

ECO-FRIENDLY FUTURE WITH GREEN ENERGY





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HD Hyundai Oilbank, the first Korean private oil company established in 1964, owns 5 affiliates, which are HD Hyundai Chemical, HD Hyundai and Shell Base Oil, HD Hyundai OCI, HD Hyundai Cosmo Petrochemical and HD Hyundai E&F. We serve customers with unique services and reliable products through our around 2,500 gas stations across the nation. We produce the world's best quality petroleum, petrochemical products, lube base oil and carbon black and offer fuels for a wide range of applications ranging from cars, vessels and planes to industrial and household consumption.

About this Report

Report Overview

Through the 2022 HD Hyundai Oilbank Integrated Report, we aim to transparently disclose our direction and performance on sustainability management and actively communicate with our various stakeholders. We will continue to publish integrated reports to listen to your valuable opinions and strive to grow into an eco-friendly energy business platform with global competitiveness.

Reporting Principles

This report was written based on the Global Reporting Initiative (GRI) standards, which are international guidelines for sustainability reporting. We 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).

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(HDO) and its affiliates – HD Hyundai Chemical(HDC), HD Hyundai and Shell Base Oil(HSB), HD Hyundai OCI(HOC), HD Hyundai Cosmo Petrochemical(HCP). Any difference in the reporting scope and changes in data are indicated separately.

Third-Party Assurance

HD Hyundai Oilbank has received third-party verification from KMR (Korea Management Registrar Inc) in accordance with the four principles of AA1000AS (2020)—materiality, responsiveness, comprehensiveness, 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 is based on fiscal year 2022 (January 1–December 31, 2022). The last three years' worth of data is included in the quantitative performance to identify trends in performance, and qualitative performance may include data of partial results of 2023, in consideration for timeliness and significance.

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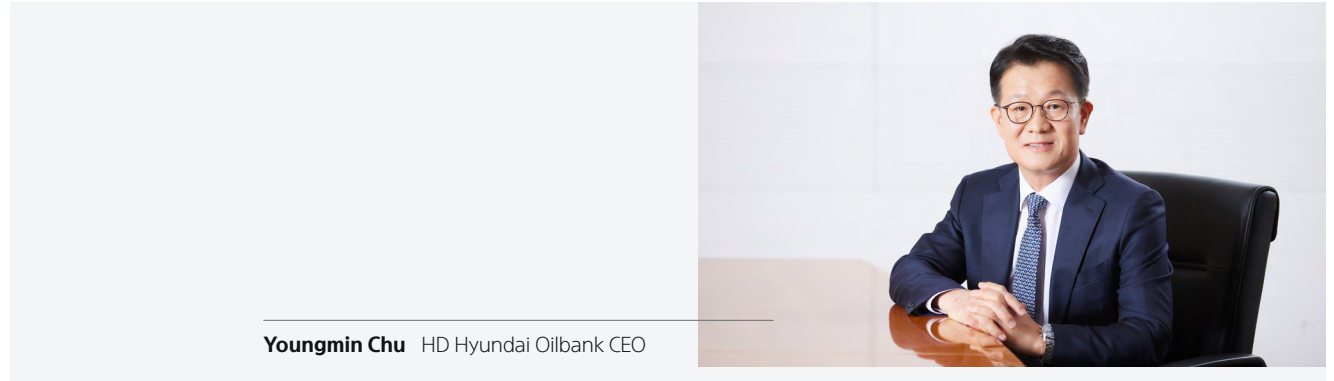
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INTRODUCTION



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CEO Message



Youngmin Chu HD Hyundai Oilbank CEO

Dear valued stakeholders,

I would like to express my deepest gratitude for your unwavering interest and support for HD Hyundai Oilbank.

The year 2022 was particularly an eventful year, full of challenges, presenting us with a range of unique issues to navigate. In addition to the ongoing COVID-19 pandemic, we faced the prolonged Russo-Ukrainian war and economic downturn. Despite these obstacles, we are proud to announce that we achieved our highest operating profit of KRW 2,000 billion since our foundation, thanks to our employees' hard work and dedication.

However, we recognize that we are still facing significant challenges caused by economic stagnation, inflation, contraction of consumption, and high-interest rates. In particular, the oil refining and petrochemical industries are facing challenges such as carbon neutrality and the shift towards a new energy paradigm. We are determined to overcome this crisis with an innovative mindset and turn it into opportunity.

As a responsible corporate citizen, we will take the lead in addressing urgent issue of climate change by joining the global movement towards carbon neutrality. We will continue our efforts to reduce GHG emissions through various measures such as improving energy efficiency, introducing renewable and eco-friendly energy sources, and promoting carbon capture, utilization, and storage (CCUS) and other reduction projects.

In addition to reducing GHG emissions, we are committed to expanding our eco-friendly businesses. We plan to promote bio-businesses such as bio-naphtha, bio-diesel, and sustainable aviation fuel, and eco-friendly hydrogen businesses by introducing clean hydrogen and clean ammonia. We also aim to build a resource circulation economy by utilizing waste plastic pyrolysis oil and expand eco-friendly energy infrastructure by supplying LNG and electric and hydrogen vehicle charging stations.

To achieve our sustainability goals, we will actively invest in research and development for a sustainable future—such as refining technology that reuses waste lubricants, carbon dioxide capture and conversion technology, and electrolyte membranes for hydrogen fuel cells.

Our diversification strategy into high-value petrochemical business has been based on our traditional business competitiveness in oil refining and lube base oil. Throughout this process, we have always prioritized safety and environmental responsibility, while maximizing value for stakeholders such as employees, shareholders, local communities, and suppliers.

At HD Hyundai Oilbank, we will continue to take steps toward sustainable development and we will communicate with you by transparently sharing the company's ESG performance, strategy, and plans through an annual integrated report.

We sincerely ask for your continued interest and support on our journey towards a sustainable future.

Thank you.

May 2023

Company Overview

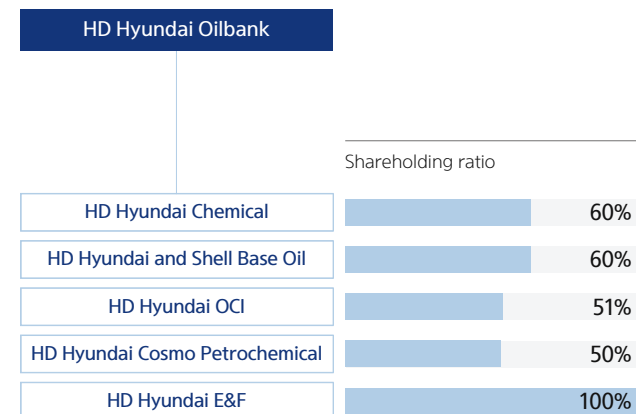
HD Hyundai Oilbank was established in 1964 as Korea's first private oil refining company, and our affiliates include HD Hyundai Chemical, HD Hyundai and Shell Base Oil, HD Hyundai OCI, HD Hyundai E&F. About 2,500 of our gas stations offer exceptional services and reliable products, and we produce world-class quality petroleum products, petrochemicals, lubricating oils, and carbon black products, ranging from fuel for automobiles, ships, and aircraft to industrial and household use.

Currently, we are preparing for the Carbon Capture and Utilization (CCU) and clean hydrogen business, as well as a white bio ecosystem, which is a system that produces eco-friendly energy and chemicals. We also plan to expand into various eco-friendly businesses, such as waste plastic recycling, photovoltaic technology, and the development of secondary battery-related materials. We will do our best to become a reliable company that fulfills its social responsibility and the corporate responsibility of generating profits.

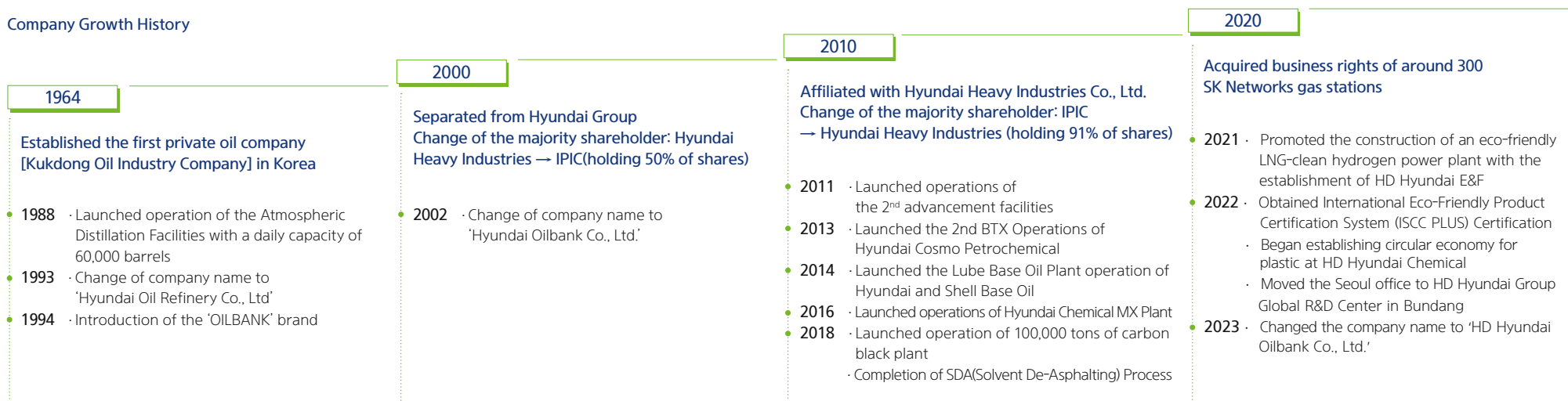
Overview

Name	HD Hyundai Oilbank Co., Ltd
CEO	Youngmin Chu
Date of Founding	November 19, 1964
Total Assets	KRW 19,735.4 billion
Sales Revenue	KRW 34,955 billion
No. of Employees	2,928 (HD Hyundai Oilbank: 2,079, affiliates: 849)
Main Business Area	Refining petroleum and selling refined petroleum products
Petroleum Refining Capacity	690,000 barrels/day(*) (upgrading rate 41.7%) *Capacity of Hyundai Chemical is included

Affiliates



Company Growth History



Business Model

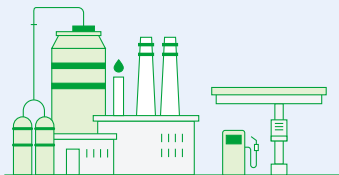
HD Hyundai Oilbank is increasing business efficiency and establishing a stable foundation for growth through business expansion and vertical integration.

HD Hyundai Oilbank

Petroleum Refining and Petroleum Product Business

The company produces high-quality petroleum products and naphtha, a raw material for petrochemical products. We have a refining capacity of 520,000 barrels per day of crude oil, of which 41.7% can be produced as high-value-added products.

Capacity	520,000 barrels per day of crude oil
Products	Automobiles, aircraft and ship fuel, petroleum for domestic and industrial uses
Sales	KRW 32,599.8 billion (Separate standard)



HD Hyundai Chemical

Petrochemical Business

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



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 8,111.2 billion

HD Hyundai Cosmo Petrochemical

Petrochemical Business

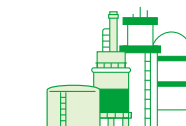
The company produces benzene, toluene, and xylene (BTX) using naphtha.



Capacity	BTX produces 1.83 million tons per year
Products	BTX (benzene, paraxylene)
Sales	KRW 2,912.5 billion

HD Hyundai and Shell Base Oil

Lube Base Oil Business

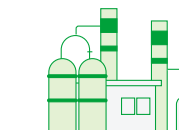


The company produces lube base oil using hydrowax as a raw material.

Capacity	1 million tons of lube base oil per year
Products	Lube base oil
Sales	KRW 1,266.8 billion

HD Hyundai OCI

Carbon Black Business



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

Capacity	150,000 tons of carbon black per year
Products	Carbon Black, BTX
Sales	KRW 384.7 billion

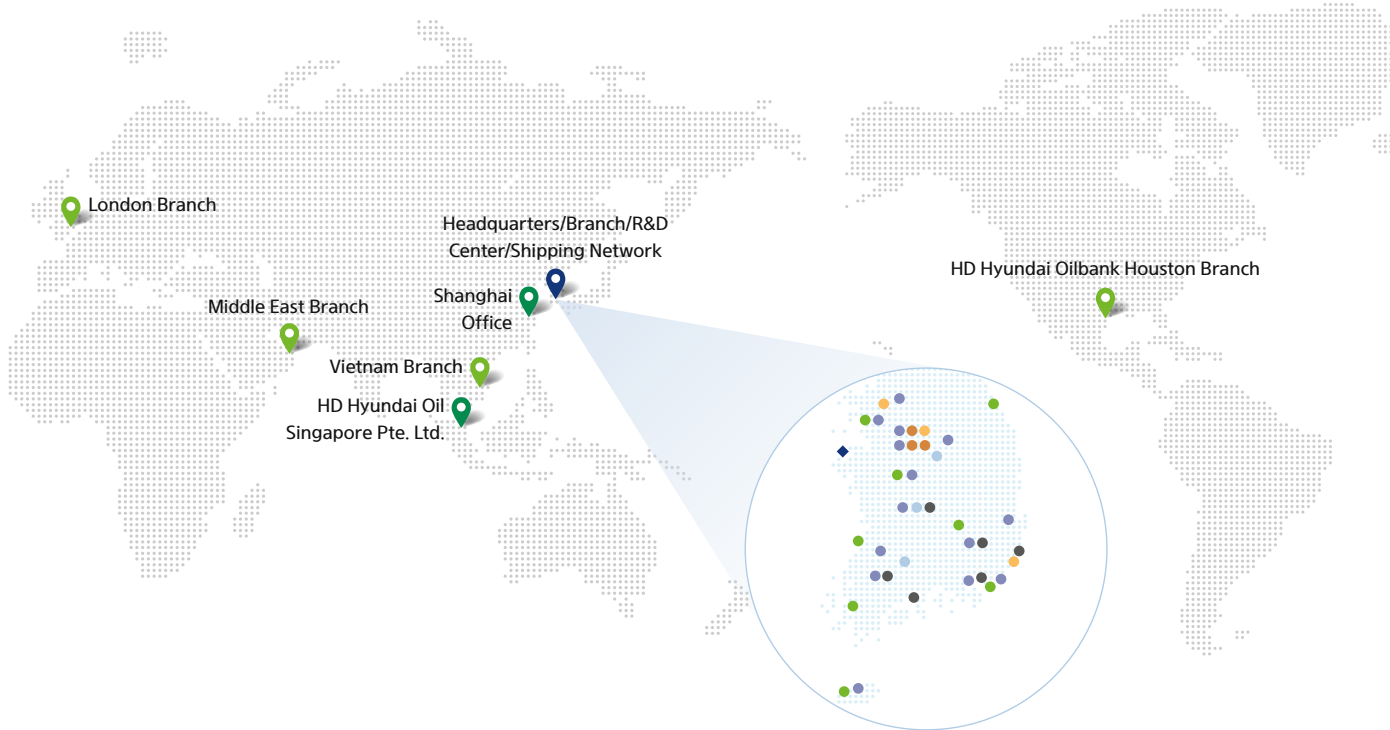
HD Hyundai E&F

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

Subsidiaries	Singapore	HD Hyundai Oil Singapore Pte. Ltd.
	China	HD Hyundai Oilbank Shanghai Co., Ltd.
Branches	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	Seoul	Seoul Branch	
	Capital Region	Incheon Branch, Northern Gyeonggi Branch, Southern Gyeonggi Branch	
	Chungcheong	Daejeon Branch, Chungnam Branch, Chungbuk Branch	
	Gangwon Region	Gangwon Branch	
	Yeongnam Region	Busan Branch, Gyeongnam Branch, Daegu/Gyeongbuk Branch	
	Honam Region	Gwangju/Jeonnam Branch, Jeonbuk Branch	
	Jeju	Jeju Business Office	
	Shipping Network	Distribution Centers	Incheon Distribution Center, Okgye Distribution Center, Chungcheong Distribution Center, Mokpo Distribution Center, Gunsan Distribution Center, Daegu Distribution Center, Busan Distribution Center, Jeju Distribution Center
		Lubricant Distribution Centers	Metropolitan Lubricant Distribution Center, Chungcheong Lubricant Shipping Center, Honam Lubricant Shipping Center
Oil Storage Centers		Seongnam Oil Storage Centers, Goyang Oil Storage Centers, Ulsan New Port Oil Storage Centers	
Shipping Centers	Daejeon Shipping Center, Yeosu Shipping Center, Gwangju Shipping Center, Changwon Shipping Center, Ulsan Shipping Center, Daegu Shipping Center		
R&D Center	Central Technology R&D Institute, Lubricant Research Institute, Pangyo Technology Supporting Center		

Overseas

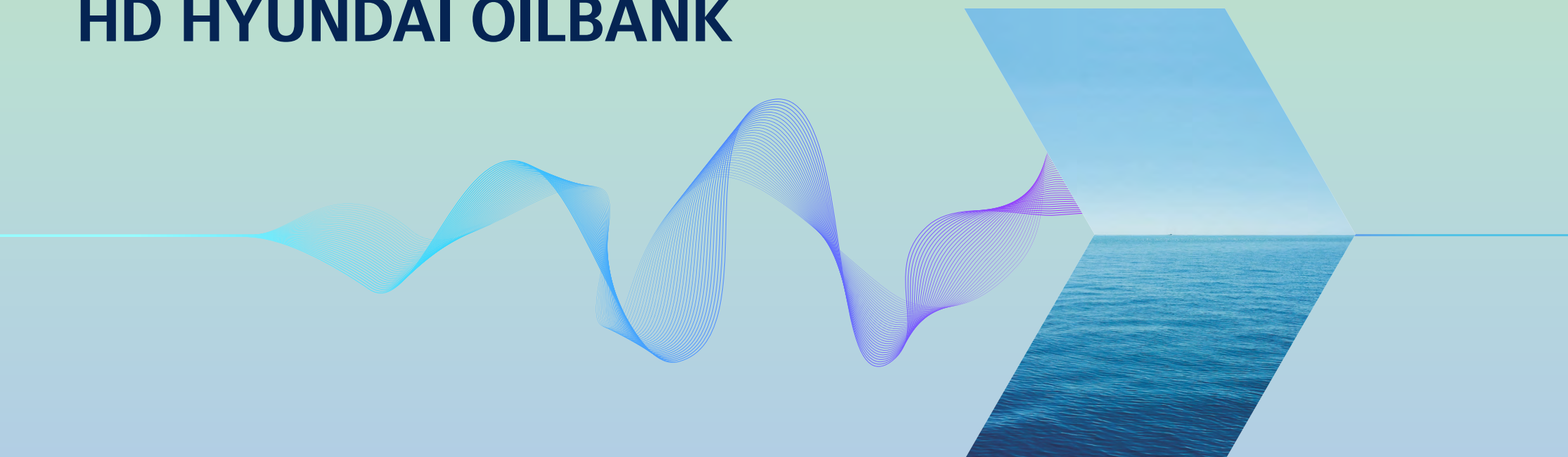
Domestic

Subsidiaries	2		
Branches	14	Shipping Network	20
			R&D Center
			3

◆ Headquarters ● Oil Storage Centers ● Lubricant Distribution Centers
● Branches ● Shipping Centers ● R&D Centers
● Distribution Centers

* Headquarters: 1, Branch Office (including business offices): 14, R&D Centers: 3, Distribution Centers: 8, Oil Storage Centers: 3, Shipping Centers: 6, Lubricant Distribution Centers: 3

SUSTAINABILITY AT HD HYUNDAI OILBANK



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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 Slogan	ESG Pillar	Key ESG Activities			Key Tasks
<p>Eco-Friendly Future with Green Energy</p> 	<p>Green Growth with Eco-friendly Business</p>	<p>Promoting Eco-Friendly Businesses</p> 	<p>Enhancing Competitiveness of Green Products</p> 	<p>Advancing Our Response to Climate Change</p> 	<ul style="list-style-type: none"> · Conduct product life-cycle assessment (LCA) · Classify eco-friendly products and manage performance · Strengthen the GHG monitoring and management system
	<p>Green Value with People & Safety</p>	<p>Establishing and Supporting Supplier ESG Management System</p> 	<p>Becoming a Health and Safety Well-being Company</p> 	<p>Internalizing Human Rights Management</p> 	<ul style="list-style-type: none"> · Establish supplier code of conduct and conduct ESG evaluations · Implement safety evaluation system · Advance of human rights impact assessment
	<p>Green Leadership with Transparency</p>	<p>Strengthening ESG Management at the BOD Level</p> 	<p>Establishing a Compliance System</p> 	<p>Promoting ESG Communication</p> 	<ul style="list-style-type: none"> · Improve the non-financial risk management and supervision functions of the BOD · Obtain anti-corruption management system certification · Provide ESG information through various channels

ESG Management System

ESG Governance

HD Hyundai Oilbank has launched an ESG Committee under BOD in June 2021 to effectively determine the company's ESG strategy and discuss important matters related to the company's ESG management.

Since July 2022, an ESG Working Group led by the Chief ESG Officer has been operating to discuss detailed implementation plans and provide momentum. The Chief ESG Officer and executives of each ESG sector attend the working group to review ESG activities across the company and support the achievement of improvement tasks.

ESG Governance Structure



ESG Committee (Under BOD)

- **Members**¹⁾ : 3 independent directors + 1 inside director + 1 other non-executive director
 - **Role** : Determine the direction of the company's ESG strategy and discuss important ESG management issues
-
- **Key Discussion Agenda**
 - ESG strategic direction, planning, and implementation
 - Matters concerning the company's social responsibility
- 1) As of March 2023

ESG Working Group

- **Members** : Chief ESG Officer + Executives of each ESG sector
 - **Role** : Discuss detailed ESG management implementation plan and provide momentum
-
- **Key Discussion Agenda**
 - Promotion and identification of ESG improvement tasks
 - Matters concerning the human rights management
 - Discuss major internal and external ESG issues

ESG Performance Management System

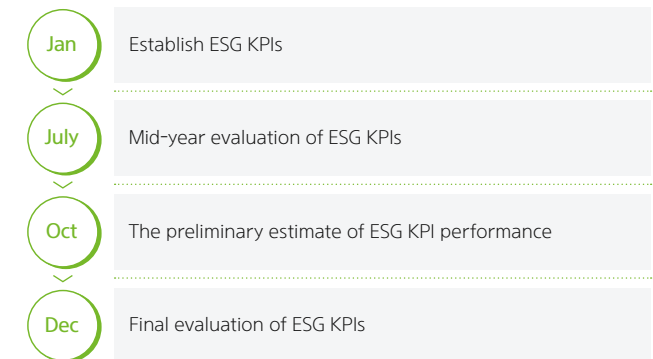
Establishing an ESG KPI Pool

We analyzed the urgency and importance of item demanded by stakeholders and the company's main management direction to establish a pool of ESG key performance indicators (KPIs). We plan to continue developing the pool in accordance with evolving ESG systems and ecosystems.

ESG Performance Evaluation and Rewards

The CEO and executives have established their individual ESG KPIs by utilizing the ESG KPI pool, which takes into account their specific management responsibilities, including environment, health and safety, and supply chain management, as well as the unique characteristics of the organization. These KPIs are designed to evaluate and reward performance based on achievement, ensuring that ESG efforts are aligned with the company's overall goals and objectives.

ESG Performance Evaluation Process



Materiality Assessment

We conducted a materiality assessment to identify key ESG issues, based on social and environmental impact. From the assessment, we selected the top five issues with the highest impact on the company. As part of our commitment to ESG management, we will continue to monitor and assess the impact of our business activities on the environment and society.

Materiality Assessment Process

We selected the ESG issues of HD Hyundai Oilbank by conducting a materiality assessment reflecting GRI's Impact Assessment, and identified and evaluated the impact of the activities of each issue on the environment and society.

STEP 1 — Form a pool of issues

We examined ESG issues related to the company and the current status and trends of global ESG management and formed a pool with a total of 35 ESG issues.

External Factor Analysis

- Global disclosure standards (GRI and SASB)
- ESG evaluation criterion (MSCI and KCGS)
- Important issues in the refining and petrochemical industry
- Media articles related to HD Hyundai Oilbank

Internal Factor Analysis

- BOD agenda
- ESG vision and initiatives
- 2021 ESG material issues
- 2022 performances and 2023 business plan



ESG Issue Pool

- Develop eco-friendly products and services
- Respond to climate change risks and opportunities
- Monitor suppliers' ESG management status
- . . .
- Establish and operate a responsible BOD

STEP 2 — Identify social and environmental impacts

We evaluated the impact of our business activities on the environment and society related to the identified ESG issues, and classified them into four categories: positive, negative, actual, and potential.

Impact Identification Basis

- Policy and legal requirements
- Internal corporate activities
- Media
- Similar cases in other companies
- Global Initiatives
- Stakeholders' opinions

Example

Corporate Activities

Promote new sustainable eco-friendly business and develop eco-friendly products using waste



Impact

Reduction in environmental impact, such as the reduction of carbon emissions by increasing the proportion of new eco-friendly businesses

STEP 3 — Assess social and environmental impacts

Internal and external experts evaluated social and environmental impacts identified by analyzing HD Hyundai Oilbank's activities and results on ESG Issue.

Impact Assessment Criteria

Scale

Evaluate how grave the impact is

Scope

Evaluate how widespread the impact is

Remediability

Evaluate how hard it is to counteract or make good the resulting harm

Likelihood

Evaluate the chance of the impact happening

STEP 4 — Select and disclose material issues

Based on the experts' comments and evaluation results, we identified and reported the top five ESG material issues with the highest social and environmental impacts.

ESG Material Issues

01

Develop eco-friendly products and services

02

Practice health and safety management and prevent accidents

03

GHG reduction activities

04

Respond to climate change risks and opportunities

05

Monitor suppliers' ESG management status

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 Hyundai Oilbank, we focus on mitigating potential negative impacts associated with the material issues, while maximizing positive impacts.

Materiality Assessment Results

We identified the level and type of each impact on the environment and society of our business activities related to the five material issues.

+ Positive - Negative ●●● Upper ●●○ Middle ○○○ Lower

Material Issue	Issue Identification	Main Impact	Management Measure	Type	Level of impact	Page	GRI Topic Standards
Develop eco-friendly products and services 	Actively discover and promote eco-friendly businesses such as clean hydrogen, white bio, and eco-friendly materials to secure a sustainable business structure	Reduction in environmental impact such as lowering carbon/harmful substance emissions by developing and expanding new eco-friendly businesses	Promote and develop new businesses such as bio, hydrogen, and circular economy	+	●●●	26-33, 92	-
		Loss of the company's reputation due to greenwashing risks for eco-friendly products	Establish the company's eco-friendly product classification system, pre-inspection procedures before promoting eco-friendly products, and guide to prevent greenwashing	-	●●●		
Respond to climate change risks and opportunities 	Develop a climate change response system that aligns with our management strategies and complies with major domestic and international climate change regulations to minimize negative impacts	Optimization of energy use and reduction in carbon emissions by improving the environmental performance of plant operations, such as switching to eco-friendly fuels and utilizing technology	Promote energy efficiency projects for plants, consider transitioning to eco-friendly and low-carbon fuel, and install flare gas recovery facilities, etc.	+	●●●	22-25, 88-89, 110-111	·201-2 ·305-1~5
		Negative impact on investment decisions of financial institutions and institutional investors in case the company fails to comply with domestic and international climate change regulations and requirements.	Enhance GHG reduction performance management and respond to climate change-related initiatives	-	●●●		
GHG reduction activities 	Establish a GHG management system to monitor emission levels and carry out emission reduction activities, such as implementing GHG reduction technology	Minimization of the impact on the environment through GHG reduction activities	Reduce greenhouse gas emissions through CCUS business, eco-friendly plant operation, and energy efficiency improvements	+	●●●		
		Increased burden on customers due to a product price increase due to GHG emission costs	Reduce costs and increase productivity by adopting new technologies such as process improvement and digital transformation	-	●●●		
Practice health and safety management and prevent accidents 	Continuously improve systems and programs based on health and safety management to provide a safe and healthy workplace	Provision of a safe working environment for employees through prevention of industrial accidents and health disorders	Create a safety culture by advancing risk assessment and conducting activities to strengthen safety capabilities	+	●●●	46-56, 59, 69, 97-98	·403-1~10
		Labor losses due to workplace safety accidents	Prevent disasters by adopting safety performance indicators and establishing an advanced safety management system	-	●●●		
Monitor suppliers' ESG management status 	Conduct regular ESG evaluations for suppliers and continuously monitor their ESG management progress to build a sustainable supply chain	Improvement of sustainable management capabilities of suppliers through an assessment of suppliers' ESG practices and establishment of a low-carbon supply chain through sharing and monitoring of progress	Conduct ESG evaluations for suppliers, provide incentives based on results, and improve suppliers' capabilities if needed	+	●●●	64-65, 101	·414-1, 414-2
		Increase in instability of product supply and demand due to supply disruptions, in case of suppliers' violation of laws and regulations	Minimize supplier ESG risk by providing ESG consulting services to suppliers	-	●●○		

2022 Highlight

<p>Environment</p>	<p>Reinforcing Response to Climate Change ↗</p> <p>» Launched organizations dedicated to carbon strategy and promoting eco-friendly businesses Advanced GHG management system</p> 	<p>Enhancement of the Competitiveness of Eco-Friendly Products ↗</p> <p>Obtained ISCC PLUS Conducted life cycle assessments (LCA) for all polymer-based products</p> 	<p>Expansion of Eco-friendly Investments ↗</p> <p>Increased our environmental investments by 142% compared 2021 Eco-friendly R&D, bio-projects, improvement of environmental facilities</p> 
<p>Social</p>	<p>Establishment of Safety Compliance System ↗</p> <p>» Conducted company-wide health and safety audits biannually Ensured compliance and a distributed guidebook</p> 	<p>Advancement of Corporate Culture ↗</p> <p>Conducted Human Rights Impact Assessment Obtained family-friendly certification</p> 	<p>Social Contribution ↗</p> <p>Social contribution of KRW 5.82 billion in 2022 5,110 of employee volunteer hours in 2022</p> 
<p>Governance</p>	<p>Establishment of ESG Governance ↗</p> <p>» Launched an organization dedicated to promoting ESG management Established ESG strategies and promoted support to C-level ESG decision-making</p> 	<p>Operation of ESG Committee Under BOD ↗</p> <p>Made decisions on major issues related to climate change and social responsibility Recruited female directors and environmental experts</p> 	<p>Operation of a Compliance System ↗</p> <p>Conducted a compliance risk assessment across all departments Enforced ethics and compliance training for all employees</p> 

**Special Digital Transformation**

HD Hyundai Oilbank aims for four goals of digital transformation as our core management strategy: big data and artificial intelligence (AI), smart company, value chain optimization and smart plant. With these goals in mind, in 2022 we began the company-wide big data project EQR-180 in collaboration with Palantir Technologies to lead a new 180-degree change with big data-based innovation. We also established a cloud-based optimized decision-making system that allows us to utilize data assets in real time and foster an efficient work environment by bridging the information gap between organizations.

01 Big Data and AI

Big data-driven plant operation



We plan to actively utilize big data platforms in safe production operation and energy management in Daesan plant through EQR(Energy Quantum Revolution)180 project. This will not only allow us to efficiently manage plant data as a whole—which has been separated across multiple systems—but also improve the safety of petroleum product production by utilizing data analysis technology. We also expect to maximize our profits through enhancing the accuracy of installation qualification (IQ) and improving automated process control (APC). In addition, we are in the process of establishing a platform that will aid us in preventing accidents by predicting the possibility of facility failure in advance, developing a stable plant operation by optimizing the facility inspection cycles, and lower energy usage by analyzing the energy usage patterns of the plant.

03 Value Chain Optimization

Equipment data integration platform



We are currently building a equipment platform that can integrate existing fragmented equipment management systems. This platform will eliminate data inconsistencies by establishing a standardized and systematic equipment database, and allow us to manage maintenance history that was previously recorded by hand in individual documents. Soon, we plan to integrate all equipment-related processes into the platform and establish a data value chain for the entire life cycle of facilities from installation to maintenance and disposal. We will continue to pursue digitization in order to lead successful data-based plant operations and ultimately create sustainable business insights based on a data-based value chain.

02 Smart Company

Changing the way we work



We plan to establish a big data platform that promotes effective communication and increases work efficiency across our company. In this spirit, we are bridging the data gaps that existed between departments, promoting transparent communication, and fostering a paperless culture through a digital-based decision-making system. We are also enhancing employees' data analysis capabilities and digital literacy by conducting regular training sessions. By reducing unnecessary work and improving the quality of individual work through automation, we are taking a leap towards becoming a data-driven company.

04 Smart Plant

Streamline process operation



We aim to establish a digital twin process model across all plants, from crude distillation unit (CDU) to fluid catalytic cracking (FCC). By creating a model that mirrors the actual process, we anticipate an increase in productivity and profitability. We also plan to apply this model to the facility, safety, and environment fields, as well as Delayed Coking Unit (DCU) and Hydrocracker(HCR), and use the spiral assay for value chain optimization to enhance efficiency in crude oil input planning and product output forecasting.

FOCUS AREAS



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Area 1. Response to Climate Change

Governance | Strengthening the GHG Management Organization

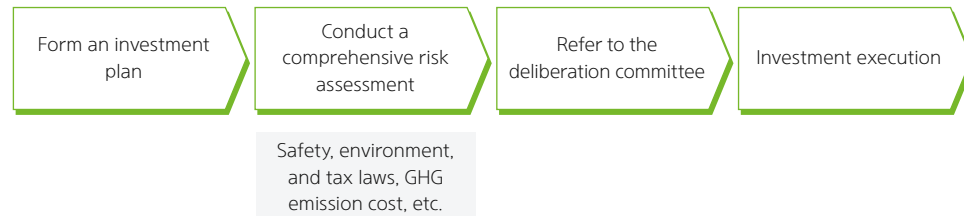
We operate an ESG Committee under the BOD to discuss major ESG issues and have launched a dedicated GHG management organization to enhance our expertise and execution ability to respond to climate change.



Risk Management | GHG Risk Management

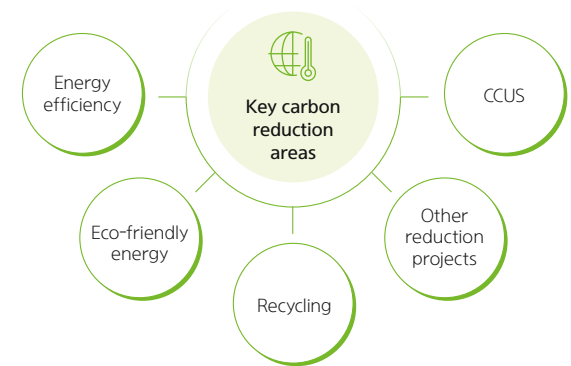
As worldwide regulations for GHG emissions become more strict, they are being recognized as a cost. When making investment decisions, we check compliance with ESG-related regulations to minimize risks associated with GHG emissions and take into account emission costs when assessing profitability.

Investment deliberation and execution process



Strategy | GHG Reduction Action Plan

We are actively pursuing GHG reduction projects, including improving energy efficiency and transitioning to eco-friendly energy sources in order to participate in the global movement toward carbon neutrality by 2050.



Metrics and Targets | Monitoring GHG indicators

Monitoring GHG emissions

We monitor and manage GHG emissions through daily emission monitoring for each unit process and past trend tracking with GHG monitoring system.



Executive performance evaluations

We have set GHG emissions-related indicators as KPIs for management and are making every effort to reduce our emissions.



Area 2. Expanding New Eco-friendly Businesses

As a company with high-level competitiveness in the oil refining industry, we aim to transform our existing refining and petrochemical business into a platform for eco-friendly energy, in line with the global shift towards addressing climate change and achieving carbon neutrality. As part of these efforts, we are expanding into new eco-friendly businesses such as clean hydrogen, white bio, and eco-friendly chemicals and materials, as well as resource and lubricant recycling, hydrogen energy, and electrical vehicle (EV) charging stations.

Bio Business

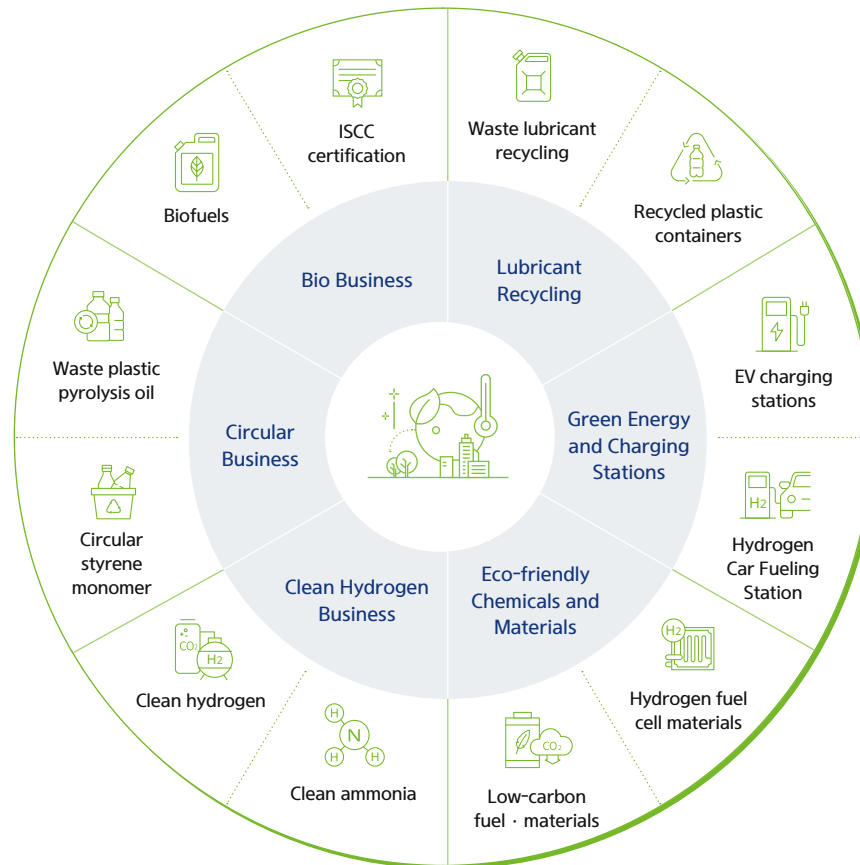
We are developing bio-marine oil and building a bio-plant capable of producing biodiesel to expand our bio-fuel business. We are also in the process of acquiring the ISCC EU/CORSIA certification, which is an internationally recognized eco-friendly certification for bio-naphtha, biodiesel, and sustainable aviation fuel.

Circular Business

In our efforts to combat climate change and promote a circular resource economy, we are converting waste plastic into pyrolysis oil and developing a technology package for circular styrene monomer production that will allow us to recycle waste polystyrene.

Clean Hydrogen Business

We have entered into strategic business agreements with top global companies to construct hydrogen supply infrastructure, engage in hydrogen fuel cell power generation utilizing clean hydrogen, and develop ammonia cracking catalysts for the purpose of clean hydrogen production.



Lubricant Recycling

We are currently developing purification technology that will allow us to recycle and reuse waste lubricants, and we have plans to incorporate recycled plastic into our branded lubricant containers.

Green Energy and Charging Stations

We are actively seeking out suitable business sites and working to improve regulations to develop a hydrogen supply network. As part of our efforts to promote eco-friendly energy infrastructure, we are also engaged in a sales brokerage business for micro-EVs. We plan to expand the number of EV charging stations to 40 by 2023.

Eco-friendly Chemicals and Materials

We are conducting research on hydrogen fuel cell electrolyte membrane materials and preparing to expand into the water electrolysis field in the future. We are also examining technologies for capturing carbon dioxide and converting it into low-carbon fuels or materials.

Area 3. Upgrading Safety Management System

HD Hyundai Oilbank is committed to becoming a “Safety Well-being Company”, and we made various efforts to achieve this goal in 2022. We conducted semi-annual health and safety audits, performed safety compliance diagnosis, published and distributed a compliance guidebook, and promoted an autonomous safety culture by incorporating the EHS Index into the KPIs and MBOs of executives and team leads.

Strengthening of Safety Leadership

In response to the Serious Accidents Punishment Act, we strengthened our governance and organizational structure. We also developed behavioral standards for safety at each step of the process as part of our safety leadership model, which aims to internalize safety capabilities.

Advancement	Health and Safety Goals	<ul style="list-style-type: none"> Ensured alignment of company-departmental health and safety goals and established personalized goals for each department Promoted coaching and business improvement activities to establish an autonomous safety system
	Risk Assessment	<ul style="list-style-type: none"> Reorganization and internalization of risk assessment(Linked to the Ministry of Employment and Labor’s Serious Accidents Reduction Roadmap)

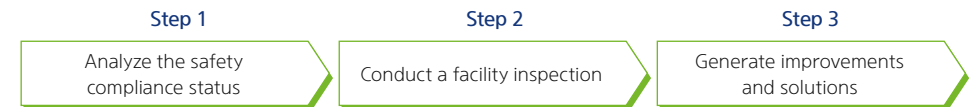
Development	Safety Leadership Coaching Program	Safety Leadership Guide	Safety Leadership Training Video
			
	<ul style="list-style-type: none"> Raised employee interest and participation in the training 		

Conducted safety performance management for top management level employees by including safety performance indicators in 30% of the executive KPIs and team lead MBOs.

Internalization	Evaluation Items		Evaluation Items	
		Details		Details
	Safety Accidents	Ensure no injury/fire/explosion/environmental accident	Improvement Progress	Take action on improvement suggestions
	External Inspection	Conduct inspections through external organizations	Compliance with Safety Rules	Comply with the 12 major safety rules
	Risk Assessment	Conduct risk assessments	Safety Culture	Participate in safety leadership and facilitating safety meetings

Minimizing Safety Risks

Safety Compliance Assessment and Consulting From August to December 2022, we have conducted a company-wide safety compliance assessment and consulting with external experts to proactively respond to the Serious Accidents Punishment Act and ensure the compliance with health and safety laws and regulations.



Company and Supplier Health and Safety Audit We conducted a health and safety audit for all business sites under the supervision of the Chief Safety Officer (CSO). The results of the audit were directly reported to him. Additionally, we selected 12 companies that perform high-risk work among the resident suppliers of Daesan plant and conducted legal consulting through safety and health audits by an external organization.

HD Hyundai Oilbank	Suppliers
<ul style="list-style-type: none"> Health and safety policies and goals, budgeting, etc. Health and safety organization and workforce status Health and safety statutory appointment status Work performance evaluation results Health and safety education achievements Implementation status of relevant laws (including improvement/corrective orders) Accident status Track record of improving safety and reducing hazard and risk factors Compliance status with health and safety Laws 	<ul style="list-style-type: none"> Health and safety manager Health and safety training completion status Near-miss case training status Job Safety Analysis history Material Safety Data Sheet (MSDS) publishing status Record of handling hazardous substances Personal Protective Equipment (PPE) Record Accident investigation and reporting procedures, etc.

ENVIRONMENT

Green Growth
with Eco-friendly Business



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Response to Climate Change

GOVERNANCE >>

Organizational Structure

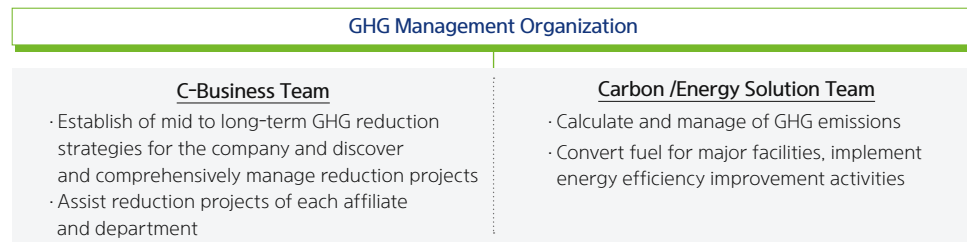
Climate Change Response System

As part of our commitment to combat climate change, HD Hyundai Oilbank has built a climate change response system by forming a dedicated GHG management organization and working group. We included the GHG and Energy Source Unit items, which indicate GHG emissions or energy consumption per volume of refined crude oil, in the organization's KPIs and created a system that allows us to periodically assess performance based on targets and measure results.

GHG Working Group We have identified four key areas to focus on for GHG reduction and divided the working group into each area. The members of the relevant departments regularly meet up to discuss progress and determine the next steps.



GHG Management Organization We have established a dedicated organization, which includes the C-Business Team and the Carbon/Energy Solution Team, to effectively respond to global climate change issues. The C-Business Team is under the Management Support Division, and their duties include establishing GHG reduction strategies for the company and its affiliates, discovering and comprehensively managing reduction projects, and assisting with reduction projects for each affiliate and department. The Carbon/Energy Solution Team is under the Safety Production Division, and their duties include calculating and managing GHG emissions, converting fuel for major facilities, and implementing energy efficiency improvement activities.

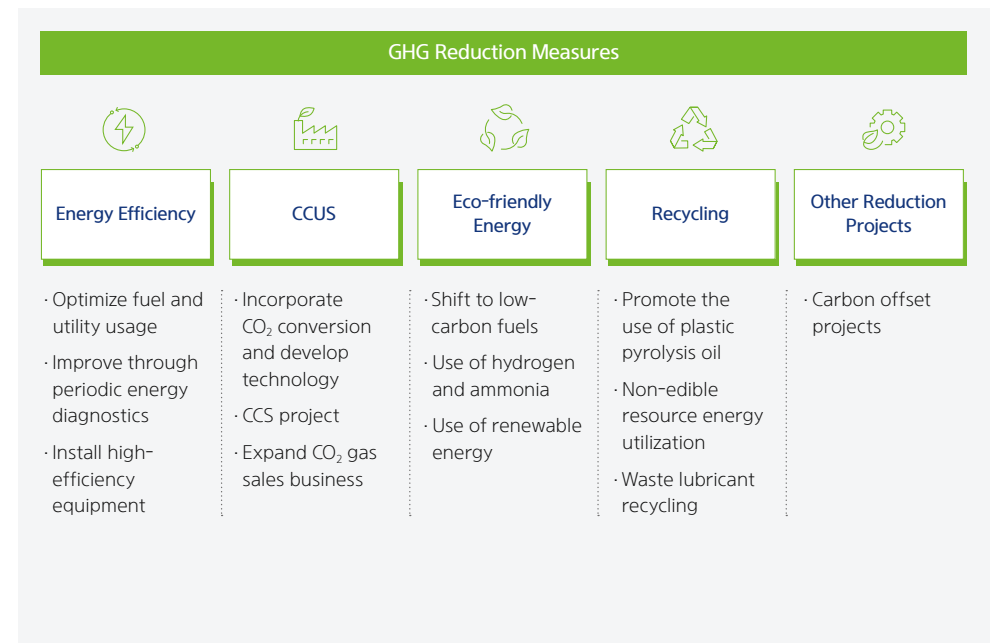


STRATEGY >>

GHG Reduction Plan

Climate Change Response Strategies

HD Hyundai Oilbank is establishing a mid to long-term GHG reduction roadmap to achieve carbon neutrality by 2050. We have selected energy efficiency, CCUS, renewable and eco-friendly energy, resource recycling, and other reduction projects as key areas, and we are developing standards to quantitatively evaluate the feasibility of specific reduction measures while taking into account the risk, feasibility, and profitability of each area. Based on the evaluation results, we plan to identify priorities, form an action plan, and follow the GHG reduction roadmap.



Response to Climate Change

STRATEGY >>

GHG Reduction Projects

Reducing Energy Consumption and Improving Efficiency

HD Hyundai Oilbank has set a goal to improve energy source units by 1% per year as part of the Korea Energy Efficiency Partnership 30 (KEEP 30) project, which aims to provide incentives to the 30 largest energy-consuming companies in Korea for making innovative efforts to improve energy efficiency from 2023 to 2027. Therefore, the company is making various efforts, such as analyzing energy usage patterns through energy study, identifying areas where energy can be saved, and making improvements.



Energy Efficiency Innovation Partnership Signing Ceremony

Plant Energy Optimization Studies We continuously identify and improve energy-saving opportunities by conducting plant energy optimization diagnostics to enhance energy efficiency.

In 2021, we formulated 25 energy efficiency improvement ideas through HOU Plant optimization studies, and we are gradually applying them to our processes. One of the ideas is investing in the MHC waste heat recovery heat exchanger, which we expect will save us fuel worth KRW 1.14 billion per year. In 2022, we conducted a study of #1 Plant and identified 23 energy efficiency improvement ideas. Currently, we are re-verifying the effectiveness of each idea.

Improving Process Efficiency We are taking steps to improve the efficiency of our process utilities to reduce GHG emissions. We plan to enhance the overall performance of the #2CDU process and separate the atmospheric distillation column by replacing the old plate heat exchanger and installing a new Air Fin Cooler. In addition, we will build a naphtha pump to eliminate bottlenecks in the #2CDU process.

Reducing Energy Consumption

HD Hyundai Oilbank is continuously planning and carrying out various energy-saving activities. In 2022, energy costs were reduced by about KRW 17.1 billion through energy-saving activities. The major activities included reducing petro-cokes by reusing excess process off-gas as fuel for boilers and saving fuel by optimizing the operating load distribution of heaters and heat exchangers. In 2023, we plan to install a flare gas recovery facility, which is expected to save energy and improve the air pollution. We are actively exploring the adoption of new technologies that can improve energy efficiency. For example, we are considering the use of high-efficiency fans made of lightweight materials and non-contact magnetic couplings that can reduce motor power consumption. We are also planning to upgrade our energy monitoring system to enable real-time diagnosis of energy use, and implementing an 'idea incentive program' to encourage all our team members to contribute to energy-saving efforts.

> HD Hyundai Cosmo Petrochemical

HD Hyundai Cosmo Petrochemical conducted the first assessment to improve #2BTX and PXP energy in 2022 and plans to complete the second assessment by December 2023.

> HD Hyundai OCI

HD Hyundai OCI aims to reduce GHG emissions and waste generation by improving the cooling process of the carcass reactor in May 2023. By changing the cooling water to process water and using it as boiler influent, the company expects to reduce the amount of low-pressure steam used to preheat boiler inlet water. This change will result in a reduction of GHG emissions by approximately 2,466 tCO₂ per year and prevent damage to raw material injectors, which will reduce waste generation.

Response to Climate Change

STRATEGY >>

GHG Reduction Projects

Eco-Friendly Plant Operation

Eco-Friendly LNG Power Plant In June 2021, HD Hyundai Oilbank established HD Hyundai E&F to build an eco-friendly power plant and obtained a collective energy business license. HD Hyundai E&F has allocated around KRW 430 billion towards constructing an eco-friendly power plant powered by LNG. The facility is scheduled to commence operation in March 2026 and is anticipated to reduce GHG emissions by up to 57% compared to the current fossil fuel-based power generation. To ensure a stable fuel supply for the plant, we have entered into a contract with Korea Gas Corporation for the purchase of 320,000 tons of LNG per year, which will be utilized until December 2034.

Solomon Study We have been participating in the Solomon Study to improve plant operation efficiency. Solomon, a global company that specializes in the evaluation of oil refineries and petrochemical plants, compares and evaluates the operating efficiency of more than 300 refineries around the world every two years based on their recent plant operation performance.

In the 2018, plant operation performance evaluation, we secured the 1st Quartile, which indicates to the first grade in the categories of crude oil barrel margin, energy cost, and manpower operation. The evaluation for 2022 is currently underway. Based on its results, we will clearly diagnose and improve our strengths and weaknesses, with the goal of becoming a global leading company in terms of energy efficiency.

Carbon Capture, Usage and Storage (CCUS)

We aim to continuously expand our business scope and strengthen our eco-friendly business portfolio and contribute to achieving a carbon-neutral society. With this in mind, we are currently considering the adoption of CCUS technology as a potential measure to reduce carbon emissions across our worksites.

We are exploring different ways of utilizing carbon, including developing mineral carbonation technology that produces precipitated calcium carbonate by reacting CO₂ with desulfurized gypsum, selling CO₂ among the by-product gases in our process, and reviewing technologies for carbon capture and transfer to over-seas storage facilities.



HD Hyundai E&F · Korea Gas Corporation LNG Signing ceremony Contract for sale and purchase

Response to Climate Change

STRATEGY >>

GHG Reduction Activities

Managing Environmental Impact of Our Products

Starting with automotive engine oils supplied to automakers for lubricant products in 2023, HD Hyundai Oilbank plans to conduct a life cycle assessment (LCA) for all XTeer-branded engine oils. LCA is a technique that quantitatively analyzes the environmental impact that occurs during the entire process of product production based on input and output data. It not only examines carbon emissions, but also evaluates the consumption of water and resources, establishing a comprehensive management system. By conducting the assessment, we will be able to disclose the environmental impact as demanded by our customers and the global market. HD Hyundai Oilbank will continue to use a systematic procedure to quantitatively analyze the environmental impact of our products, identify areas for enhancement, and communicate transparently with stakeholders.

Stakeholder Engagement Activities

Under the vision of “Green Growth, Green Value, Green Leadership”, we are promoting various eco-friendly activities in which employees can directly participate and feel motivated to pursue environmental management.

In 2022, we launched the Green Walk Together campaign to promote employee wellness and social responsibility. This donation initiative was designed to convert the number of steps taken by each employee and their family member into monetary donations for charitable causes. More than 600 employees and their family members have participated, and by achieving 120 million steps, we were able to donate KRW 100 million and reduce carbon emissions by approximately 15 tons.

In addition, we organized a participatory employee volunteer program to create a DIY Environmental Pop-up Book, which contains daily practices to protect the earth, such as resource recycling. 230 employees participated in the production of 1,136 books, which were then donated to underprivileged groups around the world. Through programs like these, we aim to encourage all our employees participate voluntarily and ultimately create a sustainable future together.

RISK MANAGEMENT >>

Managing Climate Change Risks and Opportunities

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 regularly manage our GHG emissions by regular monitoring and developing ways to secure additional emission allowances. We actively participate in the emissions trading to contribute to the ETS activation and secure additional emission allowances.

Despite the anticipation of a significant reduction in emissions allowances in response to the future tightening of the national GHG reduction target, we remain committed to reducing our GHG emissions by following the GHG emission reduction roadmap and promoting reduction projects.

> HD Hyundai Chemical

In anticipation of the mandatory disclosure of EU battery carbon footprints and the expected increase in demand for environmental information from our raw material manufacturers, HD Hyundai Chemical conducted a LCA for our polymer-based products, including PP, HDPE, LDPE, and EVA. Through this assessment, we were able to calculate GHG emissions of the key substances of each process stage. We plan to use these results to identify the emission status and establish future reduction plans.

Eco-friendly Businesses

GOVERNANCE >>

Organizational Structure

Strengthening the Eco-Friendly Organization

To further enhance our execution abilities and secure expertise for future growth businesses, HD Hyundai Oilbank has strengthened its eco-friendly organizations.

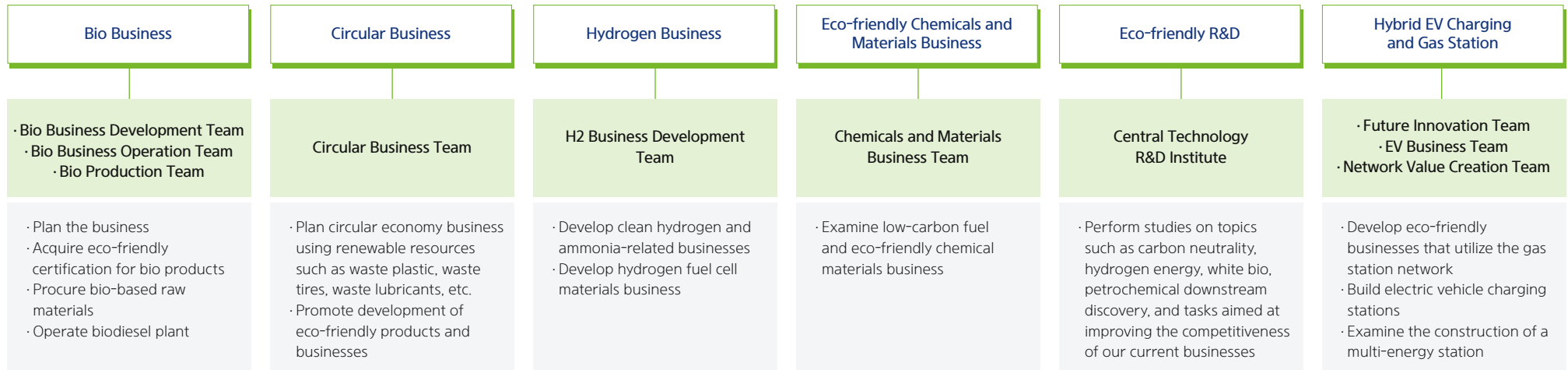
We have established management organizations for each new eco-friendly field, including biotechnology, hydrogen, circular economy, and eco-friendly chemical materials, and also converted our EV Business Development Task Force team into a permanent EV business team to support our expansion into the EV charging business.

To improve organizational efficiency and research performance management, the Central Technology R&D Institute has been reorganized into three research groups: Sustainability, Performance Materials, and Refinery Technology.

These reorganization efforts will strengthen our expertise in projects aimed at improving the eco-friendliness of our current business, expanding our R&D infrastructure and investment, and promoting eco-friendly research through the recruitment of highly-qualified researchers.

> Future Strategy and Task Workshop

We operate the Future Strategy Task Workshop to discuss practical strategies for future growth projects and R&D, as well as cooperation with relevant departments and decision-making. The CEO and heads of eco-friendly organizations attend every other month to discuss major issues related to future growth projects and to promote active cooperation between headquarters.



Eco-friendly Businesses

STRATEGY >>

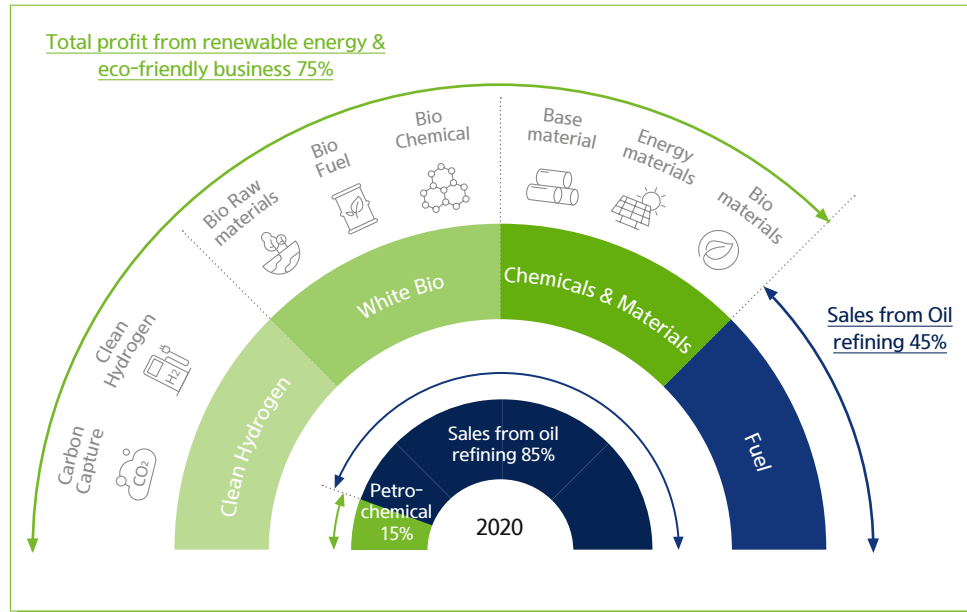
Eco-Friendly Business Overview




Vision 2030

To comply with the global carbon reduction policies and meet the expectations of consumers for eco-friendly business activities, HD Hyundai Oilbank is actively promoting new sustainable eco-friendly businesses in the oil refining and petrochemical industries.

Our goal is to move closer to our vision of "Green Growth, Green Value, Green Leadership" by increasing competitiveness through innovation in our current business to maximize eco-friendliness and identifying sustainable and profitable business opportunities for a stable mid to long-term portfolio.

By 2023, we aim to increase the share of profits from renewable energy and eco-friendly businesses to 70%.



<p>Clean Hydrogen</p> 	<ul style="list-style-type: none"> • Hydrogen fueling stations and fuel cell power generation • Construction of ammonia terminal 	<p>We plan to build an ammonia terminal, which will be used to procure clean ammonia from overseas, develop its supply business. In addition, clean hydrogen will be produced from the ammonia and supplied to hydrogen charging stations and hydrogen fuel cell power generation.</p>
<p>White Bio</p> 	<ul style="list-style-type: none"> • Enter 2nd generation white bio industry in 2023 • Establish a bio ecosystem of 1 million tons by 2030 	<p>The white bio business is an industry that produces various energy sources and chemical materials using various plant resources generated by photosynthesis 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.</p>
<p>Eco-friendly Chemicals and Materials</p> 	<ul style="list-style-type: none"> • Expansion of chemicals and materials 	<p>As our HPC plant begins operation, we are planning our eco-friendly chemical and material business with our affiliate HD Hyundai Chemical. We plan to expand our petrochemical downstream business with a focus on basic materials, energy materials, and materials for secondary batteries.</p>

Eco-friendly Businesses

STRATEGY >>

Bio Business

HD Hyundai Oilbank has established a three-step bio business roadmap 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 product, we are currently building a biodiesel plant and producing biofuel and biochemical products with bio-based raw materials.

Bio Business Roadmap



ISCC¹⁾ certification In 2022, we obtained ISCC PLUS certification for our bio business and we are now working towards obtaining ISCC EU and ISCC CORSIA certification.

1) International Sustainability and Carbon Certification

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 CORSIA	<ul style="list-style-type: none"> Sustainable aviation fuel certification program that certifies fuels that meet the requirements for CORSIA Eligible Fuels (CEF) as part of the International Aviation Carbon Offsetting and Reduction Scheme (CORSIA).

Biodiesel

In compliance with Korean renewable energy fuel blending laws, we have been blending biodiesel into diesel oil for domestic use at the mandated rate each year. Although the blending rate is set at 3.5% for 2023, we anticipate a gradual increase in the future. To proactively respond to this trend, we are currently building a biodiesel plant with an annual capacity of 130,000 tons at our Daesan plant, which is scheduled to operate in the latter half of 2023. In line with the global shift towards eco-friendliness, we are exploring the use of oil palm residue generated during cooking oil production in Indonesia and Malaysia, as well as waste-based raw materials approved by Europe, such as UCO. In addition, we have signed an MOU with Lotte Wellfood to ensure a stable supply of eco-friendly raw materials.

Sustainable Aviation Fuel

As part of our efforts to reduce carbon emissions in the aviation sector, we are taking steps to enter the sustainable aviation fuel business. A sustainable aviation fuel plant with an annual capacity of within 500,000 tons is scheduled to be completed after 2025, and the produced sustainable aviation fuel will be supplied to customers worldwide. We have signed an MOU with Korean Air to promote the growth of the domestic market and are continuing discussions to adopt sustainable aviation fuel. We are also preparing to acquire ISCC EU or ISCC CORSIA certification in 2023.

Marine Biofuel

We are developing marine biofuels as part of our efforts to join the global movement towards reducing carbon emissions in the shipping sector. Due to their high energy density, these biofuels can be mixed with regular marine fuel. As marine biofuels are expected to become the next-generation alternative fuel, we are preparing to enter this market by conducting technical tests, which includes checking the compatibility between biofuels and our ultra-low sulfur marine oil (VLSFO) and developing optimal recipes by setting the effective range.

Co-Processing

We plan to combine bio and fossil raw materials to produce eco-friendly biofuels with our existing oil refining facility. Incorporating bio-based raw materials into our production process will not only help us decrease our carbon footprint, but also enable us to comply with mandatory biofuel blending regulations worldwide. Our goal for 2023 is to thoroughly assess the effectiveness of our raw material processing techniques, obtain ISCC certification based on data obtained from pilot operations, and apply any applicable technologies to further enhance our production capabilities.

Eco-friendly Businesses

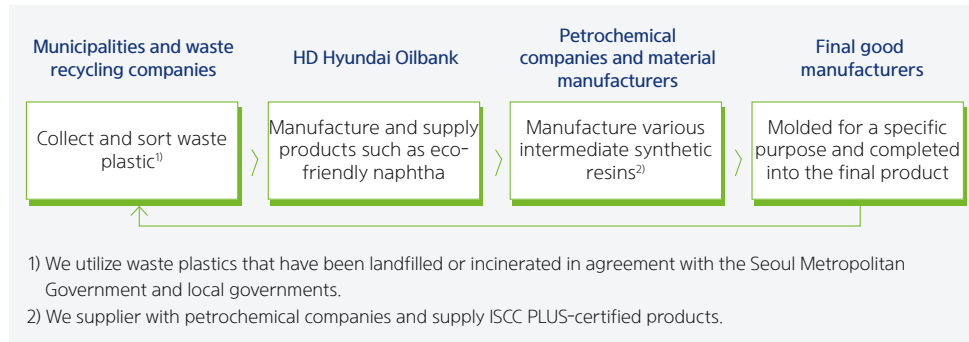
STRATEGY >>

Circular Business

Waste Plastic Pyrolysis Oil

We practice resource circulation by using pyrolysis oil produced through chemical recycling of waste plastics in our refinery. In January 2022, we became the first Korean refiner to obtain ISCC PLUS* for our waste plastic pyrolysis oil-based products. We are currently selling waste plastic pyrolysis oil-based naphtha to nearby petrochemical companies and global market. We are also establishing business partnerships with petrochemical companies worldwide and end product manufacturers to regenerate various resources including waste tires, Styrofoam, and waste lubricants. We plan to gradually increase the use of pyrolysis oil, expand the production of eco-friendly products, and manufacture our own pyrolysis oil to meet the increasing demand in the market.

***ISCC PLUS**: An EU eco-friendly certification granted to products produced and distributed through sustainable methods



Eco-Friendly Product Production Process



Business Roadmap

	2023	2025	2030
Total volume of pyrolysis oil	13 kt per year	100 kt per year	400 kt per year
Recycling Volume	13 kt	70 kt	200 kt
Production Volume	under review	30 kt (under review)	200 kt (under review)

Business Agreements and MOUs

HD Hyundai Oilbank has entered into an agreement with the Seoul Metropolitan Government to promote the use of waste plastic pyrolysis oil, in order to help with the recycling of waste plastics that are currently incinerated or sent to landfills. We purchase pyrolysis oil produced from waste vinyl and waste plastic provided by the Seoul Metropolitan Government, and use it to produce eco-friendly products. In addition, HD Hyundai Chemical has signed an MOU with Lotte Chemical and LG Household & Health Care to promote eco-friendly plastic businesses. The plan is to develop and manufacture eco-friendly plastic items using pyrolysis oil, utilizing the manufacturing technologies, research, marketing strategies, and tips of each company. Through the production of waste plastic pyrolysis oil products, we ultimately aim to build a circular economy for plastic and reduce carbon footprint.

Eco-friendly Businesses

STRATEGY >>

Resource Recycling Business

Waste Polystyrene Refining Technology

Manufacturing Circular SM Through Waste Polystyrene (PS) Depolymerization We are currently developing a technology package that uses waste PS as a raw material to produce polymerized oil, which is then purified into a high-purity monomer. To date, we have discovered optimal operating conditions that increase the yield and selectivity of styrene monomer (SM), resulting in performance that exceeds the standard value. Going forward, we plan to continue developing a competitive Circular SM production technology package.

Lubricant Recycling

Refined Waste Lubricant Oil We are conducting research on a chemical recycling process to refine waste engine oil and convert it into a usable product. As part of this research, we are developing minimum quality standards required for the lube base oil that has undergone a refining process to be used as a raw material for lubricants, and testing the friction and fuel efficiency performance on actual vehicle engines using our own engine test facilities. In addition, we are jointly developing with suppliers with excellent refining technology with the goal of launching refined lube base oil products.

Lubricant Container We have developed a container for our own lubricant brand XTeer using eco-friendly materials. We differentiated our product by making it odorless, non-toxic, and effective. These new containers are scheduled to be used for all XTeer lubricants sold worldwide.

> HD Hyundai OCI

Recycling of Non-Standard Carbon Black Product

Non-standard products refer to products that cannot be sold as official products as they contain a trivial amount of impurities. While they are typically treated as waste, a significantly higher proportion of non-standard products can be refined compared to standard products.

HD Hyundai OCI has installed a contaminant removal system through on-site consulting from the Korea Environment Corporation and sells cleaned non-standard carbon black products to waste recycling companies so that they can be used as general products.

A company with a sales record of at least six months with waste recycling companies can receive a circular resource certification for non-standard products, and HD Hyundai OCI is planning to obtain it by early 2023. Once obtained, the company will be able to reduce approximately 190 tons of waste per year through the recycling of non-standard carbon black products.

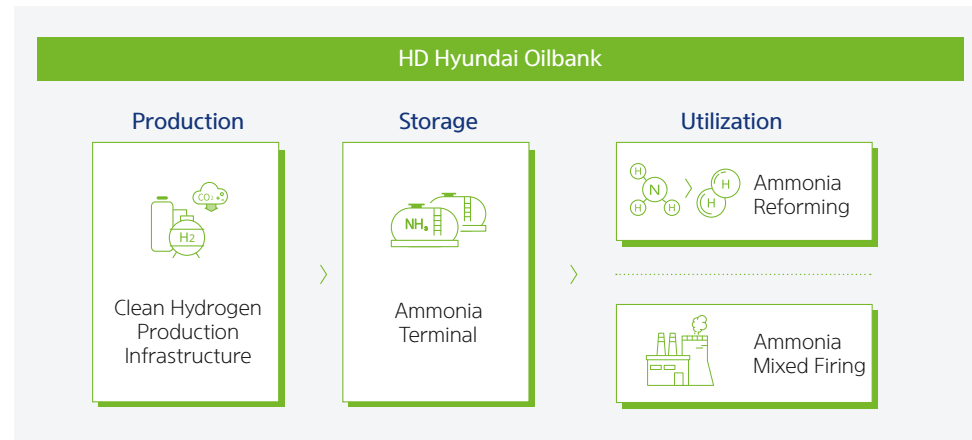
Eco-friendly Businesses

STRATEGY >>

Hydrogen Business

Clean Hydrogen Business

The importance of clean hydrogen as a new energy source is increasingly recognized in light of global issues such as climate change and energy supply. 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

In April 2021, HD Hyundai Oilbank signed a MOU with Air Products, one of the top three global industrial gas companies with expertise in the field of hydrogen infrastructure construction, including the production, storage, and transfer of hydrogen. We are currently in discussions regarding business collaborations aimed at introducing clean ammonia into the country, which includes ammonia terminals and ammonia-based hydrogen production. We are also collaborating with Aramco, a company with whom we signed a MOU in March 2021, on joint projects related to the discovery of clean ammonia and clean hydrogen and on joint R&D efforts.

Entering the Hydrogen Power Generation Market

We are currently developing a 20MW hydrogen fuel cell power generation project at the Daesan complex as part of our efforts to comply with Clean Hydrogen Portfolio Standards (CHPS). Our plan is to produce clean hydrogen by capturing and utilizing the carbon produced during hydrogen production, and then use it as a fuel.

Producing Hydrogen Fuel

At HD Hyundai Oilbank, our goal is to become a leader in the hydrogen supply system. To achieve this goal, we have established a hydrogen shipping center located in our Daesan plant, which produces ultra-high purity hydrogen for fuel cells. Our hydrogen can be compressed up to 200 bar using a compressor to charge the tube trailer for transport. This enables us to supply approximately 800 tons of hydrogen per year to hydrogen vehicle fueling stations, which is enough to charge about 400 hydrogen vehicles. We plan to adjust our sales volume according to the trend of hydrogen vehicle supply in Korea.

Hydrogen Transportation and Storage

As the world becomes more interested in building sustainable and decarbonized ecosystems, the use of hydrogen energy is receiving increasing attention as a key measure. However, due to the limitations of transporting and storing hydrogen, countries including Korea and Japan are considering importing and storing hydrogen in the form of ammonia—as they can be converted back to hydrogen through a decomposition process using a catalyst. To contribute to building a hydrogen society, we aim to address this issue by developing a core technology for an ammonia decomposition catalyst.

Eco-friendly Businesses

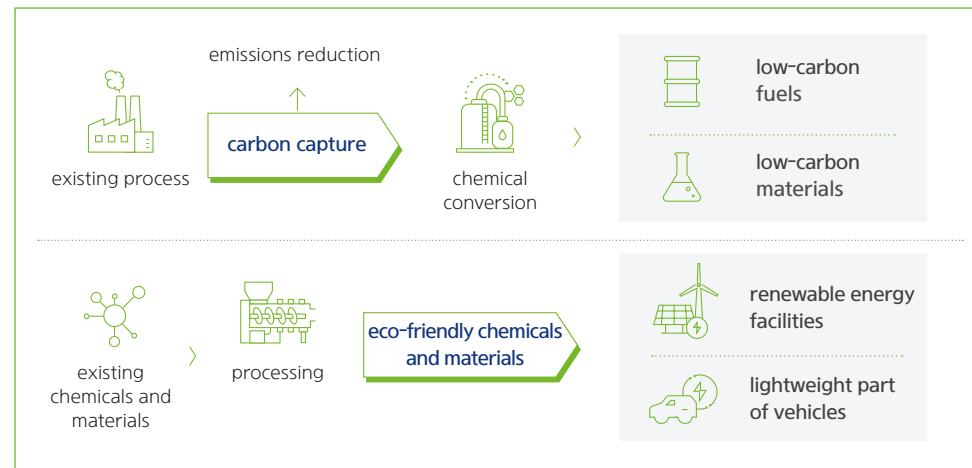
STRATEGY >>

Eco-Friendly Chemicals and Materials

Low-Carbon Fuels and Materials

In the global energy and materials market, achieving carbon neutrality has become a critical value and a new paradigm for ensuring the sustainability of businesses. We, too, are making company-wide efforts to achieve our GHG reduction targets and contribute to combating climate change by capturing and utilizing carbon dioxide as a raw material in the chemicals and materials field. We are currently exploring technologies to capture carbon dioxide at our worksites and convert it into low-carbon fuels and materials, with the goal of building an eco-friendly business model that will create the greatest synergy with our core business.

In addition to this, we are also exploring ways to contribute to the reduction of fossil fuel usage in society as a whole. We plan to do this by expanding our business expertise to renewable energy and lightweight materials for vehicles.



Hydrogen Fuel Cell Materials

The global shift towards carbon neutrality has increased the demand for green hydrogen significantly. The role of the electrolyte membrane is crucial in ensuring sufficient production, profitability, and system safety of green hydrogen produced through the water electrolysis system. To this end, we are developing high-performance and high-durability electrolyte membranes, and promoting the business of polymer electrolyte membrane/proton exchange membrane (PEM) and its core material, expanded polytetrafluoroethylene (e-PTFE).

In 2021, we built a commercial production line with an annual area of 3 million m² using expanded polytetrafluoroethylene technology. Starting in 2022, we began research and development of a fluorine polymer electrolyte membrane, with the aim to commercialize PEM water electrolysis. We are committed to providing solutions for achieving global carbon neutrality by contributing to both the vertical and horizontal expansion of the green hydrogen value chain through developing excellent materials and promoting the development of next-generation products.

> HD Hyundai Chemical

Photovoltaic Module Material

With the global trend toward decarbonization, the demand for photovoltaic modules is continuing to increase. In recognition of this, our subsidiary, HD Hyundai Chemical, has started producing ethylene-vinyl acetate (EVA) as a material for photovoltaic modules through the polyethylene (PE) production process.

EVA is a key material for photovoltaic modules due to its excellent adhesion and light permeability, and it is more profitable compared to other polymer products. With the operation of the HPC plant completed in 2022, the company 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 >>

Green Energy and Charging Stations

Building Green Energy Infrastructure

EV Charging Station We are currently preparing to launch our EV charging station business in November 2023. Our plan is to install 40 EV charging stations at gas stations and build a hybrid station network in the metropolitan area where EV charging infrastructure is relatively scarce. By establishing an ultra-fast 200 kW charging network, we will provide customers with differentiated services and reinforce our eco-friendly business by enhancing the value of gas stations as energy stations.

To support our EV charging station business, our affiliate HD Hyundai Electric is developing ultra-fast EV charging stations through its subsidiary Hyundai Plaspo. The company aims to enter the EV charger manufacturing business based on our EV charging station business and create synergy within the Hyundai group.

Multi-Energy Station Starting with the opening of the first multi-energy station in Ulsan Yeonam, we are committed to securing new sites and developing businesses to expand the multi-energy station network in compliance with government policies.

Camping Car Dump Station With the increasing popularity of camping culture, the number of camping car users is on the rise, but there is a lack of necessary infrastructure to support them. Typically, the wastewater generated in camping cars is dumped into public toilets, forests, or lands, leading to serious environmental problems. To tackle this issue, we have launched a camping car dump station at our Gangneung Samteo gas station, with the goal of expanding this business to create an eco-friendly platform and improve our ESG management.

Micro Electric Car Exhibition, Sales, and Brokerage We operate a sales and brokerage business where we display CEVO micro electric cars in our directly-managed gas stations. In response to the increasing demand and supply of eco-friendly vehicles, we have decided to sell electric vehicles at our gas stations, which were previously associated only with gas vehicles. We plan to continue expanding our business by incorporating more eco-friendly vehicles.



Camping Car Dump Station
Micro Electric Car Exhibition,
Sales, and Brokerage

Environmental Pollutant Management

GOVERNANCE >>

Organizational Structure

Environmental Working Group

At HD Hyundai Oilbank, we operate an environmental working group where the dedicated environmental teams of each affiliate meet every quarter to share major environmental issues, discuss plant pollutant management measures, environmental investments, and environmental policies.

Environmental Working Group
<ul style="list-style-type: none"> · Composed of environmental managers of each company · Facilitate quarterly meetings · Share information on environmental issues, discuss joint measures to respond to environmental policies and issues, and seek efficient investment through cooperation

Environmental Management Organization

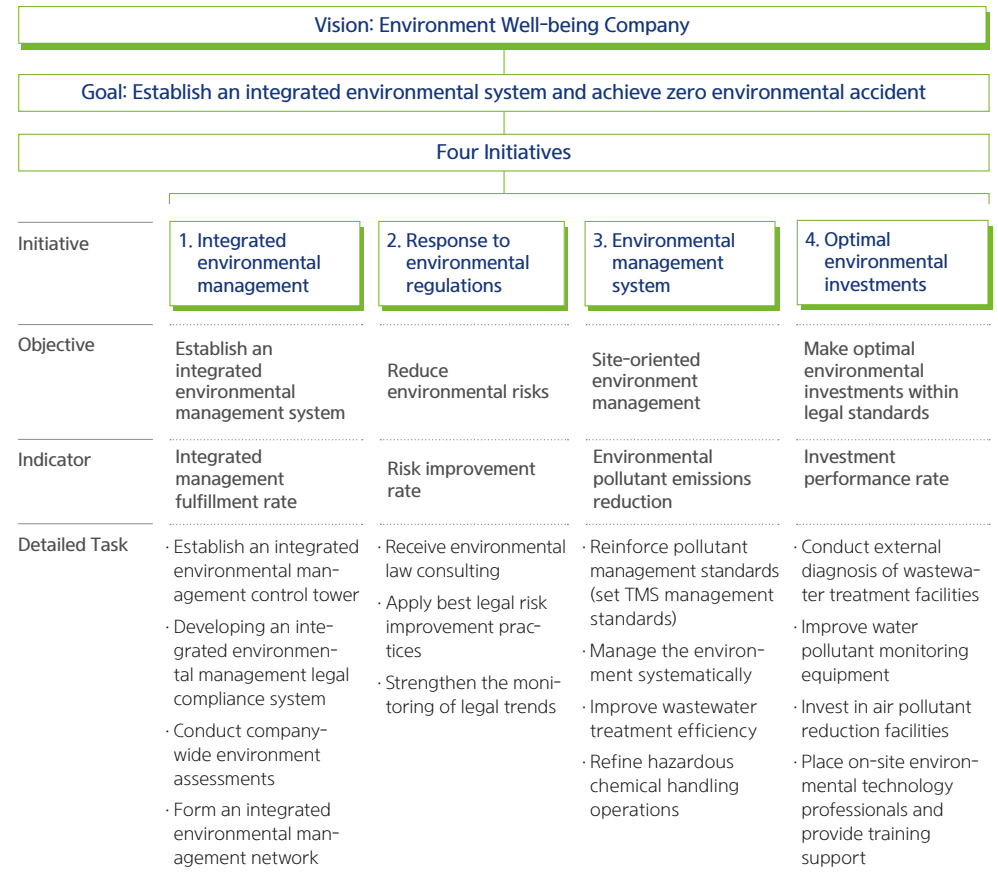
To strengthen our company's environmental management, we have restructured our existing environmental teams into divisions, which are subdivided into three teams based on their work characteristics: planning, management, and technical teams. The Environment Division will establish standardized environmental management practices and conduct environmental law-related risk audits, serving as the environmental control tower for the company.



STRATEGY >>

Environmental Management System

Environment-Focused Implementation Strategy



Environmental Pollutant Management

STRATEGY >>

Environmental Management System

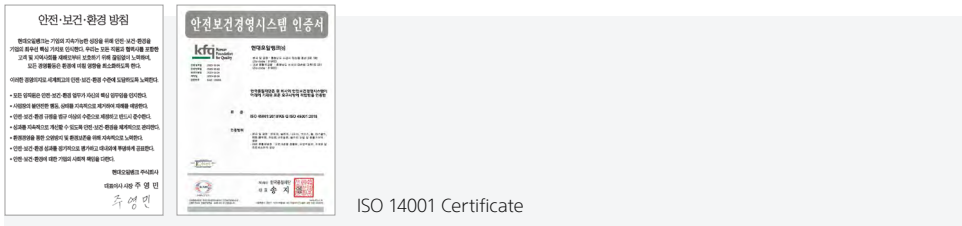
Environmental Policy

At HD Hyundai Oilbank, we prioritize environmental management as a core value for sustainable growth in our company. With this in mind, we have established an environmental policy with the aim to achieve the highest environmental standards in the world.

[Read the full policy](#)

Environmental Management System Certification

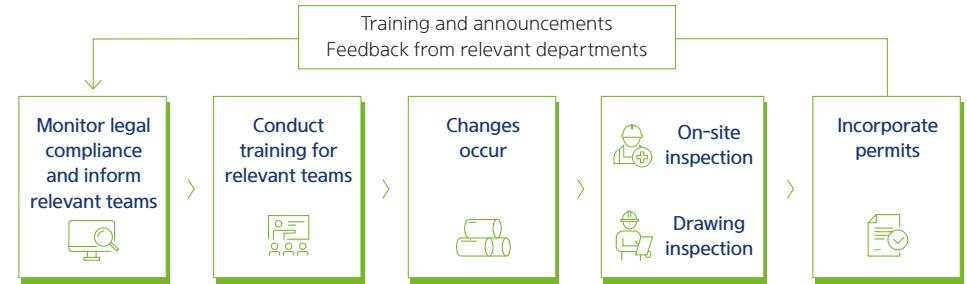
To minimize the environmental pollution caused by our production activities, we have acquired ISO 14001 certification from the International Organization for Standardization (ISO) and are operating our environmental management systems in accordance with international standards.



Integrated Environment Management System

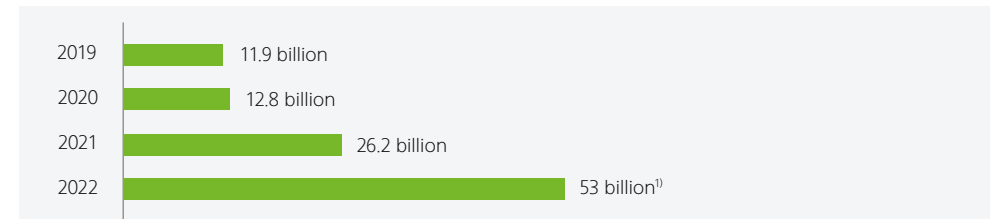
To efficiently manage pollutants generated at our worksites, we obtained the Integrated Environmental Permit in December 2022. This permit enabled us to establish an environmental management system that comprehensively considers the impact of pollutants on the environment and health, and allowed us to minimize pollutant emissions through optimal investments in environmental facilities.

Integrated Environmental Permit Compliance System We are planning to establish a system that allows us and our affiliates to jointly invest in environmental facilities to comply with relevant laws and effectively reduce pollutants, which involves introducing an integrated environmental management system that automates the post-management of permits and monitors any changes to licenses. In addition, we have developed a legal compliance system that includes training and work processes to ensure compliance with the integrated environmental laws.



Daesan Plant Environment Facility Investment

We have continued to invest in air prevention facilities, wastewater treatment plants, and pollutant monitoring systems to improve the environment and prevent pollutant emissions. These investments were made through the Daesan Industrial Complex Safety and Environment Investment Agreement, and a total of KRW 103.9 billion was allocated to environmental facilities from 2019 to 2022.



1) HD Hyundai Oilbank Execution of KRW 53 billion out of KRW 116.6 billion in total environmental investment in 2022 as environmental facility investment

Environmental Awareness Training

To instill the environmental management mindset and improve the pollution handling skills of our employees, we provide monthly training sessions to engineers and plant professionals on environmental management basics, environmental systems, and hands-on training.

Environmental Pollutant Management

STRATEGY >>

Air Pollutants

Fixed Volume-Based Management

We take a proactive approach to managing our emissions by setting a fixed volume limit, rather than relying on post-management of emissions concentration levels. Each year, we establish emission plans for sulfur oxides, nitrogen oxides, and dust, and aim to reduce pollutants through eco-friendly investments and reinforcing our management standards.

Telemonitoring System (TMS) Management Strategy Starting from 2023, the air pollution emission standards have been strengthened due to the application of the integrated environmental license. At our company, we aim to respond to this by establishing internal standards that exceed the legal requirements. We have set our internal standards and emergency standards to 70% and 80% of the legal standards, respectively. In case the emission levels exceed our internal standards, we will take immediate actions such as adjusting the amount of chemical input and operating load to reduce emissions.

Voluntary Agreement for Fine Dust Management

As part of our efforts to reduce fine dust, we have signed a Voluntary Agreement for Fine Dust Management to minimize pollutant emissions by operating the maximum number of prevention facility in January, February, March, and December—the period when the fine dust level is especially high. We also operate two water sprinkler trucks to directly control on-site fugitive dust emissions.

Air Pollutant Reduction Activities

Plants As part of our reduction efforts, we installed air pollutant reduction facilities at our plants, including VCUs that convert VOCs into harmless gases. In 2022, we installed these facilities for the tanks at HD Hyundai Oilbank and HD Hyundai Cosmo Petrochemical.

Pollutant	Abatement Facility
SOx	Flue Gas Desulfurizer and Absorption Tower
NOx	Selective Catalytic Reduction, Selective Non-catalytic Reduction, and Ultra-low NOx Burner
Dust	Electrostatic Precipitator and Bag Filter
VOCs	Vapor Recovery Unit, Regenerative Thermal Oxidizer, and Vapor Combustion Unit

Distribution Centers and Gas Stations We strive to preserve the air environment by reducing nitrogen oxide (NOx) and volatile organic compound emissions at our distribution centers and gas stations. We have installed vapor recovery units (VRUs) and replaced old diesel boilers with low-NOx kerosene boilers at our distribution centers, and have also installed VRUs at tank lorries and gas pumps for highly volatile unleaded gasoline (UG). In our ongoing efforts to reduce organic compound emissions, we plan to improve our facilities by duplicating sealing equipment and adding additional gaskets to the internal floating roof tank (IFRT).

> Flare Gas Recovery Unit

At HD Hyundai Oilbank, one of our environmental projects involves reusing combustible gas generated in our business process as an energy source to reduce fast burning in the flare stack. The Flare Gas Recovery Unit (FGRU) is a facility that separates a portion of the combustible gas before it enters the flare stack and compresses and removes impurities and hydrogen sulfide to produce fuel gas that can be used in the refinery process. By installing FGRU, we have been able to recycle combustible gases, recover energy, and reduce flare stack emissions, ultimately contributing to the economy and environment in various aspects such as reducing our carbon footprint and preventing plant odors.



Operation of road sweeper
Fine dust emergency reduction
measures electronic display board

Environmental Pollutant Management

STRATEGY >>

Waste

Waste Disposal Management

We have conducted waste management training for on-site departments and suppliers and reinforced waste separation and storage activities by assigning waste management personnel on-site.

Waste Storage We operate a waste storage facility in compliance with legal waste storage standards, including measures to prevent leachate leaks. The facility is equipped with smoke detectors and CCTV cameras to monitor for potential fires and external leaks.

Waste Disposal We constantly conduct due diligence for waste treatment companies after signing a contract to ensure environmental compliance and utilize Allbaro system to monitor whether they are treating waste properly.

Waste Recycling We are continuously striving to enhance our waste recycling initiatives and uphold our commitment to responsible waste management. In order to ensure that our waste disposal suppliers meet the highest standards, we regularly monitor their waste disposal practices to confirm that waste is being properly disposed of.

Water Resources

Water Use Management

Water Recycling We adopt a sustainable approach to water usage by recycling blowdown water from cooling towers and boilers, as well as utilizing acidic water for cleaning purposes. We are continuously exploring new methods to recycle water and reduce our environmental footprint.

Water Use Monitoring We constantly monitor our water consumption across all our worksites and optimize the production volume of our water treatment plants based on our actual water usage.

Wastewater Quality Management

To comply with the discharge allowance standards outlined by the Water Environment Conservation Act, we have installed efficient prevention facilities and continuously implement measures to reduce water pollutants. As a result, we are able to maintain effluent pollution levels lower than the legally required standard. In addition, we have installed real-time analyzers in wastewater inlet pipes to manage discharge within control standards when injecting chemicals or adjusting operating parameters. Going forward, we plan to proactively respond to tightened wastewater management standards by installing TOC analyzers in the wastewater treatment plant and efficiently monitoring and managing wastewater for each facility.

Improving Wastewater Treatment Capacity

Wastewater Treatment Plant Diagnosis We plan to hire professional wastewater treatment diagnosis companies to diagnose our wastewater treatment plants in order to improve our treatment facilities and chemical systems. Based on the results, we will formulate effective wastewater treatment solutions, optimize wastewater treatment plant operations, and explore options for automated facilities.

Improving Wastewater Treatment Plant Efficiency We plan to improve the efficiency of our wastewater treatment plant by improving the corrugated plate interceptor (CPI). Furthermore, we are exploring the adoption of a centrifugal dehydrator which has a lower failure rate and does not generate additional wastewater due to cleaning liquid consumption, for the purpose of removing hydration of sludge generated during wastewater treatment.

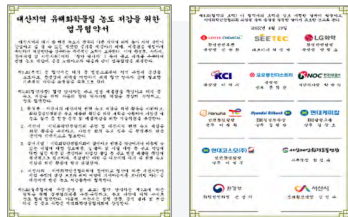
Environmental Pollutant Management

STRATEGY >>

Hazardous Chemicals

Hazardous Chemical Discharge Management

Reduction of Hazardous Chemical Substances Agreement In 2021, HD Hyundai Oilbank entered into a business agreement with the Ministry of Environment, Seosan City, and civil society to safeguard the health of local residents and prevent environmental damage by lowering the benzene level in the air in Daesan. In 2022, we established the Regional Chemical Safety Council with a comprehensive governance structure that involves the public, government, and industry stakeholders. We also devised an implementation plan to monitor benzene levels in the Daesan Industrial Complex through discussions.



Daesan Hazardous Chemical Substance Business Agreement

Chemical Substance Training We conduct chemical substance training for all employees at Daesan plant to raise awareness and enhance professionalism in handling chemicals.

Chemical Safety Community Chemical Safety Community is a program hosted by Geumgang Basin Environmental Office, aimed to cooperate and support between well-equipped big companies and small to medium-sized companies to jointly respond to chemical accidents that occur within the area.

We formed chemical safety communities for nine worksites in the Seosan 2 region in 2015, which are actively working to prevent local chemical accidents through quarterly activities.

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.

Fire/Explosion	Leakage	Emergency Patients
<ul style="list-style-type: none"> · Immediately put on PPE · Attempt to extinguish the fire using a fire extinguisher 	<ul style="list-style-type: none"> · Put on PPE and block the leak point 	<ul style="list-style-type: none"> · Call emergency services
<ul style="list-style-type: none"> · Notify the control room · Request fire department chemical task force for support 	<ul style="list-style-type: none"> · Continue wearing PPE until the emergency task team arrives · Prevent external leakage 	<ul style="list-style-type: none"> · Transport the patient via ambulance accompanied by nurse
<ul style="list-style-type: none"> · Contact emergency response agencies · Send out evacuation alerts to nearby residents 	<ul style="list-style-type: none"> · Contact emergency response agencies · Send out evacuation alerts to nearby residents · Transport patients to hospitals 	<ul style="list-style-type: none"> · Transport to nearby medical facilities (Daesan Orthopedics, Seosan Medical Center, Seosan Jungang General Hospital, etc.)

Chemical Accident Joint Drill We have developed an internal chemical accident prevention plan and conduct joint drills to prepare for hazardous chemical leaks. Every year, we organize joint drills with our affiliates, including HD Hyundai Chemical, HD Hyundai Cosmo Petrochemical, HD Hyundai and Shell Base Oil, as well as the National Institute of Chemical Safety and Seosan Chemical Disaster Prevention Center, to ensure that our employees are trained to respond immediately in case of emergencies.



Chemical Accident Drill

Eco Champion Program Our on-site departments have implemented the Eco Champion program, which aims to reduce hazardous air pollutants (HAPs) through various activities. These activities include using gas leak detection cameras to identify leak points and mitigating risk factors to prevent environmental accidents. We actively encourage all of our employees to participate in on-site safety by using tools such as OGI cameras and thermal imagers, as well as performing H2S mitigation activities. At the end of the year, we record their performances and reward the department with the highest number of points.

Environmental Pollutant Management

STRATEGY >>

Soil Environment

Soil Contamination

Soil Contamination Testing In accordance with the Soil Environment Conservation Act, we conduct soil pollution testing every other year at our direct worksites across Korea. The testing is performed by registered soil pollution testing organizations under the Ministry of Environment. In case of any soil contamination, we promptly report it to the local government and initiate remediation activities through a soil remediation company that is also registered with the Ministry of Environment, as outlined in the law.



Soil Contamination Testing

Voluntary Inspection We have signed a voluntary agreement with the Ministry of Environment and actively carry out voluntary inspections to preserve the soil environment. As an example, we conducted a thorough inspection that exceeded the legal requirements and performed remediation work after acquiring SK Networks gas stations.

Soil Pollution Prevention

Pipe Leak Inspection While the Soil Environment Conservation Act requires leak inspections every 8 years, HD Hyundai Oilbank conducts our own pipe inspections annually for gas stations that have been in operation for over 10 years to prevent pipe leakage, which is the biggest cause of soil pollution. If a pipe leak is discovered, we immediately report it to the local government and carry out remediation processes at the initial stage before the pollution spreads, to minimize the damage and prevent soil pollution.

Leakage Detection To minimize pipe leakage, we have developed our own Hyundai Homes System and installed them at our directly-managed gas stations. Hyundai Homes System is a real-time detecting sensor developed with patented eco-friendly technology that can be attached to connected pipes for each gas pump. If leakage is detected, it alerts the gas station, shuts down the specific gas pump, and promptly replaces the leaked pipe to prevent any further damage. We will continue to minimize soil pollution by advancing this patented technology.

Marine Environment

Marine Pollution Prevention

HD Hyundai Oilbank is deeply committed in protecting the marine environment. We carry out various measures such as proactively assessing risks through continuous monitoring, and enhancing our facilities and accident response systems.

- 1 Appoint marine pollution prevention managers for each marine facility and work shift to prevent accidents during the night
- 2 Implement safety management by boarding a professional ship safety management company composed of experienced marine pilots on berthed ships
- 3 Prevent pollution by hiring an oil spill response company to patrol the pier on a rotating basis
- 4 Conduct joint drills to improve the ability to respond quickly and accurately, in case of a marine pollution accident (more than twice a year)
- 5 Install CCTV cameras at each berth and key points
- 6 Sign an agreement on cooperation on marine oil pollution with Taean Coast Guard, Hanwha Total Energies Petrochemical, and Korea National Oil Corporation
- 7 Participate in joint marine pollution working council activities that involve 21 local coast guards, local governments, and businesses
- 8 Implement accident prevention activities from December 1st to February 28th to address the higher risk of marine accidents that often occur during the winter season

Marine pollution joint drills
Joint marine pollution working council

Environmental Pollutant Management

RISK MANAGEMENT >>

Environmental Impact Assessment

Worksite Environmental Impact Assessment

We conduct an environmental impact assessment before carrying out a project to proactively respond to environmental issues that may arise due to the implementation of the project and to minimize the environmental impact on the local community. Through preliminary environmental impact assessment, we identify any negative factors each project may have on the environment, examine possible issues that may occur, and establish and implement measures to address them. Even after the project ends, we continue to monitor environmental impact and conduct a post-environmental impact assessment.

Environmental Impact Assessment Process



Environmental Compliance

Environmental Compliance

Self Assessment We conduct quarterly environmental compliance assessments using a checklist for all departments subject to environmental laws and regulations.

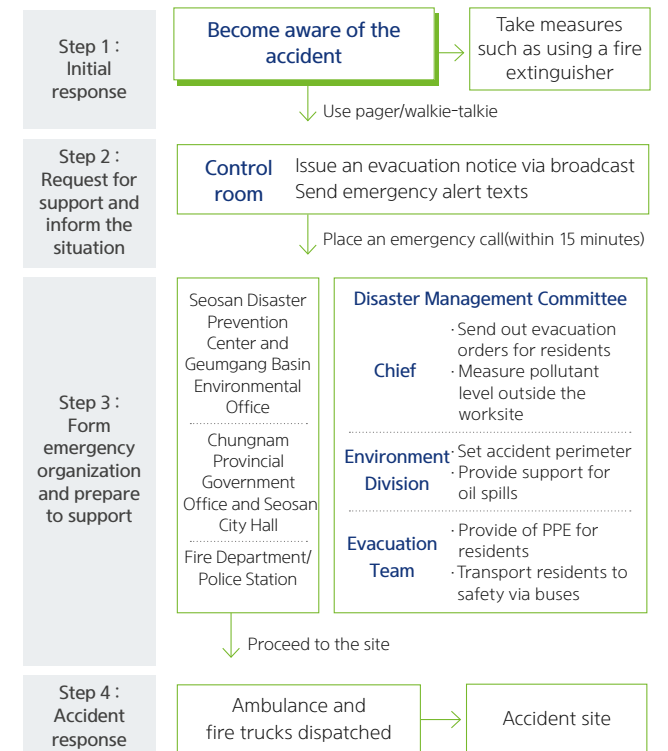
Environmental Audit and Cross-check We conduct regular environmental audits to proactively identify potential legal risks and conduct quarterly environmental cross-checks between HD Hyundai Oilbank and its affiliates to eliminate any identified environmental risk factors across all companies.

Environmental Law Consulting To mitigate legal risks, we engage external environmental law experts to verify our permit status and compliance with legal standards for on-site environmental facilities. We also plan to leverage environmental law consulting services to identify and improve potential risk factors and proactively address environmental concerns. This includes creating self-assessment manuals and regularly scheduled consulting sessions to ensure ongoing compliance.

Environmental Emergency Response

Emergency Response Procedure for Environmental Accidents

We have an emergency response system that utilizes the town broadcasting system, alert text messages, and pollutant measurement vehicles and allows us to effectively identify the extent of environmental impact outside the worksite and evacuate residents.





Environmental Pollutant Management

METRICS AND TARGETS >>

Environmental Management Goals and Performance

2022 Performance

Response to Environmental Regulations

- Received a treatment analysis consulting on wastewater treatment plant in June
- Acquired the Integrated Environmental Permit in December
- Created environmental compliance management guidebook
- Strengthened air and water quality TMS management standards

Environmental Pollutant Management

- Conducted a joint hazardous chemical substance control drill in November
- Implemented a joint government marine pollution accident prevention training
- Strengthened the air and water quality monitoring system
- Organized daily on-site patrols
- Operated wastewater management with a strengthened indicator (COD→TOC)

Optimal Environmental Investments

- Improved the heating facility and boiler deNOx systems
 - Installed ULNB, SCR, and SNCR
- Strengthened HAPs emission facility management
 - Installed Flare Stack OGI camera
 - Invested in reducing HAPs emissions of IFRT
- Upgraded the wastewater treatment plant

2023 Plan

Integrated Environmental Management

- Establish an integrated environmental management control tower for all affiliates
- Develop an integrated licensing compliance system
- Conduct an environmental risk diagnosis
- Establish a company-wide environment management network

Environmental Management System

- Develop and enforce on-site management standards
- Improve safety measures for chemical handling operations
- Upgrade the HAPs emissions management system to the latest technology
- Conduct a chemical accident prevention consulting
- Strengthen law monitoring

Optimal Environmental Investments

- Invest and conduct a consulting on improving wastewater treatment efficiency
- Invest in reducing air pollutant generation
 - Install an additional boiler FGD
 - Improve the heating facility deNOx system
 - Invest in a flare gas recovery system
- Strengthen the monitoring system by installing an additional air TMS and improving the water quality TMS
- Environmental technical support (Including affiliates)

SOCIAL

Green Value
with People & Safety



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72 Local Communities

Human Rights Management

GOVERNANCE >>

Organizational Structure

As part of HD Hyundai Group's ongoing efforts to reinforce human rights management, HD Hyundai Oilbank and our energy affiliates have established a Human Rights Management Division under the ESG Working Group, with the aim of actively promoting human rights in 2022. The division is composed of executives from relevant organizations, such as HR, legal, and public relations teams, and is led by a chief ESG officer. We have developed detailed guidelines to ensure effective operation of the division, and to establish a human rights governance system that truly respects human rights in every aspect of our operations. By doing so, we can promptly respond to any issues that arise and ensure that human rights are upheld in all aspects of our business.

Human Rights Management Governance



STRATEGY >>

Human Rights Management System

We are committed to upholding the dignity and human rights of all our stakeholders.

In 2022, we issued a Human Rights Management Declaration signed by our CEO, pledging to actively practice human rights management that respects and fulfills our social responsibilities to our employees, customers, shareholders, suppliers, local communities, and the government. To support this commitment, we have developed policies that protect and promote the human rights of all stakeholders, including the establishment of a dedicated Human Rights Management Division and the implementation of a human rights management system.

We have also created the Human Rights Management Charter, which sets out rules for stakeholders, including a commitment to non-discrimination, compliance with fair working conditions, prevention of harassment, and responsible supply chain management. To ensure effective governance, we have established detailed guidelines for the operation of the dedicated division.

HD Hyundai Oilbank and our affiliates will continue to take a leadership role in strengthening human rights management, ensuring that our policies are equally applied to all of our stakeholders.

The image shows three documents side-by-side. The first is the 'Human Rights Management Declaration' signed by the CEO, dated 2022. The second is the 'Human Rights Management Charter' with a table of contents. The third is the 'Human Rights Charter' with detailed articles.

Human Rights Management

STRATEGY >>

Human Rights Management Activities

Employee Diversity

Gender Diversity and Inclusion We are committed to increasing the proportion of female leaders in our organization. In 2022, we appointed three additional female team leaders and expanded the number of female general managers to six in 2023, reaching our goal* of securing more female leaders a year ahead of schedule. Our goal is to continue this positive trend by hiring more female employees, aiming to increase the proportion of female employees from 8% in 2022 to 12% by 2030. We will also prioritize promoting work-family balance and offering better employee benefits to reduce churn rate and retain female talent within the organization.

* Securing 10 female leaders including team leaders and general managers in the next five years (Based on 2022)

Disability Inclusion and Support Since 2003, we have been working with the Korea Employment Agency for Persons with Disabilities to employ individuals with mental retardation. As of the end of 2022, 17 disabled employees have been working for more than 10 years as car wash assistants at 11 of our directly-managed gas stations. To commemorate the Day of Disabled Persons, we hold an annual family event to give them an opportunity to create cherished memories with their loved ones and take a break from their daily routine. We will continue to provide stable jobs and support independence for people with disabilities.

Human Rights Training

We conduct legally mandated training every year on topics such as sexual harassment prevention and disability awareness to raise employees' awareness of human rights. Since 2019, we have established guidelines on workplace harassment. In 2022, we included workplace harassment training in the mandatory training for all employees.

RISK MANAGEMENT >>

Human Rights Impact Assessment

Assessment Process

In 2022, we established a human rights-focused management system by adopting a human rights impact assessment based on the guidelines of National Human Rights Commission of Korea. The Human Rights Management Division supervises the assessment, which is based on a checklist of areas such as discrimination, forced labor, and child labor. The results of the assessment are shared through reports, and any identified improvement needs are reported to top management and implemented into our management activities. To conduct the assessment, we first conduct self-assessments of the personnel in charge of related departments at HD Hyundai Oilbank and HD Hyundai Chemical, focusing on human rights risks that may affect our employees and stakeholders. The HR Planning Team examines each assessment item, identifies and reports high-risk areas, and requests compliance with improvement measures. We plan to continue conducting regular human rights impact assessments to manage potential human rights issues and risks.

Human Rights Impact Assessment Schedule



Assessment Results

The 2022 Human Rights Impact Assessment was conducted for 14 relevant departments of HD Hyundai Oilbank and HD Hyundai Chemical, using a checklist consisting of 33 items and 158 indicators based on the standard evaluation areas of the National Human Rights Commission of Korea.



Upon reviewing the assessment results, we promptly implemented necessary improvements in several departments to address identified issues.

	Items that require improvement	Improvements made
Health and Safety	Hygiene training led by an expert required	Conducted a hygiene training led by an expert
Suppliers	Ensure suppliers' compliance with human rights	Included ESG-related factors in the supplier evaluation
Quality Management	Provide product details to protect consumers' right to know	Product details provided upon consumer request

We are currently exploring additional measures to further enhance the reliability of our assessments and will continue to proactively identify and mitigate human rights risks through various activities.

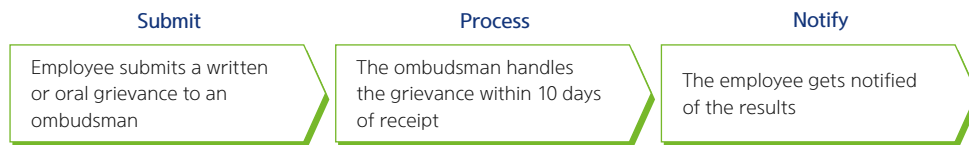
Human Rights Management

RISK MANAGEMENT >>

Grievance System

In accordance with the collective agreements with labor unions, HD Hyundai Oilbank and its energy affiliates have implemented an employee grievance system to address various grievances, including workplace harassment and sexual harassment. When a report of human rights violation is received through the reporting channel, we investigate the details and facts and conduct an investigation in the presence of a female lawyer if deemed necessary. Based on the results of the investigation, we take appropriate measures to discipline offenders and protect victims. To protect the personal information of reporters, we have simplified our grievance reporting system. We have also placed a grievance system banner on the main screen of our company's groupware to increase accessibility to employees who may have suffered unreasonable damages. No grievances were submitted through our official channel in 2022. Nevertheless, we will continue to make various efforts to protect human rights in our workplace and ensure a safe working environment.

Official Grievance Procedure



* Matters that cannot be handled by the ombudsman will be dealt by the Labor-Management Council

METRICS AND TARGETS >>

Human Rights Management Goals and Performance

We set our human rights management goals for each stage to manage performance more systematically and achieve them.

	2022 Performance	Future Plans
Structure governance framework	Launched the Human Rights Management Division under ESG Working Group	Stabilize human rights management governance system
Declaration of human rights management	Declared human rights management	Establish human rights management guidelines for each topic
Disclose human rights information	Disclosed in the Integrated Report	Continue to disclose information
Human rights training	Conducted human rights training	Manage human rights training status Conduct trainings for all employees
Human Rights Impact Assessment	Conducted Human Rights Impact Assessment using the checklist	Strengthen reliability of the assessment through listening to stakeholder opinions and advice from human rights experts

Health and Safety

GOVERNANCE >>

Organizational Structure

HD Hyundai Oilbank and our affiliates have established a dedicated health and safety organization that oversees and conducts work related to health and safety across the company. We develop plans and make decisions on major safety agenda through the affiliated company safety councils, which includes the board of directors.

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

Board of Directors	Occupational Safety and Health Committee	Affiliated Company Safety Councils
<ul style="list-style-type: none"> · Establish and approve the health and safety plan at regular board meetings. · Report health and safety organization and facility status · Create a dedicated budget for health and safety and manage the performance 	<ul style="list-style-type: none"> · Aim to collect feedback from the employees on health and safety matters on a quarterly basis · Discuss enactment and revision of safety regulations, improve on-site hazards, and address major health and safety issues 	<ul style="list-style-type: none"> · Composed of affiliated safety officers · Facilitate quarterly regular meetings · Share exemplary practices in safety management, identify regulations that need improvement, revise company policies accordingly, vote on major health and safety matters, and benchmark companies with effective safety management

HD Hyundai Oilbank Health and Safety Organization

EHS Management Team	Health and Safety Team	Health and Safety Support Team
<ul style="list-style-type: none"> · Manage tasks related to the Serious Accidents Punishment Act · Ensure compliance with health and safety laws such as Occupational Safety and Health Act and High-pressure Gas Safety Control Act · Occupational health and safety licensing-related work (PSM/SMS) · Establish a safety culture 	<ul style="list-style-type: none"> · Manage facilities and ensure compliance related to fire and hazardous items in Daesan Plant · Manage the plant's emergency response · Supervise on-site hazardous activities · Manage safety of the on-site suppliers · Manage employee's health 	<ul style="list-style-type: none"> · Assist with safety management for the overall workplace, including the Central Technology R&D Institute, gas stations, and distribution centers · Monitor legal compliance · SMU plant health and safety council and joint inspection tasks

Affiliates' Health and Safety Organization

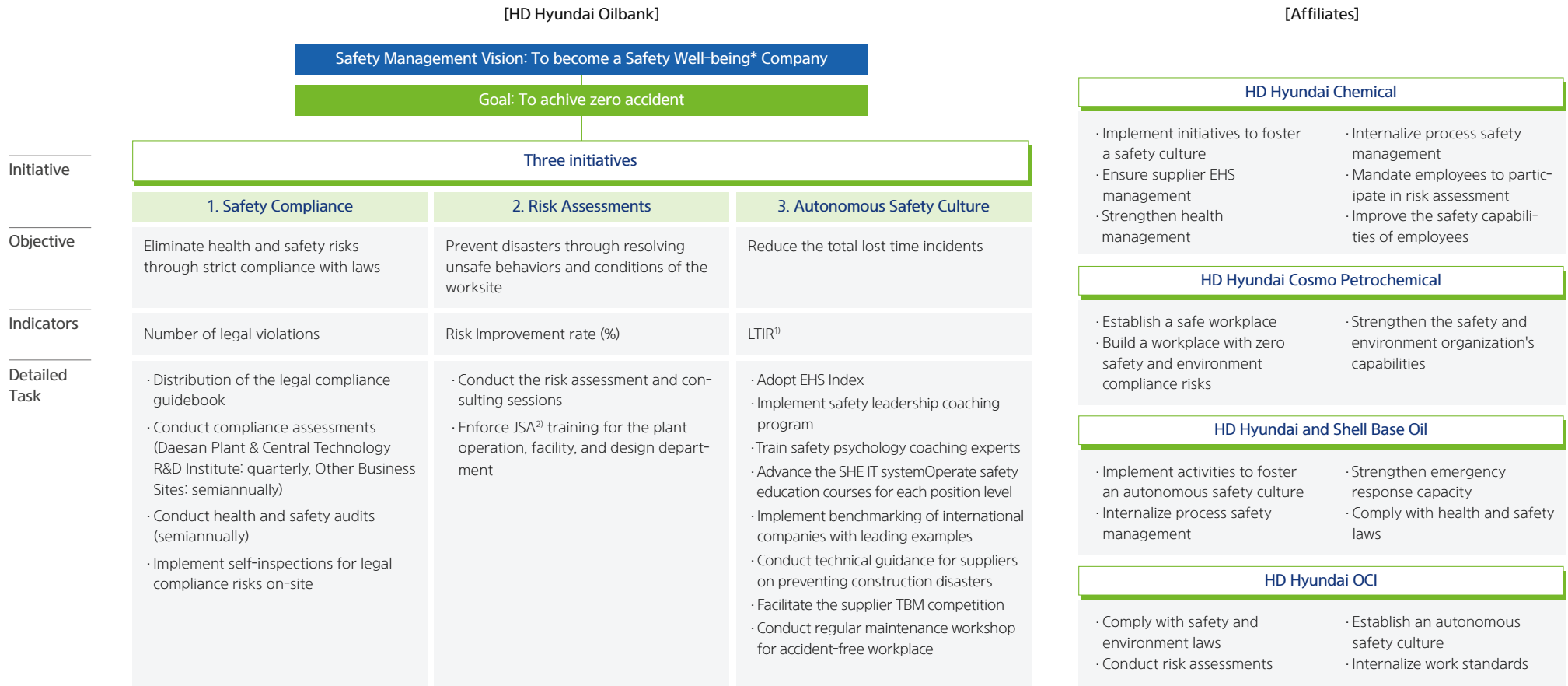
HD Hyundai Chemical	HD Hyundai and Shell Base Oil
<p><u>EHS Management Team</u></p> <ul style="list-style-type: none"> · Response to health and safety-related regulations · Operate process safety management (PSM) · Ensure health and safety management of suppliers · Listen and improve employee's opinions on health and safety <p><u>Health and Safety Team</u></p> <ul style="list-style-type: none"> · Manage on-site facilities and supervise dangerous work · Manage the company's emergency response and employee health 	<p><u>Safety, Environment, and Technical Service Team</u></p> <ul style="list-style-type: none"> · Strengthen safety management to respond to the Serious Accidents Punishment Act · Investment in safety facilities
HD Hyundai Cosmo Petrochemical	HD Hyundai OCI
<p><u>Safety, Environment, and Production Team</u></p> <ul style="list-style-type: none"> · Response to health and safety-related regulations · Operate process safety management(PSM) · Ensure health and safety compliance 	<p><u>Safety and Environment Team</u></p> <ul style="list-style-type: none"> · Response to health and safety-related regulations · Identify risk factors in the processes and manage investments in improving facility

Health and Safety

STRATEGY >>

Health and Safety Management System

Safety Management Strategy System



* **Safety Well-being:** pursuing comfort and happiness in body and mind while being liberated from unsafe conditions

1) LTIR: Lost Time Incident Rate

2) JSA: Job Safety Analysis

Health and Safety

STRATEGY >>

Health and Safety Management System

Environment, Health, and Safety Policy

At HD Hyundai Oilbank, we prioritize environment, health, and safety (EHS) as our core values, and our company and all of our affiliates have officially declared the EHS policy. This policy applies to all of our business sites to minimize possible negative effects in the course of all business activities.

Environment, Health, and Safety Policy

HD Hyundai Oilbank considers environment, health, and safety as our top priority for sustainable growth. We are committed to protecting our employees, customers, suppliers, and local communities, while minimizing the environmental impact of our operations. With this goal in mind, we are dedicated to achieving the highest global standards in environment, health, and safety management.

- All employees shall acknowledge environment, health, and safety-related tasks are their core mission.
- We shall continuously identify and report unsafe behaviors and conditions at worksites to prevent potential disasters.
- We shall prioritize environment, health, and safety rules above all else and must strictly comply with them at all times.
- Environment, health, and safety shall be managed systematically to continuously improve the performance.
- We shall continuously strive to prevent pollution and preserve the environment through effective environmental management.
- We shall regularly evaluate and openly disclose the environment, health, and safety performance to the public.
- We shall fulfill our corporate social responsibility for the environment, health, and safety.

Health and Safety Management System

Supplier Health and Safety Code of Conduct

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



Occupational safety

Suppliers shall conduct risk assessments to identify and eliminate risk factors that employees may be exposed to.



Emergency preparedness

Suppliers shall proactively identify potential accidents and emergencies, evaluate the expected damage, and implement training accordingly.



Industrial accident and disease prevention

Suppliers shall prevent industrial accidents and diseases of employees and establish procedures to prevent recurrence.



Management of harmful factors in the work environment

Suppliers shall regularly measure and evaluate harmful factors present at worksites, and implement appropriate technical measures to prevent employees from being exposed to levels that exceed standard values.



Physically demanding work

Suppliers shall identify tasks that require physically demanding work and develop measures to control and eliminate such tasks.



Facility Safety

Suppliers shall regularly assess and maintain the safety of facilities used for tasks.



Sanitation facility, cafeteria, dormitory management

Suppliers shall provide hygienic and safe personal space to their employees.



Health and Safety Training

Suppliers shall regularly conduct health and safety education and training.

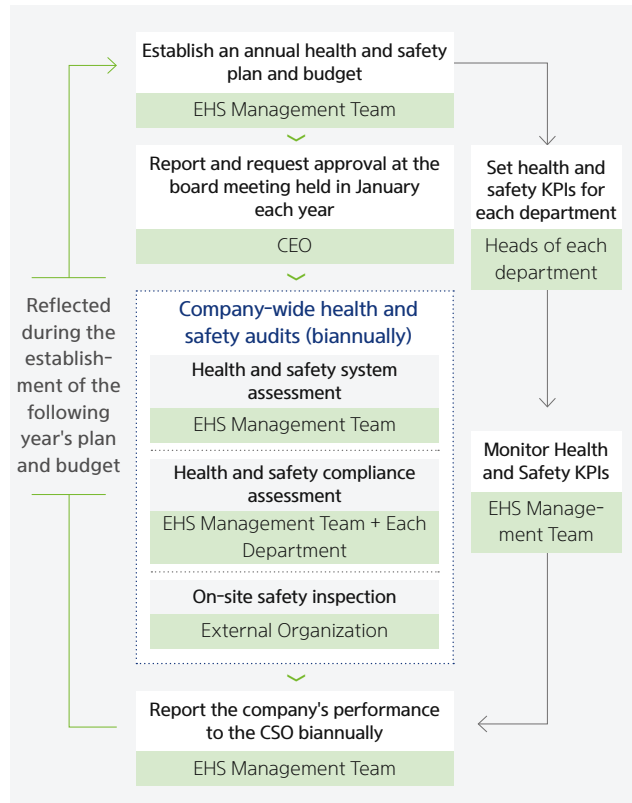
Health and Safety

STRATEGY >>

Health and Safety Management Activities

Building a Safety Culture

Performance Management Process HD Hyundai Oilbank operates a responsible health and safety management system by establishing a performance management process.



Safety KPIs We manage safety performances of our top managerial positions by reflecting 30% of the EHS Index in the KPIs and MBOs of the executives and team leaders.

EHS Index	
· Environmental Accidents	· Improvement Rate
· External Inspection	· Compliance with Critical Safety Rules
· Risk Assessments	· Safety Culture

Management's Safety Awareness Activities Every month, the chief safety officer (CSO) publishes a Safety Letter to share on-site risk management items with the entire company and expresses the management's commitment to health and safety. For on-site suppliers, they send safety text messages every day to remind them of our commitment to safety.

Implement Safety Leadership Coaching Program We offer coaching programs for Daesan plant executives, team leaders, G/F, and S/F with professional safety coaching experts. Through this program, we established a safety leadership code of conduct for each leadership position and provide necessary training and coaching.



Safety Management at Worksites We have appointed safety managers with expertise in on-site processes and operations for each department, and we have strengthened our autonomous safety management capabilities. Daesan Plant announces safety rules for dangerous work twice a day via broadcast and conducts safety awareness training, which consists of first aid training, work permit procedures, job safety analysis training, and accident case education for the plant operation, facility, and design department. In addition, our directly-managed gas stations and distribution centers nationwide are making every effort to prevent potential safety accidents by providing monthly educational materials and conducting safety training.



Health and Safety Consulting Services for Suppliers We have selected 12 companies that perform major dangerous work among on-site suppliers and conducted health and safety law consulting led by an external organization. To identify improvement plans among suppliers' compliance with the Occupational Safety and Health Act, consulting sessions were conducted for six companies every half year. During these sessions, major improvement areas—such as adequacy of the health and safety management organizations, training system, and risk assessment consulting—were identified.

Health and Safety

STRATEGY >>

Health and Safety Management Activities

Building a Safety Culture - Affiliates

> HD Hyundai Chemical

Occupational Health and Safety Month

HD Hyundai Chemical has designated the month of July as its Occupational Health and Safety Month, during which they organize various activities such as awards ceremonies, special training programs, and safety campaigns for their employees and on-site suppliers.

Occupational Health and Safety Month

Event Highlights

- Best near-miss case contest
- Award supplier with an excellent safety and environment management plan
- Award employees with excellent safety of each sector
- Safety Survey: results are reflected in future safety trainings
- Safety Campaigns
- Special training for supervisors to led by external auditors
- Award legally qualified employees



Supplier Communication Channel

HD Hyundai Chemical operates several communication channels, including supplier council meetings, CEO meetings, and a health and safety suggestion box, to collect safety-related feedback from all suppliers and identify and mitigate hazards.

Environmental Safety Meeting

HD Hyundai Chemical shares the results of environmental safety initiatives and safety inspections and urges all departments to take lessons from successful hazard mitigation cases discussed in safety environment expansion conference.

Safety Environment Expansion Conference

- Participants: executives, team leaders, position managers, site manager, and group manager (bimonthly)
- Share safety initiatives and hazard improvement cases implemented by each team

Team Environmental Safety Meeting

- Held in team units (monthly)
- Share environmental safety inspection and action meeting performance results

Safety Action Meeting

- Participants: Shift workers (at least once a month)
- Share health and safety notices
- Identify and improve major risk points

Major Safety Inspection

- Comprehensive safety inspection
- Daily work safety check
- Joint safety inspection with suppliers

> HD Hyundai and Shell Base Oil

Regular Maintenance and Accident Prevention Activities

HD Hyundai and Shell Base Oil has maintained an accident-free workplace since its founding through various accident prevention activities. This year, as part of regular maintenance, the company has taken additional measures to improve safety, including conducting joint risk assessments prior to high-risk work, providing safety maintenance manager training, and presenting a joint safety management plan with HD Hyundai Oilbank to better manage and reduce potential risk factors.

> HD Hyundai Cosmo Petrochemical

Safety Production Division Meeting

Through monthly safety production division meetings, the company shares and discusses major issues and areas that require cooperation with safety, environment, production, and technical department.

Safety and Environment Bulletin Board and AI Speaker

HD Hyundai Cosmo Petrochemical has strengthened safety communication by installing safety and environment bulletin boards and AI speakers at easily-accessible locations. The company posts legal notifications and safety-related announcements on the bulletin boards to encourage participation in safety activities. In addition, safety announcements are made four times a day through the AI speakers installed in daytime offices, boards, and shelters to further promote safety awareness among employees.

Prescription Safety Glasses

To protect employees' eyesight, the company provides prescription safety glasses for those with low vision and blue light blocking safety glasses for board employees.

Health and Safety

STRATEGY >>

Health and Safety Management Activities

Strengthening Safety Capabilities

Occupational Health Education At the Daesan plant, we announce health-related information twice a month and provide health education for employees with metabolic syndrome. In addition to annual CPR training, we also offer various occupational health training, such as musculoskeletal disease prevention and stretching, every three years.

CPR and AED Training HD Hyundai Oilbank and its affiliates provide cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) training to improve employees' ability to cope with emergencies. Starting with the training for the headquarters in February 2023, we have completed providing training to employees of branch offices and commissioned operators of directly-managed gas stations by May 2023.



Employee CPR and AED Training

Regular Plant Safety Maintenance We carried out turnaround (TA) task force team activities for the #1 Plant in addition to regular maintenance in April 2022. The TA task force team plans to apply improvements that were identified during the regular maintenance to the #1 HOU and #2 Plant in 2023.

Blue Clean Program Under our slogan "Blue Clean", we provide differentiated services by implementing regular environmental improvement and safety enhancement systems at our directly-managed gas stations, so that customers can experience a cleaner and safer gas station environment. We have introduced an inspection application that Commissioned operators of the gas stations allow them to regularly inspect facilities of the gas stations. The inspection details are monitored at the headquarters level, checked for abnormalities in facilities, and prepared for environmental pollution accidents such as oil leakage.



Gas Station Facility Inspection

Emergency Response Drills We are working to strengthen our emergency response system by conducting fire drills and fire task force team training. In order to improve the emergency response capability of all employees, we also implemented basic fire drills and a fire safety skills contest in the company's fire training ground.

HD Hyundai Chemical

Emergency Response Trainings The company conducts various safety trainings to strengthen emergency response capabilities of its employees.

Name	Basic Fire Drill	Fire Safety Training
Frequency	Twice a year	Every month
Photo		
Name	Confined Space Emergency Rescue Training	Health and Safety Team Training
Frequency	Every Quarter	Every other month
Photo		

Health and Safety

STRATEGY >>

Health and Safety Management Activities

Internalize Process Safety Management

Process Safety Management (PSM) At HD Hyundai Oilbank, we operate process safety management (PSM) to prevent serious industrial accidents caused by fire, explosion, and leakage of hazardous substances, and we are making every effort to prevent process accidents through systematic diagnosis and active investment in the facilities. We have established a system for the 12 elements of process safety management by training safety experts for each department, and we maintain the highest level (P) of process safety through annual self-audits. To secure professional process safety management skills and strengthen execution abilities, we conduct PSM training led by external experts from the Korea Occupational Safety & Health Agency.

> HD Hyundai Chemical

HD Hyundai Chemical is enhancing its process safety capabilities by providing targeted training to employees at all levels of the organization.

Participant	Frequency	Details
All Employees	Once a year (5 days per session)	<ul style="list-style-type: none"> Work risk assessment training (external instructor) Reorganize regular safety education (Korea Industrial Safety Association)
Team/General Managers	4 times a year (2 hours per session)	Management Supervisor Collective Training
Shift Managers	Once a year (8 hours per session)	Shift Manager Collective Training
Operators	-	<ul style="list-style-type: none"> Operator interview during PSM implementation evaluation Basic operation information (MSDS toxicity values, explosive hazardous locations, etc.) Instructions on wearing PPE and implementing TBM

Process Risk Assessment We utilize various methods such as HAZOP, KPSR, and checklists to conduct our process risk assessment. Based on the assessment results, we calculate the size of the damage and perform quantitative risk assessment. With this information, we develop specific emergency action plans for each department to effectively respond to any potential risks.

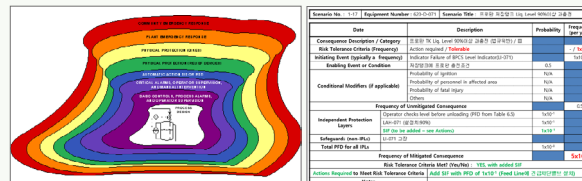
Process Safety Event (PSE) Management HD Hyundai Oilbank manages process safety events by classifying them according to the tiers based on SASB standards and internally established standards. For those that are Tier 2 or higher, we form an investigation team and conduct a detailed investigation of the incident.

Improving Safety in Process Operations We regularly conduct inspections with relevant departments to increase the reliability and safety of our facilities and equipment. If any abnormalities are found, we promptly analyze the operation logic of the facility, check its maintenance history, and utilize backup equipment if necessary. We also review the emergency manual to ensure that we can safely respond to any issues that may occur during processes.

> HD Hyundai and Shell Base Oil

HD Hyundai and Shell Base Oil will be the first energy affiliate to apply LOPA¹⁾ to maintain a P-rated workplace in terms of process safety management. The company plans to adopt process safety indicators to effectively respond to the risk assessment results and make actual improvements to ensure process safety.

1) LOPA: Layer Of Protection Analysis



LOPA

Health and Safety

STRATEGY >>

Health and Safety Management Activities

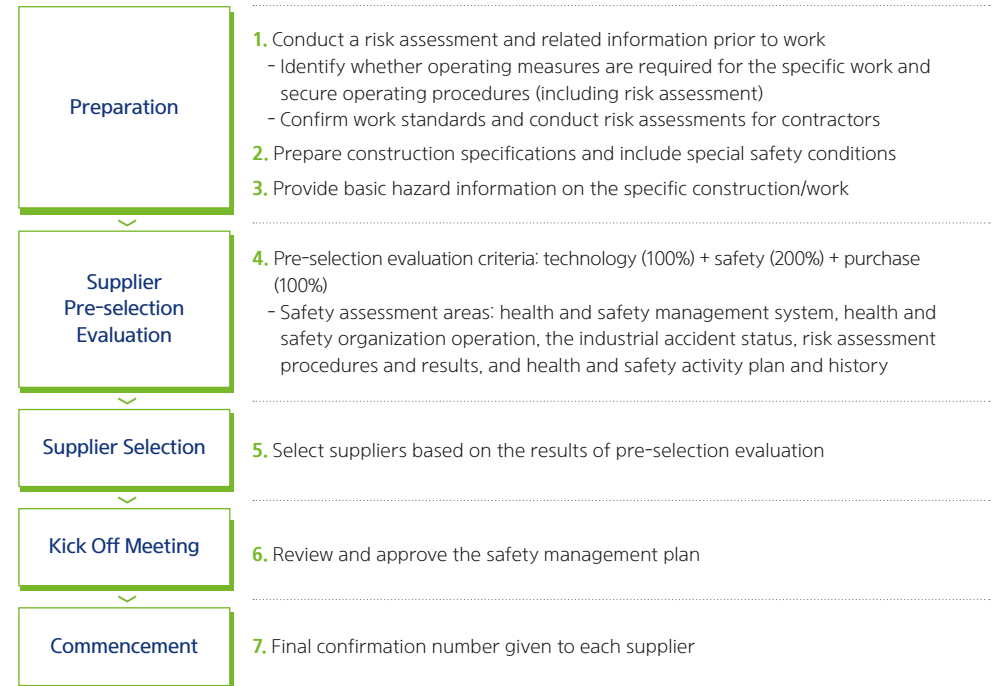
Safety Support for Suppliers

HD Hyundai Oilbank has established regulations that exceed the safety standards required by law, which apply to our suppliers. We continuously monitor our suppliers to ensure that they are in compliance with these standards, and actively seek their input and feedback through supplier council meetings.

● HD Hyundai Oilbank ● Suppliers

1	Pre-assessment (Supplier Selection)	<ul style="list-style-type: none"> Review the performance of safety management through pre-assessment The score in the safety sector has significantly increased from 33% to 50%, making safety assessment the most important factor
2	Share Safety Requirements and Information	<ul style="list-style-type: none"> Provide health and safety regulations that exceed the standards required by current laws Provide information on potential workplace hazards
3	Establish a Safety Management Plan	<ul style="list-style-type: none"> Establish a safety management plan based on the information provided
4	Raise Awareness Among Suppliers	<ul style="list-style-type: none"> Identify and eliminate hazards prior to work Implement on-the-job training to effectively educate safety managers of suppliers Separately conduct training courses for supervisors such as signalmen, fire watchers, and external safety officers for confined spaces, and conduct qualification exams to select only those who meet the necessary standards
5	Performance Evaluation	<ul style="list-style-type: none"> Develop evaluation criteria and standards for each type of supplier, such as on-site suppliers, large-scale project suppliers, and short-term contractors Evaluate the performance of suppliers through active participation of relevant departments and apply the results in the bidding process
6	Award Excellent Suppliers	<ul style="list-style-type: none"> Select suppliers with excellent safety management and provide them with regular rewards three times a year
7	Strengthening Safety Capabilities	<ul style="list-style-type: none"> Establish a feasible health and safety management system and strengthen safety capabilities

In our contracting business, we ensure that only qualified contractors are engaged in work by providing them with hazard information and conducting safety level evaluations from the preparation stage onwards.



Health and Safety

STRATEGY >>

Health and Safety Management Activities

Safety Support for Suppliers - Preliminary Safety Evaluation

To ensure that we select suppliers with a high level of health and safety management capabilities, our safety evaluation during the eligibility process focuses on five key areas: health and safety management system, health and safety organization operation, the industrial accident status, risk assessment procedures and results, and health and safety activity plan and history. We have established 16 detailed indicators to fairly evaluate potential suppliers. In 2022, we conducted pre-assessments for 181 companies, evaluating them for a total of 73 contracts, and we restricted 5 from bidding based on their performance in the safety evaluation. To examine non-financial risk factors, we use fair and objective indicators during the safety evaluation process. We regularly evaluate the adequacy and effectiveness of the pre-assessment process, making gradual improvements as new health and safety goals are established.

Supplier Preliminary Safety Evaluation Criteria

Criteria	Details	Criteria	Details
Health and Safety Management System	Health and safety management policy	Risk Assessments	Contents of the risk assessment
	Health and safety goals and implementation plan		Health and safety training
	Health and safety management system certifications		Health and safety inspection
Health and Safety Organization Operation	Formation of health and safety organization and assignment of responsibilities	Health and Safety Activity Plan and History	Safety management by each hazardous/dangerous work
	Organizational capabilities and competencies, qualifications, and experience of the members		Management of hazardous/dangerous machinery and equipment
	Adequacy of the health and safety personnel questionnaire		Incident management
Industrial accident Status	Industrial accident occurrence rate compared to the average of the industry		Emergency response
			Health management
			Operation of subcontracting suppliers

> HD Hyundai Chemical

We conduct semi-annual audits for our suppliers to examine health and safety management system and activity status so that they can improve their own capabilities.

Audit Criteria	Details	Audit Criteria	Details
Health and Safety Management System	Health and safety organization status	Employee Health Management	Material safety data sheet (MSDS)
	Health and safety promotion plan		Health checkup status
	Safety management officer status		Handling of Specially Controlled Substances
	Safety manager status		Break room management
	Posting of legal requirements		
Health and safety training	Others (such as certification status)		
	Regular employee training		
	New hire training		
Hazard Management and Risk Assessment	Special education		
	Appointment and training of supervisors		
	Risk assessment status		
	Work procedure development status		
	Disaster and near miss status		
	Safety inspection (joint and rounds)		
	PPE record		
	Confined space work training		
	Worksite safety management status		



Suppliers consulting

Health and Safety

RISK MANAGEMENT >>

Health and Safety Risk Management

Occupational Health and Safety Management System (ISO 45001)

HD Hyundai Oilbank has a strong commitment to health and safety management, as evidenced by our acquisition of OHSAS 18001 and KOSHA 18001 certifications in 1999, and ISO 45001 certification for all business sites since 2020.

The EHS management team conducts an annual internal audit to ensure compliance with ISO 45001 standards, including the identification of risks, selection of issues, and operation through the PDCA cycle.

Health and Safety Audit

The Chief Safety Officer (CSO) conducts health and safety audits for all business sites every six months to ensure compliance with safety laws. The audits aim to monitor the health and safety management system of each site. The results are reported directly to the CSO, and any necessary improvements are made immediately.

Health and Safety System Operation Procedures



1) PDCA Cycle: the cycle of Plan-Do-Check-Act phases



ISO 45001 Certificate

Health and Safety Law Risk Management

We are currently in the process of establishing a Safety and Health Compliance System to achieve zero legal risks related to health and safety. We regularly monitor the enactment and revision of relevant laws and regulations and conduct quarterly legal compliance assessments. During the health and safety audit conducted by the CSO, we offer guidance for improvement and check for any additional legal violations.

- 1 **Enactment and revision of laws**
 - Check the enacted and revised laws
- 2 **Addition to the company's law registry**
 - Add any newly passed or revised laws to the company's law registry (EHS department)
- 3 **Revision of the compliance assessment form**
 - Revise the compliance assessment form based on the newly passed or revised laws (EHS department)
- 4 **Compliance Assessment**
 - Conduct health and safety compliance assessment for each department
 - Safety Production Division & Central Technology R&D Institute: quarterly
 - PM Division & Lubricant Business Division: semiannually
- 5 **Health and Safety Audit**
 - Conduct semiannual safety and health audits led by CSO
 - Audit Team: EHS Management Team + External Experts
- 6 **Improvements**
 - Take corrective measures in areas identified by health and safety compliance assessment and audits

Health and Safety

RISK MANAGEMENT >>

Safety and Health Inspection Activities

Safety Compliance and Safety Inspection Activities

Proactive Response to the Serious Accidents Punishment Act In August through December of 2022, HD Hyundai Oilbank enlisted external experts to conduct safety compliance diagnosis and consulting for laws including the Occupational Safety and Health Act, the High-pressure Gas Safety Control Act, and the Act On The Safety Control Of Hazardous Substances. This enabled us to obtain the necessary permits and ensure compliance across all of our business sites.

Departmental Safety Managers and Regional Safety Supervisors At HD Hyundai Oilbank and our affiliates, there are safety managers assigned to each production department who are responsible for overseeing the health and safety of high-risk work and constantly monitoring for any risks. The EHS department also has safety supervisors who ensure compliance with safety rules for dangerous work in specific regions and provide guidance and advice.

Joint Inspection and Worksite Safety Rounds We conduct bimonthly joint inspections attended by the management of suppliers, as well as daily safety rounds of supplier's worksites.

Autonomous Safety-themed Inspection All employees of the Daesan plant, including those in production, facility, design, and support departments, conducted a safety-themed inspection autonomously to identify any violations of laws and regulations in their processes and worksites. This inspection took place over eight weeks from October to November 2022, with a different inspection theme each week.

Legal Compliance Guidebook We have developed and distributed a guidebook on legal compliance to all employees and our suppliers. This guidebook includes information on compliance matters for each relevant health and safety law applicable to the Daesan plant, including the Occupational Safety and Health Act, the High-pressure Gas Safety Control Act, and the Act On The Safety Control Of Hazardous Substances.

12 Critical Safety Rules In November 2022, HD Hyundai Oilbank established and declared the 12 Critical Safety Rules, which are to be strictly followed by all employees to prevent safety accidents in the workplace.



12 Critical Safety Rules

> HD Hyundai Chemical

Regular Health and Safety Inspection Activities

To enhance on-site work safety, HD Hyundai Chemical conducts daily work safety inspection meetings where executives and team leaders review work details and implement risk assessments and improvement measures. The plant's production, facility, and EHS departments conduct expanded safety inspections activities jointly every odd-numbered month to identify and address potential hazards. Joint safety inspections are held quarterly, and safety rounds for suppliers are conducted every other day.

> HD Hyundai and Shell Base Oil

HD Hyundai and Shell Base Oil conducted a compliance audit of the Serious Accidents Punishment Act to identify and improve safety and health-related risks proactively. The audit revealed approximately 30 areas requiring improvement across nine categories, and the company plans to develop improvement measures and implement a health and safety management system accordingly.

Health and Safety

METRICS AND TARGETS >>

Health and Safety Management Goals and Performance Management

HD Hyundai Oilbank and our affiliates systematically manage health and safety by setting specific goals and indicators, and monitoring performance to achieve the health and safety vision and key tasks each year.

	Objective	Indicator	2022 Performance	2023 Target
HD Hyundai Oilbank	Eliminate EHS risks through strict legal compliance	Number of legal violations	4 cases	0 case
	Prevent workplace disasters by mitigating unsafe behaviors and conditions in the worksite	Risk Improvement rate	100%	100%
	Establish an autonomous safety culture	LTIR	0.10	0.033
HD Hyundai Chemical	Autonomous safety activities	Progress	100%	100%
	Enhance supplier EHS	Number of disasters of on-site suppliers	0 case	0 case
	Establish health management system	Progress	100%	100%
	Strengthen process safety management	Progress	100%	100%
	Strengthen risk assessment	Risk assessment implementation rate	100%	100%
	Strengthening safety management capabilities across all levels	Training implementation rate	100%	100%
HD Hyundai Cosmo Petrochemical	Prevent industrial accidents through the establishment of safety environment	Number of serious disasters	0 case	0 case
	Conduct internal audits and take corrective measures	Improvement rate	100%	100%
	Conduct health and safety education	Mandatory health and safety training completion rate	100%	100%
HD Hyundai and Shell Base Oil	Reduce LTIR through the advancement of safety and environmental awareness	LTIR	0	3 or less
	Maintain P-grade process safety management	PSM self-audit score	94	90 and above
	Secure the soundness of firefighting equipment	Emergency drill implementation rate	100%	100%
	Conduct a health and safety compliance audit	Improvement rate	100%	90% or more
HD Hyundai OCI	Eliminate EHS risks through strict legal compliance	Number of legal violations	0 case	0 case
	Prevent workplace disasters by mitigating unsafe behaviors and conditions in the worksite	Risk Improvement rate	100%	100%
	Achieve zero accidents through the establishment of an autonomous safety culture	LTIR	1.01	0
	Improve safety level through the establishment of site-oriented work standards	Number of development and revisions to work procedures	8 cases	15 cases

Employees

GOVERNANCE >>

Organizational Structure

HD Hyundai Oilbank has reorganized its previous HR support division into a HR division to promote effective human resource management and development.

Dedicated Human Resource Development Organization In 2022, we have established the dedicated HR Development Team, that considers improving work satisfaction and employee empowerment as its top priorities. They have set two main goals for 2023: upgrade on-site expertise and resume in-person training courses.

To this end, we plan to develop professional job training program for engineers and production employees, and resume group training programs that have been suspended since the outbreak of COVID-19.



STRATEGY >>

Human Resource Management

Evaluation and Rewards

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



Profit Sharing System In order to establish a fair reward system, we have introduced a profit-sharing (PS) system that shares a certain portion of the company's excess profits with employees. By doing so, we aim to go beyond providing a stable jobs to our employees and enhance their work satisfaction and manage human resources, which are valuable assets of our company.

Talent Development In 2022, we established a leadership profile as part of our leadership program. Additionally, we launched a Succession Plan program that enables leaders to directly mentor their less-experienced colleagues. Through various talent development initiatives, we aim to manage employees' growth paths and cultivate potential future leaders.

Employees

STRATEGY >>

Human Resource Management

Employee Benefits

Housing Benefit To support the housing stability of our employees, we offer to cover a portion of the interest expenses on their housing loans and provide nearby housing options for those who work at our Daesan headquarters. For employees who reside far away from the workplace, we offer financial assistance with rental deposits or monthly rent based on our separate operating standards.

Health Care Benefit To prioritize the health of our employees, we provide regular and comprehensive health checkups and cover medical expenses, excluding deductibles, up to an annual limit. In addition, our Daesan plant implements the Best Body Project to promote physical health among employees.

Workplace Counselling To support our employees in maintaining healthy minds, we offer workplace counseling services such as Counselling Plus at Daesan plant and Mind Cafe at GRC. Our on-site professional counselors provide counseling sessions to employees on stress, interpersonal relationships, and personal concerns. Additionally, HD Hyundai Group offers an online counseling service available to all employees.

Vacation We offer our employees a condo membership, which entitles them to receive benefits when staying at Hyundai Hotels across Korea. Additionally, we encourage our employees to use their vacation days through our intensive leave system.

Employee Perks and Tuition Support We provide our employees with a bereavement and congratulatory fund. We also have a financial aid system that provides tuition support to the children of our employees from middle school to university. If they do not proceed with university, we cover a portion of tuition from other institutions.

Family-Friendly Benefits To ease the burden of giving birth and raising children, we provide coverage for a portion of infertility treatment expenses and offer infertility treatment leave to our employees. We have implemented a maternity program that allows pregnant and early-stage postpartum employees to work reduced hours, receive a congratulatory fund for childbirth, tuition support for their children, and medical expenses. We also provide various services such as maternity care rooms, baby rest rooms, and daycare centers to support the work-family balance of our employees. In addition, we offer an additional three months of maternity leave on top of the statutory leave and implement a 3+3 system that provides monthly incentives to improve the welfare of employees who give birth. Through these efforts, we have been recognized for our excellent family-friendly program and received a family-friendly certification from the Ministry of Gender Equality and Family in December 2022.



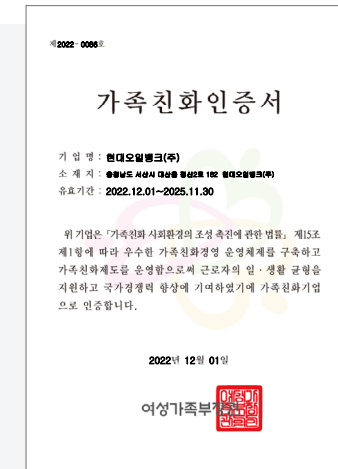
Maternity
Care Room



Baby Rest
Room



Daycare
at work



Family-Friendly
Certification

Employees

STRATEGY >>

Human Resource Development

Talent Development and Career Advancement

Education System At HD Hyundai Oilbank, we have created an education system chart that enables us to manage our employees' careers effectively and support their continuous growth and advancement.

All Employees	Department	Global	Other
Training of new executives and team leaders	Online Job Training	Overseas job training	Online reading communication
Leadership training for executives and team leaders		Overseas technical training for engineers	Legally required education
Core Talent Competencies			Outsourced training
New hire orientation training	Engineer Job Training	Foreign language learning program	Graduate tuition reimbursement
Promotion training		Global Leaders	Digital Transformation
Competency building training			
Mentoring			

Talent Development by Position We prioritize building competencies of our employees through various training programs, such as new hire training and promotion training tailored to each position and experience level. To ensure the effectiveness of our talent development programs, we regularly conduct trainees-satisfaction surveys, where we find areas for further improvement and focus. Questionnaires in 2022 were specifically zeroed in on our promotion and new hire training program. In addition, we have included the factors of 'program improvement' and 'new program design' as KPIs of our instructors, with the goal of continuous improvement in our curriculum. >> [All Employees](#)

Enhancing Job Expertise We provide our employees with online courses to enhance job expertise and competencies required for tasks. We have developed well-structured curriculums for nine fields, including chemical engineering, machinery, and safety. The video courses especially on chemical engineering have been specifically designed by an internal instructor for the purpose of offering tailored training program to our engineers. >> [All Employees](#)

Succession Plan To ensure that we have capable leaders who can guide the company into the future, we take a long-term perspective on leadership development. We identify and nurture potential leaders, and select the right people to lead the organization. Our leadership program focuses on strengthening business capabilities for all leadership positions from department heads to executives and building profiles for each position to effectively manage our candidates. >> [Department](#)

Step 1 **Building a leader position profile - setting a baseline**
Establish position-specific profiles that are suitable for the business environment and industry characteristics

Step 2 **Establishment of a evaluation system for leader candidates - analysis of standards and current status**
Develop an optimized evaluation method for each position profile component and design it in detail to a level that allows for future self-evaluation

Step 3 **Running a leadership session - confirm backups by position**
Discuss the candidates who meet the position-specific criteria and formulate a structured plan for leadership development through assessment sessions

Securing Global Competitiveness We are enhancing the job expertise of our employees by implementing international technical training programs for engineers and a foreign language learning program to help our employees learn new languages. Furthermore, we support our employees in becoming future leaders through the HD Hyundai Group's talent development program. >> [Global](#)

Employees

STRATEGY >>

Labor Relations and Communication

Labor Relations

Labor Union Founded in 1988, the HD Hyundai Oilbank Labor Union consists of four leaders(full-time union officers) and a total of 43 members(union representatives). We ensure that employees have the right to freely join the labor union and participate in labor relations activities. As of December 2022, all 1,069 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 2022, we held the council four times, which resulted in 16 agreements.

Collective Agreement We adhere to the labor-related laws and collective agreements 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 semiannual management briefings for our union members, led by the safety production director, to build mutually beneficial labor relations through workshops. Furthermore, since 2022, we have been implementing a Reverse Mentoring program in the Daesan plant to break down generational barriers as more young employees join our company. This program involves younger employees acting as mentors to executives and department heads, sharing youth culture, enhancing mutual understanding between generations, and contributing to a younger corporate culture.

Company Newsletter

HD Hyundai Oilbank publishes a monthly newsletter that serves as a communication channel to deliver major news and industry trends to our employees.

Employee Communication

HD Hyundai Oilbank conducts various activities to promote a smooth communication and collaboration culture among employees.

C-level Communication We operate various communication activities between employees and C-level, such as "A Glass of Wine with the CEO" and online meetings, to foster a horizontal and respectful corporate culture.

As part of establishing an effective communication culture, HD Hyundai OCI has officially implemented management briefings and meetings led by the CEO since 2022. They are also developing and implementing various other communication programs among its workforce.

Junior Board and Junior Talk Program To foster a flexible corporate culture, we operate the Junior Board and Junior Talk program, which serve as communication channels for junior-level employees. Since 2022, we have been hosting various communication activities with the dedicated corporate culture organization at the center.

Change Agent Program Change Agent is a program that facilitates change by identifying tasks that need to be done and managing them in a systematic way. We have reorganized the Change Agent Program to establish HD Hyundai Group's new core value system of "Innovation, Challenge, Respect, and Safety" throughout the workplace and promote better communication among employees.

Corporate Culture Improvement Activities We held the 2022 Corporate Culture Conference as part of our effort to create a positive corporate culture. As we aim to establish a horizontal culture where our employees directly participate and seek solutions through mutual discussion, we plan to conduct group-wide workshops for CEOs, executives, and employees from 2023.

Employees

STRATEGY >>

Corporate Culture Innovation

Horizontal Organizational Culture

To establish a more horizontal culture within HD Hyundai Oilbank and our affiliates, we underwent a system reorganization in 2022 to simplify position levels into three categories: Senior Manager, Assistant Manager, and Manager. This has allowed us to foster a work culture that promotes efficient and horizontal decision-making processes.

Flextime

We offer a flexible work schedule known as Flextime, which allows employees to adjust their work hours independently, promoting a better work-life balance and enhancing efficiency. Furthermore, to assist employees who reside far away from the Daesan plant to commute with ease, we have implemented a 12 o'clock clock-out system on Fridays.

Bettering Work Environment

In 2022, all HD Hyundai Group companies moved their offices to the Global R&D Center (GRC) building and implemented a hot desking policy, which enables employees to choose their own workspaces and seats according to their preferences. We also reorganized the Daesan factory residence, cafeteria, and shuttle bus routes, and expanded the rest area in the new main building, which was completed in February 2023.

Encouraging Vacation Days

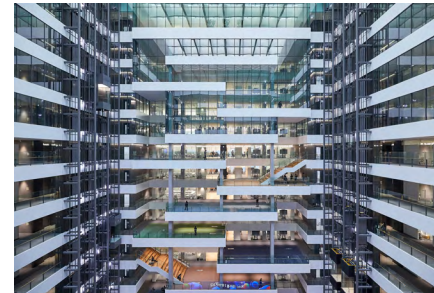
We have implemented a vacation self-approval system, which allows our employees to use their vacation days at their discretion without requiring approval from their supervisors. We also provide various welfare benefits to enable our employees to enjoy different hobbies and leisure activities. Moreover,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

GRC Remote Work for Engineers

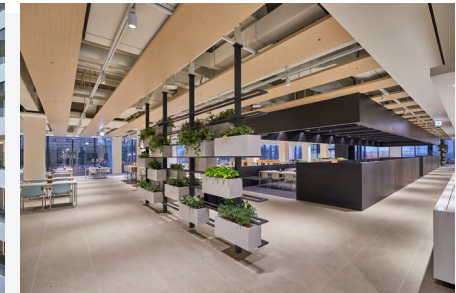
We have implemented GRC Remote for Engineers to create synergy and collaboration between employees at GRC and engineers at Daesan Plant, and to enhance work satisfaction. We have confirmed that employee satisfaction has improved since the pilot operation using shared offices in 2022, and we have officially implemented it since 2023.

One-Day COO Experience

One-Day COO Experience is a program, in which younger generations work with the Daesan plant manager for a day, contributing to the spread of the culture of mutual understanding and respect among employees.



GRC interior lobby



GRC cafeteria



Employees

METRICS AND TARGETS >>

Human Resource Management Goals and Performance

In 2022, HD Hyundai Oilbank achieved all of our human resource management goals.

01 Established a fair compensation system

We have adopted a new salary system to enhance our employee's work satisfaction and to compensate them fairly for their performance.

02 Strengthened the human rights management

We established the Human Rights Management Division within the ESG Working Group to strengthen the human rights management of our company. To proactively identify and prevent human rights-related risks, we conducted a human rights impact assessment and obtained certification as a family-friendly company from the Ministry of Gender Equality and Family.

03 Build a smart workplace

As we relocated our Seoul office to the Global R&D Center (GRC) in Bundang, we have implemented new policies, such as hot desking and a paperless culture, to increase work efficiency.

01 Incorporate DX (Digital Transformation) trends

As the trend of digitalization accelerates, we are preparing to establish a human resource management system based on big data. We plan to utilize big data to develop strategies and execute tasks that enable fair and efficient management of our employees.

02 Strengthen employee communication

We are planning to launch a program aimed at improving teamwork and communication among our employees. The program will utilize various methods, such as team member personality analysis, to ensure that the characteristics of each team are properly reflected in the development stage.

03 Internalize corporate culture values

As HD Hyundai Group established a new value system of "Mission, Vision, and Core Values" in 2022, we are exploring ways to define our own direction for corporate culture and internalize it.

Suppliers

GOVERNANCE >>

Organizational Structure

Our procurement division manages our supply chain and suppliers based on their expertise in key areas. We continuously monitor risks and listen to the opinions of our on-site suppliers under a systematic management approach.

To further strengthen our supply chain ESG management, we plan to expand communication channels with our suppliers by holding meetings and create an opinion board within our system.

Additionally, we aim to advance our internal management system by implementing training programs to develop the management capabilities of our employees. We will proactively identify supply chain risks and continuously enhance the ESG competency of our suppliers.

STRATEGY >>

Supply Chain Management

Strengthening Supply Chain Management

Establishing a Virtuous Supply Chain Environment We have recently incorporated supply chain ESG-related items into our KPIs to strengthen our supply chain ESG management. To achieve mutual growth with our suppliers, we constantly explore win-win plans for small to medium-sized businesses by reviewing subcontract operation status, improvement items, and the delivery unit price interlocking system. Furthermore, we strengthen our suppliers' capabilities by operating a Mutual Growth Supplier Award, which is a program that evaluates suppliers' performance every year and provides incentives to excellent suppliers.

Integrated Procurement System In 2022, we established a new integrated procurement system that is used by our suppliers. We now select our suppliers objectively and transparently through the system, and we are exploring ways to use it as a supplier communication channel. Moreover, we are planning to apply the function that enables us to check ESG evaluation results, so that we can consider them alongside environmental management risk assessment results when selecting suppliers.

Supplier Support Programs

Certification Cost Assistance Program Since 2020, HD Hyundai Oilbank has been providing financial support to our on-site suppliers to acquire ISO 45001 and KOSHA 18001 certifications by covering 50% of the expenses. We also provide monetary assistance in obtaining risk assessment certification and health and safety certification. We encourage our suppliers to implement autonomous safety management systems and reflect their acquisition of the KOSHA 18001 certification in our regular supplier evaluations.

Prepayment for the Holidays If our suppliers for new expansion and construction projects complete material delivery and construction before the holidays, we provide prepayment to support smooth fund operations.

Supplier Payment Policy To ensure that our suppliers are able to manage their funds effectively, HD Hyundai Oilbank makes payments three times a month, on the 5th, 15th, and 25th of each month.

Suppliers

RISK MANAGEMENT >>

Supply Chain Risk Management

Supply Chain ESG Evaluation

In 2022, HD Hyundai Oilbank conducted supply chain ESG evaluations for 165 companies. We completed the first round of online assessments for all suppliers and conducted on-site due diligence for selected suppliers based on the results.

ESG Evaluation Process

Send out assessment notice and document submission instruction	Submit self-assessment and evaluation documents	Assess and cross-check documents and data	Conduct on-site due diligence and interviews	Implement an ESG evaluation and write a report	Monitor ESG risks
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The supply chain ESG evaluation is conducted using key items and detailed metrics for each ESG area, and we created seven comprehensive ESG ratings for each supplier's system and performance.

According to the results, most of the suppliers were being managed at a level above average. However, we intend to lay the foundation for proactive ESG management by developing improvement measures for the environmental management system and other areas.

We will continue to conduct objective ESG evaluations for our supply chain and provide improvement suggestions and an ESG guidebook to suppliers in need. We believe these efforts will increase the overall ESG level of our supply chain.

Supply Chain Environment Risk Assessment In accordance with our supplier management policy, we regularly conduct assessments for our on-site suppliers. The assessment is largely divided into three categories: quality management, safety management, and environmental management. The environment management category consists of environmental accident, environmental compliance, and on-site waste management, which evaluates the overall environmental risks of the suppliers.

Supply Chain Safety Evaluation We select excellent suppliers based on effective evaluation criteria, comprehensively evaluating their safety and technology capabilities and assigning them one of four ratings (S, A, B, or C). Companies rated as C are excluded from future partnerships. When selecting suppliers, we review the feasibility of their health and safety management goals, ensure compliance with current laws and regulations, and confirm the expertise of the members in the health and safety organization. In addition, we prevent the selection of companies with poor safety records by comparing their industrial accident rates with the industry average.

Supplier Communication Channels

Supplier Health and Safety Council We operate a monthly Health and Safety Council for Daesan plant suppliers, conduct joint inspections, and implement safety interactions with our suppliers. Additionally, we conduct quarterly councils and joint inspections with Hyundai Oil Terminal (HDOT), which operates oil storage centers.

Supplier Safety Management Workshop To prevent accidents in the final sales stage, we regularly hold meetings with our gas station business suppliers to share safety inspection results, discuss difficulties, and exchange tips related to safety management.

Supplier Grievance System Every year, we select major suppliers and visit them regularly to address any grievances they may have. We are also planning to implement an official supplier grievance system.



Supplier Safety Council

Suppliers

METRICS AND TARGETS >>

Supply Chain Management Goals and Performance

HD Hyundai Oilbank conducted a supplier ESG evaluation in 2022 and established a phased roadmap based on the identified improvement tasks from the evaluation results. We aim to further advance the ESG management of suppliers by putting those tasks into action and ultimately strengthening the response abilities for global ESG regulations and policies.

2022 Performance	Conducted ESG evaluation for 165 companies Performed on-site due diligence for 51 companies	
2023 Supplier ESG Management Goals	Establish supply chain ESG policy	<ul style="list-style-type: none"> · Include ESG factors in supplier registration and regular evaluation
	Build a supply chain sustainability risk management system	<ul style="list-style-type: none"> · Develop a risk definition and identification process · Establish a risk impact assessment and management plan
	Implement a supplier ESG evaluation system	<ul style="list-style-type: none"> · Establish and advance supplier code of conduct, guidelines, and checklists · Develop evaluation target selection criteria · Conduct an ESG management consulting for 10 suppliers in 2023 · Establish an improvement management and due diligence system



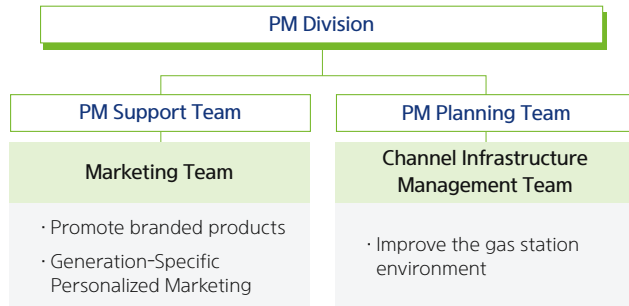
Supplier ESG Evaluation Results Reporting Meeting

Customers

GOVERNANCE >>

Organizational Structure

We established an organizational structure to facilitate partnerships and events with other companies, continuously enhance customer satisfaction by improving the working environment, and offer a unique experience through smooth business operations.



Customer Service Awards

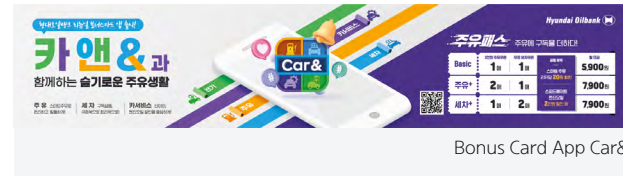
Due to our continuous efforts to prioritize customer satisfaction, HD Hyundai Oilbank has been named the top gas station in the Korean Standard Well-being and Environment Index (KS-WEI) for two consecutive years by the Korean Standards Association. The KS-WEI survey measures customer satisfaction within each industry and aims to promote an eco-friendly consumption culture while emphasizing safety and social responsibility. We will continue to strive to improve the quality of our customer service to maintain our position as a leading gas station in terms of customer satisfaction.

STRATEGY >>

Customer Satisfaction Programs

Customer-Friendly Services

Renewal of the Car and Life Integrated Platform: Car& We have reorganized our bonus card app, Car&. We have simplified the design around the core services such as smart fueling, subscription service, and refueling pass, enabling our customers to make payments and accumulate points quickly and conveniently. In addition, we are expanding our range of services through various partnerships, such as mobile car wash, mobile car repair, car rentals, and tire services.



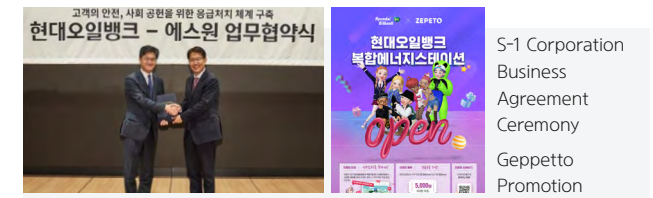
Bonus Card App Car&

Coupon Book Savings Plan with HD Hyundai Oilbank We partnered with KB Kookmin Bank and launched the Coupon Book Savings Plan with HD Hyundai Oilbank. This is a limited savings plan with enhanced benefits, offering high interest rates and gas discounts worth up to 36,000 won. Moreover, we are planning various promotions through partnerships with various companies to offer more useful benefits to our customers.

Customer-Friendly Gas Stations

Installation of AED at directly-managed gas stations We have partnered with S-1 Corporation to establish a first aid system aimed at ensuring the safety of our customers and the wider society. As part of this initiative, we have installed automated external defibrillators (AEDs) in 210 of our directly-managed gas stations located in urban areas with high foot traffic. We guide customers to the locations of these AEDs through our bonus card app, Car&, and collaborate with S-1 Corporation to provide regular CPR and AED training for Commissioned Operators of these gas stations.

Virtual Energy Stations in the Metaverse We implemented a marketing strategy that targets Millennials and Generation Z by creating a multi-energy station in the metaverse platform Geppetto. This station offers various types of fuels, including gasoline, diesel, hydrogen, and electricity, and we presented it as a cultural complex by including services like premium car wash. Through this initiative, our customers were able to indirectly experience our various platform businesses.



Quality Management

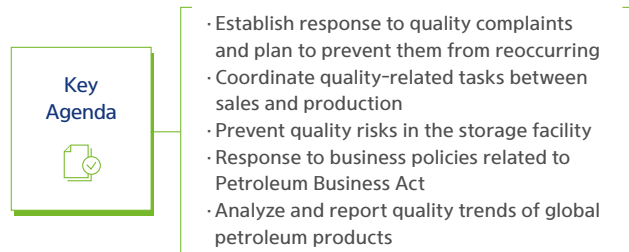
GOVERNANCE >>

Organizational Structure

Product quality is a crucial factor in customer satisfaction, and at HD Hyundai Oilbank, we make every effort to maintain reliable quality for our customers. Our Quality Management Team is dedicated to quality innovation through activities such as quality evaluation, inspection, and quality strategy meetings.



We hold bimonthly quality strategy meetings to make important decisions regarding improving quality, enhancing brand value, and preventing and responding to quality complaints.



STRATEGY >>

Quality Control System

Quality Management System

Quality Management System and Certification We are demonstrating world-class level of quality management by renewing our ISO 9001 quality management system certification every year, and we strive to identify and eliminate factors that may cause quality risks in the entire life cycle from production to sales. To prevent reoccurrence of quality risks, we establish and apply response measures across the company after it happens.

As a result of our thorough quality management efforts, our products have been approved as suitable for both the annual fuel quality inspections conducted by the Ministry of Trade, Industry and Energy and the Ministry of Environment for gas stations in Korea. Moreover, our products have consistently been ranked at the top for quality and reliability in the Fuel Oil, LPG, and Asphalt Precision Comparison Test conducted by the Korea Petroleum Quality & Distribution Authority, among four other Korean petroleum companies and various petroleum business labs. Our oils have received this recognition every year from 2014 to the present.

Quality Control Process

Quality Management Regulations We have established our quality policy along with detailed rules, aiming to achieve the highest level of quality in the world.

Quality Complaint Response System Our quality management team follows a defined process to address customer quality complaints and handle normalization measures.



Quality Management

STRATEGY >>

Quality Control Activities

Quality Inspection We conduct quality inspections in accordance with the regulations stipulated by laws and regulations at all distribution stages, from production to sales. We also conduct pre-quality inspection throughout the year to ensure thorough control of product quality.

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 on-site to analyze the product together and provide a detailed explanation of the results.

Customer Quality Support Center In order to effectively prevent and manage quality risks in the distribution stage and actively address various quality complaints, we operate customer quality support centers with the latest experimental analysis equipment in Pangyo, Gunsan, and Busan. The customer quality support center takes samples, conducts quality evaluations, and promptly notifies the results to relevant departments and customers.

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 Training We conduct biannual quality training for our sales associates and gas station owners, focusing on ensuring product quality and preventing sales of counterfeit oil. In response to the COVID-19 pandemic, our S/S Control and Strategy Team has conducted online video training for individuals who were unable to attend in-person sessions. As we move forward, we are planning to expand in-person training for gas station owners by utilizing service academies. In order to enhance the effectiveness of our quality training program, we plan to actively employ teaching materials such as booklets, calendars, and promotional materials.



Quality Training Materials

Information Security and Privacy

GOVERNANCE >>

Organizational Structure

HD Hyundai Oilbank's information security organization operates an administrative and technical information security management system. This includes investing in the company's information security, raising employee awareness of security measures, conducting vulnerability diagnosis, and establishing security policies. In addition, the information security organization collaborates with external security companies to effectively respond to both internal and external threats, and closely works with the HD Hyundai Group's information security organization to enhance the overall security level of the affiliates.

Information Protection Organization Chart



STRATEGY >>

Information Security Management System

Information Security Management System Certification

In compliance with the Information Communications Network Act, we hold certification for the Korean information protection and personal information protection management system. We strive to strictly adhere to relevant laws and regulations pertaining to personal information protection. From 2017 to 2019, we maintained the Production Information Management System (PIMPS), and in 2022, we acquired the Personal Information & Information Security Management System (ISMS-P). To ensure the safe management of customer information, we underwent a second follow-up audit in 2022 to maintain the certification. Furthermore, we regularly assess the proper operation of our management system through an external security consulting company to identify and address any deficiencies.

Information Security Education and Training

We consistently prioritize information security by conducting regular training for our employees. Every year, we provide dedicated personal information protection training to the relevant employees to enhance the overall security level of the company. In 2022, we also conducted additional security change management training for employees who relocated to the new GRC building. To further raise awareness among our employees, we conduct malicious email drills at least twice a year, which help our staff familiarize themselves with identifying and handling potential security threats. In addition, we distribute a monthly newsletter to employees, which covers the latest security trends and internal security policies. In 2022, we conducted five malicious email drills and shared 12 information security newsletters with our employees.



ISMS-P Certification

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 and prevent both external hacking threats and internal abnormal behavior.

To protect against external hacking attempts and unauthorized access, we utilize a DDoS protection tool, web 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.

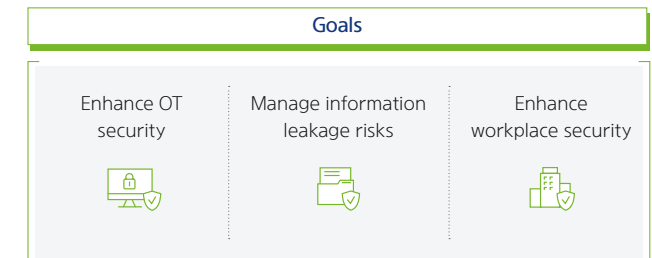
All system logs are collected and continuously monitored in real time by our security control and analysis system, which operates around the clock. We are continuously advancing our security tools and technologies to effectively respond to increasingly intelligent and sophisticated security threats.

Security Incident Response

Vulnerability Diagnosis and Security Incident Response We have implemented an investigation and response process to address security incidents effectively. Additionally, we conduct an annual security infringement drill to test and enhance our incident response capabilities. We perform mock hacking and vulnerability diagnosis on external websites twice a year, which helps us identify potential weaknesses in our systems, allowing 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. This insurance coverage ensures that we can fulfill our responsibility to compensate for any damages caused by security infringement incidents.

Processing of Personal Data We are committed to managing personal information safely and continuously improving the level of protection. To create a safe usage environment, we have implemented a separate network for our personal information processing system. Furthermore, we conduct regular checks on external personal information processing companies at least once a year to minimize risks, and maintain ongoing monitoring and management practices to ensure compliance with relevant laws and regulations.

For 2023, we have set a goal to establish a secure IT environment capable of smartly addressing any needs that arise. To achieve this goal, we will conduct a thorough evaluation of the security level in all existing and new business areas and reorganize our management system to effectively prevent any potential information leakage.



Local Communities

GOVERNANCE >>

Organizational Structure

HD Hyundai Oilbank is actively engaged in various social contribution activities under the leadership of our Public Relations team to fulfill our corporate social responsibility. We actively participate in the HD Hyundai Group's social contribution council and collaborate with other affiliate companies to create synergy in our social impact initiatives.



STRATEGY >>

Social Contribution Policy

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



HD Hyundai 1% Nanum Foundation

In 2011, we established the HD Hyundai Oilbank 1% Nanum Foundation, which allows our employees to contribute 1% of their salaries to support underprivileged individuals. Since its establishment, our gas stations, suppliers, and many other major companies have also joined us in this initiative, creating a new donation paradigm in our society. In 2020, we expanded this initiative to the HD Hyundai 1% Nanum Foundation, involving all our affiliates and increasing the overall scope of our sharing activities.

Office Furniture Donation

As HD Hyundai Oilbank relocated to Global R&D Center in Bundang, we donated about 400 pieces of furniture, including desks, chairs, and drawers, to 19 organizations selected together with ChildFund Korea. Furthermore, we provided financial support for replacing office furniture and building break rooms for many of our suppliers and gas stations, and delivered more than 2,000 pieces of furniture to 87 institutions as part of our commitment of creating social value.

Helping Türkiye Refugees

We participated in the event aimed at collecting relief items for Türkiye refugees suffering from the earthquake. Five of our suppliers, including GRC, Gyedong Office, and Daesan plant, worked together to deliver approximately 600 pieces of winter clothing to those in need.



Local Communities

STRATEGY >>

Community Service Activities

Win-Win Activities

Local Rice Purchase Project For the past 20 years, we have carried out the Local Rice Purchase Project since 2003. The primary objective of this project is to revitalize the local economy. With enhancing the competitiveness of local agriculture, we encourage our local farmer to cultivate high-quality rice varieties. Most importantly, we annually purchase local rice worth KRW 1 billion to support local rice farmers directly. Furthermore, we produce and distribute ton bags for rice storage to them. The rice we purchase is then donated under the name of "Sharing Rice of Hope and Energy" to 15 cities and counties in South Chungcheong Province.

Kimchi-Making Charity Event Since 2012, we have held the annual Kimchi-making Charity Event, in every October–November. During this event, local organizations and our employees come together to make kimchi using locally sourced ingredients. The kimchi is then distributed to individuals in need who reside near our plant. In 2022, our employees, along with their families and local organizations, collectively delivered a generous contribution of 3,200 heads of kimchi and 3,000 kg of rice.



Local Rice Purchase Project



Kimchi-making Charity Event

Supporting the Underprivileged

Happiness Sharing Volunteer Program Since 2005, HD Hyundai Oilbank employees have been actively participating in the Happiness Sharing Volunteer Program, offering their time and assistance to various sites in need. For every hour volunteered by our employees, a designated amount of money is donated by the company through a matching grant to the respective organization. We also offer support by fulfilling up to KRW 2 million worth of requested items, hoping to create a more compassionate and caring world. In 2022, our employees have volunteered a total of 5,110 hours.

Heating Bill Support Project Since 2005, we have been implementing a heating bill support program to assist the elderly residents living near our plant in staying warm during the winter months. In 2022, in collaboration with the 1% Nanum Foundation, we extended our support to 31 senior centers in Daesan and provided heating expenses to our neighbors who were facing challenges due to rising inflation and cold waves.

Self-Reliant Future Generations

Local Talent Development Program In 2006, we established the HD Hyundai Oilbank Scholarship Foundation with the aim of supporting local students near our headquarters. Each year, we select approximately 100 students from the area surrounding our Daesan Plant and provide them with scholarship support. Furthermore, we organize college preparation briefing sessions for local examinees and their parents, who may have limited access to information compared to those in larger cities. For college students, we also offer career exploration opportunities through career fairs.

Joint Youth Soccer Program Since 2020, we have been collaborating with the K League to jointly operate a youth soccer program. In 2021, we recruited 23 promising young soccer players for the second year of the Dream Assists program. Through this initiative, these talented individuals had the opportunity to further develop their skills and receive one-on-one mentoring from current professional soccer players.



Scholarship Ceremony

Local Communities

STRATEGY >>

Social Contribution Programs Under ESG Vision

Sea-Caring Project Since 2003, we have been dedicated to the Sea-Caring Project, an initiative with an annual budget of KRW 200 million. Over the past 20 years, we have focused on releasing rockfish into the coastal waters of Samgilpo, aiming to enhance coastal fish stocks and support the livelihoods of fishermen. Through our efforts, Samgilpo has transformed into the largest rockfish collection area in Korea. The success of our project has even led to the establishment of the renowned Samgilpo Rockfish Festival, which attracts visitors from all corners of the country.

Hwagok Reservoir Park Project The Hwagok Reservoir, located near Daesan plant, was heavily polluted due to garbage dumping. In 2014, HD Hyundai Oilbank undertook the Hwagok Reservoir Park Project, which involved cleaning up the surrounding area and installing a walking deck along the reservoir. Since its implementation, there have been fewer garbage dumping issues, and the reservoir has transformed into a beautiful resting place for local residents. We allocate an annual budget of KRW 50 million to maintain the park, and we continuously plant flowers and trees to develop it into an environmentally-friendly park.

Eco-Friendly Pop-Up Book Our Public Relations team actively develops participatory volunteer programs by incorporating diverse opinions from employees who are interested in social contributions. In 2022, a total of 230 employees participated in a project to create 1,136 eco-friendly pop-up books for children, which contained information about resource recycling. These books were donated to a child welfare facility to provide opportunities for children to learn the importance of the environment in an entertaining way.

Carbon Reduction Walk Campaign In 2022, we successfully completed our “Green Walk, Together” donation campaign, which was based on the number of steps taken by participants. Approximately 600 employees and their families joined this campaign, collectively accumulating 120 million steps over the course of one month. This impressive step count translates to a distance of approximately 60,000 kilometers and an estimated reduction in carbon emissions equivalent to 15 tons, which is comparable to planting around 360 pine trees. The steps were collected through the walk donation application, Big Walk, and for every 100 million steps, we donated KRW 100 million. The raised amount of KRW 100 million was then delivered to the Korean Society of Child Welfare to provide support for young individuals transitioning from orphanages into adulthood.

Hiring People With Disabilities We support our employees with disabilities who work at our directly-managed gas stations nationwide, ensuring that they can actively participate as valuable members of society. In celebration of the Day of Disabled Persons, we organize a special event where we invite their friends and families, and we provide them with complementary work uniforms twice a year.

Delivery Worker Safety Campaign 97 of our directly-managed gas stations are planning to display safe delivery campaign posters as part of the Delivery Worker Safety Campaign led by the Industrial Safety Standards Division of the Ministry of Employment and Labor. The campaign will run for two months, from April to May.

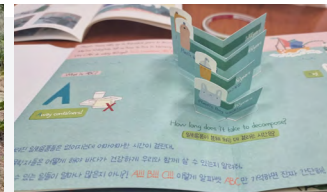
Entering the Advertising Agency Business HD Hyundai Oilbank is considering a project to install digital signage on top of the self-fueling machines at gas stations. This will allow us to transmit advertisements, including main commercial advertisements, and also create social value by promoting public campaigns.



Sea-Caring Project



Hwagok Reservoir Park Project



Eco-Friendly Pop-Up Book

Green Walk, Together
Safe Delivery Campaign Poster

Local Communities

METRICS AND TARGETS >>

Social Contribution Activities and Goals

	Program		2022 Performance	2023 Plan
Win-Win Activities 	Local Rice Purchase Project	Contributing to the stable sales of rice by local farmers	· Purchased amount: KRW 1 billion	· Plan to continue ('03~)
	Sea-Caring Project	Releasing rockfish into the water	· Volume: 200,000	· Plan to continue ('03~) · Project budget: KRW 200 million
	Preserving the Local Environment	Marine cleanup activities near the plant, removal of large wastes, environmental improvement of ecological parks, etc.	· Hwagok Reservoir Park Project	· Plan to continue
	Kimchi-Making Charity Event	Delivering kimchi to the underprivileged with the local government and town council	· Volume: 3,200 heads (50 participants)	· Plan to continue
Supporting the Underprivileged 	Happiness Sharing Volunteer Activities	Making eco-friendly pop-up books, carbon reduction walking campaign, etc. Develop programs that employees and their families can participate together	· Donated 1,136 books to children's facilities · Raised 100 million steps, and donated KRW 100 million to the Korean Society of Child Welfare · 338 participants (a total of 5,110 hours)	· Plan to continue
	1% Nanum Nest	Reconstruction of houses of local residents whose residences were destroyed by disasters	· Reconstructed one house damaged due to flood · 1 additional temporary modular house	· Reconstruction: one house · Temporary house: one house
	1% Nanum Meal House	Providing free lunch for elderly people at senior welfare centers	· Selected five senior welfare centers in Seoul, Busan, Daejeon, and Seosan · Provided KRW 50 million a year of lunch cost for each center	· Locations: five senior welfare centers · Budget: KRW 250 million
	Heating Oil of Love	Provide heating oil to vulnerable households and facilities	· Provided heating oil to 300 households and 150 facilities · Improved heating efficiency for ten households and five facilities	· Budget: KRW 500 million
	Barrier-Free Films	Enhancing access to cultural activities for people with hearing and visual impairments Expansion of barrier-free film production support and encourage employee participation	· Production support: CODA, Hommage, Greta Thunberg · Employee talent donation: Voices of 10 employees	· Number of productions: three films
Self-Reliant Future Generations 	Youth Scholarship Project	Provide scholarships for the children of maritime and land police and truck drivers and vulnerable families in the local community	· KRW 61.5 million to 32 children of maritime and land police · KRW 100 million to 115 children of truck drivers · KRW 58.5 million to 157 children from vulnerable households	· Continue the scholarship support (KRW 230 million)
	Dream Assist Program	Recruiting young soccer players and providing overseas training opportunities in collaboration with K League	· Implemented the Joint Youth Soccer Program · Selected 40 children and provided mentoring with professional soccer players	· Plan to expand · Project budget: KRW 30 million
Other 	Sisterhood with Marine Corps Yeonpyeong Unit	Assisting comfortable living environments for Marine Corps Veterans	· Installed the basketball hoops in the gym	· Budget: KRW 20 million
	Fundraising	Raising fund for forest fire damages, Itaewon disaster, year-end campaign, etc.	· KRW 200 million for Hope Bridge Korea Disaster Relief Association · KRW 2 billion for Community Chest of Korea · KRW 300 million for child welfare organizations	

GOVERNANCE

Green Leadership
with Transparency



- 77 Governance
- 80 Business Ethics
- 82 Compliance
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Governance

Board Leadership

Roles and Composition

The Board of Directors is established to ensure management transparency and enhance the value of companies through strategic decision-making, advice, and monitoring of overall management matters. The board holds the authority to appoint a 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. As the decision-making body of the company, the board conducts thorough and open discussions to examine and approve major management decisions such as improving the financial structure and undertaking significant investment projects.

Title	Name	Gender	Expertise	Term	Committee Activities	Career
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	-	Head of Management Support Department, HD Korea Shipbuilding & Offshore Engineering
Non-executive Director	Samer A. Hokail	Male	Global Network	2 years	ESG Committee	General Manager, Saudi Aramco Affiliates (2021-) CEO, Saudi Petroleum International (2016-2021)
Independent Director	Hyun-Woong Kim	Male	Law	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	Business Administration	2 years	Audit Committee Independent Director Nomination Committee Internal Transaction Monitoring Committee ◆ ESG Committee	Visiting Professor, Graduate School of Engineering Practice, Seoul National University (2016-) Vice President, KT Management Planning Division (2014-2015) Director, SpaceN (2012-2014) CEO, KT Networks (2009-2011)
	Sun-Hwa Choi	Female	Finance	3 years	Audit Committee ◆ Independent Director Nomination Committee Internal Transaction Monitoring 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

*As of March 2023, ◆ Chairman

Governance

Board Leadership

Board Transparency

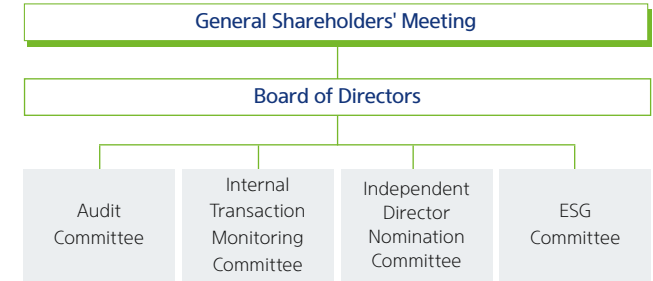
Directors are appointed through a shareholder vote at the general shareholders' meeting in accordance with Article 382 of the Commercial Act. Inside directors are appointed based on board recommendations, while independent directors are chosen from among nominated candidates by the Independent Director Nomination Committee, as specified in Article 542-8 of the Commercial Act. According to the same regulation, the majority of the Independent Director Nomination Committee members must be composed of outside directors. HD Hyundai Oilbank complies with this requirement by having one inside director and three independent directors on the committee, ensuring a fair selection process for nominees. The term of directors ranges from one to three years, as outlined in the company's articles of incorporation.

Board Diversity and Expertise

Our Board of Directors selects directors based on their professional expertise in key areas that are critical for effective management decision-making. These areas include energy, chemistry, law, corporate management, accounting/finance, and global networks. By leveraging their extensive knowledge and understanding of the company and its business systems, the board ensures that rational decisions are made. Furthermore, we are dedicated to promoting gender diversity within the board by appointing more female independent directors.

Board Committees

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 relevant regulations. Each committee adheres to its specific set of regulations and guidelines in carrying out its responsibilities.



Roles and Composition (As of March 2023)

<p>Audit Committee</p>	<p>Hyun-Woong Kim Hoon Hahn Sun-Hwa Choi (Chairman)</p>	<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
<p>Internal Transaction Monitoring Committee</p>	<p>Hyun-Woong Kim Hoon Hahn (Chairman) Sun-Hwa Choi</p>	<ul style="list-style-type: none"> · Review and approve large-scale internal transactions in accordance with the Fair Trade Act
<p>Independent Director Nomination Committee</p>	<p>Youngmin Chu Hyun-Woong Kim (Chairman) Hoon Hahn Sun-Hwa Choi</p>	<ul style="list-style-type: none"> · Nominate candidates for independent directors to be appointed at the general shareholders' meeting
<p>ESG Committee</p>	<p>Youngmin Chu (Chairman) Samer A. Hokail Hyun-Woong Kim Hoon Hahn Sun-Hwa Choi</p>	<ul style="list-style-type: none"> · Determine the company's ESG management directions and examine key ESG issues

Governance

Board Operation

Board Activities

Our Board of Directors holds both regular and special meetings. The directors are notified one month in advance for regular meetings and two weeks in advance for special meetings. Along with the notice, materials related to the meeting agenda are provided so that the directors have sufficient time to review the matters prior to the meeting. In the year 2022, a total of 13 board meetings were held. The attendance rate for inside and non-executive directors was 90%, while the attendance rate for independent directors was 100%.

Board Remuneration

The remuneration of registered directors is paid in compliance with regulations, within the annual remuneration limit of KRW 3 billion-approved by the general shareholders' meeting. For inside directors, their remuneration includes a basic salary and a performance salary. The basic salary is determined based on executive remuneration standards, while the performance salary takes into account quantitative indicators such as sales and operating profit, as well as qualitative indicators such as leadership and job expertise in achieving management performance.

As for the members of the Audit Committee, their compensation is paid on a monthly basis within the limit approved by the general shareholders' meeting to ensure their independence.

Competency Development

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

Independent Director Training Status

Date	Details
February 2020	Internal accounting control system and audit procedures
October 2020	Changes in the financial circumstances in 2020, the role and responsibilities of the Audit Committee, and implementation strategies for the consolidated internal accounting control system
January 2021	Internal accounting control system and audit procedures
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 related to corrupt cases

Protecting the Rights of Shareholders

Dividend Policy and Shareholder Status

HD Hyundai¹⁾, the largest shareholder of HD Hyundai Oilbank, is a holding company that was spun off from Korea Shipbuilding & Offshore Engineering. As of the end of 2022, it owns 180,991,117 shares.

The dividend policy of our company is determined by taking into account various factors, including the financial structure and dividend stability. In addition, we have established conditions that allow for the payment of interim dividends with the approval of the board based on the management circumstances. Interim dividends were implemented in July 2022 in accordance with Article 462-3 of the Commercial Act and Article 49 of HD Hyundai Oilbank's articles of incorporation.

1) Changed the company name from Hyundai Heavy Industries Holding to HD Hyundai in March 2022

Shareholders With 5% Or More

Shareholder	Number of shares	Share ratio
HD Hyundai	180,991,117	73.85%
Aramco	41,664,012	17.00%

Business Ethics

GOVERNANCE >>

Business Ethics System

HD Hyundai's System

HD Hyundai Oilbank has established a 'Code of Conduct' and 'Business Ethics Guidelines' based on the 'Charter of Ethics' that reflects our management philosophy, promoting effective ethical management. Furthermore, we are continuously improving the effectiveness of these guidelines by incorporating changes in social aspects, such as laws related to corruption, social perceptions of ethical management, and issues like solicitation and bribery.

Value Structure

Like a "FOREST" that contributes to the coexistence of all surrounding lives, we will foster an environment for all stakeholders' growth and development and pursue a sense of fairness, ownership, responsibility, enthusiasm, safety, transparency and trust.



Charter of Ethics Since the adaptation of ethics regulations for procurement position in 1994, HD Hyundai has been active in implementing and expanding its ethics program, online ethics violation reporting platform and training courses. In October 2005, HD Hyundai also established its 'Charter of Ethics', which set out its ethical management philosophy. Following the merger with HD Hyundai Group in August 2010, HD Hyundai Oilbank has been adhering to the principles outlined in the Charter of Ethics.

[HD Hyundai Business Ethics Website](#)

Code of Conduct HD Hyundai has enhanced its ethical management practices by refining each sector of the Charter of Ethics and establishing the Code of Conduct and Business Ethics Guidelines. In addition, the company has developed the Code of Ethics for Business Partners, aiming to promote more effective ethical management throughout its business relationships. We actively encourage its employees to comply with the ethical management rules through various initiatives, such as ethical management practices and internal audits.

Establishing an Ethical Culture

HD Hyundai Oilbank is committed to promoting an ethical corporate culture through transparent management and ongoing innovation based on employee ethics and responsibility to various stakeholders.

Clean, Honest, and Transparent Business

Commitment to Our Customers and Business Partners

- Improvement of customer value
- Fair business practices
- Pursuance of mutual development

National and Social Responsibility

- Observance of domestic and international laws
- Contribution to national and social development

Responsibility towards shareholders and employees

- Maximizing shareholders' value
- Respect for employees
- Safe working environment

Employees' Basic Ethics

- Fair performance of duties
- Respecting mutual trust
- Compliance with work ethics

In addition, we operate various Business Ethics Action Program based on the Charter of Ethics, Code of Ethics, and Business Ethics Guidelines.

Charter of Ethics

Code of Conduct

Business Ethics Guidelines

Business Ethics Action Programs

Business Ethics

STRATEGY >>

Core Values & Direction

Business Ethics Action Programs

1	Commitment to Business Ethics Management	<ul style="list-style-type: none"> Our employees and suppliers are required to annually submit a pledge of commitment to business ethics, which is a commitment to understanding the relevant regulations and abiding by corporate policies and guidelines. Number of employees and suppliers that submitted the Ethics Pledge 2022: 1,460 employees and 101 companies
2	Conflict of Interest Reporting	<ul style="list-style-type: none"> When a possible conflict of interest is identified, the employee in question is obligated to report the issue in advance. This policy applies to executives and employees as well as employees of partners on an annual basis.
3	Clean Notice System	<ul style="list-style-type: none"> When employees receive gifts unavoidably from stakeholders, we have implemented a system that helps them return the gift to its source or donate to the charities only with a simple notice process.
4	Clean National Holiday Campaign	<ul style="list-style-type: none"> We send off letters to our partners not to provide any gift to our employees prior to major national holidays such as the Lunar New Year and Korean Thanksgiving Day and urge employees not to accept gifts from stakeholders.
5	Ethical Violation Reporting and Whistleblower Protection System	<ul style="list-style-type: none"> We run an ethical violation reporting and reward system to eradicate unethical behaviors and promote an ethical corporate culture.
6	Business Ethics Self-Evaluation	<ul style="list-style-type: none"> The self-monitoring and evaluation system helps employees enhance the understanding of business ethics and find points for improvements.
7	Business Ethics Field Sessions	<ul style="list-style-type: none"> We conduct field sessions to hear opinions from employees and partner companies to diagnose and improve the level of ethics compliance. We also ensure those opinions are reflected to the work process.
8	Training and Promotion of Business Ethics	<ul style="list-style-type: none"> Every year, we conduct both group and online training courses on business ethics to enhance employees' understanding and motivate active compliance. We utilize promotional videos to further reinforce ethical values and principles within the organization. Number of employees who completed ethics training in 2022: 1,950 employees

Business Ethics Reporting Channel

HD Hyundai Oilbank operates a 24/7 online reporting system on the Group's Business Ethics website. This system allows anyone to report unethical behaviors such as receiving bribes and abuse of official authority for personal gains. Reports can also be submitted via phone, fax, e-mail, and postal mail.

We thoroughly protect whistleblowers' identities and provide rewards based on our internal rewarding standards for reporters. In 2022, we received a total of 12 reports through this system. Investigations were conducted on three cases suspected of unethical behavior. One case was found to be a violation, and disciplinary measures were taken against the relevant employee following our internal regulations and procedures. The remaining nine complaints were transferred to the relevant departments, and appropriate actions have been taken.



HD Hyundai Business Ethics Website

Compliance

GOVERNANCE >>

Organizational Structure

In 2018, HD Hyundai Oilbank established compliance control standards and appointed the head of the legal affairs division 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 Chief Compliance Officer (CCO) and implementing our own Compliance Program (CP) across our management activities.

The Compliance Program enables us to prevent potential legal violations in our management activities by regularly reporting on the status of compliance management and setting practice standards for compliance with fair trade laws. To ensure effective compliance management, we emphasize smooth communication and close collaboration among all relevant departments.



STRATEGY >>

Fair Trade Compliance Program

CEO's Commitment to Compliance

At HD Hyundai Oilbank, we have a strong commitment to complying with fair trade laws and regulations. This commitment starts from the top, as our CEO sets fair trade and compliance management goals at the beginning of each year. The CEO also signs the Declaration of Ethical and Legal Compliance Management Practice, which is posted on our website for all employees to review. This practice creates a culture within our workplace where every member, from new hires to the CEO, understands the importance of compliance and works together to adhere to laws and regulations.

Compliance Policy

We constantly develop and revise our internal regulations to respond to various situations.

In addition to the Business Ethics Guidelines for our general business operation, we have developed and implemented not only compliance control standards in accordance with Fair Trade Business Regulations but also Anti-Corruption Laws Compliance Manual and Guidelines for Economic Sanctions Laws.

Employee Compliance Training Program

Throughout the year, we conduct various training programs to ensure that our employees are well-informed about fair trade laws and regulations and are able to comply with them in their work.

Fair trade training is conducted at least once a year for members of the PM Division and we provide specialized training for new hires and employees assigned to relevant departments. To ensure that new hires quickly familiarize themselves with fair trade principles, we provide them with various educational materials within 30 days of their employment.

Furthermore, we support our employees by covering the expenses for on-site or online training organized by external organizations such as law firms and the Fair Competition Federation so that our employees to enhance their knowledge and skills related to fair trade practices.

In response to a previous order from the Korea Fair Trade Commission and the US Federal Trade Commission regarding US military bid rigging, we have implemented comprehensive training programs that cover topics such as US antitrust law, government contract law, and Korean fair trade law. By conducting in-depth training on these subjects, we are actively working to prevent any anti-competitive behaviors within our organization.

Compliance

RISK MANAGEMENT >>

Compliance Risk Management

Internal Supervision of Fair Trade

HD Hyundai Oilbank establishes and implements various internal supervision systems to promptly identify and address fair trade risks that may arise in our business operations.

To ensure comprehensive compliance, we thoroughly examine any violations by participating in regular Fair Trade Commission Investigations as outlined in the Fair Trade Act, the Agency Act, and Subcontracting Law.

Additionally, we enforce fair trade compliance evaluations within the PM Division to encourage them to be more mindful while performing job duties as their work closely relates to the Fair Trade Act.

When special attention is required at sales sites, the Government Relations Team (Energy) and the Legal Affairs Division conduct inspections to provide support in making informed decisions. Furthermore, we actively utilize hotlines and an external online reporting system to identify and address fair trade risks.

Appointment of Compliance Managers

In accordance with Article 9 of our compliance management standards, HD Hyundai Oilbank and our energy affiliates select compliance managers for each department. These compliance managers are responsible for assisting compliance officers in conducting compliance risk assessments and providing compliance training. We have completed the appointment of compliance managers in February 2023.

Compliance Risk Assessment

Since 2022, HD Hyundai Oilbank has conducted compliance risk assessments for all departments of our company and our energy affiliates, following the selection of compliance managers in 2023.

These assessments are carried out by compliance managers who report on the transaction status of each department, including sales, purchases, and transactions between suppliers and affiliates. In 2023, we have implemented a risk assessment management table, which enables them to identify risk items, track control status, and determine improvement directions to effectively manage potential risks.

To further strengthen our risk management system, we have planned additional compliance training and on-site inspections for departments that pose medium to high risks in areas such as corruption, price fixing, subcontracting, fair trade, and economic sanction laws.

Risk Management

GOVERNANCE >>

Risk Management System

To effectively respond to various risk factors such as oil prices, foreign exchange, and compliance, HD Hyundai Oilbank's business department meticulously manages risks. The department identifies and forecasts potential risks and continuously monitors market conditions to prevent them. To address oil price and foreign exchange risks in a timely manner, we convene the Risk Management Committee, chaired by the CEO, every quarter or as needed. This committee ensures stable management of profit and loss even in rapidly changing conditions. In addition, we undergo legal and tax examinations prior to entering into any business contracts. Recently, we have revised our delegations of authority policy to manage potential operational risks to enable decision-making through discussions and approvals involving relevant departments when signing business agreements and engaging with external companies and government agencies.

Risk Management Process HD Hyundai Oilbank identifies certain factors such as oil prices, petroleum product prices, and exchange rates as risks that can fluctuate. To mitigate these risks, we implement physical adjustment and engage in hedging activities. To facilitate this process, the risk management committee develops key strategies, while the business department implements improvement measures and monitors the market closely.



Non-Financial Risk Assessment Prior to Investments When examining investment projects, we conduct a comprehensive evaluation of environmental and safety risks, tax risks, and potential violations of laws and systems based on ESG impacts. Major investments undergo the approval process of the Investment Review Committee. Then, the reviewing department conducts an ESG assessment after receiving inputs from various teams, including EHS Division, the Tax team, the Legal Affairs Division, and the GHG organization, and examines the profitability of investment scenarios, considering various risks. Furthermore, the department responsible for investment execution conducts follow-up assessments after one year, focusing on investment performance, project progress, and profitability.

Internal Accounting Management System

HD Hyundai Oilbank operates 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 operations 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 and notify key schedules such as deficiencies improvement plans and inspection directions to the Audit Committee
Control activity evaluation (3 times/year)	<ul style="list-style-type: none"> · Develop and examine 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 reporting of 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

Risk Management

STRATEGY >>

Risk Management

Risk Management Committee	Financial	Oil Price	Crude oil transportation typically takes about 1 to 2 months, which exposes us to a risk of price fluctuations during this timeframe. To mitigate this risk, we implement price adjustments for purchased crude oil and employ hedging strategies through forward transactions. In addition, HD Hyundai Oilbank hedges operating margins for crude oils as necessary considering market circumstances to defend the reduction in profits from the decline in petroleum prices. Hedging is always done for any transactions that need to fix profits.
		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 risk management department actively executes hedging activities in areas where the risk exposure is significant, in accordance with this strategy.
ESG Committee	Non-financial	Environment	To enhance our company's environmental management, we have recognized and elevated our existing environmental teams into a department unit, each consisting of three teams based on their work characteristics: planning, management, and technical. We also established the Environmental Working Group to address major environmental issues and formed a functional GHG management organization and GHG working group to enhance our ability to combat climate change and reduce our carbon emission. 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 Management Committee (PORC) collaborate to discuss safety risks and establish regulations such as the Crisis Management Committee Operating Regulations, Safety Committee Operating Regulations, Work Suspension and Serious Accident Response Regulations, Emergency Response Regulations, and Incident Investigation Regulations. Additionally, 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. Furthermore, we renew our ISO 9001 certification annually to demonstrate our adherence to international standards of quality management.
		Ethics and Compliance	Our employees proactively prevent risks by engaging in consultations regarding compliance programs and undergoing fair trade risk assessments for various operations in advance. 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. This approach guarantees transaction transparency through 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 familiarize our 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. We operate an information security and privacy management system that has been ISMS-P certified. We are preventing risks and enhancing our response capabilities through activities such as monitoring, vulnerability diagnosis, implementing a separate network for our personal information processing system, and training and drills. We are dedicated to preventing internal information leakage, especially in response to the evolving work environment shifting towards remote operations.

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ESG Data

Financial Performance¹⁾

(Unit: KRW million)

Item	57th Term	58th Term	59th Term
Condensed Consolidated Statement of Financial Position	(End of Dec. 2020)	(End of Dec. 2021)	(End of Dec. 2022)
Current assets	3,292,680	5,536,922	6,366,227
Cash and cash equivalents	301,665	323,088	134,889
Financial assets	58,093	102,082	93,068
Trade and other receivables	1,030,590	1,729,047	2,227,976
Inventory assets	1,774,262	3,291,548	3,795,158
Other current assets	128,070	87,389	115,136
Assets held for sale	-	3,768	-
Non-current assets	11,383,560	12,652,150	13,369,157
Investments in joint ventures and associates	284,155	255,484	307,733
Financial assets	35,613	59,627	61,002
Trade and other receivables	278,610	307,944	311,756
Property, plant and equipment	9,345,574	10,558,746	11,088,555
Intangible assets	210,675	200,156	196,997
Right-of-use assets	1,217,538	1,253,982	1,292,597
Deferred tax assets	9,864	11,816	17,085
Other non-current assets	1,531	4,395	93,432
Assets total	14,676,240	18,189,072	19,735,384
Current liabilities	3,237,509	5,238,728	5,344,672
Non-current liabilities	6,167,829	7,226,544	7,463,890
Liabilities total	9,405,338	12,465,272	12,808,562
Share capital	1,225,412	1,225,412	1,225,412
Hybrid equity securities	428,924	428,924	428,924
Share premium	(176,016)	(176,016)	(176,016)
Accumulated other comprehensive income	454,199	433,854	440,928
Earned surplus	2,535,019	2,802,742	3,909,148
Non-controlling interests	803,364	1,008,884	1,098,426
Equity total	5,270,902	5,723,800	6,926,822
Sales	13,689,914	20,801,543	34,955,040
Operating profit	(593,344)	1,093,554	2,789,794
Consolidated net profit	(359,771)	491,070	1,632,702
Net profit attributable to owners	(366,659)	342,218	1,484,258
Earnings per share (Unit: KRW)	(1,575)	1,334	5,994
Number of consolidated companies	8	8	8

(Unit: KRW million)

Item	57th Term	58th Term	59th Term
Consolidated Income Statement	Jan.1 - Dec. 31, 2020	Jan.1 - Dec. 31, 2021	Jan.1 - Dec. 31, 2022
Revenue	13,689,914	20,801,543	34,955,040
Cost of sales	13,808,865	19,160,684	31,493,832
Gross profit (loss)	(118,951)	1,640,858	3,461,208
Selling and administrative expenses	474,393	547,305	671,414
Operating profit (loss)	(593,344)	1,093,554	2,789,794
Finance income	176,031	35,061	263,900
Finance costs	182,912	277,950	616,125
Other non-operating income	391,037	350,789	1,240,415
Other non-operating expenses	362,953	426,779	1,412,355
Share of loss of associates and joint ventures	1,169	(30,014)	(59,438)
Income (loss) before income tax	(570,972)	744,660	2,206,190
Income tax expense (revenue)	(211,201)	253,591	573,488
Net profit (loss)	(359,771)	491,070	1,632,702
Equity attributable to owners	(366,659)	342,218	1,484,258
Non-controlling interests	6,888	148,852	148,444
Basic earnings per share (unit: KRW)	(1,575)	1,334	5,994

1) There have been changes in the amount of data for each account in the 2021 consolidated financial statements due to the revision of Financial Accounting Standards No. 1016, Tangible Assets (please refer to the 2022 Annual report for detailed information)

ESG Data

Non-Financial Performance - Environment¹⁾

Greenhouse Gas Emissions²⁾

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

Item		Unit	2020		2021		2022							
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
GHG emissions	Total GHG emissions (Scope 1+2)		tCO ₂ e	6,841,015	8,142,730	7,510,616	9,165,327	6,827,605	3,004,636	N/A	378,403	N/A	10,210,644	
	Direct GHG emissions (Scope 1)	Total	tCO ₂ e	6,062,147	6,915,277	6,610,164	7,650,486	5,872,476	1,571,286	N/A	339,910	N/A	7,783,672	
		By type of GHG	CO ₂	tCO ₂ e	6,033,870	6,881,729	6,581,074	7,616,623	5,842,536	1,564,073	N/A	339,739	N/A	7,746,348
			CH ₄	tCO ₂ e	22,931	27,814	23,207	27,489	24,497	6,301	N/A	68	N/A	30,866
			N ₂ O	tCO ₂ e	5,346	5,735	5,883	6,374	5,442	912	N/A	101	N/A	6,455
			HFCs	tCO ₂ e	0	0	0	0	0	0	N/A	0	N/A	0
			SF ₆	tCO ₂ e	0	0	0	0	0	0	N/A	0	N/A	0
			PFC	tCO ₂ e	0	0	0	0	0	0	N/A	0	N/A	0
			NF ₃	tCO ₂ e	0	0	0	0	0	0	N/A	0	N/A	0
		By emission activity	Stationary combustion	tCO ₂ e	3,855,236	4,680,142	4,274,819	5,303,567	3,818,137	1,394,428	N/A	311,000	N/A	5,523,565
			Mobile combustion	tCO ₂ e	1,772	1,862	1,299	1,521	1,031	201	N/A	24	N/A	1,256
	Process emissions		tCO ₂ e	1,935,673	1,958,687	2,123,935	2,126,979	1,858,368	7,505	N/A	28,451	N/A	1,894,324	
	Fugitive emission		tCO ₂ e	20,499	25,120	20,618	24,566	22,116	5,499	N/A	0	N/A	27,615	
		Others	tCO ₂ e	248,967	249,466	189,493	193,853	172,824	163,653	N/A	435	N/A	336,912	
	Indirect GHG emissions (Scope 2)	tCO ₂ e	778,868	1,227,453	900,452	1,514,841	955,129	1,433,350	N/A	38,493	N/A	2,426,972		
GHG emission change ³⁾	Total change		tCO ₂ e	(140,241)	(51,685)	669,601	1,022,597	(683,011)	1,759,796	N/A	(31,468)	N/A	1,045,317	
	Scope 1 change		tCO ₂ e	(40,011)	15,733	548,017	735,209	(737,688)	901,465	N/A	(30,591)	N/A	133,186	
	Scope 2 change		tCO ₂ e	(100,230)	(67,419)	121,584	287,388	54,677	858,331	N/A	(877)	N/A	912,131	

Item	Unit	2020		2021		2022					
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	
GHG emission intensity ⁴⁾	tCO ₂ e /KRW1 billion		469.72		313.77	185.64	370.44		N/A	982.86	N/A

1) Data based on Daesan plant (GHG emissions data includes directly-managed gas stations, distribution centers, R&D centers, and Seoul office)

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

- 2021 data were corrected to the Ministry of Environment certification value

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

3) GHG emission change = emissions of the previous year - emissions of the current year

4) GHG emission intensity = GHG emission ÷ 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⁾

Energy Use²⁾

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

Item	Unit	2020		2021		2022							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Energy consumption	Total energy consumption	TJ	70,961	91,747	80,735	107,750	77,077	51,697	N/A	4,324	N/A	133,098	
	Direct Energy	Fuel	56,733	70,380	63,581	80,725	57,992	30,142	N/A	3,520	N/A	91,654	
	Indirect energy	Electricity	TJ	12,526	17,154	15,117	21,539	17,400	11,841	N/A	804	N/A	30,045
		Steam	TJ	1,702	4,213	2,037	5,486	1,685	9,714	N/A	0	N/A	11,399

Item	Unit	2020		2021		2022				
		HDO		HDO		HDO	HDC	HSB	HOC	HCP
Energy consumption intensity ³⁾	TJ/ KRW 1 billion	4.87		3.37		2.10	6.37	N/A	11.23	N/A

Renewable Energy

Item	Unit	2020		2021		2022					
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total
Solar power	TJ	0.06	0.16	0.09	0.13	0.10	0.00	0.00	0.08	0.00	0.18

Air Pollutants⁴⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Air pollutants emissions	Nitrogen Oxides (NOx)	kg	2,700,828	3,870,334	2,965,876	4,102,562	2,892,337	430,877	11,667	161,485	273,160	3,769,526
	Sulfur Oxides (SOx)	kg	1,859,441	2,067,623	1,766,239	2,009,724	1,699,037	8,631	11,745	235,148	6,105	1,960,666
	Particulate Matter (PM)	kg	51,042	57,961	49,189	80,498	34,089	220	601	5,468	12,530	52,908
	Volatile Organic Compounds (VOCs) ⁵⁾	kg	175,220	249,073	189,163	315,768	36,075	241,845	N/A	N/A	32,016	309,936
	Hazardous Air Pollutants (HAPs) ⁵⁾	kg	3,779	54,537	5,489	59,374	4,551	114,660	N/A	N/A	15,073	134,284
	Hydrogen Sulfide (H ₂ S)	kg	0	298	0	466	0	0	0	0	0	0

1) Data based on Daesan plant (GHG emissions data includes directly-managed gas stations, distribution centers, R&D centers, and Seoul office).

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

- 2021 data were corrected to the Ministry of Environment certification value

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

3) GHG emission intensity = GHG emission ÷ 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)

4) Data corrected due to the unification of data calculation standards among affiliates

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



ESG Data

Non-Financial Performance - Environment¹⁾

Water and Waste Water²⁾³⁾

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

Item	Unit	2020		2021		2022							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Water intake	Total water intake	m ³	16,996,268	18,334,270	20,570,268	22,205,157	22,362,974	N/A	N/A	1,831,953	N/A	24,194,927	
	Seawater	m ³	0	0	0	0	0	N/A	N/A	0	N/A	0	
	Surface water	m ³	4,754,750	4,771,229	8,024,791	8,039,668	9,993,785	N/A	N/A	13,156	N/A	10,006,941	
	Groundwater	m ³	0	0	0	0	0	N/A	N/A	0	N/A	0	
	Third-party water ⁴⁾	m ³	12,241,518	13,563,041	12,545,477	14,165,489	12,369,189	N/A	N/A	1,818,797	N/A	14,187,986	
Water consumption	Total water consumption	m ³	16,996,268	20,933,524	20,570,268	24,782,075	22,362,974	5,163,415	255,429	1,831,953	158,345	29,772,116	
	Total reused water	m ³	2,487,367	2,588,341	2,847,628	2,956,959	2,675,945	0	0	105,195	0	2,781,140	
	Water reuse rate	%	14.63	12.36	13.84	11.93	11.97	0	0	5.74	0	9.34	
Water discharge	Total water discharge	m ³	7,082,352	7,853,070	7,510,185	9,270,213	7,181,932	2,472,089	N/A	379,309	N/A	10,033,330	
	Seawater	m ³	7,082,352	7,609,777	7,510,185	8,970,185	7,181,932	2,472,089	N/A	0	N/A	9,654,021	
	By discharge site	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 ⁴⁾	m ³	0	243,293	0	300,028	0	0	N/A	379,309	N/A	379,309
	By type	Freshwater (≤1,000 mg/L TDS)	m ³	7,082,352	7,609,777	7,510,185	8,970,185	7,181,932	2,472,089	N/A	0	N/A	9,654,021
Other water (>1,000 mg/L TDS)		m ³	0	243,293	0	300,028	0	0	N/A	379,309	N/A	379,309	

Water Pollutants²⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Water pollutants emissions	Chemical Oxygen Demand (COD, 2022 TOC)	ton	189	201	163	198	116	35	2	2	2	157
	Biochemical Oxygen Demand (BOD)	ton	64	69	67	83	53	8	3	3	1	68
	Suspended Solids (SS)	ton	121	147	139	166	88	3	2	10	2	105
	Total Nitrogen (TN)	ton	132	144	125	152	111	10	2	3	1	127
	Total Phosphorus (TP)	ton	4	5	5	6	5	19	0	0	0	24

1) Data based on Daesan plant

2) Data corrected due to the unification of data calculation standards among affiliates

3) HD Hyundai Oilbank manages the water intake and wastewater discharge of some affiliates

4) The item name changed

ESG Data

Non-Financial Performance - Environment¹⁾

Waste²⁾

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

Item	Unit	2020		2021		2022								
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total			
Waste generated	Total weight of waste generated	ton	26,694	28,427	28,189	32,921	29,610	7,980	230	694	441	38,955		
	Hazardous waste (specified waste)	ton	8,950	9,133	9,767	10,029	7,932	3,461	11	90	7	11,501		
	Non-hazardous waste (general waste)	ton	17,744	19,294	18,422	22,892	21,678	4,519	219	604	434	27,454		
Waste treated	Total weight of waste treated	ton	26,694	28,411	28,189	32,944	29,610	7,982	230	694	441	38,957		
	Hazardous waste (specified waste)	Subtotal	ton	8,950	9,133	9,767	10,030	7,932	3,462	11	90	6	11,501	
		By treatment type	Recycled	ton	7,087	7,094	8,325	8,456	6,764	3,335	0	0	0	10,099
			Incinerated	ton	1,823	1,999	1,382	1,474	1,086	127	11	71	6	1,301
			Landfilled	ton	38	38	60	100	59	0	0	19	0	78
			Others	ton	2	2	0	0	23	0	0	0	0	23
		By treatment method	Internal	ton	0	0	0	0	0	0	0	0	0	0
	Third-party		ton	8,950	9,133	9,767	10,030	7,932	3,462	11	90	7	11,502	
	Non-hazardous waste (general waste)	Subtotal	ton	17,744	19,278	18,422	22,914	21,678	4,520	219	604	435	27,456	
		By treatment type	Recycled	ton	15,566	15,628	16,967	20,401	19,766	3,990	205	45	344	24,350
			Incinerated	ton	362	561	295	513	436	453	14	194	10	1,107
			Landfilled	ton	1,466	2,739	856	1,696	845	77	0	365	81	1,368
			Others	ton	350	350	304	304	631	0	0	0	0	631
		By treatment method	Internal	ton	175	175	0	0	0	0	0	0	0	0
	Third-party		ton	17,569	19,103	18,422	22,914	21,678	4,520	219	604	435	27,456	
Waste recycled	Total weight of waste recycled	ton	22,653	22,722	25,292	28,857	26,530	7,325	205	45	344	34,449		
	Total ratio of waste recycled	%	84.86	79.93	89.72	87.66	89.60	91.79	89.13	6.48	78.00	88.43		
	Hazardous waste (specified waste)	Subtotal	ton	7,087	7,094	8,325	8,456	6,764	3,335	0	0	0	10,099	
		Internal	ton	0	0	0	0	0	0	0	0	0	0	
		Third-party	ton	7,087	7,094	8,325	8,456	6,764	3,335	0	0	0	10,099	
	Non-hazardous waste (general waste)	Subtotal	ton	15,566	15,628	16,967	20,401	19,766	3,990	205	45	344	24,350	
		Internal	ton	0	0	0	0	0	0	0	0	0	0	
		Third-party	ton	15,566	15,628	16,967	20,401	19,766	3,990	205	45	344	24,350	

1) Data based on Daesan plant

2) Data corrected due to HD Hyundai Cosmo Petrochemical 2021 data error

ESG Data

Non-Financial Performance - Environment¹⁾

Hazardous Chemical

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

Item	Unit	2020		2021		2022 ²⁾						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Hazardous chemical	Used	ton	86,499	1,093,741	60,151	1,044,397	N/A	N/A	N/A	N/A	N/A	N/A
Chemical substances	Discharged	ton	207	347	213	385	N/A	N/A	N/A	N/A	N/A	N/A

Environmental Compliance

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Environmental compliance ³⁾	Number of environmental compliance issues	case	2	2	1	1	2	N/A	N/A	N/A	N/A	2
	Expenses due to monetary sanctions (heavier than imposition of administrative fines)	KRW million	2.6	2.6	0.5	0.5	60.0	N/A	N/A	N/A	N/A	60.0

Environmental Certifications

Item	Unit	HDO	HDC	HSB	HOC	HCP	
Environmental certifications	ISO 14001 certification expiration date	Month/Day/Year	12/23/2023	05/10/2025	12/23/2023	08/02/2024	12/23/2023

Eco-Friendly Businesses and Investments

Item	Unit	2020		2021		2022							
		HDO	Total	HDO	Total	HDO	HDC ⁴⁾	HSB	HOC	HCP	Total		
Environmental investment costs	Total	KRW million	20,051	21,714	46,139	49,568	116,632	165	600	310	2,000	119,707	
	Eco-friendly	Eco-friendly R&D	KRW million	88	88	10,828	10,828	10,045	0	0	0	0	10,045
		Eco-friendly businesses	KRW million	7,153	7,153	9,071	9,071	53,581	0	0	0	0	53,581
	Environmental	Daesan plant environmental facilities	KRW million	12,810	14,473	26,240	29,669	53,006	165	600	310	2,000	56,081
Eco-friendly technology	Number of patents (cumulative)	number	1	1	2	2	2	0	0	0	0	2	

1) Data based on Daesan plant (environmental businesses and investments include R&D centers)

2) 2022 data not confirmed by the Ministry of Environment

3) Based on the business report (violation cases under the same law are classified as one case)

4) Execution of large-scale environmental investment with the completion of the HPC Plant in October 2021, scheduled environmental investment for regular maintenance of the MX Plant in 2023

Eco-friendly future with green energy



ESG Data

Non-Financial Performance - Social

Current Employee Status

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

Item	Unit	2020		2021		2022							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Total number of employees	person	2,030	2,707	1,999	2,855	2,086	699	28	112	32	2,957		
Registered executives ¹⁾	Total	6	28	6	28	7	6	6	4	6	29		
	Gender	Male	6	26	6	26	6	6	4	4	6	26	
		Female	0	2	0	2	1	0	2	0	0	3	
Employees ²⁾	Total	2,024	2,679	1,993	2,827	2,079	693	22	108	26	2,928		
	Permanent employees	Total	1,984	2,589	1,935	2,629	1,997	592	21	103	24	2,737	
		By gender	Male	1,838	2,415	1,786	2,446	1,835	560	17	98	20	2,530
			Female	146	174	149	183	162	32	4	5	4	207
		By age	Under 30 years	498	658	464	632	471	145	5	27	3	651
			30-49 years	990	1,331	925	1,310	930	315	14	53	18	1,330
			50 years and over	496	600	546	687	596	132	2	23	3	756
	Contract employees ³⁾	Total	40	87	58	199	82	101	1	4	2	190	
		By gender	Male	29	72	47	185	76	100	0	4	1	181
			Female	11	15	11	14	6	1	1	0	1	9
By age		Under 30 years	12	19	37	62	59	38	1	3	1	102	
		30-49 years	13	13	9	47	7	33	0	0	0	40	
		50 years and over	15	55	12	90	16	30	0	1	1	48	
Non-affiliated employees	Total	29	31	27	28	39	4	1	0	1	45		
	Agency employee	29	31	27	28	39	4	1	0	1	45		

1) Data corrected due to HD Hyundai Oilbank's energy affiliates missing data

2) Registered executives excluded

3) For fixed-term workers (temporary/daily/short-term workers are not applicable)



ESG Data

Non-Financial Performance - Social

Employment

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

Item	Unit	2020		2021		2022								
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total			
Employment scale	person	(16)	294	(31)	148	86	14		2	(2)	1	101		
Total number of new hires	person	126	280	113	264	214	101		5	4	7	331		
New Hires	Permanent employees	Total	person	110	241	72	121	181	63	5	1	7	257	
		By gender	Male	person	108	237	60	105	158	54	4	1	4	221
			Female	person	2	4	12	16	23	9	1	0	3	36
		By age	Under 30 years	person	100	164	57	88	111	36	3	0	4	154
			30-49 years	person	10	77	14	34	65	27	2	1	3	98
			50 years and over	person	0	0	1	1	5	0	0	0	0	5
		By region	South Korea	person	110	241	72	123	181	63	5	1	7	257
		By recruitment type	Non-regular recruitment	person	8	88	15	36	18	8	1	0	2	29
			Open recruitment	person	102	153	57	87	163	55	4	1	5	228
		Contract employees	Total	person	16	39	41	143	33	38	0	3	0	74
Diversity ¹⁾	Employees with disabilities ²⁾	Number of employees ³⁾	person	47	47	46	46	44	0	0	0	44		
		Employment rate	%	2.32	2.32	2.31	2.31	2.12	0	0	0	2.12		
	Veterans	Number of employees	person	62	70	70	78	77	8	0	0	0	85	
		Employment rate	%	3.06	2.77	3.51	2.92	3.70	1.15	0	0	0	3.07	

1) Based on the sum of full-time employees each month

2) Data corrected due to changes in data calculation standards and errors in the previous reporting year (data based on Seoul office, Daesan plant, and directly-managed gas stations)

3) Separate from the Ministry of Employment and Labor reporting standards (According to the Act on Welfare of Persons with Disabilities, employment rate of severely disabled are doubled when reporting)



ESG Data

Non-Financial Performance - Social

Turnover

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

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Voluntary turnover rate ¹⁾	%	1.67	1.80	3.41	3.36	2.96	4.42	5.00	0.91	24.00	3.43	
Voluntary turnover ²⁾	Total	34	43	69	90	59	30	1	1	6	97	
	By gender	Male	27	35	58	76	52	27	1	0	3	83
		Female	7	8	11	14	7	3	0	1	3	14
	By age	Under 30 years	19	21	33	42	36	19	0	1	3	59
		30-49 years	12	18	36	45	17	11	1	0	3	32
		50 years and over	3	4	0	3	6	0	0	0	0	6
	By region	South Korea	34	43	69	90	59	30	1	1	6	97

Labor Relations

Item	Unit	2020		2021		2022					
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total
Labor unions ³⁾	Number of employees eligible to join	849	1,191	812	1,173	781	288	N/A	0	N/A	1,069
	Number of employees who joined	849	1,191	812	1,173	781	288	N/A	0	N/A	1,069
	Membership rate	100	100	100	100	100	100	N/A	0	N/A	100
	Collective agreement coverage rate	100	100	100	100	100	100	N/A	0	N/A	100
Labor Council ⁴⁾	Total number of representatives	12	26	12	28	12	8	N/A	8	N/A	28
	Number of discussions and disputes	0	0	0	0	0	0	N/A	0	N/A	0

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

2) Data corrected due to the inclusion of contract employees and the change in calculation period

3) Full-time employees of some subsidiaries are members of the HD Hyundai Oilbank labor union, and data changed due to changes in the calculation period of the number of HD Hyundai Chemical union members

4) HD Hyundai and Shell Base Oil and HD Hyundai Cosme Petrochemical are not subject to the Labor Council

ESG Data

Non-Financial Performance - Social

Employee Benefits

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

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Employee benefits	Benefit expenses per person ¹⁾	KRW million/person	20	18	21	18	23	8	24	23	17	19
	Benefits expenses	KRW million	41,182	47,276	42,713	51,002	47,487	5,877	522	2,468	450	56,804

Parental Leave¹⁾²⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Number of employees were entitled to parental leave ²⁾	Male	person	405	523	362	525	370	144	6	25	7	552
	Female	person	36	45	37	44	48	5	0	1	1	55
Number of employees took parental leave	Male	person	3	3	2	3	9	2	0	0	0	11
	Female	person	9	11	7	8	19	0	0	0	0	19
Number of employees returned after parental leave	Male	person	3	3	1	2	8	2	0	0	0	10
	Female	person	8	8	10	12	13	0	0	0	0	13
Number of employees retained (over 1 year) after parental leave	Male	person	1	1	1	1	1	1	0	0	0	2
	Female	person	5	5	6	6	8	1	0	1	0	10
Return-to-work rate after parental leave ³⁾	Male	%	100	100	100	100	100	100	N/A	N/A	N/A	100
	Female	%	100	100	100	100	100	N/A	N/A	N/A	N/A	100
Retention rate (over 1 year) after parental leave ⁴⁾	Male	%	100	100	33.3	33.3	100	100	N/A	N/A	N/A	100
	Female	%	100	83.3	75.0	75.0	80.0	100	N/A	100	N/A	83.3

1) Data corrected due to changes in data calculation standards

2) For full-time employees

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

4) 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

Industrial Accidents¹⁾

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

Item		Unit	2020		2021		2022								
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total			
Industrial accidents	Type of accidents	Serious accidents	Number of serious accidents	case	0	0	0	0	0	0	0	0	0	0	
		Industrial accidents	Number of industrial accidents	case	1	1	5	5	10	0	0	1	0	11	
	Employees	Serious accidents	Number of serious accident injuries	person	0	0	0	0	0	0	0	0	0	0	
		Industrial accidents	Industrial accident rate	%	0	0	0	0	0.10	0	0	1.01	0	0.10	
			Number of industrial accident injuries	person	0	0	0	0	2	0	0	1	0	3	
	Supplier	Industrial accidents	Number of industrial accidents	case	0	0	0	0	2	0	0	1	0	3	
			Serious accidents	Number of serious accident injuries	person	0	0	0	0	0	N/A	0	N/A	0	
		Industrial accident rate	%	0.02	0.02	0.13	0.11	0.19	0	N/A	0	N/A	0.17		
	Recordable incidents	Employees	Total recordable incidents	Total Recordable Incident Rate (TRIR) ²⁾	case/200,000 man-hours	0.05	0.04	0	0	0.24	0	0	1.01	0	0.21
			Lost Time Injury	Lost Time Injury Rate (LTIR)	case/200,000 man-hours	0	0	0	0	0.10	0	0	1.01	0	0.10
Lost Time Injury (LTI)				case	0	0	0	0	2	0	0	1	0	3	
Total working hours ³⁾			hour	4,114,000	5,058,000	4,022,000	5,534,000	4,104,000	1,354,000	42,000	198,000	52,000	5,750,000		
Supplier		Total recordable incidents	Total Recordable Incident Rate (TRIR)	case/200,000 man-hours	0.03	0.03	0.23	0.19	0.42	0	N/A	0.00	N/A	0.35	
		Lost Time Injury	Lost Time Injury Rate (LTIR)	case/200,000 man-hours	0.03	0.03	0.23	0.19	0.31	0.21	N/A	0.00	N/A	0.29	
			Lost Time Injury (LTI)	case	1	1	5	5	8	1	N/A	0	N/A	9	
		Total working hours	hour	6,487,620	7,035,620	4,315,400	5,279,800	5,242,450	949,800	N/A	120,000	N/A	6,312,250		

1) HD Hyundai Oilbank manages the suppliers of some affiliates

2) Data corrected due to omission of one MTC case in 2020

3) Data corrected due to changes in data calculation standards and errors in the previous reporting year



ESG Data

Non-Financial Performance - Social

Occupational Illness¹⁾

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

Item		Unit	2020		2021		2022						
			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	0
		Number of occupational illnesses	case	0	0	0	0	0	0	0	0	0	0
		Number of fatalities due to occupational illness	case	0	0	0	0	0	0	0	0	0	0
	Supplier	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	case	0	0	0	0	0	0	N/A	0	N/A	0
		Number of fatalities due to occupational illness	case	0	0	0	0	0	0	N/A	0	N/A	0

Occupational Safety Training²⁾

Item		Unit	2020		2021		2022					
			HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total
Occupational safety training	Total hours of occupational safety training ²⁾	hour	34,880	60,424	35,008	62,258	43,928	21,358	1,722	2,703	5,522	75,233
	Number of occupational safety training sessions ²⁾	time	16	136	21	141	66	38	58	32	44	238

1) Based on standards approved by Korea Worker's Compensation & Welfare Service

2) Data corrected due to errors in the previous reporting year



ESG Data

Non-Financial Performance - Social

Employee Training and Career Management

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

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Training hours	Total hours of training	hour	497,408	544,026	489,516	540,594	487,467	122,680	1,291	898	772	613,108
	Hours of training per employee ¹⁾	hour/person	246	203	246	191	234	177	59	8	30	209
Training expenses	Training expenses per employee	KRW million/person	0.50	0.59	0.50	0.61	0.49	0.95	4.27	0.13	0.54	0.61
	Total training expenses	KRW million	1,019	1,577	994	1,737	1,010	660	94	14	14	1,792
Regular performance evaluation	Percentage of total employees received a regular performance evaluation	%	96.9	96.0	97.1	93.2	96.1	83.3	100	96.3	96.2	93.1

Employee Ratio and Salary

Item	Unit	2020		2021		2022							
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total		
Employee ratio	Number of female employees	Executive level (including registered executives)	person	0	2	0	2	1	0	2	0	0	3
		Manager level	person	4	4	8	8	9	9	0	0	0	9
		Working level	person	153	185	152	189	159	33	5	5	5	207
Employee remuneration	Ratio of female remuneration compared to men		%	47.5	50.5	53.2	56.6	55.6	62.7	68.6	64.4	54.4	61.0
	Average remuneration per person	Male	KRW million/person	99	92	126	113	153	142	140	135	136	141
		Female	KRW million/person	47	46	67	64	85	89	96	87	74	86

1) Registered executives excluded



ESG Data

Non-Financial Performance - Social

Human Rights Protection

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

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Non-discrimination	Number of discrimination incidents	case	0	0	0	0	0	0	0	0	0	0
Human rights impact assessment	Percentage of business sites that conducted human rights impact assessment ¹⁾	%	N/A	N/A	N/A	N/A	100	100	0	0	0	50.00
Human rights training	Total hours of human rights training	hour	4,102	5,386	4,042	5,584	6,384	2,079	72	330	90	8,955
	Training rate	%	100	99.96	100	97.84	100	100	100	100	100	100

Social Contribution

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Volunteer activities ²⁾	Hours of activity	hour	N/A	3,719	N/A	4,157	N/A	N/A	N/A	N/A	N/A	5,110
	Number of participants ³⁾	person	N/A	320	N/A	357	N/A	N/A	N/A	N/A	N/A	371
Social contribution expenses	Total social contribution expenses	KRW million	7,364	7,538	7,463	7,728	6,555	240	7	38	7	6,847
	Employee donations	KRW million	814	988	779	1,044	731	216	7	38	7	999
	Company donations	KRW million	6,550	6,550	6,684	6,684	5,824	24	0	0	0	5,848

Products and Services⁴⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Violation of information and labeling laws and regulations	Number of violation cases in which fines were imposed	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of violation cases in which warnings were given	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of cases that violated the voluntary codes	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
Violation of marketing/communication laws and regulations	Number of violation cases in which fines were imposed	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of violation cases in which warnings were given	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of cases that violated the voluntary codes	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0

1) Human rights impact assessment was conducted from 2022

2) All energy affiliates

3) Data corrected due to changes in data calculation standards

4) Based on HD Hyundai Oilbank's separate standards



ESG Data

Non-Financial Performance - Social

Information Protection¹⁾

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

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Violation of customer privacy	Total number of violations	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of complaints from regulatory bodies	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of complaints from other organizations	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
	Number of identified leaks/thefts/losses of customer data	case	0	0	0	0	0	N/A	N/A	N/A	N/A	0
Personal information security training ²⁾	Number of employees received the training	person	58	58	47	47	23	N/A	N/A	N/A	N/A	23
	Number of employees eligible to receive	person	58	58	47	47	23	N/A	N/A	N/A	N/A	23
Investment in information security	Investment rate compared to IT investment	%	N/A	N/A	N/A	N/A	3.52	N/A	N/A	N/A	N/A	3.52
Security awareness improvement activities	Monthly newsletter	case	N/A	N/A	12	12	12	N/A	N/A	N/A	N/A	12
	Malicious email drill	case	N/A	N/A	6	6	5	N/A	N/A	N/A	N/A	5

Social Compliance³⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
Social and economic compliance	Number of social and economic compliance issues	case	0	1	4	6	5	0	0	0	0	5
	Expenses due to monetary sanctions (heavier than imposition of administrative fines) ⁴⁾	KRW million	0	5.8	21.3	21.7	98.6	0	0	0	0	98.6

Supplier ESG Management¹⁾

Item	Unit	2020		2021		2022						
		HDO	Total	HDO	Total	HDO	HDC	HSB	HOC	HCP	Total	
ESG assessment	ESG assessment participation rate	%	N/A	N/A	N/A	N/A	75.00	N/A	N/A	N/A	N/A	75.00
	Number of suppliers subject to ESG assessment	company	N/A	N/A	N/A	N/A	220	N/A	N/A	N/A	N/A	220
	Number of suppliers that participated in ESG assessment	company	N/A	N/A	N/A	N/A	165	N/A	N/A	N/A	N/A	165
ESG assessment results	Number of suppliers that require improvement measures (vulnerable deemed supplier)	company	N/A	N/A	N/A	N/A	41	N/A	N/A	N/A	N/A	41
	Number of improvement measures required	case	N/A	N/A	N/A	N/A	14	N/A	N/A	N/A	N/A	14
	Number of improvement measures implemented ⁵⁾	case	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0
	Implementation rate of implementation measures	%	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0

1) Based on HD Hyundai Oilbank's separate standards

2) Data corrected due to changes in data calculation standards

3) Based on Annual report (violation cases under the same law are classified as one case)

4) Expenses for failing to comply with laws and regulations that occurred during the reporting period prior to 2021 amounted to KRW 1.92 million

5) Supply chain ESG evaluation was conducted in 2022 and improvement measures will be implemented in 2023



ESG Data

Non-Financial Performance - Governance¹⁾

Shareholding Status

Item	Unit	2020	2021	2022	
Number of investors	person	404	550	673	
Shareholders holding 5% or more	HD Hyundai	Number of shares	181,667,517	180,991,117	180,991,117
		Share ratio	74.13	73.85	73.85
	Aramco Overseas Company	Number of shares	41,664,012	41,664,012	41,664,012
		Share ratio	17.00	17.00	17.00

Voting Rights Status

Item	Unit	2020	2021	2022
Total number of shares issued	share	245,082,422	245,082,422	245,082,422
Number of shares without voting rights	share	0	0	0
Number of shares without voting rights based on the articles of incorporation	share	0	0	0
Number of shares with voting rights limited by other laws	share	0	0	0
Number of shares with restored voting rights	share	0	0	0
Number of shares that can exercise voting rights	share	245,082,422	245,082,422	245,082,422

1) Based on HD Hyundai Oilbank's separate standards

2) BOD attendance rate (Total) = $\{\sum(\text{number of directors who attended each board meeting} \div \text{total number of board members}) \div \text{number of board meetings held}\}$

3) BOD attendance rate (inside and non-executive directors) = $\{\sum(\text{number of inside directors and non-executive directors who attended each board meeting} \div \text{total number of inside and non-executive directors}) \div \text{number of board meetings held}\}$

4) The ratio of agendas corrected or rejected = $(\text{Number agendas that received objections} \div \text{total number of agendas})$

5) Established in June 2021

Board of Directors and Committees Status

Item	Unit	2020	2021	2022			
Board of Directors	Composition	Total	person	6	6	7	
		Inside director	person	2	2	2	
		Non-executive director	person	1	1	1	
		Independent director (non-standing)	Number of directors	person	3	3	4
			Ratio of directors	%	50	50	57.1
		Female directors	Number of directors	person	0	0	1
			Ratio of directors	%	0	0	14.3
		Ratio by age	Under 30 years	%	0	0	0
			30-49 years	%	0	0	28.6
	Attendance rate	50 years and over	%	100	100	71.4	
		Total ²⁾	%	98	100	96	
		Inside and non-executive directors ³⁾	%	100	100	90	
	Agendas	Independent director (non-standing)	%	96	100	100	
		Number of meetings held	time	9	9	13	
Agendas	Number of Agendas	case	37	33	43		
	Ratio of agendas corrected or rejected ⁴⁾	%	0	0	0		
Committees under the BOD	Audit Committee	Number of meetings held	time	3	4	4	
		Agendas	case	4	6	5	
	Internal Transaction Monitoring Committee	Number of meetings held	time	3	4	5	
		Agendas	case	3	4	6	
	Independent Director Nomination Committee	Number of meetings held	time	1	4	3	
		Agendas	case	1	4	3	
	ESG Committee ⁵⁾	Number of meetings held	time	N/A	1	2	
		Agendas	case	N/A	1	3	



ESG Data

Non-Financial Performance - Governance¹⁾

Ethics and Fair Trade

Item	Unit	2020	2021	2022	
Anti-corruption (ethics) training ²⁾	Number of executives who completed the training	person	31	30	20
	Ratio of executives who completed the training	%	73.81	60.00	38.46
	Number of employees who completed the training	person	1,084	1,155	1,387
	Ratio of employees who completed the training	%	54.53	59.26	68.19
	Hours of training	hour	573	768	704
Anti-corruption policy (Code of Ethics)	Suppliers who signed anti-corruption policy (Code of Ethics) ³⁾	company	132	114	101
	Employees who signed anti-corruption policy (Code of Ethics) ⁴⁾	person	1,157	1,146	1,098
Number of business sites that conducted anti-corruption risk assessments ⁵⁾	Ratio of business sites that conducted anti-corruption risk assessments	%	100	100	100
	Total number of corruption cases	case	0	0	1
Corrupt practices	Number of employees who were disciplined/terminated due to corruption ⁵⁾	case	0	0	1
	Number of suppliers who were disciplined/terminated due to corruption ⁵⁾	case	0	0	0
Compliance training ^{3,6)}	Number of employees who have completed the training	person	948	950	998
	Number of employees subject to compliance training	person	2,707	2,855	2,957
Fair trade education ⁶⁾	Number of employees who have completed the training	person	354	584	233
	Number of employees subject to compliance training	person	2,030	1,999	2,086
Fair trade violations	Number of legal/regulatory violations	case	0	1	0
	Total monetary losses from legal procedures related to price fixing or price manipulation ⁷⁾	USD ten thousand	4,413	0	0

1) Based on HD Hyundai Oilbank's separate standards

2) Data corrected due to the sale of Hyundai Oil Terminal in 2021 and changes in data calculation standards

3) All energy affiliates

4) Data corrected due to the completion of the sale of Hyundai Oil Terminal in 2021

5) Not applicable to the cases that led to contract termination

6) Data corrected due to changes in internal training classification and management system

7) Installment payments were made in 2020 for violations in 2019



GRI Standard Index

Universal Standard

Classification	Indicator	Description	Page	Note
GRI 2: General Disclosures				
GRI 2: The organization and its reporting practices	2-1	Organizational details	7, 9	
	2-2	Entities included in the organization's sustainability reporting	3	
	2-3	Reporting period, frequency and contact point	3	
	2-4	Restatements of information	88-103	
	2-5	External assurance	115	
GRI 2: Activities and workers	2-6	Activities, value chain and other business relationships	8	
	2-7	Employees	93	
	2-8	Workers who are not employees	93	
GRI 2: Governance	2-9	Governance structure and composition	12, 77-78	
	2-10	Nomination and selection of the highest governance body	78	
	2-11	Chair of the highest governance body	77	
	2-12	Role of the highest governance body in overseeing the management of impacts	12	
	2-13	Delegation of responsibility for managing impacts	12	
	2-14	Role of the highest governance body in sustainability reporting	12	
	2-15	Conflicts of interest	78	
	2-16	Communication of critical concerns	79	
	2-17	Collective knowledge of the highest governance body	79	
	2-18	Evaluation of the performance of the highest governance body	12, 79	
	2-19	Remuneration policies	12, 79	
2-20	Process to determine remuneration	79		
2-21	Annual total compensation ratio	-	Confidential	

Classification	Indicator	Description	Page	Note
GRI 2: General Disclosures				
GRI 2: Strategy, policies and practices	2-22	Statement on sustainable development strategy	6	
	2-23	Policy commitments	43	
	2-24	Embedding policy commitments	22, 27, 34-35, 43, 47-48, 68, 70, 72, 80, 84	
	2-25	Processes to remediate negative impacts	45, 81, 112	
	2-26	Mechanisms for seeking advice and raising concerns	45, 81, 112	
	2-27	Compliance with laws and regulations	92, 101	
	2-28	Membership associations	113	
	2-29	Approach to stakeholder engagement	112	
	2-30	Collective bargaining agreements	95, 112	
	GRI 3: Material Topics			
GRI 3: Disclosures on material topics	3-1	Process to determine material topics	13	
	3-2	List of material topics	14	
	3-3	Management of material topics	14	



GRI Standard Index

Topic Standard

Classification	Indicator	Description	Page	Note	Sector Standard
GRI 200: Economic Performances					
GRI 201: Economic performance	201-1	Direct economic value generated and distributed	92, 100, Annual report (page 154, 273, 348)		11.14.2 11.21.2
	201-2	Financial implications and other risks and opportunities due to climate change	110-111		11.2.2
	201-3	Defined benefit plan obligations and other retirement plans	Annual report (page 136)		
	201-4	Financial assistance received from government	Annual report (page 41)		11.21.3
GRI 203: Indirect Economic Impacts	203-1	Infrastructure investments and services supported	74-75		11.14.4
	203-2	Significant indirect economic impacts	14		11.14.5
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	83, 103		11.20.2
	205-2	Communication and training about anti-corruption policies and procedures	103		11.20.3
	205-3	Confirmed incidents of corruption and actions taken	103		11.20.4
GRI 206: Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	103		11.19.2

Classification	Indicator	Description	Page	Note	Sector Standard
GRI 300: Environmental Performances					
GRI 302: Energy	302-1	Energy consumption within the organization	89		11.1.2
	302-2	Energy consumption outside of the organization	N/A	Not applicable	11.1.3
	302-3	Energy intensity	89		11.1.4
	302-4	Reduction of energy consumption	23		
GRI 303: Water and Effluents	303-1	Interactions with water as a shared resource	37		11.6.2
	303-2	Management of water discharge-related impacts	37		11.6.3
	303-3	Water withdrawal	90		11.6.4
	303-4	Water discharge	90		11.6.5
	303-5	Water consumption	90		11.6.6



GRI Standard Index

Topic Standard

Classification	Indicator	Description	Page	Note	Sector Standard
GRI 300: Environmental Performances					
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	88		11.1.5
	305-2	Energy indirect (Scope 2) GHG emissions	88		11.1.6
	305-3	Other indirect (Scope 3) GHG emissions	-	To be managed (due to incomplete information)	11.1.7
	305-4	GHG emissions intensity	88		11.1.8
	305-5	Reduction of GHG emissions	88		11.2.3
	305-6	Emissions of ozone-depleting substances (ODS)	N/A	Not applicable	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	89		11.3.2
GRI 306: Waste	306-2	Management of significant waste-related impacts	37		11.5.3
	306-3	Waste generated	91		11.5.4
	306-4	Waste diverted from disposal	91		11.8.2
	306-5	Waste directed to disposal	91		11.5.5
GRI 308: Supplier Environmental Assessment	308-2	Negative environmental impacts in the supply chain and actions taken	65, 101		

Classification	Indicator	Description	Page	Note	Sector Standard
GRI 400: Social Performances					
GRI 401: Employment	401-1	New employee hires and employee turnover	94-95		11.10.2
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	96		11.10.3
	401-3	Parental leave	96		11.10.4, 11.11.3
GRI 402: Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	61		11.7.2, 11.10.5
GRI 403: Occupational Health and Safety	403-1	Occupational health and safety management system	48, 55		11.9.2
	403-2	Hazard identification, risk assessment, and incident investigation	48, 55-56		11.9.3
	403-3	Occupational health services	51, 56		11.9.4
	403-4	Worker participation, consultation, and communication on occupational health and safety	46, 55		11.9.5
	403-5	Worker training on occupational health and safety	51		11.9.6
	403-6	Promotion of worker health	59		11.9.7
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	49-52, 69		11.9.8
	403-8	Workers covered by an occupational health and safety management system	55		11.9.9
	403-9	Work-related injuries	54-56, 97		11.9.10
	403-10	Work-related ill health	54-56, 98		11.9.11
GRI 404: Training and Education	404-1	Average hours of training per year per employee	99		11.10.6, 11.11.4
	404-2	Programs for upgrading employee skills and transition assistance programs	60		11.7.3, 11.10.7
	404-3	Percentage of employees receiving regular performance and career development reviews	99		
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	93, 102		11.11.5
	405-2	Ratio of basic salary and remuneration of women to men	99		11.11.6
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	45, 100		11.11.7



GRI Standard Index

Topic Standard

Classification	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	44, 61-62		11.13.2
GRI 408: Child Labor	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	44		11.12.2
GRI 413: Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	40, 72-73		11.15.2
GRI 414: Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	-	To be managed (due to incomplete information)	11.10.8 11.12.3
	414-2	Negative social impacts in the supply chain and actions taken	65, 101		11.10.9

Classification	Indicator	Description	Page	Note	Sector Standard
GRI 400: Social Performances					
GRI 417: Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	100		
	417-3	Incidents of non-compliance concerning marketing communications	100		
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	101		



SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Item	Unit	2020	2021	2022	Note	
Greenhouse Gas Emissions	EM-RM-110a.1	Gross global Scope 1 emissions	tCO ₂ -e	6,915,277	7,650,486	7,783,672		
		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 22~25				
Air Quality	EM-RM-120a.1	Air emissions of NOx (excluding N ₂ O)	t	3,870	4,103	3,770		
		SOx	t	2,068	2,010	1,961		
		PM10	t	57.96	80.50	52.91		
		H ₂ S	t	0.298	0.466	0.000		
		VOCs	t	249.07	315.77	309.94		
	EM-RM-120a.2	Number of refineries in or near areas of dense population	number	1	1	1	HD Hyundai Oilbank Daesan Plant	
Water Management	EM-RM-140a.1	Total fresh water withdrawn	t	18,334,270	22,205,157	24,194,927		
		Percentage recycled	%	12.36	11.93	9.34		
		Percentage in regions with High or Extremely High baseline water stress	%	N/A	N/A	N/A	Not applicable	
	EM-RM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	case	0	0	1		
Hazardous Materials Management	EM-RM-150a.1	Amount of hazardous waste generated	t	9,133	10,030	11,501		
		Percentage recycled	%	77.67	84.32	87.81		
	EM-RM-150a.2	Number of underground storage tanks (USTs)	case	2	2	2	Gas stations inside the plant	
		Number of UST releases requiring cleanup	case	0	0	0		
		Percentage in states with UST financial assurance funds	%	N/A	N/A	N/A	Not applicable to Korea	
Workforce Health & Safety	EM-RM-320a.1	Total Recordable Incident Rate (TRIR)	Full-time employees	-	0.04	0	0.21	Calculated based on 200,000 man-hours
			Contract employees	-	0	0	0	
		Fatality rate	Full-time employees	%	0	0	0	
			Contract employees	%	0	0	0	
		Near Miss Frequency Rate (NMFR)	Full-time employees	-	N/A	N/A	N/A	To be disclosed
			Contract employees	-	N/A	N/A	N/A	To be disclosed
EM-RM-320a.2	Discussion of management systems used to integrate a culture of safety	-	Page 46~48					



SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Item	Unit	2020	2021	2022	Note
Product Specifications & Clean Fuel Blend	EM-RM-410a.1	Production of renewable fuels	%	N/A	N/A	N/A	RVO system not applicable
		Purchase of separated renewable identification numbers (RIN)	%	N/A	N/A	N/A	RVO system not applicable
	EM-RM-410a.2	Total addressable market and share of market for advanced biofuels and associated infrastructure	₩, %	N/A	N/A	N/A	Market size forecast value varies by institution
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 related to collusion or manipulation of price	USD ten thousand	4,413	0	0	We have fully paid agreed compensation and are obligated to educate and report on United States antitrust law and are complying with them
Management of the Legal & Regulatory Environment	EM-RM-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-		N/A		
Critical Incident Risk Management	EM-RM-540a.1	Tier 1	ratio	N/A	N/A	N/A	To be disclosed due to the difference between the internal and SASB standards
		Tier 2	ratio	N/A	N/A	N/A	
	EM-RM-540a.2	Challenges to Safety Systems Indicator rate (Tier 3)	ratio	N/A	N/A	N/A	
	EM-RM-540a.3	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	-		Page 49~52		

Activity Metrics

Topic	Code	Item	Unit	2020	2021	2022	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)	188,457,000	206,049,000	201,143,000	Calculated based on crude oil refining throughput
Refining operating capacity	EM-RM-000.B	Refining operating capacity	Thousand barrels per day (TBPd)	643	650	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"> · 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. · 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>HD Hyundai Oilbank has established ESG key performance indicators (KPIs) for each executive, including the CEO. The ESG performance index 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 as a KPI for our management to address climate change.</p>	11, 22
<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]</p> <ul style="list-style-type: none"> · Risk: Since the Paris Agreement, the Korean government has announced its 2030 nationally determined contribution (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. 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>[Mid-term Reputation Risk]</p> <ul style="list-style-type: none"> · Risk: As the significance of climate change continues to grow, stakeholders are showing an increased interest in environmental issues. The eco-friendliness of products and services has also become a significant factor influencing consumers' purchasing decisions. Since consumers often hold negative views towards the fossil fuel-producing oil industry, this poses a potential risk to the reputation and brand image of oil companies. · Strategy: We are actively reorganizing our business structure and promoting sustainable businesses to align with consumers' expectations for eco-friendly business activities. With the goal of increasing the profit share of renewable energy and green businesses to 70% by 2030, we aim to improve long-term profitability while attracting new customers through our eco-friendly initiatives. 	25, 27



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 Technology Risk]</p> <ul style="list-style-type: none"> • Risk: With the rapid transition towards a balanced energy mix and clean energy, there is a growing demand for green fuels. As a result, the previous fossil fuel-centric business model of oil companies can impact profitability. It is crucial to invest in and develop sustainable fuel production technologies that can effectively reduce carbon footprint. • Strategy: Under the vision of "Eco-Friendly Future with Green Energy", we are actively involved in the development of clean fuel technology. In alignment with the government's efforts to expand biofuel supply, we are actively promoting businesses related to biodiesel, sustainable aviation fuel, and marine biofuel and focusing on producing ultra-high purity hydrogen. <hr/> <p>[Long-term Product and Service Opportunities]</p> <ul style="list-style-type: none"> • Opportunity: With the increasing global concern over climate change and energy supply challenges, the significance of clean energy sources and resource recycling has become more prominent. Governments worldwide are demonstrating their commitment to establishing ecosystems and policies to support clean hydrogen, biofuels, and plastic recycling. Consequently, the demand for biofuels is steadily rising across various sectors, including automobiles, ships, and aviation. Recognizing these market trends, HD Hyundai Oilbank identifies eco-friendly businesses such as hydrogen, biofuels, and plastic recycling as new opportunities for our company. • Strategy: Currently, we are in the process of constructing a biodiesel plant with an annual production capacity of 130,000 tons, and we have plans to build a sustainable aviation fuel facility in the future. We are actively working to secure biofuel technologies, such as marine biofuel and raw material extraction technology, while also prioritizing the competitiveness of our biofuel products by obtaining ISCC certification. Furthermore, we are engaged in producing high-purity hydrogen for automotive use, working with Air Products regarding the introduction of clean ammonia, and promoting an ammonia-based hydrogen production business. Moreover, we are contributing to the establishment of a circular economy ecosystem by promoting the chemical recycling business of waste plastics, through strategic partnerships with the Seoul Metropolitan Government and various downstream companies. 	19, 27-31
<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 risks through a GHG risk management system.</p> <ul style="list-style-type: none"> • Risk management process: We have established a dedicated organization to oversee climate change-related risks. We formed C-Business Team and Carbon/Energy Solution Team to strengthen our expertise and execution abilities in addressing climate change. These teams are 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 Management Team, Tax Team, Legal Affairs Division, and GHG-related organizations and determining their profitability. 	22, 84
<p>Metrics and Targets</p> <p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material</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>	22-25

Stakeholder Communication

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

Stakeholder	Employees	Customers and Suppliers	Shareholders and Investors	The government and local governments	Local communities
Communication Channels	<ul style="list-style-type: none"> · Company Newsletters · Corporate Portal · Surveys · Junior Talk (Seoul) · Junior Board (Daesan) · Employee Seminars · Conversation with the CEO · CEO Management Briefings · Collective bargaining · Labor-management council · Various labor-management TF 	<ul style="list-style-type: none"> · Customer Center · Bonus Card App (Car&) · Bonus Card Website · Corporate Website · Youtube Channel · (@hdhyundaioilbank) · On-site Visit to Major Suppliers · Instagram and Facebook · Media platform 'Blue Talk' 	<ul style="list-style-type: none"> · Annual Report · Annual General Meeting · Disclosures · Non-deal Roadshow (NDR) · Performance Presentation · E-mail and Phone · Corporate website 	<ul style="list-style-type: none"> · Public Hearings · Meetings/Conferences · Seminar · Newsletters · Local Government Websites 	<ul style="list-style-type: none"> · Scholarship Work Council · Voluntary Service Steering Committee · Daesan Complex Council · Field trip to Daesan Plant · Social Contribution Activities · Social Group Activities Affiliated to Local Government
Topic	<ul style="list-style-type: none"> · Communication between the company and employees · Improvements in quality of life of employees · Human rights protection · Corporate competitiveness · Collective bargaining and various agreements · Performance-based rewards · Training of talented individuals · Increase in corporate value 	<ul style="list-style-type: none"> · Communication between the company and customers · Service quality improvements · Customer protection · Marketing · Corporate promotion · Customer satisfaction and safety · Grievances 	<ul style="list-style-type: none"> · Respect for shareholder rights · Investment information · Responses to internal and external risks · Protection of shareholders' interests · Transparent company management · Shareholder value enhancement 	<ul style="list-style-type: none"> · Changes in government policies · Compliance with laws and taxes · Industry trends · Trends of each local government 	<ul style="list-style-type: none"> · Contributing to the local society and economy · Promoting local development · Communication and mutual development with communities · Local culture and arts sponsorship



Initiatives and Associations / Certificates

Initiatives and Associations

Name		
Korea Enterprises Federation	Korea Petroleum Association	Korea Petrochemical Industry Association
Korea Lubricating Oil Industry Association	Korea Chamber of Commerce and Industry	Korea Industrial Technology Association
Korean Society of Industrial and Engineering Chemistry	Korean Institute of Chemical Engineers	World Energy Council (WEC)
World Petroleum Council (WPC)	Energy Future Forum	Korea Business Council for Sustainable Development (KBCSD)
Korea Industrial Safety Association	Korean Standards Association	Daesan Complex Council
Seosan Chamber of Commerce and Industry	Korea Environmental Preservation Association	

Certificates

Name	Organization	Effective Date
ISO 14001 Environmental management system	Korean Foundation for Quality	12.23.2023
ISO 45001 Occupational health and safety management system	Korean Foundation for Quality	12.23.2023
ISO 9001 Quality management system	Korean Foundation for Quality	12.23.2023
ISCC Plus Certificate (HD Hyundai Oilbank)	CUC Germany GmbH	01.10.2024
ISCC Plus Certificate (HD Hyundai Chemical)	CUC Germany GmbH	04.27.2024
ISMS-P (HD Hyundai Oilbank Bonus Card Service Operation)	Korea Internet & Security Agency	12.01. 2023
EOLCS Certificate	API	03.31.2024
IATF 16949 (Automotive Quality Management System)	Lloyd's Register	08.29.2025

GHG Verification Statement

Verification Statement on 2022 Greenhouse Gas Emission Report

Verification Target

Korean Foundation for Quality (hereinafter "KFQ") has conducted a verification of "Greenhouse Gas Emissions (hereinafter "Inventory Report") of HD Hyundai Oilbank, HD Hyundai Chemical, HD Hyundai OCI. (hereinafter the "Company") for 2022.

Verification Scope

KFQ's verification covered on all facilities and emission sources under the operational control and organizational boundary of Company during 2022.

Verification Criteria

The verification process was based on 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme (Notification No. 2022-279 of Ministry of Environment)', 'Rules for verification of operating the greenhouse gas emission trading scheme (Notification No. 2021-112 of Ministry of Environment)' and 'ISO14064-3' for every applicable part.

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 confirmed through the 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:

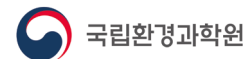
- 1) The Inventory Report has been stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme' and "ISO 14064-1".
- 2) As a result of the materiality test on each company's GHG emissions, it satisfies the quantitative standard and presents an opinion of "appropriate".

Company	Scope 1	Scope 2	Total
HD Hyundai Oilbank	5,872,475	955,130	6,827,600
HD Hyundai Chemical	1,571,287	1,433,350	3,004,635
HD Hyundai OCI	339,908	38,494	378,400

* Total emissions are the sum of emissions by business site after truncating the decimal point, and there is a difference from the sum of Scope 1 and 2 emissions.

May 17th, 2023
CEO Ji-Young Song
Korean Foundation for Quality

Ji Young Song





Third-Party Assurance Statement

To readers of HD Hyundai Oilbank Integrated Report 2022

Introduction

Korea Management Registrar (KMR) was commissioned by HD Hyundai Oilbank to conduct an independent assurance of its Integrated Report 2022 (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 the 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
- Material Topic standards
 - GRI 201 : Economic Performance
 - GRI 305 : Emissions
 - GRI 403 : Occupational Health and Safety
 - 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 2021. 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.

May 2023 Seoul, Korea

CEO *E. J. Hwang*





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