	30,640	72,962
	Hydrogen sulfide (H ₂ S)	kg	0	466	0	0	167	0	0	0	0	167

Water Pollutants

	Item	Unit	2021		2022		2023					
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total
Water pollutants emissions	Total Organic Carbon (TOC, 2021 COD)	ton	163	198	116	157	76	18	1	2	1	98
	Biochemical Oxygen Demand (BOD)	ton	67	83	53	68	44	17	1	3	1	66
	Suspended Solids (SS)	ton	139	166	88	105	29	8	1	15	0	53
	Total Nitrogen (TN)	ton	125	152	111	127	76	34	1	2	1	114
	Total Phosphorus (TP)	ton	5	6	5	24	1	1	0	0	0	2

1) Data based on Daesan Plant

2) HD Hyundai and Shell Base Oil and HD Hyundai OCI are not subject to reporting VOCs and HAPs



ESG Data

Non-Financial Performance - Environment

Water and Effluents¹⁾²⁾

	Item	Unit	2021		2022		2023						
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Water withdrawal ³⁾	Total water withdrawn	m ³	20,577,917	22,212,806	22,370,618	24,202,571	20,644,049	1,441	360	1,900,629	360	22,546,839	
	By source	Seawater	m ³	0	0	0	0	0	N/A	N/A	0	N/A	0
		Surface water	m ³	8,024,791	8,039,668	9,993,785	10,006,941	8,312,204	N/A	N/A	12,432	N/A	8,324,636
		Groundwater	m ³	0	0	0	0	0	N/A	N/A	0	N/A	0
		Third-party water	m ³	12,553,126	14,173,138	12,376,833	14,195,630	12,331,845	1,441	360	1,888,197	360	14,222,203
	By site	Daesan Plant	m ³	20,570,268	22,205,157	22,362,974	24,194,927	20,631,036	N/A	N/A	1,900,250	N/A	22,531,286
		Seoul Office	m ³	N/A	N/A	N/A	N/A	8,713	1,441	360	379	360	11,254
Central Technology R&D Institute		m ³	7,649	7,649	7,644	7,644	4,299	N/A	N/A	N/A	N/A	4,299	
Water consumption ³⁾	Total water consumption	m ³	18,000,999	22,212,806	16,793,429	24,202,571	15,823,249	4,389,968	292,526	1,900,629	140,467	22,546,839	
	By site	Daesan Plant	m ³	17,993,350	22,205,157	16,785,785	24,194,927	15,810,236	4,388,527	292,166	1,900,250	140,107	22,531,286
		Seoul Office	m ³	N/A	N/A	N/A	N/A	8,713	1,441	360	379	360	11,254
		Central Technology R&D Institute	m ³	7,649	7,649	7,644	7,644	4,299	N/A	N/A	N/A	N/A	4,299
	Total water reused	m ³	2,847,628	2,956,959	2,675,819	2,781,014	1,809,249	N/A	N/A	103,250	N/A	1,912,499	
Water reuse rate	%	15.82	13.31	15.93	11.49	11.43	N/A	N/A	5.43	N/A	8.48		
Water discharge	Total water discharge	m ³	7,510,185	9,270,213	6,820,385	9,671,783	6,641,773	3,124,509	N/A	450,233	N/A	10,216,515	
	By discharge site	Seawater	m ³	7,510,185	8,970,185	6,820,385	9,292,474	6,641,773	3,124,509	N/A	0	N/A	9,766,282
		Surface water	m ³	0	0	0	0	0	0	N/A	0	N/A	0
		Groundwater	m ³	0	0	0	0	0	0	N/A	0	N/A	0
		Third-party water	m ³	0	300,028	0	379,309	0	0	N/A	450,233	N/A	450,233
	By type	Freshwater (≤1,000 mg/L TDS)	m ³	7,510,185	8,970,185	6,820,385	9,292,474	6,641,773	3,124,509	N/A	0	N/A	9,766,282
		Other (>1,000 mg/L TDS)	m ³	0	300,028	0	379,309	0	0	N/A	450,233	N/A	450,233

1) Marked as N/A where HD Hyundai Oilbank manages affiliates' water withdrawal, consumption, and discharge, or if not applicable

2) No applicable High or Very High water stress areas

3) Added data on water withdrawal and consumption for the Seoul Office and Central Technology R&D Institute, along with some data corrections (data added from 2023)



ESG Data

Non-Financial Performance - Environment¹⁾

Waste

	Item	Unit	2021		2022		2023							
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Waste generated ²⁾	Total amount of waste generated	ton	28,189	32,921	29,610	38,955	115,173	8,065	26	781	440	124,485		
	Hazardous waste (designated waste)	ton	9,767	10,029	7,932	11,501	12,206	3,110	13	76	22	15,427		
	Non-hazardous waste (general waste)	ton	18,422	22,892	21,678	27,454	102,967	4,955	13	705	418	109,058		
Waste treated	Total amount of waste treated	ton	28,189	32,944	29,610	38,957	115,173	8,064	26	779	440	124,482		
	Subtotal	ton	9,767	10,030	7,932	11,501	12,206	3,110	13	75	22	15,426		
	Hazardous waste (designated waste)	By treatment type	Recycled	ton	8,325	8,456	6,764	10,099	11,272	2,419	0	0	13,691	
			Incinerated	ton	1,382	1,474	1,086	1,301	891	252	13	46	22	1,224
			Landfilled	ton	60	100	59	78	43	0	0	29	0	72
	By treatment method	Other	ton	0	0	23	23	0	439	0	0	0	439	
		Internal	ton	0	0	0	0	0	0	0	0	0	0	
		Third-party	ton	9,767	10,030	7,932	11,502	12,206	3,110	13	76	22	15,427	
	Subtotal	ton	18,422	22,914	21,678	27,456	102,967	4,954	13	704	418	109,056		
	Non-hazardous waste (general waste)	By treatment type	Recycled	ton	16,967	20,401	19,766	24,350	98,542	3,102	0	95	335	102,074
			Incinerated	ton	295	513	436	1,107	686	672	13	176	39	1,586
			Landfilled	ton	856	1,696	845	1,368	3,160	1,104	0	433	44	4,741
		By treatment method	Other	ton	304	304	631	631	579	76	0	0	0	655
			Internal	ton	0	0	0	0	178	0	0	0	0	178
	Third-party	ton	18,422	22,914	21,678	27,456	102,789	4,955	13	705	418	108,880		
Waste recycled	Total amount of waste recycled	ton	25,292	28,857	26,530	34,449	109,814	5,521	0	95	335	115,765		
	Total ratio of waste recycled	%	89.72	87.66	89.6	88.43	95.35	68.46	0	12.16	76.14	93		
	Hazardous waste (designated waste)	Subtotal	ton	8,325	8,456	6,764	10,099	11,272	2,419	0	0	0	13,691	
			Internal	ton	0	0	0	0	0	0	0	0	0	
			Third-party	ton	8,325	8,456	6,764	10,099	11,272	2,419	0	0	0	13,691
	Non-hazardous waste (general waste)	Subtotal	ton	16,967	20,401	19,766	24,350	98,542	3,102	0	95	335	102,074	
			Internal	ton	0	0	0	0	0	0	0	0	0	
			Third-party	ton	16,967	20,401	19,766	24,350	98,542	3,102	0	95	335	102,074

1) Data based on Daesan Plant

2) Waste increased temporarily in 2023 due to new operation testing of prevention facilities



ESG Data

Non-Financial Performance - Environment¹⁾

Hazardous Chemical

Item	Unit	2021		2022		2023 ²⁾						
		HDO	Total ³⁾	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Hazardous chemical	Used	ton	60,151	1,044,397	142,138	432,542	N/A	N/A	N/A	N/A	N/A	N/A
Chemical substances	Discharged	ton	213	370	65	462	N/A	N/A	N/A	N/A	N/A	N/A

Eco-Friendly Businesses and Investments

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total ⁴⁾	HDO	HDC	HSB	HOC	HCP	Total	
Environmental investments	Total	KRW million	46,139	49,568	116,632	119,745	200,390	11,789	2,047	691	3,754	218,671
	Eco-friendly R&D expenses subtotal ⁵⁾	KRW million	10,828	10,828	10,045	10,045	21,416	0	0	0	0	21,416
	Eco-friendly business investments	KRW million	9,071	9,071	53,581	53,619	126,095	2,737	0	0	0	128,832
	Daesan Plant environmental facilities investments	KRW million	26,240	29,669	53,006	56,081	52,879	9,052	2,047	691	3,754	68,423

Environmental Compliance

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Environmental compliance ⁶⁾	Number of environmental compliance issues	case	1	1	2	2	0	0	0	1	0	1
	Monetary sanctions (heavier than imposition of administrative fines)	KRW million	0.5	0.5	60	60	0	0	0	2.4	0	2.4

1) Data based on Daesan Plant (eco-friendly businesses and investments data includes R&D centers)

2) 2023 hazardous chemicals data have not been confirmed and scheduled to be submitted in next year's report

3) 2021 data corrected due to error in the calculation

4) Environmental investment costs of some affiliates changed due to changes in data calculation standards

5) Sum of Eco-friendly R&D expenses for CapEx and OpEx

6) Based on the Annual Report (violations under the same law are counted as one case)



ESG Data

Non-Financial Performance - Social

Current Employee Status

Item	Unit	2021		2022		2023							
		HDO	Total ¹⁾	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Total number of employees	person	1,999	2,855	2,086	2,957	2,168	675	27	113	34	3,017		
Registered executives	Total registered executives	6	28	7	29	6	6	6	4	6	28		
	Gender	Male	6	26	6	26	5	6	4	4	6	25	
		Female	0	2	1	3	1	0	2	0	0	3	
Employees	Total employees	1,993	2,827	2,079	2,928	2,162	669	21	109	28	2,989		
	Permanent employees	Total	1,935	2,628	1,997	2,738	2,042	633	21	107	25	2,876	
		By gender	Male	1,786	2,445	1,835	2,531	1,870	601	17	102	21	2,659
			Female	149	183	162	207	172	32	4	5	4	217
		By age	Under 30 years	464	632	471	651	430	173	4	13	4	624
			30-49 years	925	1,310	930	1,330	1,007	319	15	69	18	1,428
			50 years and over	546	686	596	757	605	141	2	25	3	824
	Contract employees ²⁾	Total	58	199	82	190	120	36	0	2	3	161	
		By gender	Male	47	185	76	181	118	36	0	2	3	159
			Female	11	14	6	9	2	0	0	0	0	2
		By age	Under 30 years	37	62	59	102	47	6	0	1	0	54
			30-49 years	9	47	7	40	5	2	0	0	0	7
50 years and over			12	90	16	48	68	28	0	1	3	52	
Non-affiliated employees	person	27	28	39	45	45	5	2	0	2	54		

1) Data corrected due to omission of some affiliated personnel

2) Includes unregistered executives from 2023

ESG Data

Non-Financial Performance - Social

Employment

	Item	Unit	2021		2022		2023						
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
New hires ¹⁾	Total number of new hires	person	72	121	181	257	87	19	1	2	2	111	
	By gender	Male	person	60	105	158	221	77	18	1	2	2	100
		Female	person	12	16	23	36	10	1	0	0	0	11
	By age	Under 30 years	person	57	88	111	154	61	15	0	0	1	77
		30-49 years	person	14	34	65	98	26	4	1	2	1	34
		50 years and over	person	1	1	5	5	0	0	0	0	0	0
	By region	South Korea	person	72	123	181	257	87	19	1	2	2	111
Employment diversity	Employees with disabilities ²⁾	Number of employees	person	46	46	44	44	44	8	0	0	0	52
		Employment rate	%	2.31	2.31	2.12	2.12	2.02	1.17	0	0	0	1.82
	Veterans	Number of employees	person	70	78	77	85	76	2	0	0	0	78
		Employment rate	%	3.51	2.92	3.7	3.07	3.47	0.29	0	0	0	2.72

Turnover

	Item	Unit	2021		2022		2023						
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Voluntary turnover rate ³⁾		%	3.41	3.36	2.96	3.43	1.73	3.32	4.55	0.93	0	2.08	
Voluntary turnover	Total	person	69	90	59	97	36	23	1	1	0	61	
	By gender	Male	person	58	76	52	83	31	21	1	1	0	54
		Female	person	11	14	7	14	5	2	0	0	0	7
	By age	Under 30 years	person	33	42	36	59	8	8	0	0	0	16
		30-49 years	person	36	45	17	32	13	11	1	0	0	25
		50 years and over	person	0	3	6	6	15	4	0	1	0	20
	By region	South Korea	person	69	90	59	97	36	23	1	1	0	61

1) Based on full-time employees

2) Based on monthly average of full-time workers

3) Voluntary turnover rate = number of voluntary turnovers of this year ÷ total number of employees in the previous year



ESG Data

Non-Financial Performance - Social

Labor Relations

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Labor Unions ¹⁾	Number of eligible employees	person	812	1,173	781	1,069	831	324	N/A	0	N/A	1,155
	Number of employees who joined	person	812	1,173	781	1,069	831	324	N/A	0	N/A	1,155
	Collective agreement coverage rate	%	100	100	100	100	100	100	N/A	0	N/A	100
Labor Council ²⁾	Total number of representatives	person	12	28	12	28	12	8	N/A	8	N/A	28
Number of disputes	case		0	0	0	0	0	0	N/A	0	N/A	0

Parental Leave³⁾

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Employees eligible for parental leave	Male	person	362	525	370	552	389	139	2	23	7	560
	Female	person	37	44	48	55	54	4	0	0	1	59
Employees on parental leave	Male	person	2	3	9	11	4	3	0	0	0	7
	Female	person	7	8	19	19	23	2	0	0	0	25
Employees who returned from parental leave	Male	person	1	2	8	10	4	2	0	0	0	6
	Female	person	10	12	13	13	11	1	0	0	0	12
Employees retained (over 1 year) after parental leave	Male	person	1	1	1	2	6	2	0	0	0	8
	Female	person	6	6	8	10	12	0	0	0	0	12
Return-to-work rate after parental leave ⁴⁾	Male	%	100	100	100	100	100	100	N/A	N/A	N/A	100
	Female	%	100	100	100	100	100	100	N/A	N/A	N/A	100
Retention rate (over 1 year) after parental leave ⁵⁾	Male	%	33.3	33.3	100	100	75	100	N/A	N/A	N/A	80
	Female	%	75	75	80	83.3	92.3	N/A	N/A	N/A	N/A	92.3

1) Based on full-time employees, some affiliates' employees are members of the HD Hyundai Oilbank labor union

2) HD Hyundai and Shell Base Oil and HD Hyundai Cosmo Petrochemical are not subject to the Labor Council

3) Based on full-time employees

4) Return-to-work rate after parental leave = number of people returned from parental leave this year ÷ number of people scheduled to return after parental leave this year

5) Retention rate after parental leave = number of employees who worked for more than 1 year after returning from parental leave this year ÷ number of people who returned from parental leave in the previous year



ESG Data

Non-Financial Performance - Social

Safety Accidents¹⁾

Item	Unit	2021		2022		2023									
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total				
		Industrial accidents	Types	Serious accidents	Number of serious accidents	case	0	0	0	0	0	0	0	0	0
Industrial accidents	Employees	Industrial accidents	Number of industrial accidents	case	5	5	10	11	13	0	0	0	0	0	13
		Industrial accident rate	Industrial accident rate	%	0	0	0.1	0.1	0.05	0	0	0	0	0	0.03
Industrial accidents	Suppliers	Number of industrial accidents	Number of industrial accidents	case	0	0	2	3	1	0	0	0	0	0	1
		Industrial accident rate	Industrial accident rate	%	0.13	0.11	0.19	0.17	0.26	0	N/A	0	N/A	0	0.22
Recordable incidents	Employees	Total recordable incidents	Total Recordable Incident Rate (TRIR)	case/200,000 man-hours	0.00	0.00	0.24	0.21	0.37	0	0	0	0	0	0.27
		Total working hours	Total working hours	hour	4,022,000	5,534,000	4,104,000	5,750,000	4,308,000	1,326,000	50,000	210,000	56,000	5,936,000	
	Lost Time Injury	Lost Time Injury Rate (LTIR)	Lost Time Injury Rate (LTIR)	case/200,000 man-hours	0	0	0.1	0.1	0.05	0	0	0	0	0	0.03
		Lost Time Injury (LTI)	Lost Time Injury (LTI)	case	0	0	2	3	1	0	0	0	0	0	1
	Suppliers	Total recordable incidents	Total Recordable Incident Rate (TRIR)	case/200,000 man-hours	0.23	0.19	0.42	0.35	0.39	0.58	N/A	0	N/A	0	0.40
		Total working hours	Total working hours	hour	4,315,400	5,279,800	5,242,450	6,312,250	9,292,000	1,034,000	N/A	120,000	N/A	10,446,000	
	Lost Time Injury	Lost Time Injury Rate (LTIR)	Lost Time Injury Rate (LTIR)	case/200,000 man-hours	0.23	0.19	0.31	0.29	0.32	0.58	N/A	0	N/A	0	0.34
		Lost Time Injury (LTI)	Lost Time Injury (LTI)	case	5	5	8	9	15	3	N/A	0	N/A	0	18

Occupational Illness¹⁾

Item	Unit	2021		2022		2023								
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total			
		Occupational illnesses	Employees	Occupational Illness Frequency Rate (OIFR)	case/200,000 man-hours	0	0	0	0	0	0	0	0	0
Occupational illnesses	Employees	Number of occupational illnesses	Number of occupational illnesses	case	0	0	0	0	0	0	0	0	0	0
		Number of fatalities due to occupational illnesses	Number of fatalities due to occupational illnesses	case	0	0	0	0	0	0	0	0	0	0
Occupational illnesses	Suppliers	Occupational Illness Frequency Rate (OIFR)	Occupational Illness Frequency Rate (OIFR)	case/200,000 man-hours	0	0	0	0	0	0	N/A	0	N/A	0
		Number of occupational illnesses	Number of occupational illnesses	case	0	0	0	0	0	0	N/A	0	N/A	0
		Number of fatalities due to occupational illnesses	Number of fatalities due to occupational illnesses	case	0	0	0	0	0	0	N/A	0	N/A	0

1) HD Hyundai Oilbank manages the suppliers of HD Hyundai and Shell Base Oil and HD Hyundai Cosmo Petrochemical

ESG Data

Non-Financial Performance - Social

Employee Training¹⁾ and Career Management

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Training hours	Total hours of training	hour	128,365	193,866	97,840	159,176	116,632	43,463	840	6,034	10,119	177,087
	Hours of training per employee	hour/person	64	69	47	54	54	65	40	55	361	59
Training expenses	Training expenses per employee	KRW million/person	0.51	0.62	0.49	0.61	0.68	0.73	0.57	0.48	0.86	0.69
	Total training expenses	KRW million	1,022	1,765	1,012	1,795	1,470	491	12	52	24	2,049
Regular performance evaluation	Percentage of employees who received regular performance evaluations	%	97.1	93.2	96.1	93.1	98.9	96.3	100	98.2	89.3	98.2

Employee Ratio and Remuneration

Item	Unit	2021		2022		2023							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Employee ratio	Executive-level (including registered executives)	person	0	2	1	3	1	0	0	0	0	1	
	Manager-level (team leaders, section leaders)	person	8	8	9	9	10	2	0	0	0	12	
	Staff-level (senior managers and below)	person	152	189	159	207	164	30	4	5	4	207	
Employee remuneration	Ratio of female remuneration compared to male	%	53.2	56.6	55.6	61	57.6	63.4	39.4	69.4	72.0	59.9	
	Average remuneration per person	Male	KRW million/person	126	113	153	141	144	134	126	126	114	129
		Female	KRW million/person	67	64	85	86	83	85	49	87	82	77

1) Data corrected due to data error in the past

ESG Data

Non-Financial Performance - Social

Human Rights Protection

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Non-discrimination	Number of discrimination incidents	case	0	0	0	0	2	0	0	0	0	2
Human rights training	Total hours of human rights training	hour	4,042	5,584	6,384	8,955	6,994	2,113	74	346	94	9,621
	Training completion rate ¹⁾	%	100	97.84	100	100	100	100	100	100	100	100

Information Security

Item	Unit	2021		2022		2023						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Information security accidents	Number of information security accidents	case	0	0	0	0	0	0	0	0	0	0

1) Based on all employees

ESG Data

Non-Financial Performance – Governance

Board of Directors and Committees Status¹⁾

		Item	Unit	2021	2022	2023	
Board of Directors	Composition	Total	person	6	7	6	
		Inside directors	person	2	2	2	
		Non-executive directors	person	1	1	1	
		Independent directors (non-standing)	Number of directors	person	3	4	3
			Percentage of directors	%	50.0	57.1	50.0
		Female directors	Number of directors	person	0	1	1
			Percentage of directors	%	0	14.3	16.7
		Percentage by age	Under 30 years	%	0	0	0
			30-49 years	%	0	28.6	33.3
	50 years and over		%	100	71.4	66.7	
	Attendance rate	Total ²⁾	%	100	96	100	
		Independent directors(non-standing)	%	100	100	100	
		Number of meetings held	time	9	13	8	
ESG Committee	Number of meetings held	time	1	2	3		
	Agendas	case	1	3	5		

Economic Value Creation and Distribution³⁾

		Item	Unit	2021	2022	2023
Business		R&D expenses	KRW million	9,501	18,552	22,354
Shareholders and investors		Dividends	KRW million	296,060	568,346	339,684
		Interest expenses	KRW million	91,474	197,393	339,144
Local communities		Total social contribution expenses	KRW million	6,684	5,848	14,200
Suppliers		Procurement costs	KRW million	13,883,217	20,869,055	17,363,358
Employees		Labor expenses	KRW million	315,635	462,508	429,553
Government		Corporate tax	KRW million	253,590	573,488	60,889

1) Based on the HD Hyundai Oilbank separate basis

2) BOD attendance rate (Total) = {Σ(number of directors who attended each board meeting ÷ total number of board members)} ÷ number of board meetings held

3) Based on the Annual Report

4) Some past data corrected to reflect consolidated disclosures of energy affiliates

5) Number of disciplinary incidents (excluding contract terminations)

6) Consistent with the figures in the Annual Report (violations under the same law is counted as one case)

Business Ethics⁴⁾

		Item	Unit	2021	2022	2023
Anti-corruption (ethics) training		Number of employees who completed ethics training	person	1,535	1,950	2,106
		Ethics training completion rate	%	53.8	66.0	69.8
Anti-corruption policy (Code of Ethics)		Suppliers who signed anti-corruption policy (Code of Ethics)	company	114	101	350
		Employees who signed anti-corruption policy (Code of Ethics)	person	1,473	1,460	1,800
Number of business sites that conducted anti-corruption risk assessments		Percentage of business sites that conducted anti-corruption risk assessments	%	100	100	100
		Total number of corruption cases	case	0	1	3
Corrupt practices ⁵⁾		Number of cases that resulted in employee discipline/termination due to corruption	case	0	1	2
		Number of suppliers who were disciplined/terminated due to corruption	case	0	0	1

Compliance and Fair Trade¹⁾

		Item	Unit	2021	2022	2023
Compliance training		Number of employees who completed training	person	950	998	1,763
		Number of employees subject to training	person	2,855	2,957	4,064
Fair trade training		Number of employees who completed training	person	584	233	350
		Number of employees subject to training	person	1,999	2,086	350
Compliance ⁶⁾		Number of violations of laws and regulations	case	9	6	3
		Total fines paid	KRW million	23	158.6	35.1
		Payments for cases from the reporting year	KRW million	23	158.6	35.1
		Payments for cases from the previous reporting year	KRW million	-	-	-
Fair trade violations		Number of violations of laws and regulations	case	1	0	0
		Total monetary losses from legal procedures related to price fixing or price manipulation	KRW million	0	0	0
		Number of confirmed whistleblowing cases	case	0	0	0



GRI Standard Index

Universal Standard

Item	Indicator	Description	Page	Note
GRI 2: General Disclosures				
GRI 2: The organization and its reporting practices	2-1	Organizational details	8, 10	
	2-2	Entities included in the organization's sustainability reporting	2	
	2-3	Reporting period, frequency and contact point	2	
	2-4	Restatements of information	95-106	
	2-5	External assurance	118	
GRI 2: Activities and workers	2-6	Activities, value chain and other business relationships	9	
	2-7	Employees	100	
	2-8	Workers who are not employees	100	
	2-9	Governance structure and composition	13, 83-84	
	2-20	Nomination and selection of the highest governance body	84	
	2-11	Chair of the highest governance body	83	
	2-12	Role of the highest governance body in overseeing the management of impacts	13	
	2-13	Delegation of responsibility for managing impacts	13	
	2-14	Role of the highest governance body in sustainability reporting	13	
	2-15	Conflicts of interest	84	
GRI 2: Governance	2-16	Communication of critical concerns	85	
	2-17	Collective knowledge of the highest governance body	84	
	2-18	Evaluation of the performance of the highest governance body	13, 85	
	2-19	Remuneration policies	13, 85	
	2-20	Process to determine remuneration	85	
	2-21	Annual total compensation ratio	N/A	Unmanaged data

Item	Indicator	Description	Page	Note
GRI 2: General Disclosures				
GRI 2: Strategy, policies and practices	2-22	Statement on sustainable development strategy	7	
	2-23	Policy commitments	56	
	2-24	Embedding policy commitments	39, 46, 56, 59, 68, 72, 79, 80, 86, 89	
	2-25	Processes to remediate negative impacts	58, 87-88, 114	
	2-26	Mechanisms for seeking advice and raising concerns	58, 87-88, 114	
	2-27	Compliance with laws and regulations	106	
	2-28	Membership associations	114	
	2-29	Approach to stakeholder engagement	114	
	2-30	Collective bargaining agreements	102, 114	
	GRI 3: Material Topics			
GRI 3: Disclosures on material topics	3-1	Process to determine material topics	14	
	3-2	List of material topics	15	
	3-3	Management of material topics	16-17	



GRI Standard Index

Topic Standard

Item	Indicator	Description	Page	Note	Sector Standard
GRI 200: Economic Performances					
GRI 201: Economic performance	201-1	Direct economic value generated and distributed	94, 106, Annual report (Page 249, 271, 350)		11.14.2 11.21.2
	201-2	Financial implications and other risks and opportunities due to climate change	112-113		11.2.2
	201-3	Defined benefit plan obligations and other retirement plans	Annual report (Page 231)		
	201-4	Financial assistance received from government	Annual report (Page 45)		11.21.3
GRI 203: Indirect economic impacts	203-1	Infrastructure investments and services supported	69-71		11.14.4
	203-2	Significant indirect economic impacts	16-17		11.14.5
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	90, 106		11.20.2
	205-2	Communication and training about anti-corruption policies and procedures	106		11.20.3
	205-3	Confirmed incidents of corruption and actions taken	106		11.20.4
GRI 206: Anti-competitive behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	106		11.19.2

Item	Indicator	Description	Page	Note	Sector Standard
GRI 300: Environmental Performances					
GRI 302: Energy	302-1	Energy consumption within the organization	95		11.1.2
	302-2	Energy consumption outside of the organization	N/A	Not Applicable	11.1.3
	302-3	Energy intensity	95		11.1.4
	302-4	Reduction of energy consumption	21-22		
GRI 303: Water and effluents	303-1	Interactions with water as a shared resource	41		11.6.2
	303-2	Management of water discharge- related impacts	41		11.6.3
	303-3	Water withdrawal	97		11.6.4
	303-4	Water discharge	97		11.6.5
	303-5	Water consumption	97		11.6.6
GRI 304: Biodiversity	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	47		11.4.5
	305-1	Direct (Scope 1) GHG emissions	95		11.1.5
GRI 305: Emissions	305-2	Energy indirect (Scope 2) GHG emissions	95		11.1.6
	305-3	Other indirect (Scope 3) GHG emissions	N/A	Unmanaged data	11.1.7
	305-4	GHG emissions intensity	95		11.1.8
	305-5	Reduction of GHG emissions	95		11.2.3
	305-6	Emissions of ozone-depleting substances (ODS)	N/A	Unmanaged data	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	96		11.3.2
GRI 306: Waste	306-1	Waste generation and significant waste-related impacts	41		11.5.2
	306-2	Management of significant waste-related impacts	41		11.5.3
	306-3	Waste generated	98		11.5.4
	306-4	Waste diverted from disposal	98		11.5.5
	306-5	Waste directed to disposal	98		11.5.6
GRI 308: Suppliers 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 Standard Index

Topic Standard

Item	Indicator	Description	Page	Note	Sector Standard
GRI 400: Social Performances					
GRI 401: Employment	401-1	New employee hires and employee turnover	101		11.10.2
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	51		11.10.3
	401-3	Parental leave	102		11.10.4 11.11.3
GRI 402: Labor/ Management relations	402-1	Minimum notice periods regarding operational changes	55		11.7.2 11.10.5
	403-1	Occupational health and safety management system	59-60, 65		11.9.2
	403-2	Hazard identification, risk assessment, and incident investigation	59-60, 65-66		11.9.3
	403-3	Occupational health services	62, 66		11.9.4
GRI 403: Occupational health and safety	403-4	Worker participation, consultation, and communication on occupational health and safety	59, 65		11.9.5
	403-5	Worker training on occupational health and safety	64		11.9.6
	403-6	Promotion of worker health	51		11.9.7
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	61-64, 78		11.9.8
	403-8	Workers covered by an occupational health and safety management system	65		11.9.9
	403-9	Work-related injuries	103		11.9.10
	403-10	Work-related ill health	103		11.9.11
GRI 404: Training and education	404-1	Average hours of training per year per employee	104		11.10.6 11.11.4
	404-2	Programs for upgrading employee skills and transition assistance programs	53		11.7.3 11.10.7
	404-3	Percentage of employees receiving regular performance and career development reviews	104		
GRI 405: Diversity and equal opportunity	405-1	Diversity of governance bodies and employees	100, 106		11.11.5
	405-2	Ratio of basic salary and remuneration of women to men	104		11.11.6
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	58, 105		11.11.7

Item	Indicator	Description	Page	Note	Sector Standard
GRI 400: Social Performances					
GRI 407: Freedom of association and collective bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	54-55, 57		11.13.2
	408-1	Operations and suppliers at significant risk for incidents of child labor	N/A	Not Applicable	
GRI 409: Forced or compulsory labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	57		11.12.2
GRI 410: Security practices	410-1	Security personnel trained in human rights policies or procedures	N/A	Not Applicable	11.18.2
GRI 411: Rights of indigenous people	411-1	Incidents of violations involving rights of indigenous peoples	N/A	Not Applicable	11.17.2
	413-1	Operations with local community engagement, impact assessments, and development programs	44, 68-70		11.15.2
GRI 413: Local communities	413-2	Operations with significant actual and potential negative impacts on local communities	N/A	Not Applicable	11.15.3
	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		11.10.9
GRI 415: Public policy	415-1	Political contributions	N/A	Not Applicable	11.22.2
GRI 416: Customer health and safety	416-1	Assessment of the health and safety impacts of products and service categories	79		11.3.3
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	N/A	Not Applicable	
GRI 417: Marketing and labeling	417-1	Requirements for product and service information and labeling	MSDS on the official website	[Link]	
	417-2	Incidents of non-compliance concerning product and service information and labeling	N/A	Not Applicable	
	417-3	Incidents of non-compliance concerning marketing communications	N/A	Not Applicable	
GRI 418: Customer privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	105		

SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Extractives & Minerals Processing(Oil & Gas – Refining & Marketing)

Topic	Code	Item	Unit	2021	2022	2023	Note
Greenhouse Gas Emissions	EM-RM-110a.1	Gross global Scope 1 emissions	tCO ₂ e	7,620,093	7,782,328	7,069,038	
		Percentage covered under emissions-limiting regulations	%	100	100	100	
	EM-RM-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	Page 20-25			
Air Quality	EM-RM-120a.1	Air emissions of NOx (excluding N ₂ O)	ton	4,103	3,770	2,344	
		Air emissions of SOx	ton	2,010	1,961	1,418	
		Air emissions of PM10	ton	80.5	52.91	41.49	
		Air emissions of H ₂ S	ton	0.466	0	0.167	
		Air emissions of VOCs	ton	315.77	309.94	144.25	
	EM-RM-120a.2	Number of refineries in or near areas of dense population	number	1	1	1	Daesan Plant
Water Management	EM-RM-140a.1	Total water withdrawn	ton	22,212,806	24,202,571	22,546,839	No applicable High or Very High water stress areas
		Total water consumed	ton	22,212,806	24,202,571	22,546,839	
	EM-RM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	case	0	1	0	
Hazardous Materials Management	EM-RM-150a.1	Amount of hazardous waste generated	ton	10,030	11,501	15,427	
		Percentage of hazardous waste recycled	%	84.32	87.81	88.75	
	EM-RM-150a.2	Number of underground storage tanks (USTs)	case	2	2	2	Applicable to gas stations within the plants
		Number of UST releases requiring clean up	case	0	0	0	
		Percentage in jurisdictions with UST financial assurance funds	%	N/A	N/A	N/A	Not applicable to domestic sites
Workforce Health & Safety	EM-RM-320a.1	Total recordable incident rate (TRIR)	Direct employees	%	0	0.21	0.0743
			Contract employees	%	0	0	0
		Fatality rate	Direct employees	%	0	0	0
			Contract employees	%	0	0	0
		Near miss frequency rate (NMFR)	Direct employees	%	0.0625	0.0858	0.069
			Contract employees	%	0	0	0
	EM-RM-320a.2	Discussion of management systems used to integrate a culture of safety	-	Page 59-60			



SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Extractives & Minerals Processing(Oil & Gas – Refining & Marketing)

Topic	Code	Item	Unit	2021	2022	2023	Note
Product Specifications & Clean Fuel Blends	EM-RM-410a.2	Total addressable market and share of market for advanced biofuels and associated infrastructure	₩,%	N/A	N/A	N/A	Predictions differ by organizations
	EM-RM-410a.3	Volumes of renewable fuels for fuel blending	Net amount produced	0	0	0	
			Net amount purchased	1,060,087	1,179,728	1,225,048	
Pricing Integrity & Transparency	EM-RM-520a.1	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation	KRW million	0	0	0	
Management of the Legal & Regulatory Environment	EM-RM-530a.1	Discussion of corporate positions related to government regulations or policy proposals that address environmental and social factors affecting the industry	-	Page 91-92, 112-113			
Critical Incident Risk Management	EM-RM-540a.1	Process Safety Event (PSE) rates	Tier 1	0.01006	0.00002	0.00009	
			Tier 2	0	0	0	
	EM-RM-540a.2	Challenges to Safety Systems Indicator rate (Tier 3)	%	0	0	0.00002	
	EM-RM-540a.3	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	-	Page 61-64			

Activity Metrics

Topic	Code	Item	Unit	2021	2022	2023	Note
Refining throughput of crude oil and other feedstocks	EM-RM-000.A	Refining throughput of crude oil and other feedstocks	Barrels of oil equivalent (BOE)	206,049,000	201,143,000	190,614,000	Calculated based on crude oil refining throughput
Refining operating capacity	EM-RM-000.B	Refining operationing capacity	Thousand barrels/day (TBDP)	650	693	693	Calculated based on production capacity



TCFD Index

TCFD Recommendation	Response Activity	Page
<p>Governance</p> <p>Disclosure of the organization’s governance around climate-related risks and opportunities</p>	<p>[Role of Management]</p> <p>At HD Hyundai Oilbank, we have established the ESG Committee under the Board of Directors and the ESG Working Group to ensure effective response to climate change.</p> <ul style="list-style-type: none"> · ESG Committee: The ESG Committee comprises five directors who convene to discuss critical ESG management issues, including climate change. Their responsibilities include setting the direction for ESG strategies, receiving reports on stakeholder communication outcomes, and monitoring annual performance. · ESG Working Group: The ESG Working Group consists of the Chief ESG Officer and executives from each sector. They collaborate to discuss and identify detailed implementation measures for ESG management. <p>[Management ESG Performance Evaluation]</p> <p>We manage ESG key performance indicators (KPIs) for each executive, including the CEO. The ESG performance KPI pool was utilized to assign indicators based on their responsibilities and organizational characteristics. Once the KPIs are achieved, the executives are rewarded accordingly. We have included GHG emissions-related indicators (GHG intensity) as a KPI for our management to address climate change.</p>	<p>13, 20</p>
<p>Strategy</p> <p>Disclosure of the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material</p>	<p>[Short-Term - Regulatory Risk: Greenhouse Gas Emission Regulation]</p> <ul style="list-style-type: none"> - Risk: Since the Paris Agreement, the Korean government has announced its 2030 nationally determined contribution (2030 NDC) to reduce national GHG emissions by 40% compared to 2018, with the goal of achieving carbon neutrality by 2050. To support these targets, the government has implemented an emissions trading system to encourage businesses to participate in GHG reduction activities and the proportion of auctioned allowances is gradually increasing. Due to the allocation of emission allowances through auctions and the potential need to purchase additional allowances if we exceed our cap, we acknowledge that GHG emissions are directly linked to costs and may pose a potential short-term risk. - Strategy: As a designated participant in Korea’s Emissions Trading System (ETS), we diligently manage the GHG emissions of our business sites and ensure compliance with the allocated allowances. We regularly monitor emissions and explore strategies to secure additional allowances when necessary. Additionally, we actively engage in the emissions trading market to address any allowance-related challenges effectively. In anticipation of the future decrease in emission caps as per the national target, we have developed a GHG emission reduction roadmap and plan to implement various reduction initiatives. <p>[Short-Term - Regulatory Risk: Greenwashing]</p> <ul style="list-style-type: none"> - Risk: As stakeholders increasingly focus on climate change and environmental issues, addressing the problem of greenwashing becomes paramount. The Ministry of Environment and the Fair Trade Commission have established the K-Taxonomy and guidelines for labeling and advertising eco-friendly business activities, while also revising the guidelines for examining environmental labeling advertisements. This governmental intervention sets standards for eco-friendly activities and mandates that companies substantiate their claims with clear evidence. Furthermore, as the number of lawsuits related to greenwashing by consumer and environmental groups rises, companies must prioritize communication with stakeholders to prevent such issues. - Strategy: We have responded by establishing our own HDO Taxonomy to combat greenwashing. Through this, we evaluate whether our investment, procurement, and sales activities adhere to eco-friendly standards. Furthermore, we operate the Conformity Assessment Group to ensure that its eco-friendly initiatives align with the Six Environmental Goals, meet legal requirements, acquire third-party eco-friendly certifications, and have quantitative improvement effect. 	<p>24-25</p>








TCFD Index

TCFD Recommendation	Response Activity	Page
<p>Strategy</p> <p>Disclosure of the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material</p>	<p>[Long-Term – Policy/Market Risk: Decline in Demand for Refinery Products]</p> <ul style="list-style-type: none"> - Risk: The transportation sector contributes approximately 20% of global GHG emissions, primarily due to the consumption of light crude oil for roads. To mitigate this, many countries are implementing policies for transitioning internal combustion engines to eco-friendly vehicles. For example, the government is prohibiting the sale of new internal combustion engine vehicles, subsidizing the purchase of electric vehicles, and expanding the network of electric vehicle charging stations. With the recent decline in lithium battery prices and advancements in electric vehicle manufacturing technology, the price competitiveness of electric vehicles is increasing. According to the Ministry of Land, Infrastructure, and Transport, the penetration rate of eco-friendly vehicles rose from 2% in 2017 to 8% in 2023. As the availability of eco-friendly vehicles expands, the long-term risk of decreased demand for light crude oil for roads becomes apparent. - Strategy: We are preparing for mid to long-term changes in our product portfolio in response to shifts in energy demand. Our focus includes optimizing the efficiency of our existing oil refining business, producing eco-friendly fuels, and expanding the production capacity of high-value-added, eco-friendly high-tech materials. We aim to increase the proportion of eco-friendly products to 18% (based on weight) by 2040. <p>[Long-term – Product & Service Opportunity: Growing Demand for Green Energy Products]</p> <ul style="list-style-type: none"> - Opportunity: The demand for eco-friendly products such as bioenergy and resource circulation products is increasing globally. Many countries, including Korea, are enforcing regulations on the mandatory blending of biodiesel, which emits less GHG than conventional petroleum fuels. Furthermore, international organizations like the European Union, the International Maritime Organization (IMO), and the International Civil Aviation Organization (ICAO) are regulating the carbon intensity of ships and mandating the use of sustainable aviation fuel (SAF) to reduce GHG emissions in the maritime and aviation sectors. The global plastic waste issue has prompted many countries to introduce plastic regulations, with OECD forecasts indicating an increase from 33 million tons in 2022 to 223 million tons by 2050. - Strategy: We plan to expand our bioproduct production capacity to 700,000 tons by 2030 to capitalize on the growing demand for green energy solutions. A biodiesel plant with an annual capacity of 130,000 tons commenced commercial operations in 2024, and we are striving to enhance our bio energy competitiveness by obtaining ISCC certification for our aviation biofuel business and participating in marine biofuel empirical research projects. In addition, we integrate pyrolysis oil extracted from waste plastics into our refining process to establish a circular economy. We produce and sell recycled naphtha, which has obtained ISCC PLUS certification. To further expand our circular resource business, we plan to increase pyrolysis oil processing capacity to about 400,000 tons by 2030. 	<p>26-37</p>
<p>Risk Management</p> <p>Disclosure of how the organization identifies, assesses, and manages climate-related risks</p>	<p>HD Hyundai Oilbank manages climate change-related risks through an integrated management system throughout the company.</p> <ul style="list-style-type: none"> - Risk management process: We have established a dedicated organization to oversee climate change-related risks. We formed a dedicated GHG-related organization to strengthen our expertise and execution abilities in addressing climate change. This organization is responsible for managing and identifying the company's GHG risks and developing reduction projects. - Risk inspection prior to investing: We conduct a comprehensive assessment of environmental and safety risks, tax risks, and potential legal violations through an ESG risk inspection procedure before making investments above a certain threshold. The Investment Review Committee approves major investments after reviewing input from the EHS Department, Tax Team, Legal Affairs Team, and GHG-related organizations and determining their profitability. 	<p>91-92</p>
<p>Metrics and Targets</p> <p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities</p>	<p>We annually manage and disclose our Scope 1 and 2 GHG emissions. To effectively control GHG and energy risks, we set related indicators as KPIs of the company and management. In addition, we are involved in various reduction initiatives, including enhancing energy efficiency at our business sites, promoting CCUS, expanding renewable/green energy, and implementing resource recycling. We conduct quantitative evaluations that take into account the risks and costs of specific carbon reduction measures.</p>	<p>20-25</p>







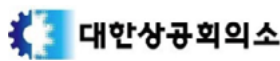







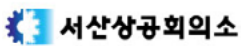
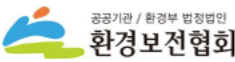



Stakeholder Communication

HD Hyundai Oilbank operates various communication channels to facilitate effective communication with our key stakeholders.

Key Stakeholders	Communication Channels		Topics	
Employees 	<ul style="list-style-type: none"> · Company Newsletters · Enterprise Portal (EP) · Surveys · Change Agent · Employee Seminars 	<ul style="list-style-type: none"> · Conversations with the CEO · CEO Management Briefings · Collective Bargaining · Labor Council · Various Labor-management TF 	<ul style="list-style-type: none"> · Management and employee communication · Improving the quality of life of employees · Human Rights Protection · Enhancing company's competitiveness 	<ul style="list-style-type: none"> · Collective agreements and various agreements · Performance-based rewards · Talent development · Increasing corporate value
Customers and Suppliers 	<ul style="list-style-type: none"> · Customer Center · Bonus Card App (Car&) · Bonus Card Website · Company Website 	<ul style="list-style-type: none"> · Youtube Channel (@hdhyundaioilbank) · On-site Visit to Major Suppliers · Instagram and Facebook · Media platform 'Blue Talk' 	<ul style="list-style-type: none"> · Company and consumer communication · Improving service quality · Customer protection 	<ul style="list-style-type: none"> · Marketing · Promotion · Customer satisfaction and safety · Grievances
Shareholders and Investors 	<ul style="list-style-type: none"> · Annual Report · General Shareholders' meeting · Disclosures · NDR(Non-deal Roadshow) 	<ul style="list-style-type: none"> · Performance Presentation · E-mail and Phone · Company Website 	<ul style="list-style-type: none"> · Respect for shareholder rights · Investment information · Responses to internal and external risks 	<ul style="list-style-type: none"> · Protection of shareholders' interests · Transparent company management · Enhancing shareholder value
The Government and Central Ministries 	<ul style="list-style-type: none"> · Public Hearings · Meetings/Conferences · Seminar · Newsletters · Relevant Organization Websites 		<ul style="list-style-type: none"> · Changes in government policy · Compliance with laws and taxes · Industry-specific trends · Regional trends 	
Communities and Local Governments 	<ul style="list-style-type: none"> · Scholarship Foundation · Social Contribution Steering Committee · Daesan Complex Council 	<ul style="list-style-type: none"> · Field Trip to Daesan Plant · Local Volunteer Activities · Joint Social Group Activities with Local Government 	<ul style="list-style-type: none"> · Contributing to the local community and economy · Promoting local development 	<ul style="list-style-type: none"> · Communication and mutual development with communities · Sponsoring local culture and arts · Support for local education projects

Initiatives and Associations

<p>Korea Enterprises Federation</p> 	<p>Korea Petroleum Association</p> 	<p>Korea Petrochemical Industry Association</p> 	<p>World Petroleum Council Korea</p> 	<p>Energy Future Forum</p> 
<p>Korea Oil Association</p> 	<p>Korea Business Council for Sustainable Development (KBCSD)</p> 	<p>Korea Lubricating Oil Industry Association</p> 	<p>Korea Chamber of Commerce and Industry</p> 	<p>Korea Industrial Technology Association</p> 
<p>Korea Industrial Safety Association</p> 	<p>Korean Standards Association</p> 	<p>Korean Society of Industrial and Engineering Chemistry</p> 	<p>Korean Institute of Chemical Engineers</p> 	<p>World Energy Council Korea</p> 
<p>Daesan Complex Council</p> 	<p>Seosan Chamber of Commerce and Industry</p> 	<p>Korea Environmental Preservation Association</p> 	<p>Biz N Biodiversity Platform</p> 	



Certificates

Other Certifications

Company	Name	Organization	Effective Date
HD Hyundai Oilbank	ISO 14001	Korean Foundation for Quality	Dec 23, 2026
	ISO 45001	Korean Foundation for Quality	Dec 23, 2026
	ISO 9001	Korean Foundation for Quality	Dec 23, 2026
	ISMS-P (HD Hyundai Oilbank Bonus Card Service Operation)	Korea Internet & Security Agency	Dec 5, 2026
	EOLCS (Engine Oil Licensing and Certification System) Certificate	API	Mar 31, 2025
HD Hyundai Chemical	ISO 14001	Korean Foundation for Quality	May 12, 2025
	ISO 45001	Korean Foundation for Quality	May 12, 2025
	ISO 9001	Korean Foundation for Quality	May 10, 2025
HD Hyundai and Shell Base Oil	ISO 14001	Korean Foundation for Quality	Dec 23, 2026
	ISO 45001	Korean Foundation for Quality	Dec 23, 2026
	ISO 9001	Korean Foundation for Quality	Dec 23, 2026
HD Hyundai OCI	ISO 14001	Lloyd's Register	Aug 2, 2024
	ISO 45001	Lloyd's Register	Aug 2, 2024
	ISO 9001	Lloyd's Register	Aug 29, 2025
	IATF 16949 (Automotive Quality Management System)	Lloyd's Register	Aug 29, 2025
HD Hyundai Cosmo Petrochemical	ISO 14001	Korean Foundation for Quality	Dec 23, 2026
	ISO 45001	Korean Foundation for Quality	Dec 23, 2026
	ISO 9001	Korean Foundation for Quality	Dec 23, 2026

ISO 14001: Environmental management systems

ISO 45001: Health and safety management systems

ISO 9001: Quality management systems

ISCC Certifications

Company	Name	Description	Organization	Effective Date	
HD Hyundai Oilbank	ISCC Plus Certificate	Pyrolysis oil, refined oil from waste lubricating oil, etc.	CUC Germany GmbH	Jan 10, 2025	
		Co-Processing	CUC Germany GmbH	Jan 10, 2025	
		Trading operation	CUC Germany GmbH	Dec 27, 2024	
		Trading operation	RINA Services S.p.A.	Mar 30, 2025	
		ISCC EU Certificate	Co-Processing	CUC Germany GmbH	Jan 31, 2025
	ISCC EU Certificate	Trading operation	CUC Germany GmbH	Dec 27, 2024	
		Trading operation	RINA Services S.p.A.	Jun 11, 2025	
		ISCC CORSIA Certificate	Co-Processing	CUC Germany GmbH	Apr 11, 2025
	HD Hyundai Chemical	ISCC Plus Certificate	Naphtha, aromatics, etc.	CUC Germany GmbH	Apr 27, 2025
	HD Hyundai Cosmo Petrochemical	ISCC Plus Certificate	BTX-related products	CUC Germany GmbH	Dec 18, 2024

GHG Verification Statement

Verification Statement on 2023 Greenhouse Gas Emission Report

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Greenhouse Gas Emissions (hereinafter 'GHG Inventory') of HD Hyundai Oilbank, HD Hyundai Chemical, HD Hyundai OCI (hereinafter 'Companies') for 2023.

Verification Scope

KFQ's verification covered on all facilities and emission sources under the operational control and organizational boundary of the 'Companies' during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading scheme¹⁾, [Rules for verification of operating the greenhouse gas emission trading scheme²⁾] and [ISO 14064-3] for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment 2) Notification No. 2021-112 of Ministry of Environment

Level of Assurance

The verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as reasonable level of assurance. And it was confirmed through an internal review whether the process before the verification was conducted effectively.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption from the report through the verification, KFQ provides our verification opinions as below;

- 1) The Inventory Report has been stated in accordance with "Rule for emission reporting and certification of greenhouse gas emission trading Scheme" and "ISO 14064-1". The totals in this verification statement do not match the totals in emission trading scheme because the total emissions of each facility are calculated by truncating to integer units.
- 2) The result of materiality assessment satisfied the criteria for each 'Company' set by "Rules for verification of operating the greenhouse gas emission trading scheme".
- 3) Thus, KFQ concludes that the Greenhouse Gas Emissions of the 'Companies' in 2023 is correctly calculated and stated in accordance with "Rule for emission reporting and certification of greenhouse gas emission trading Scheme".

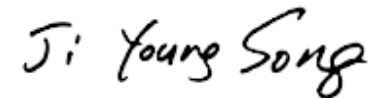
Unit : tCO₂-eq

Company	Scope 1	Scope 2	Total
HD Hyundai Oilbank	5,504,970.647	883,638.153	6,338,603
HD Hyundai Chemical	1,234,335.615	1,084,090.794	2,318,426
HD Hyundai OCI	329,729.308	38,960.816	368,689

*The totals in this verification statement do not match the totals in emission trading scheme because the total emissions of each facility are calculated by truncating to integer units.

*In case of HD Hyundai Oilbank, greenhouse gas emissions are calculated including emissions from companies(HD Hyundai and Shell Base Oil, HD Hyundai Cosmo Petrochemical) whose operations are integrated and managed.

May 9th, 2024
 CEO Ji-Young Song
 Korean Foundation for Quality




National Institute of Environmental Research





Third-Party Assurance Statement

To readers of HD Hyundai Oilbank Integrated Report 2023

Introduction

Korea Management Registrar (KMR) was commissioned by HD Hyundai Oilbank to conduct an independent assurance of its Integrated Report 2023 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of HD Hyundai Oilbank. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with HD Hyundai Oilbank and issue an assurance statement.

Scope and Standards

HD Hyundai Oilbank described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process.

- GRI Sustainability Reporting Standards 2021
- Universal Standards
- Topic Specific Standards
 - GRI 201: Economic Performance
 - GRI 303: Water and Effluents
 - GRI 305: Emissions
 - GRI 306: Waste
 - GRI 308: Supplier Environmental Assessment
 - GRI 403: Occupational Health and Safety
 - GRI 405: Diversity and Equal Opportunity
 - GRI 406: Non-discrimination
 - GRI 407: Freedom of Association and Collective Bargaining
 - GRI 408: Child Labor
 - GRI 409: Forced or Compulsory Labor
 - GRI 413: Local Communities
 - GRI 414: Supplier Social Assessment

As for the reporting boundary, the engagement excludes the data and information of HD Hyundai Oilbank's partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by HD Hyundai Oilbank to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with HD Hyundai Oilbank on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity HD Hyundai Oilbank has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality HD Hyundai Oilbank has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness HD Hyundai Oilbank prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of HD Hyundai Oilbank's actions.

Impact HD Hyundai Oilbank identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with HD Hyundai Oilbank and did not provide any services to HD Hyundai Oilbank that could compromise the independence of our work.

June 2024 Seoul, Korea

CEO *E. J. Hwang*



www.hd-hyundaioilbank.co.kr

If you have any inquiries regarding this report, please contact:

HD Hyundai Global R&D Center 477, Bundangsuseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do

E-mail. hdoesg@hd.com