Hanwha Solutions

2026 Hanwha Solutions Sustainability Report

# Sustainable Solutions For All

# ABOUT THIS REPORT

This report has been prepared to transparently share Hanwha Solutions' 2025 ESG strategy and key achievements in support of its sustainable growth. Hanwha Solutions identifies key ESG issues through a double materiality assessment, disclosing both its response strategy and implementation performance. Furthermore, based on analysis of global sustainability trends, implementation plans are presented for general ESG issues to enhance readers' understanding. Going forward, Hanwha Solutions will continue to reflect stakeholder expectations and the evolving sustainability landscape in its operations, while practicing responsible ESG management.

Interactive PDF User Guide

This report is provided in an interactive PDF format to enhance reader convenience and understanding. Click on icons to easily navigate to each section.

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## Report Overview

Hanwha Solutions publishes an annual sustainability report to transparently disclose its sustainability activities and performance across the environmental, social, and governance (ESG) areas, and to communicate with a wide range of stakeholders.

## Reporting Period

This report covers sustainability activities, as well as financial and non-financial performance for the period from January 1, 2025 through December 31, 2025. Certain qualitative information from the first half of 2026 is also included to ensure timely and relevant disclosure.

## Reporting Principles

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021, the global standard for sustainability reporting. To disclose issue-specific activities relevant to our industry, the report references the Sustainability Accounting Standards Board (SASB) standards for key sectors. In addition, Hanwha Solutions' climate-related risks, opportunities, and response strategies are disclosed in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. The report also reflects the 10 Principles of the UN Global Compact (UNGC) and incorporates relevant indicators from the UN Sustainable Development Goals (UN SDGs), which are global sustainability initiatives. Financial information contained in the report is based on the Korean International Financial Reporting Standards (K-IFRS).

## Reporting Scope

The financial performance presented in this report includes consolidated financial data of Hanwha Solutions headquarters and domestic and overseas operations. Non-financial performance is reported primarily based on data from Hanwha Solutions headquarters and all domestic sites of its four business divisions (Chemical, Qcells, Insight, and Wire & Cable).

## External Assurance

Non-financial data in this report has undergone independent assurance by the Korea Management Registrar to ensure objectivity and reliability.

## Contact

For inquiries regarding this report, please contact us using the information below.


| | |
|---|---|
| Department | ESG Secretariat |
| Phone | +82-2-729-2700 |
| Email | esg.hsc@hanwha.com |
| Address | 86 Cheonggyecheon-ro, Jung-gu, Seoul, Republic of Korea |
| Website | www.hanwhasolutions.com |

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# INTRODUCTION

# CEO MESSAGE

Dear stakeholders,
I am Seung Deok (Andy) Park,
CEO of Hanwha Solutions.

I would like to express my sincere gratitude to all our stakeholders—including our employees, shareholders, customers, suppliers, and local communities—for your unwavering trust in and support for Hanwha Solutions.

Amid persistent political instability and deteriorating economic conditions, Hanwha Solutions faced complex challenges arising from shifting market environments and supply chain volatility. Despite these headwinds, we strengthened the competitiveness of our core businesses while pursuing operational efficiency and business transformation. We remain committed to further strengthening the foundation for sustainable growth.

Sustainability management has become a critical factor in determining the long-term success of a business, based on stakeholder trust.
As stakeholder expectations for ESG management continue to rise and domestic and international ESG disclosure standards continue to evolve, ESG practices have become integral to corporate strategy and risk management.
Hanwha Solutions proactively manages key ESG issues, such as climate action, supply chain management, human rights, and safety, to secure future business competitiveness and reinforce the foundation for sustainable growth.
Designating climate action as a key strategic initiative, we are accelerating renewable energy supply, improvements in energy efficiency, and the development of low-carbon products to achieve our 2050 Net Zero goal.
Centered on our Solar Hub, we take responsibility for supplying clean energy and are leading the global energy transition through the development of next-generation solar technologies. Since 2025, we have been building a circular economy model that combines carbon reduction and resource circulation through our 'EcoRecycle by Qcells' business that focuses on managing the entire lifecycle of solar products, including the collection, material extraction, and recycling of end-of-life solar modules.
Furthermore, we are contributing to the transition of petrochemical products toward a low-carbon, circular economy by developing recycling technologies and products made with bio-based raw materials while playing a vital role in expanding clean energy through the development of high-value-added materials for the power grid infrastructure.
Hanwha Solutions operates an ESG Committee composed entirely of independent directors to strengthen management and oversight of critical ESG issues, enabling systematic response to evolving regulations and market changes. In parallel, the company continues its efforts to uphold sound governance by protecting shareholder interests, advancing board independence, and strengthening our audit support framework to build a more accountable decision-making process.

Dear valued stakeholders,
Hanwha Solutions will continue to create sustainable value and, with the spirit of a 'Great Challenger' that transforms change and challenges into new opportunities, we will move toward a better future.
Thank you.

June 26, 2026
CEO **Seung Deok (Andy) Park**

# INTRODUCTION TO Hanwha Solutions

## Company Overview

### About Hanwha Solutions

Hanwha Solutions is a global company that provides sustainable solutions across a wide range of business areas based on its energy and materials technologies. Leveraging the Chemical Division's customer-oriented, customized materials technologies and the Qcells Division's smart energy solutions, the company pursues sustainable growth and works to create a better future for all. In particular, Hanwha Solutions is expanding its Green Portfolio through continuous investment and R&D in environmentally friendly areas, including next-generation solar technologies and renewable energy solutions from the Qcells Division, as well as circular economy technologies developed by the Chemical and Qcells Divisions.

### Company Profile

| | |
|---|---|
| Name | HANWHA SOLUTIONS CORPORATION |
| Year of Establishment | 1965 |
| Revenue[1] | KRW 13,333,055 million |
| Number of Employees | 5,503 (as of Dec. 31, 2025) |

| | |
|---|---|
| CEO | Dong Kwan Kim, Jung Woon Nam, Seung Deok (Andy) Park (as of the general shareholders' meeting in March 2026) |
| Head Office Address | 86 Cheonggyecheon-ro, Jung-gu, Seoul, Korea |
| Total Assets[1] | KRW 33,144,011 million |
| Website | www.hanwhasolutions.com |

### Our Business

Hanwha Solutions offers a broad portfolio of solutions driven by differentiated technologies and innovation. Through Qcells' smart, eco-friendly energy solutions and Chemical's specialized materials for diverse customer needs, Hanwha Solutions is evolving into a global leader in addressing climate change. To build a better future through sustainable growth for all, Hanwha Solutions operates across diverse business divisions.

#### Chemical Division

Sustainable Innovation.
Boundless Relevance.
Agenda for Next Generation.

Hanwha Solutions' Chemical Division pioneered the production of PVC[3] in Korea, and continues to contribute to improving quality of life by producing essential petrochemical products, such as LDPE[4], LLDPE[5], CA[6], and TDI[7], which serve as foundational materials across a wide range of industries. From basic petrochemical materials to high-value-added businesses, such as Eco-DEHCH, a phthalate-free plasticizer, rPE[8] made with recycled materials, and XDI[9], first developed in Korea, the division is seeking to grow into a competitive leader in the industry.

#### Qcells Division

Total energy solutions including solar ingot, wafer, cell, and module manufacturing, system solutions, downstream project development and solar financing

Guided by the mission of "We aim for a greener tomorrow with completely clean energy solutions," Hanwha Solutions' Qcells Division strives to build a sustainable future. Its business spans the entire solar value chain, from manufacturing and sales of solar ingots, wafers, cells, and modules, to system solutions that support energy conversion, storage, and management. It also provides solutions for solar project development and construction, as well as distributed energy solutions that minimize energy waste and deliver economic benefits to customers by optimizing power usage and trading. Through these efforts, the division is actively working to reduce carbon emissions across its operations and slow the pace of climate change.

#### Insight Division

Development projects ranging from large-scale, mixed-use developments to data centers, industrial complexes, residential/urban development, and renewable energy infrastructure

Hanwha Solutions' Insight Division pursues an integrated development model, leveraging expertise across diverse sectors, including mixed-use developments, data centers, renewable energy, industrial complexes, and premium lifestyle developments. Going beyond traditional development practices and seamlessly integrating development, financing, and operations, the division is evolving into a comprehensive developer committed to sustainable growth.

#### Q Energy Division[2]

Comprehensive renewable energy solutions in Europe (solar power, wind power, BESS, green hydrogen)

Hanwha Solutions' Q Energy Division is an energy company with over 25 years of experience. It develops, constructs, and manages projects across the entire value chain of solar power, wind power including repowering, and energy storage in the European market. It operates in key European markets including France, Spain, Portugal, Germany, and Italy, with approximately 1,000 MW under construction and an active pipeline of over 10 GW. The division is also piloting green hydrogen solutions as part of its commitment to enhancing the energy transition toward a more sustainable future.

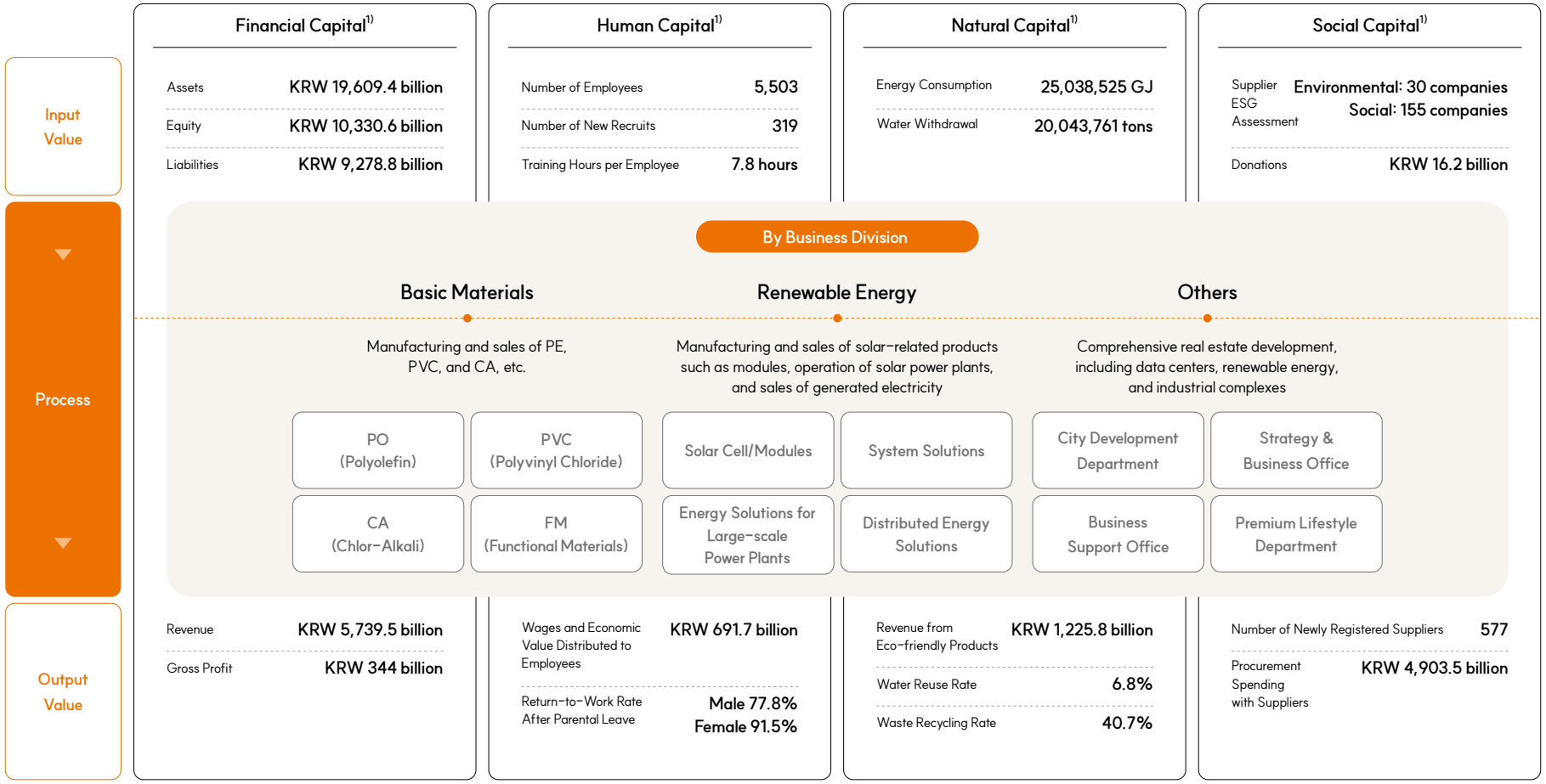
#### Wire & Cable Division

Global partner in the energy transition

Hanwha Solutions' Wire & Cable Division is establishing itself as a global partner in the transition to sustainable energy as Korea's largest XLPE[10] producer. In materials markets where contamination control is critical to ensuring reliability, the Wire & Cable Division offers exceptional quality consistency and process transparency through its integrated production system, which encompasses raw materials (LD, EVA[11], EBA[12]) and finished products (XLPE, semiconductive compounds). Through continuous quality improvement, the division is striving to become a global leader in the wire and cable sector.

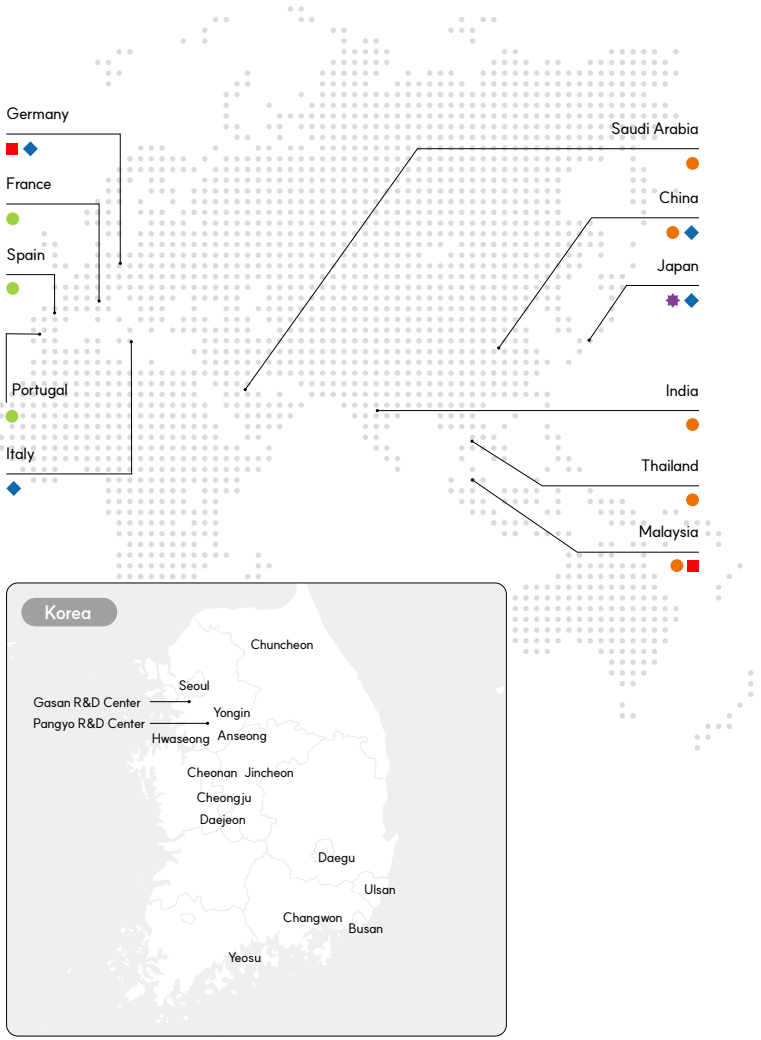
1) Based on consolidated financial statements 2) This division does not operate an independent domestic site. 3) Polyvinyl Chloride 4) Low Density Polyethylene 5) Linear Low Density Polyethylene 6) Chlor-Alkali
7) Toluene Diisocyanate 8) recycled polyethylene 9) Xylylene Diisocyanate 10) Cross-linked Polyethylene 11) Ethylene Vinyl Acetate 12) Ethylene Butyl Acrylate

## Business Performance




1) Based on separate financial statements

## Global Network




### Chemical

**Domestic Network**

Seoul Head Office
R&D Center
Chungcheong-Honam Sales Office
Yeongnam Sales Office
Yeosu Plant
Ulsan Plant 1
Ulsan Plant 2
Ulsan Plant 3

**Overseas Network**

Ningbo Office
Shanghai Office
Beijing Office
Guangzhou Office
Malaysia Office
Thailand Office
IPC Office
India Office
Hanwha Cimarron LLC

### Insight

**Domestic Network**

Seoul Head Office
Anseong Techno Valley
West Ochang Techno Valley
2nd Yongin Techno Valley
H Techno Valley
Ulsan KTX Station Area Complex
Ulsan Mugeo Residential Development
Changwon Pungho Jangcheon District
Chuncheon Jade (Jade Palace, Jade Garden)
REC Data Center
Anseong Techno Logistics

**Overseas Network**

Japan, MUWA NISEKO
Chile, Chile Office
US Napa Valley, SEVEN STONES ESTATE

### Qcells

**Domestic Network**

Seoul Head Office
Jincheon Plant
Gasan R&D Center
Daegu R&D Center
Pangyo R&D Center

**Overseas Network**

Americas
Europe
Sales, Manufacturing, and R&D Sites in Asia

### Q Energy

**Domestic Network**

N/A

**Overseas Network**

Spain Office (Madrid, Badajoz, Seville)
France Office (Paris, Avignon, Montpellier, Lyon, Bordeaux, Nantes, Toulouse)
Portugal Office (Porto, Lisbon)

### Wire & Cable

**Domestic Network**

Seoul Head Office[1)]
Yeosu Plant[1)]
Central Research Center[1)]
Ulsan Plant 1[1)]

**Overseas Network**

HANWHA CABLE SOLUTIONS S.R.L. (W&C Europe)
Europe Subsidiary (Germany)
U.S. Subsidiary
Beijing Office[1)]
Guangzhou (China) Office[1)]
Shanghai Office[1)]
Hanwha Japan

1) Identical to the Chemical Division's corporations, branches, and business sites

# ESG STRATEGY

# Hanwha Solutions ESG STRATEGY

VISION

## Sustainable solutions for all, from energy to materials

MISSION

We aim to deliver sustainable solutions for the planet through smart energy solutions and customer-focused materials.

ESG Strategy

### Environmental

- Climate Action
- Environmental Impact
- Sustainable Products
- Biodiversity

**Key Achievements**

- Implementing Greenhouse Gas (GHG) and energy reduction initiatives
- Sourcing renewable energy
- Implementing initiatives to reduce air and water pollutants and hazardous substances
- Investing in the development of eco-friendly and bio-attributed products
- Conducting biodiversity conservation initiatives

### Social

- Health & Safety
- Supply Chain
- Talent & Human Rights
- Customer Satisfaction
- Local Community

**Key Achievements**

- Developing a mid- to long-term roadmap to build a health and safety management system (~2030)
- Supporting suppliers to promote mutual growth
- Establishing a human rights policy and enhancing the human rights impact assessment process
- Acquiring ISO 9001 certification and conducting follow-up customer satisfaction surveys
- Establishing mid- to long-term social contribution targets

### Governance

- Transparent Governance
- Compliance

**Key Achievements**

- Ensuring a majority of independent directors on the Board
- Conducting Board evaluations and providing training to strengthen Board expertise
- Reviewing company-wide risk identification and mitigation strategies at the Board level
- Acquiring ISO 37001 and ISO 37301 certification and conducting regular audits

# Hanwha Solutions ESG GOVERNANCE

## ESG Governance Framework

Hanwha Solutions has established an ESG governance framework to drive sustainability, managing key ESG issues through a company-wide collaborative framework. The Board of Directors is at the center of this framework, overseeing the development, implementation, monitoring, and reporting of the ESG strategy and reviewing risks and opportunities across all ESG dimensions on a semiannual basis. In particular, priority issues identified through the materiality assessment are reported to the ESG Committee.

**ESG Committee** Hanwha Solutions established an ESG Committee under the Board of Directors to oversee ESG management. The Committee deliberates on and approves key strategies and reviews ESG-related risks and opportunities. In 2025, the Committee deliberated on or approved a total of 10 ESG agenda items, including reports on Net Zero implementation and strategies for responding to climate-related risks and opportunities.

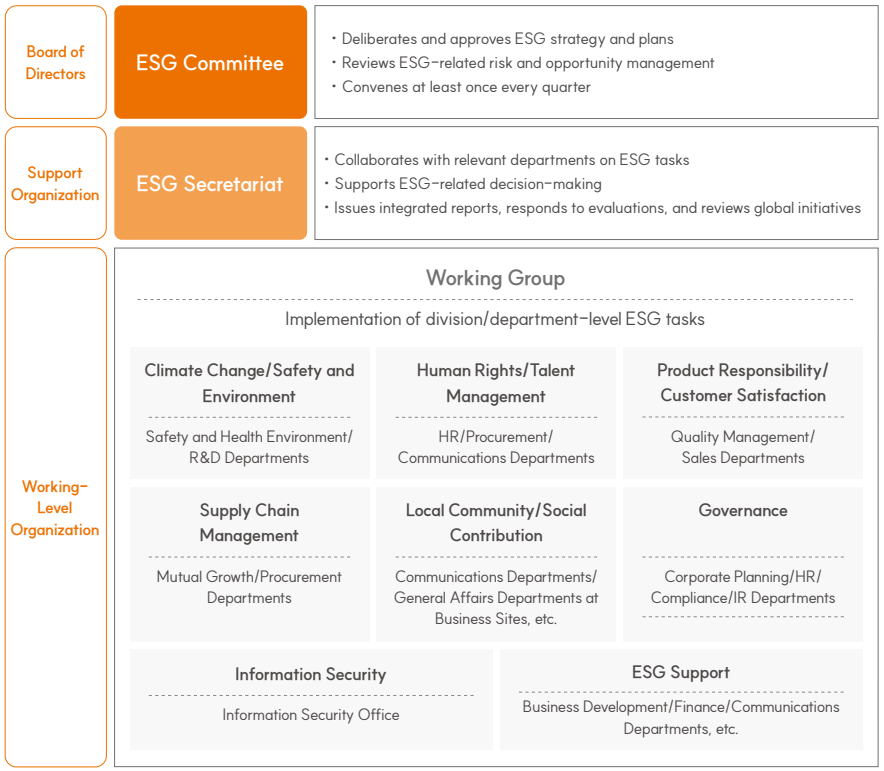
### 2025 ESG Committee Meeting Details

| Meeting Date | Agenda Items | Attendance Rate |
|---|---|---|
| Feb. 19, 2025 | • Report on ESG materiality assessment results and implementation plan | 100% |
| | • Report on 2024 human rights management activities | 100% |
| Apr. 24, 2025 | • Approval of donation to the educational foundation | 100% |
| | • Report on Net Zero implementation (Q1 performance and Q2 plan of 2025) and climate risk/opportunity response strategy | 100% |
| Jul. 30, 2025 | • 1H performance and 2H plans for key ESG issues | 100% |
| | • Report on Net Zero implementation (1H performance and 2H plan for 2025) | 100% |
| Sep. 04, 2025 | • Enactment of supply chain sustainability management policy | 100% |
| Nov. 05, 2025 | • Report on Net Zero implementation (Q3 performance and Q4 plan of 2025) | 100% |
| Dec. 23, 2025 | • Report on Net Zero implementation (2025 performance and 2026 plan) and climate risk/opportunity measures | 100% |
| | • 2H performance and 2026 plans for each key ESG issue | 100% |

**ESG Secretariat** The ESG Secretariat manages day-to-day ESG operations across the organization. It proactively reviews the requirements of global ESG initiatives and works closely with relevant departments to respond effectively. In addition, it supports the ESG Committee's decision-making and activities by developing and implementing detailed ESG initiatives and managing ESG disclosures.

**Working Group** The Working Group plays a key role in executing detailed ESG initiatives. Each division and department carries out ESG-related tasks specific to its function and conducts an annual review of relevant ESG risks. Based on such activities, the Working Group develops risk mitigation processes and reports annually to the Board of Directors.

### ESG Governance Framework



# ESG HIGHLIGHTS

Hanwha Solutions drives sustainable management across Environmental, Social, and Governance (ESG) areas, systematically managing and disclosing its key ESG achievements in 2025.

## E

| | |
|---|---|
| Revenue from eco-friendly products | KRW 1,225.8 billion |
| Tandem cell efficiency[2] | 28.6% power conversion efficiency[3] |
| Eco-friendly R&D investment | KRW 165.5 billion |
| Waste generation | 94,729 tons |

## S

| | |
|---|---|
| Process safety management implementation ratings<br>Ulsan Plant 1 (Since 2000),<br>Ulsan Plant 2 (Since 2022), Ulsan Plant 3 (Since 2016),<br>Jincheon Plant (Since 2024) | Maintaining a P Rating |
| Number of Employees Who Took Dad Leave | 101 employees |
| Female managers (increase of 6) | 220 managers |
| Social welfare: KRW 14,060 million<br>Educational scholarships: KRW 1,810 million<br>Environment and culture: KRW 260 million<br>Others: KRW 100 million | Total donations of KRW 16.22 billion[5] |

## G

| | |
|---|---|
| Appointment of independent director[1] as Chairman of the Board | Chairman of the Board (Independent Director) |
| ESG Committee attendance rate | 100% |
| Ethics and compliance certifications | Acquired at all sites<br>ISO 37001, ISO 37301 |
| Sites that conducted anti-corruption risk assessments | 100% |

| MSCI | SUSTAINALYTICS | SUSTINVEST | 한국ESG기준원 |
|---|---|---|---|
| AA | (Sep. 2025) 21.7 points[4] | (2H 2025) BB | (Integrated rating) A |

1) The title 'Outside Director' will be changed to 'Independent Director' (effective July 23, 2026, in accordance with the revisions to the Articles of Incorporation)
2) Based on internally developed M10 perovskite-crystalline silicon tandem cells
3) Verified by Fraunhofer ISE CalLab (Dec. 2024, cell level)
4) ESG Risk Rating, Industry (Chemicals) Rank 54/550
5) Due to rounding of decimals, the sum of individual items may not correspond to the total

# STAKEHOLDER COMMUNICATION

Hanwha Solutions defines customers, shareholders and investors, employees, suppliers, and local communities and government as key stakeholders that directly or indirectly interact with and influence the company's business activities. Hanwha Solutions operates diverse communication channels to continuously gather stakeholder feedback, which is incorporated into key decision-making following internal review.

## Employees

| Key Interests | Key Communication Channels |
|---|---|
| Work-life balance | Grievance reporting channel |
| Employee health and safety | Employee meetings and workshops |
| Employee career development | Intranet bulletin board |
| Fair performance evaluation and compensation | Organizational culture surveys |
| | Labor-Management Council (quarterly) |

## Customers

| Key Interests | Key Communication Channels |
|---|---|
| Privacy protection | Official website and social media channels |
| Quality of products and services | On-site and invited seminars (ongoing) |
| Sustainable and eco-friendly products | VOC (Voice of Customer) channels |
| Enhancing customer satisfaction | Customer satisfaction surveys |
| | Business reports |
| | Sustainability reports |

## Shareholders and Investors

| Key Interests | Key Communication Channels |
|---|---|
| Enhancing corporate value | Annual general meeting of shareholders (once a year) |
| Risk management activities | Extraordinary general meeting of shareholders (as needed) |
| Shareholder-friendly management | NDRs and IR meetings |
| Prompt and accurate communication | Corporate briefings (quarterly) |
| | Business reports, audit reports, corporate governance reports, sustainability reports |

## Suppliers

| Key Interests | Key Communication Channels |
|---|---|
| Building fair partnerships with suppliers | Grievance reporting channel |
| Win-win cooperation | Training programs for suppliers |
| Fair trade practices | Meetings with supplier representatives (as needed) |
| Supplier ESG support programs | |

## Local Communities

| Key Interests | Key Communication Channels |
|---|---|
| Local community development | Participation in local councils and committees (ongoing) |
| Creating value for local communities | Corporate social responsibility activities |
| Environmental conservation activities | |

## Governments

| Key Interests | Key Communication Channels |
|---|---|
| Compliance with laws and regulations | Membership and participation in industry associations |
| Participation in industry-related policy development | Support and cooperation with public institutions and government agencies |
| Strengthening public-private partnerships | |

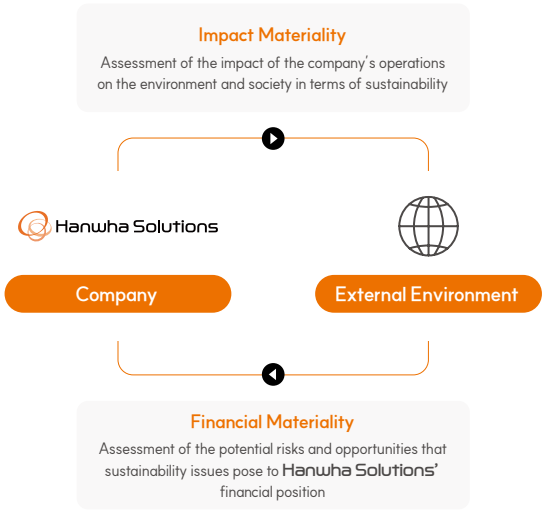
# DOUBLE MATERIALITY ASSESSMENT

## Overview

### Double Materiality Assessment Overview

Hanwha Solutions conducts annual materiality assessments based on the Double Materiality methodology required by the European Sustainability Reporting Standards (ESRS) to identify key sustainability issues. Based on assessments integrating the input of internal employees and external stakeholders, Hanwha Solutions comprehensively analyzed the impact materiality of how its business operations affect society and the environment, along with the financial materiality of how sustainability issues affect its financial performance.

#### Double Materiality Assessment Concept




### Double Materiality Assessment Process

Hanwha Solutions conducted the double materiality assessment in four phases, selecting issues for the Impact, Risk, and Opportunity (IRO) analysis by analyzing disclosure standards, media trends, peer benchmarks, and internal strategic initiatives. We then assessed the impact and financial materiality of 12 preliminary issues, narrowing them down to five priority issues through surveys of internal employees and external stakeholders. Following the assessment, implementation plans are developed for each priority issue based on the associated risks and opportunities and reported annually to the ESG Committee. Progress and next steps are also reported to the ESG Committee on a semiannual basis to support continuous monitoring.

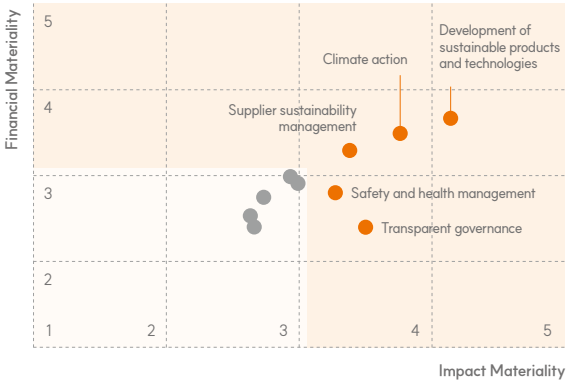
#### Double Materiality Assessment Process

| Understand Business Context | Identify Impacts, Risks, and Opportunities (IRO) | Evaluate IROs | Select Material Issues |
|---|---|---|---|
| Analysis based on business operations across the entire value chain, stakeholder mapping, and 32 common issues across Hanwha Group | Identification of environmental and social impacts and financial risks and opportunities of the initial 12 issues identified | Internal and external stakeholder assessments on identified impacts, risks, and opportunities | Derivation of double materiality assessment results based on impact and financial materiality |
| • Analysis of disclosure standards (GRI, ISSB, SASB)<br>• Media analysis (Hanwha Solutions and industries relevant to each division)<br>• Benchmarking of peer companies (by division)<br>• Internal strategic initiatives, ESG Committee minutes, etc.<br>• Upstream –Downstream value chain analysis<br>• Long-list of sustainability issues based on business context | **Rationale for Issue Identification**<br>• Identification of key issues based on policy/legal requirements and shareholder/investor expectations<br>**Environmental/ Social Impact Identification**<br>• Impact classification based on positive/negative and actual/ potential<br>**Financial Impact Identification**<br>• Impact classification based on risk/ opportunity | **Impact Materiality Assessment**<br>• Evaluation of scale, scope, irremediability, and likelihood of each impact<br>• Engagement of employees, suppliers, clients, and ESG experts<br>**Financial Materiality Assessment**<br>• Evaluation of scale and likelihood of each risk/opportunity<br>• Engagement of financial and risk departments and ESG experts | • Scoring of key issues by evaluation criteria<br>• Identification of material issues through prioritization<br>• Selection of top 5 issues based on prioritization<br>• Report assessment results and implementation plan for each issue to the ESG Committee |

## Double Materiality Assessment Results

Hanwha Solutions conducted a double materiality assessment based on impact materiality (scale, scope, irremediability, likelihood) and financial materiality (scale, likelihood) to identify five ESG material issues. Compared with the previous reporting period, 'environmental impact management and reduction' and 'compliance and ethics management' were no longer identified as material issues. Hanwha Solutions' management approach to these material issues is described in the 'ESG Material Issues' section, while other ESG issues are addressed in the 'ESG Performance' section of this report.

### Double Materiality Assessment Results




●●● High ●●○ Medium ●○○ Low

| | ESG Material Issues | Impact Materiality | Financial Materiality | Double Materiality |
|---|---|---|---|---|
| 1 | Climate action | ●●● | ●●● | ●●● |
| 2 | Development of sustainable products and technologies | ●●● | ●●● | ●●● |
| 3 | Safety and health management | ●○○ | ●●○ | ●●○ |
| 4 | Supplier sustainability management | ●●○ | ●●○ | ●●○ |
| 5 | Transparent governance | ●●○ | ●○○ | ●●○ |

### Response by Material Issue

| | ESG Material Issues | Key Impacts | IRO | Response Measure | Report Page |
|---|---|---|---|---|---|
| E | Climate action | Contributing to global and national emission reduction targets by enhancing energy efficiency in chemical and solar cell manufacturing processes | Positive Impact | • Implement GHG and energy mitigation initiatives at business sites<br>• Strengthen product lifecycle assessment (LCA) | 18–30 |
| | | Rising compliance costs for GHG regulations and risk of declining exports for carbon-intensive products | Risk | | |
| | Development of sustainable products and technologies | Advancement of domestic and global energy transition and enhancement of power generation efficiency through solar technology and material innovations | Positive Impact | • Develop manufacturing technologies for recycled materials such as rPE, and advance R&D on core technologies including anion exchange membrane water electrolysis (AEMWE) and cultured meat<br>• Develop next-generation ESS solutions and microinverters | 32–39 |
| | | Revenue growth driven by infrastructure improvements and renewable energy development to respond to the low-carbon energy market | Opportunity | | |
| S | Safety and health management | Threats to the safety and health of supplier employees due to severe occupational accidents and injuries | Negative Impact | • Conduct VFL (Visible Felt Leadership) and accident analysis for each business site<br>• Operate JSA Championships, SOP Academy, and Focus on Safety | 41–58 |
| | | Increased capital investments and inspection costs to prevent severe occupational and industrial accidents due to inherent safety risks in chemical manufacturing | Risk | | |
| | Supplier sustainability management | Strengthened financial stability across the supply chain, including suppliers, through responsible payment practices | Positive Impact | • Screen new supplier registrations, and provide SH (safety and health) evaluations and consulting<br>• Support ESG consulting for suppliers and strengthen online training content<br>• Hold joint procurement consultation sessions | 60–66 |
| | | Potential business disruptions due to supply chain instability or ESG risks | Risk | | |
| G | Transparent governance | Enhanced stakeholder trust through sound management and effective oversight supported by an independent governance structure with the necessary expertise | Positive Impact | • Conduct Board evaluations<br>• Send electronic notices of convocation four weeks before the general meeting of shareholders | 68–72 |
| | | Enhanced corporate value through more efficient decision-making, aligned with amendments to the Commercial Act and governance improvements | Opportunity | | |

# ESG MATERIAL ISSUES

Hanwha Solutions systematically manages and transparently discloses the primary impacts, response strategies, and future plans of the five ESG material issues identified through the double materiality assessment.

# Climate Action

TCFD

# CLIMATE ACTION TCFD



## Governance

### Governance Body

Climate-related Roles and Responsibilities

Board of Directors (ESG Committee) Hanwha Solutions operates an ESG Committee under the Board of Directors as the governance body responsible for overseeing climate-related risks and opportunities. The roles and responsibilities of the ESG Committee are stipulated in the ESG Committee Regulations. Under Article 3 (Authority) of the ESG Committee Regulations, the Committee is authorized to deliberate and resolve on the company's environmental, social, and governance (ESG) policies and key initiatives. In accordance with Article 11 (Matters for Deliberation), the Committee also reviews material climate-related impacts, as well as public policy engagement activities and their outcomes, as key agenda items.

Climate Governance Framework

| Category | | Role |
|---|---|---|
| Decision-making Body | ESG Committee | Deliberation and resolution of ESG strategies and plans, management and oversight of climate-related risks and opportunities |
| Management | Management of each division | Management and oversight of climate-related risks and opportunities, and GHG emissions |
| Working-level | ESG Secretariat | Coordination of company-wide ESG initiatives and reporting of climate-related risks to the ESG Committee |
| | Working Group | Development of climate response strategies and management of climate-related risks and opportunities |

Climate-Related Oversight Skills and Competencies Hanwha Solutions provides relevant training to the ESG Committee to strengthen its expertise in ESG and climate-related matters. In February 2025, four directors of the Committee received training on domestic and global ESG disclosure trends, enhancing their understanding of ESG reporting and its importance.

Climate-Related Risk and Opportunity Reporting Hanwha Solutions regularly reports climate-related risks and opportunities to the ESG Committee. In the first half of 2025, the ESG Secretariat reported identified climate-related risks and opportunities and related response strategies to the ESG Committee. In the second half of the year, it reported the outcomes of the actions taken. In preparing these reports, the ESG Secretariat compiles relevant information from a Working Group comprising representatives from each business division. Performance on key ESG issues, including climate change, is also reported separately on a semiannual basis.
In addition, the Compliance Office regularly reports company-wide risks, including climate-related risks, to the Board of Directors. In December 2025, the Board approved the agenda item 'Approval of Risk Management Performance Results.'

Climate-related Target Oversight and Progress Monitoring Hanwha Solutions' ESG Committee oversees climate-related targets and progress toward them. After establishing its 2050 Net Zero target in 2021, Hanwha Solutions reported its Net Zero roadmap to the ESG Committee and has since reported Greenhouse Gas (GHG) emissions and Net Zero implementation activities on a quarterly basis.

Climate-related Reports to the ESG Committee

| Date | Role |
|---|---|
| Apr. 24, 2025 | (Report) Net Zero implementation (Q1 performance and Q2 plan of 2025) and climate risk/opportunity response strategy |
| Jul 30, 2025 | (Report) 1H performance and 2H plans for key ESG issues<br>(Report) Net Zero implementation report (1H performance and 2H plan of 2025) |
| Nov. 5, 2025 | (Report) Net Zero implementation (Q3 performance and Q4 plan of 2025) |
| Dec. 23, 2025 | (Report) Results of Net Zero implementation (2025 performance and 2026 plan) and climate risk/opportunity measures<br>(Report) 2H performance and 2026 plans for key ESG issue |

### Management

Management-Level Roles and Oversight The CEO of Hanwha Solutions' Chemical Division receives monthly reports on environmental performance, including GHG emissions, from the Head of the SHE Office. Likewise, the CEO of the Qcells Division receives monthly reports on GHG emissions from the Head of EHS Department (CSO).

Climate-Related Performance in KPIs Hanwha Solutions reflects climate change and sustainability-related performance in its compensation system to reinforce management accountability for climate action. In 2025, the Chemical Division included GHG management performance for the Yeosu and Ulsan Plants in the performance evaluation of the Head of the SHE Office, and the Qcells Division incorporated the achievement of site-level Net Zero targets into the CSO's Key Performance Indicators (KPIs).

## Strategy

### Climate-related Risks and Opportunities in Relation to the Business Model and Value Chain

Impact of Climate-related Risks and Opportunities on Business Models and the Value Chain Hanwha Solutions operates a diversified business portfolio through its Chemical, Qcells, Insight, and Wire & Cable Divisions. Each division operates based on a value chain that connects to raw material sourcing, production, sales and service provision. Accordingly, climate-related physical risks, transition risks, and opportunities have both a direct and indirect impact on each business division and their value chains.

Business Division Introduction

In 2025, the time horizons for climate-related impacts were defined as short-term (2026–2027), medium-term (2028–2030), and long-term (2031–2040), aligned with strategic decision-making and medium- to long-term planning.

Hanwha Solutions identifies climate-related risks and opportunities on an annual basis. Climate-related risks and opportunities assessed at a risk level of Medium or higher, together with their current and anticipated effects, are presented below.

#### Current and Anticipated Effects by Risk

| Category | | Climate-related Risks | Division | Time Horizon | | | Current and Anticipated Impact |
|---|---|---|---|---|---|---|---|
| | | | | Short | Medium | Long | |
| Transition Risks | Regulation/Policy/ Legislation | (TR1) Stricter GHG emission regulations (carbon neutrality) | Chemical/ Qcells | V | V | V | • Increase in GHG-related compliance costs resulting from tighter Nationally Determined Contribution (NDC) and Emissions Trading Scheme (ETS) requirements and the introduction of Carbon Border Adjustment Mechanism (CBAM)<br>• Rising costs for carbon credit purchases and renewable energy procurement<br>• Declining exports of carbon-intensive products |
| | | (TR2) Increased regulations on existing fossil fuel-based products | Chemical | | V | V | • Decline in plastic product sales due to increased regulations on fossil fuel-based products<br>• Increase in operating costs due to transition to recycled or bio-based materials |
| | | (TR3) Introduction of mandatory sustainability reporting (including climate-related disclosures) | Chemical/ Qcells | V | V | V | • Increase in costs to respond to mandatory climate disclosure requirements<br>• Compliance and reputational risks arising from tightening climate disclosure regulations |
| | Legal/Reputation | (TR4) Rise in climate-related litigation, including greenwashing cases | Chemical | | V | V | • Incurrence of response costs and decline in operating profit in the event of greenwashing allegations, regardless of intent |
| | Technology | (TR5) Emergence of low-carbon alternatives to existing fossil fuel-based products and unsuccessful investments in technology transition and development | Chemical | | V | V | • Increase in technology adoption and response costs, and reduced business opportunities due to lagging in the race for market leadership and unsuccessful new technology investments |
| | Market/Reputation | (TR6) Consumer behavior changes and negative perceptions of existing businesses | Chemical | V | V | V | • Decline in sales of conventional fossil fuel-based products and increase in operating costs due to growing demand for sustainable raw materials and for information on product carbon footprints |
| | Market/Regulation | (TR7) Uncertainty in renewable energy supply and growing expectations for renewable energy use | Chemical | V | V | V | • Increase in procurement unit prices and transition costs due to renewable energy supply shortages and policy shifts<br>• Decline in sales of products manufactured without the use of renewable energy |
| | Reputation | (TR8) Increasing requests from clients and investors for climate-related information and ESG ratings | Chemical | | V | V | • Decline in external trust, brand value, and operating profit due to low ESG ratings and insufficient fulfillment of climate-related responsibilities |

## Strategy

### Climate-related Risks and Opportunities in Relation to the Business Model and Value Chain

Impact of Climate-related Risks and Opportunities on Business Models and the Value Chain

Current and Anticipated Effects by Risks and Opportunities

| | Category | Climate-related Risks and Opportunities | Division | Time Horizon | | | Current and Anticipated Effects |
|---|---|---|---|---|---|---|---|
| | | | | Short | Medium | Long | |
| Physical Risks | Acute | (PR1) Increase in extreme and unpredictable weather events | Chemical | V | V | V | • Decline in workforce safety (rise in heat-related illnesses) and productivity due to intensifying temperature extremes<br>• Production disruptions due to facility damage and water supply risks caused by extreme weather<br>• Financial effects caused by extreme heat, flash floods, coastal flooding, fluvial flooding, tropical cyclones, wildfires, water stress, and droughts, etc.<br>• Unstable raw material supply and cost fluctuations |
| | Acute/Chronic | (PR2) Disruptions in raw material supply due to extreme weather in imported raw material sourcing regions | Chemical | | | V | |
| | Acute | (PR3) Asset losses due to climate change | Qcells | | | V | |
| Opportunity | Resource Efficiency, Energy Resources | (O1) Carbon credit sales and energy savings through GHG reduction and offset projects | Chemical | V | V | V | • Profits from sales of surplus allowances and energy cost savings |
| | Products and Services, Energy Resources, Resilience | (O2) Increase in demand for products using renewable energy | Chemical | V | V | V | • Increase in profit from emission allowance sales and related product sales, and increase in investments related to improved corporate image |
| | | (O3) Increase in demand for products using bio-based and recycled materials, as well as low-carbon products | Chemical | V | V | | • Increased profits from sales of related products, first-mover advantage in new markets, and expanded market share and price premiums |
| | Market | (O4) Increase in demand and business opportunities in line with strengthened renewable energy policies to address energy security | Qcells | V | V | | • Increased demand for solar products and business expansion driven by the continued strengthening of renewable energy policies<br>• Market expansion and diversified demand for solar power solutions utilizing underutilized land |
| | | (O5) Market expansion driven by solar power business model diversification | Qcells | V | V | | |

Key Areas Where Climate-related Risks and Opportunities Are Concentrated in the Business Model and Value Chain The Chemical Division's petrochemical production assets and the Qcells Division's solar cell and module manufacturing facilities are highly exposed to climate-related risks. Physical and transition risks may be high in the production and operational stages of the Chemical Division's Yeosu and Ulsan production sites due to their high energy consumption and large asset scale. These risks are also relatively high in upstream petrochemical production and downstream plastics industry activities. By contrast, climate-related opportunities are concentrated across the Qcells Division's value chain, which encompasses solar product manufacturing, power generation, and electricity supply. Such opportunities also arise in the Chemical Division's transition to a product portfolio built on bio-based and recycled materials that support the circular economy.

## Strategy

### Strategy and Decision-making

**Current and Anticipated Changes to Business Model** Hanwha Solutions' Qcells Division possesses vertically integrated manufacturing capabilities across the entire solar value chain, from ingots and wafers to cells and modules. Beyond module sales, it also provides end-to-end solar power plant solutions for engineering, construction, and operations, while expanding into distributed energy solutions to deliver integrated energy services that support the energy transition. Furthermore, by leveraging advanced technologies such as AI and cloud computing, it provides power management software that integrates and automates diverse energy resources, advancing next-generation Energy-as-a-Service (EaaS) offerings to strengthen grid stability and drive energy efficiency enhancements. In addition, the Chemical Division is shifting to a circular economy based on an advanced product portfolio by developing products using bio-based or recycled materials, while the Insight Division is sharpening its competitiveness through diversification of its businesses which include industrial complexes, data centers, renewable energy, mixed-use development projects, and premium real estate.

**Response Strategies for Climate-related Risks and Opportunities** Hanwha Solutions' response strategies for identified climate-related risks and opportunities are as follows. For details on climate mitigation and adaptation efforts, including both direct and indirect measures, see pages 22-23 of this report.

| Risk and Opportunity | Response Strategy |
|---|---|
| GHG Emissions-related Risk (TR1) and Opportunity (O1) | Reducing GHG emissions, monitoring relevant regulations and submitting comments, etc. |
| Low-carbon Products and Technology Risks (TR2, 5, 6, 7) and Opportunities (O2, 3) | Procuring renewable energy, using sustainable raw materials, enhancing life cycle assessment (LCA), obtaining environmental certifications, among others |
| Climate-related Disclosure Risks (TR3,4,8) | Monitoring relevant regulations, submitting comments, responding to ESG assessments, and establishing a climate disclosure framework, among others |
| Acute and Chronic Physical Risks (PR1, 2, 3) | Conducting scenario analysis and identify climate risk factors |
| Solar Business Opportunities (O4, 5) | Expanding renewable energy business models, developing next-generation products, and providing tailored products for idle sites, among others |

**Climate-related Transition Plan and Plans to Achieve Climate-related Targets** In 2021, Hanwha Solutions established its 2050 Net Zero target, aiming to reduce its Scope 1 and 2 GHG emissions by 35% by 2030 from a 2018 base year and achieve Net Zero by 2050. Its key reduction strategies include energy consumption reduction, fuel transitions, and renewable energy procurement while also making efforts to pursue sustainable businesses, such as expanding the solar value chain and producing products based on bio- and recycled materials.

Development of Sustainable Products and Technologies

Meanwhile, the implementation of these transition plans depends not only on the company's own efforts, but also on external factors such as the sufficient expansion of national renewable energy supply infrastructure, consistency in relevant policies, the timely development and operational deployment of emissions-reduction technologies for key processes, and the procurement of renewable energy at economically viable costs.

#### Detailed Strategy for Implementing Climate Transition

| Target | Key Strategy | Detailed Strategy |
|---|---|---|
| Reduction of Scope 1·2 Emissions (Operations) | Reduction of energy usage | Process and facility improvements |
| | Fuel transition | Transition to low-carbon energy sources, such as by-product hydrogen co-firing |
| | Renewable energy transition | On-site generation, Power Purchase Agreement (PPA), and Renewable Energy Certificates (RECs) purchases |
| | Carbon capture and utilization (CCU) | Long-term GHG emissions reduction measures |
| Reduction of Scope 3 Emissions (Value Chain) | Use of sustainable feedstocks and development of circular economy | Use of recycled and bio-based raw materials |

## Strategy

### Strategy and Decision-making

Current and Anticipated Direct Mitigation and Adaptation Efforts

Reduction of Energy Usage **Hanwha Solutions** carries out energy efficiency initiatives through process and facility improvements. The **Chemical Division** completed one CA electrolyzer replacement project in 2025, which is expected to reduce annual GHG emissions by approximately 2,000 tons from the point of its completion. In addition, once the remaining electrolyzer replacement projects are capitalized, an additional annual reduction of approximately 11,000 tons of GHG emissions is expected. The **Qcells Division** completed the replacement of LED lighting and inverter installations prior to 2025 to reduce energy consumption. Through these initiatives, approximately 3,000 tons of GHG emissions were reduced in 2025. Going forward, initiatives to reduce the consumption of energy sources will be implemented to improve equipment operating efficiency and reduce electricity and LNG consumption.

Fuel Transition **Hanwha Solutions** implements initiatives for the transition of fossil fuel-based energy sources to low-carbon energy sources. **Hanwha Solutions' Chemical Division** reduces fossil fuel consumption by utilizing by-product hydrogen generated from the CA process as an internal fuel in cracking furnaces used for Vinyl Chloride Monomer (VCM) production. In 2024, two capital investment projects were initiated to further increase the hydrogen co-firing ratio, one of which was completed in 2025. Based on the completed project, annual GHG emissions are expected to be reduced by approximately 17,000 tons compared with a fossil-fuel-only scenario, and completion of the remaining project is expected to add annual reduction of approximately 34,000 tons.

K-EV100 **Hanwha Solutions** operates a total of 18 eco-friendly vehicles among the total 110 vehicles operated in 2025 (not including models outside the scope of eco-friendly transitions).

Renewable Energy Transition **Hanwha Solutions** is participating in K-RE100 by implementing various renewable energy procurement methods, including on-site solar power generation, the purchase of renewable energy certificates (RECs), and power purchase agreements (PPA), to achieve 100% renewable electricity by 2050.

2025 Renewable Energy Sourcing

| Procurement Method | 2025 Procured Volume (GWh) |
|---|---|
| On-site generation | 7.2 |
| REC | 6.7 |
| PPA | 12.8 |
| Green Premium | 27.0 |
| **Total Renewable Energy Procured** | **53.7** |

CASE

**The Qcells Division** has introduced on-site solar power generation facilities on underutilized land within its Jincheon Plant—such as parking lots and rooftops—and has progressively expanded them. The solar PV systems were installed in phases on the plant rooftop in 2016 (0.6 MW), the on-site parking lot in 2018 (1 MW), and again on rooftops in 2023 (2.4 MW) and 2024 (2 MW), bringing the total operating capacity to 6 MW. Through these investments, the Jincheon Plant used 6.61 GWh of renewable energy in 2025 and is projected to generate approximately 7 GWh of annual on-site renewable electricity going forward. In addition, the **Chemical Division** operates solar power generation facilities with a capacity of approximately 0.5 MW at its Yeosu and Ulsan Plants, using an annual 0.6 GWh of renewable energy.

Other Anticipated Direct Mitigation and Adaptation Efforts **Hanwha Solutions' Chemical Division** plans to continuously carry out energy efficiency initiatives, such as process optimizations and electrolyzer replacements, while sourcing renewable energy to further reduce emissions. The **Qcells Division** is expanding its use of renewable energy in 2026 by exploring various options, including green premiums and PPAs.

## Strategy

### Strategy and Decision-making

Current and Anticipated Indirect Mitigation and Adaptation Efforts

Management of Product-level Carbon Emissions Based on LCA Hanwha Solutions uses Life Cycle Assessment (LCA) to calculate product carbon footprints and applies the results to manage GHG emissions throughout the product lifecycle. In 2023, the Chemical Division developed an in-house LCA tool that enables cradle-to-gate environmental impact assessments from raw material extraction to manufacturing, applying seven environmental impact categories, including carbon footprint, aligned with Korean Environmental Product Declaration (EPD) standards. In 2025, the Chemical Division further enhanced its in-house LCA tool by adding new grades and bio-based products and updating its LCA results based on 2024 activity data.

Product Environmental and LCA Certification Status

| Category | Issuing Body | Product Category | Certified Year | Validity Period | Notes |
|---|---|---|---|---|---|
| EPEAT (Electronic Product Environmental Assessment Tool) | Global Electronics Council | Q.TRON, Q.PEAKDUO 3 module models | 2024 (2 products), 2026 (1 product) | - | |
| Solar Module Carbon Foot Print (CFP) | Korea Energy Agency | All solar modules for the domestic market | Varies by model | 3 years | 80 renewals and 42 new certifications in 2025 |
| Environmental Product Declaration (EPD) | Korea Environmental Industry & Technology Institute (KEITI) | Caustic soda, chlorine, PVC, plasticizer, wire and cable | 2024 (4 products), 2025 (12 products), 2026 Q1 (1 product) | 3 years | |

Use of Sustainable Feedstocks and Development of Circular Economy Hanwha Solutions' Chemical Division seeks sustainable growth through its circular economy business model. The division supports the circular economy by advancing the commercialization of bio-attributed Polyvinyl Chloride (PVC) and Ethylene Vinyl Acetate (EVA) made with biomass-based raw materials and by producing recycled polyethylene (rPE) products using recycled materials. In addition, the division has obtained and renewed International Sustainability & Carbon Certification (ISCC) Plus and Global Recycled Standard (GRS) certifications for recycled and bio-based materials.

Sustainability Certifications

Climate-related Engagement Hanwha Solutions strengthens climate response capabilities through policy engagement via participation in industry and public-private consultative bodies, as well as value chain engagement with suppliers.
In terms of policy engagement, the Chemical Division attended a meeting of the R&D consultative body for carbon-intensive industries, hosted by the Ministry of Climate, Energy and Environment. The Qcells Division attended a benchmark (BM) allocation session for the semiconductor, display, and photovoltaic industries under the Emissions Trading Scheme (ETS). Hanwha Solutions also monitors climate-related regulations and provides input on related policies.
In addition, Hanwha Solutions' Chemical Division engaged with a key supplier to share updates on 2025 climate actions, including LCA, and discuss potential areas of collaboration.

Climate-related Disclosure Hanwha Solutions voluntarily discloses climate-related information through the Sustainability Report. In preparation for upcoming mandatory climate disclosure requirements, Hanwha Solutions continuously monitors relevant regulations and is developing plans to implement disclosure standards. In addition, the Chemical Division participated in projects led by the Ministry of Climate, Energy and Environment in 2025 to develop a Scope 3 emissions calculation guideline tailored to the petrochemical industry and conduct a pilot assessment of physical climate risks, further strengthening its climate disclosure capabilities.

Anticipated Indirect Mitigation and Adaptation Efforts Hanwha Solutions' Chemical Division plans to obtain and renew sustainable raw material certifications and Environmental Product Declarations (EPDs) in 2026, while the Qcells Division plans to renew its existing carbon verification certifications and also obtain new ones. In addition, the Qcells Division will continue participating in industry roundtables and advocating for the improvement of carbon verification systems for photovoltaic modules through government policy engagement. The Chemical Division also plans to participate in the Carbon Neutrality Research Association under the Korean Chamber of Commerce and Industry, as well as the Climate Change Response Group and Carbon Neutrality Coalition Steering Committee activities of the Korea Chemical Industry Association.

## Strategy

### Strategy and Decision-making

Resourcing of Climate-related Response Activities Hanwha Solutions has financed its renewable energy and solar power businesses through green bonds issued under its Green Financing Framework. For details on green business investments, please refer to the 'Development of Sustainable Products and Technologies (p.38)' section of this report.

Progress of Climate-related Plans Hanwha Solutions regularly reviews progress on transition plans and targets developed to respond to climate change. For details on progress in implementing these plans, please refer to the 'Metrics and Targets: Performance Against Climate-related Targets' section (p. 30) of this report.

### Financial Position, Financial Performance, and Cash Flows

Financial Effects for the Reporting Period Hanwha Solutions identified the impacts of climate-related risks and opportunities on its financial position, financial performance, and cash flow during the reporting period. For the reporting period, the Chemical and Qcells Divisions incurred approximately KRW 2,878 million on renewable energy procurement costs, including PPAs, RECs, and Green Premium, resulting in increases in cost of sales and current assets. Meanwhile, the Chemical Division generated approximately KRW 231 million in income from the sale of surplus emission allowances. As of the end of the reporting period, construction in progress related to investments in energy efficiency improvements amounted to approximately KRW 32,584 million, and the carrying amount of assets acquired for such improvements during the reporting period amounted to approximately KRW 7,446 million. In addition, for on-site renewable energy generation, the carrying amount of assets acquired during the reporting period amounted to approximately KRW 109 million.

Anticipated Financial Effects Hanwha Solutions reviewed the potential future financial effects of identified climate-related risks and opportunities. If investment in emissions reduction activities to respond to greenhouse gas emissions regulations increases, capital expenditure may rise over the short, medium and long term, which could in turn increase property, plant and equipment and related liabilities. In the transition to renewable energy, increased renewable energy procurement may lead to increases in cost of sales and trade payables, thereby affecting financial position, financial performance and cash flows. Hanwha Solutions' Chemical Division is expected to invest in energy efficiency facilities, and as a result, property, plant and equipment is expected to increase in the next fiscal year due to higher capital expenditure. In addition, growing demand for bio-based and recycled material products and the expansion of renewable energy-related businesses may lead to higher sales of related products over the medium to long term, which may in turn result in changes in working capital, particularly in trade and other receivables.
The scale and timing of these financial effects vary depending on the climate scenario. Hanwha Solutions estimates the potential effects of transition and physical risks through analysis that reflects a range of climate scenarios. For detailed results of the scenario analysis, please refer to 'Strategy: Climate Resilience (p.25-27).'

Climate Resilience

Climate-related Risks and Opportunities with Potential Financial Effects in the Next Reporting Period Among the climate-related risks identified during the reporting period, Hanwha Solutions reviewed significant risk factors that could result in material adjustments to the carrying amounts of assets and liabilities in the financial statements for the next reporting period. As a result, greenhouse gas emissions-related risks were identified as risks that could affect the financial statements for the next reporting period. For example, stricter domestic greenhouse gas regulations, including the emissions trading scheme, may result in greenhouse gas emissions exceeding allocated allowances. In such cases, additional purchases of emission allowances to cover the shortfall may be required, which could affect the carrying amount of emission liabilities. In addition, investment in greenhouse gas reduction-related energy efficiency facilities is expected to continue in the next fiscal year, which may affect the carrying amount of property, plant and equipment. At the same time, if the required volume of additional emission allowance purchases decreases as a result of reduction activities, this may also affect relevant carrying amounts.

## Strategy

### Climate Resilience

Hanwha Solutions assesses resilience to identified climate-related risks and opportunities through climate scenario analysis.

Physical Risks

Approach and Timing of Scenario Analysis Hanwha Solutions used the S&P Global Climanomics Tool in the first quarter of 2025 to analyze the financial effects of physical risks across eight indicators—pluvial flooding, temperature extremes, coastal flooding, drought, wildfire, tropical cyclone, water stress, and fluvial flooding—for major business sites. The analysis showed that temperature extremes were associated with a relatively high average annual asset loss rate.
Accordingly, in the first half of 2026, Hanwha Solutions assessed the risks associated with temperature extremes, particularly extreme heat, by estimating the financial impact of lost working hours based on average annual wages at the Yeosu and Ulsan Plants in the Chemical Division and the Jincheon Plant in the Qcells Division, which have high asset values and relatively large numbers of outdoor workers.

Implications of Scenario Analysis Under the low-emission (SSP1-2.6) and high-emission (SSP5-8.5) scenarios, the estimated financial effects of labor losses due to extreme heat, based on average annual wages, varied by climate scenario, time horizon, and site-specific characteristics. Depending on the scenario and site, the estimated financial effects ranged from approximately KRW 40 million to KRW 350 million during 2026–2035, KRW 70 million to KRW 780 million during 2036–2045, and KRW 90 million to KRW 1.13 billion during 2046–2055. Overall, higher estimated effects were observed under the SSP5-8.5 scenario. The level of impact varied across sites depending not only on climate exposure, such as the frequency of heatwaves, but also on key inputs, including the number of outdoor workers and average wage levels. These quantitative findings indicate that the financial effects of extreme heat are influenced by both climate exposure and site-specific operational characteristics, such as workforce composition.

Significant Areas of Uncertainty in the Climate Resilience Assessment Hanwha Solutions estimated financial effects based on reasonable and supportable information available without undue cost or effort to assess its climate resilience. However, the analysis is subject to inherent uncertainties. The physical scenario analysis was conducted using key inputs, including regional heatwave frequency, the number of outdoor workers, additional rest periods, average wages, and annual working days. Accordingly, the results are subject to limitations, as outcomes may vary depending on the estimation assumptions and methodologies applied to these inputs. Heatwave frequency was estimated based on three-hour average temperatures projected by climate models under different climate scenarios and may therefore differ from actual site conditions. The number of outdoor workers was also estimated as of a specific point in time and may therefore vary depending on future workforce deployment.
In addition, the analysis assumes that additional rest periods result in equivalent losses in working hours, while the methodology used to estimate financial effects based on average wages and annual working hours may differ from actual operating conditions and work arrangements. The results of this analysis should therefore be regarded as an approximate estimate of the potential operational impact of heat waves.

Capacity to Adjust or Adapt to Climate Change As the financial effects of physical risks are projected to increase over time under higher-emission scenarios, we are pursuing 2050 Net Zero targets to mitigate these long-term risks. In addition, Hanwha Solutions' Chemical Division has implemented extreme heat response measures, including preventive inspections of production and utility facilities, enhanced operations of cooling systems, adjustments to working hours, and extended rest periods, to address the increasing frequency of temperature extremes and heatwaves. The Qcells Division also takes measures, such as providing information on break times and rest areas and deploying heat protection supplies to proactively prepare against escalating exposure to temperature extremes.

## Strategy

### Climate Resilience

Transition Risks and Opportunities

Approach and Timing of Scenario Analysis Hanwha Solutions conducted a scenario analysis in the first half of 2026 to assess the resilience of its key transition plan, the Net Zero roadmap, and to analyze the financial effects of transition risks and opportunities related to greenhouse gas emissions regulations. The analysis focused on the Chemical and Qcells Divisions,, which account for a high share of greenhouse gas emissions on a separate basis, and assumed emission reduction pathways for both divisions in line with their transition to net zero. On this basis, the financial effects were estimated, focusing on gains and losses from emission allowances under the domestic Emissions Trading Scheme (ETS).
However, these estimates were limited to the emission reduction pathways and did not include other transition-related costs, such as the investment and operating costs required to implement reduction activities. Accordingly, a calculation method was applied under which projected emissions in excess of allocated allowances result in allowance purchase costs, while emissions below the allocated allowances result in revenue from allowance sales.

Implications of Scenario Analysis When GHG emissions are reduced in line with the reduction pathways, emissions remain within allocated allowances, resulting in gains from allowance sales. In particular, such gains were estimated to be highest under the NZE scenario, where carbon price was highest. However, this analysis only considers the financial effect of emission allowances and excludes the capital expenditures (CAPEX) and operating expenditures (OPEX) required to implement emission reduction. Accordingly, there are limitations to assessing the overall resilience of the transition plan based solely on gains from allowance sales.
Consistent with the previous period's scenario analysis, the current analysis indicates that the emissions reduction pathways result in allowance gains, with the magnitude of such gains varying depending on carbon price assumptions under each Global Energy and Climate (GEC) Model scenario.

Transition Risks and Opportunity Analysis Outcome (estimated emission allowance profit/loss by scenario)

| Category | Unit | Medium-term (2030) | | | |
|---|---|---|---|---|---|
| | | CPS | SPS | APS | NZE |
| Emission Allowance Profit/Loss under the Emission Reduction Pathway: Cost (-) · Profit (+) | KRW 100 million | +80 | +160 | +280 | +297 |

Significant Areas of Uncertainty in the Climate Resilience Assessment Hanwha Solutions estimated financial effects based on reasonable and supportable information available without undue cost or effort as part of its climate resilience assessment. However, the analysis remains subject to inherent uncertainties.
Hanwha Solutions conducted the transition risk scenario analysis under the K-ETS framework. Potential allowance gains and losses were estimated based on key assumptions and variables, including carbon prices, 2030 target emissions, and allowance allocations. However, the results are subject to uncertainty, as outcomes may vary depending on the estimation assumptions and methodologies applied to these inputs. For example, while carbon prices were projected using the 2025 KAU25 market price and IEA scenarios, actual prices may differ due to changes in ETS policies, market supply and demand, macroeconomic conditions, and the regulatory environment. Emission levels under the emissions reduction pathway were estimated based on Hanwha Solutions' Net Zero roadmap. Accordingly, the achievement of emissions reduction targets and actual emission levels may vary depending on future business expansion, changes in the production mix, and the adoption of mitigation technologies. In addition, emission allowance allocations were estimated based on pre-allocated allowances and may differ from actual allocations depending on future business operations. The analysis excludes other costs associated with achieving Net Zero, including CAPEX, technology deployment, and OPEX, as well as a business-as-usual (BAU) emissions scenario. Therefore, the analysis is subject to limitations and uncertainties in assessing the overall financial effects of the Net Zero roadmap.

Capacity to Adjust or Adapt Hanwha Solutions is implementing Scope 1 and 2 emissions reduction activities, including the transition to renewable energy and improvements in energy efficiency, to advance the Net Zero roadmap, while responding to domestic ETS requirements by securing emission allowances through third-party verification of internal emissions reductions. In addition, Hanwha Solutions is building an organization-wide response system for transition risks by reporting greenhouse gas emissions and progress on emissions reduction implementation quarterly to the ESG Committee under the Board of Directors.

## Strategy

### Climate Resilience

Inputs and Key Assumptions Used in the Scenario Analysis

Physical Risks – Inputs Hanwha Solutions conducted an analysis for the period from 2026 to 2055 based on SSP (Shared Socioeconomic Pathway) scenarios, which are aligned with major international agreements and reflect the latest scenarios of the IPCC. In particular, Hanwha Solutions applied both low-emission and high-emission scenarios to comparatively analyze differences in the level of impacts from extreme heat-related physical risks across scenarios, and disclosed the key implications of the analysis focusing on SSP1-2.6 and SSP5-8.5. With respect to the period covered by the analysis, average heatwave frequency was estimated over successive 10-year periods starting in 2026, one year after the analysis was conducted. Based on these estimates, the estimated average annual wage impact associated with lost labor hours was analyzed over three periods: 2026–2035, 2036–2045, and 2046–2055.

**SSP Scenario Description**

- SSP1-2.6: Scenario where advances in renewable energy technologies enable environmentally-friendly and sustainable economic growth
- SSP2-4.5: Scenario with moderate levels of climate change mitigation and socioeconomic development
- SSP5-8.5: Scenario focused on rapid industrial technology development with high fossil fuel consumption and unsustainable development

Physical Risks – Key Assumptions The physical scenario analysis incorporates key assumptions regarding high-temperature exposure, the number of outdoor workers, lost labor hours, and average wages. High-temperature exposure was estimated based on the projected frequency of heatwave events across different business sites using climate scenarios and regional climate models based on 3-hour average temperatures. The number of outdoor workers reflects the actual number of outdoor workers at each business site as of the date on which the analysis was conducted. Lost labor hours were assumed to be additional rest periods required to protect worker health and safety during temperature extremes. Average wages were estimated based on average compensation reported in the business report and the total number of working days in 2025.

Transition Risks – Inputs Hanwha Solutions adopted the Global Energy and Climate (GEC) Model, revised in 2025 and developed by the International Energy Agency (IEA), in light of the high share of Scope 2 emissions and the characteristics of the manufacturing sector. In particular, the analysis also covered the NZE scenario, which is aligned with major international agreements, together with the CP, SP, and AP scenarios, in order to assess the effects of emissions-related policies. While the period covered by the analysis was determined based on the expected timing of climate-related risks and opportunities, the analysis ultimately focused on the medium-term horizon (2030), because variables such as allowance allocations are subject to greater uncertainty over longer time horizons, making reasonable estimation for the long-term horizon (2040) more difficult.

**IEA GEC Model Scenario Description**

- CPS(Current Policies Scenario): High emission scenario that only reflects current policies
- SPS(Stated Policies Scenario): Scenario that reflects announced policy targets
- APS(Announced Pledges Scenario): Scenario based on each country's Net Zero pledges
- NZE(Net Zero Emissions by 2050): Low emission scenario that targets Net Zero by 2050

Transition Risks – Key Assumptions The resilience analysis was conducted based on the K-ETS and Nationally Determined Contributions (NDCs). The emissions level for 2030 used in the analysis was set in line with the Net Zero pathway, based on a 35% reduction from the 2018 level. Emission allowance allocations were assumed based on the pre-determined free allocation of allowances. The 2030 carbon price was estimated using the 2025 KAU25 weighted average price as the baseline and applying carbon price growth rates by period from the IEA's GEC 2050 scenario.

## Risk Management

### Climate-related Risk Management Processes

Hanwha Solutions manages climate risks by integrating them into its Enterprise Risk Management process, identifying and managing climate-related risks and opportunities based on comprehensive factors, including business structure and characteristics.

Inputs and Parameters Hanwha Solutions uses multiple input variables to identify climate-related risks, including domestic and global climate policies and regulations, its business structure and strategy, key stakeholder demands, physical risk scenario analysis, and other emerging climate issues. Identified risks are assessed using parameters of 'likelihood' and 'impact severity (financial, reputational, compliance, and stakeholder dimensions).'

Identification Hanwha Solutions identifies climate-related risks and opportunities by considering various factors, including its business structure and the characteristics of each business division. To this end, Hanwha Solutions establishes a pool of climate-related risks and opportunities based on Task Force on Climate-related Financial Disclosures (TCFD) recommendations, industry guidance for implementing International Financial Reporting Standards (IFRS) S2, scenario analyses, and stakeholder perspectives. In line with the TCFD framework, the identified risk and opportunity factors are categorized into physical risks (acute and chronic), transition risks (policy, reputation, market and technology), and opportunities (energy sources, products and services and market resilience).

Assessment Hanwha Solutions assesses identified climate-related risks and opportunities using quantitative and qualitative information, taking into account both likelihood and impact severity. Based on historical experience and future projections, likelihood is classified into five levels (Very low, Low, Moderate, High, and Very high), while impact severity is also classified into five levels (Insignificant, Minor, Medium, Major, Critical). Based on both likelihood and impact severity, risks are classified into five levels: Insignificant, Minor, Medium, Major, and Critical.

Prioritization Hanwha Solutions prioritizes climate-related risks within its Enterprise Risk Management framework. Identified climate-related risks are assessed, compared, and prioritized using the same criteria applied to other company-wide risks, such as financial and compliance risks.
From an enterprise risk management perspective, risks assessed as Major or above were considered key risks; however, for climate-related risks, response plans were also established and managed for those assessed as Medium or above in order to address a broader range of such risks.

Risk Monitoring Hanwha Solutions monitors and manages identified climate risks based on their assigned risk levels. In addition, response plans and implementation outcomes for key climate-related risks are reported regularly to the ESG Committee under the Board of Directors. For details on risk monitoring by our governance bodies, please refer to the 'Governance: Climate-Related Risk and Opportunity Reporting (p.18)' section of this report.

Changes Since the Previous Reporting Period Hanwha Solutions made the following changes to the reporting standards and calculation methodologies for the current reporting period.

Changes to Climate-related Risk Assessments

| Category | Prior Reporting Period | Current Reporting Period |
|---|---|---|
| Assessment Criteria | Likelihood and risk impact (strategic importance, urgency, management impact) | Likelihood and impact severity (Magnitude of financial loss, compliance impact, stakeholder impact, and reputational impact) |
| Calculation Methodology | Likelihood × risk impact<br>·Risk Impact: Apply mode of evaluation score (or average, if unavailable) | Likelihood ×impact severity<br>·Impact severity: Overall assessment of impact on finance, compliance, stakeholders, and reputation |
| Risk Level | Level Ⅰ·Ⅱ·Ⅲ·No level (4-levels) | Critical, Major, Medium, Minor, Insignificant (5-levels) |

### Integration of Climate-related Risk and Opportunity Management into the Enterprise Risk Management Process

Hanwha Solutions manages climate risks by integrating them into the Enterprise Risk Management process, identifying and managing climate-related risks and opportunities by taking all relevant factors into account, such as business structure and characteristics of each business division.

Enterprise Risk Management

## Metrics and Targets

### Climate-related Metrics

GHG Emissions

GHG Emissions during Reporting Period The Scope 1, 2, and 3 emissions presented below are calculated on a separate basis; Scope 1 and 2 represent gross emissions, while Scope 3 emissions cover the Chemical and Qcells Divisions. These Scope 1, 2 and 3 emissions (separate basis) undergo third-party verification annually. For detailed information regarding GHG emissions, please refer to the ESG Factbook (p.126).

ESG Factbook

#### 2025 GHG Emissions (separate basis)

| Category | Unit | 2025 |
|---|---|---|
| Scope 1 | $tCO_2$-eq | 352,046 |
| Scope 2 | $tCO_2$-eq | 2,250,018 |
| Total Scope 1 and 2 Emissions | $tCO_2$-eq | 2,602,064 |
| Scope 3 Emissions[1)] | $tCO_2$-eq | 9,454,352 |

1) Sum of Chemical and Qcells Divisions (Insight Division's emission share is insignificant) and emissions were not calculated for Categories 8 and 10 in the Chemical Division, or for Categories 8, 9, 10, and 13 in the Qcells Division.

Approach to Measuring GHG Emissions Hanwha Solutions calculates and reports GHG emissions on a separate basis but plans to extend the Scope 1 and Scope 2 organization boundaries to a consolidated basis going forward to ensure alignment with consolidated financial statements.

#### Measurement Approach

| Category | Standards and Guidelines |
|---|---|
| Scope 1·2 | • The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard<br>• The Ministry of Climate, Energy and Environment, Guidelines on Emission Reporting and Certification under the Greenhouse Gas Emissions Trading Scheme |
| Scope 3 | • The Greenhouse Gas Protocol: Corporate Value Chain(Scope 3) Accounting and Reporting Standard<br>• The Greenhouse Gas Protocol: Technical Guidance for Calculating Scope 3 Emissions<br>• WBCSD, Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain |

Inputs and Assumptions for Measuring GHG Emissions Hanwha Solutions is subject to the Korea Emissions Trading Scheme (K-ETS), and its Scope 1 and Scope 2 emissions are calculated using activity-based calculation methods in accordance with K-ETS guidelines. To ensure consistency with internal management standards and avoid stakeholder confusion, Scope 1 and 2 emissions disclosed on a separate basis are aligned with the Emissions for surrender of emissions permits. Please note that certain calculation standards, including electricity emission factors, may shift with the adoption of the 4th planning period (2026-2030). Any resulting changes will be reflected in the next reporting period.
Scope 3 emissions are calculated for the Chemical and Qcells Divisions, excluding the Insight Division due to its minimal emission share. Methodologies are determined based on category-specific business relevance, emission contribution, and data availability. For inputs, supplier-provided data is prioritized, while industry-average data from sources such as the national LCI DB and Ecoinvent is used when supplier-specific data is unavailable. In addition, where it is difficult to identify an appropriate emission factor, estimates are made by applying emission factors for similar materials or based on the principle of a conservative approach. Category 12 is currently calculated based on packaging materials; however, the calculation methodology will be enhanced in the future to reflect reasonable end-of-life scenarios for products.

Changes to Measurement Approach, Inputs and Assumptions Hanwha Solutions is gradually building a consolidated Scope 1 and 2 emissions inventory. For the previous and current reporting periods, Scope 1 and 2 emissions have been calculated and reported on a separate basis, while Scope 1 and 2 emissions for selected subsidiaries, primarily major subsidiaries with manufacturing facilities, are also disclosed in the ESG Factbook. Accordingly, through the previous reporting period, emissions from subsidiaries not included in Scope 1 and 2 were calculated and reported under Scope 3 Category 15 (Investments) using revenue-based estimates; however, from the current reporting period, such emissions were excluded from Scope 3 Category 15 in consideration of the GHG Protocol and third-party verification opinions. The excluded volume is approximately 50,000 tons based on the previous period's data, accounting for approximately 0.5% of total Scope 3 emissions reported in the previous period.

## Metrics and Targets

### Climate-related Metrics

Internal Carbon Pricing Hanwha Solutions' Chemical Division considers GHG impacts when reviewing asset capitalization by estimating the GHG reduction of new facilities relative to existing facilities and applying an internal carbon price to quantify the associated reduction impacts.

Climate-related Considerations in Executive Remuneration For details on climate factors linked to management compensation, please refer to the 'Governance: Climate-Related Performance in KPIs (p.18)' section of this report.

Climate-Related Performance in KPIs

Industry-based Metrics For details on industry-based metrics, please refer to the 'SASB Index (pp.141-142)' section of this report.

SASB Index

### Climate-related Targets

Hanwha Solutions aims to achieve Net Zero emissions by 2050, with interim reduction targets of 35% by 2030 and 60% by 2040 compared to 2018 levels. The 2050 Net Zero goal is a net emissions target aligned with the Paris Agreement and national carbon neutrality policies, covering company-wide (separate basis) Scope 1 and 2 emissions ($tCO_2eq$) across the Chemical, Qcells, and Insight Divisions. This is an absolute target and includes seven major GHGs ($CO_2$, $CH_4$, $N_2O$, HFCs, PFCs, $SF_6$, $NF_3$). In addition, Hanwha Solutions pursues the K-RE100 initiative with the goal of achieving 100% renewable electricity use by 2050. For details on our transition plan and targets, please refer to the 'Strategy: Climate-related Transition Plan and Plans to Achieve Climate-related Targets (p.21)' section of this report.

Climate-related Transition Plan and Plans to Achieve Climate-related Targets

Approach to Target Setting, Review and Progress Monitoring

Target Review Processes and Progress Monitoring Metrics Hanwha Solutions continuously reviews GHG emissions to track performance against its GHG targets. To this end, GHG emissions data and the implementation status of Net Zero initiatives are regularly reported to management and the ESG Committee. Additionally, renewable electricity consumption is regularly reported to the ESG Committee to assess the company's transition towards renewable energy (K-RE100). For details on the management and oversight of climate-related targets, please refer to the 'Governance: Climate-related Target Oversight and Progress Monitoring (p.18)' section of this report.

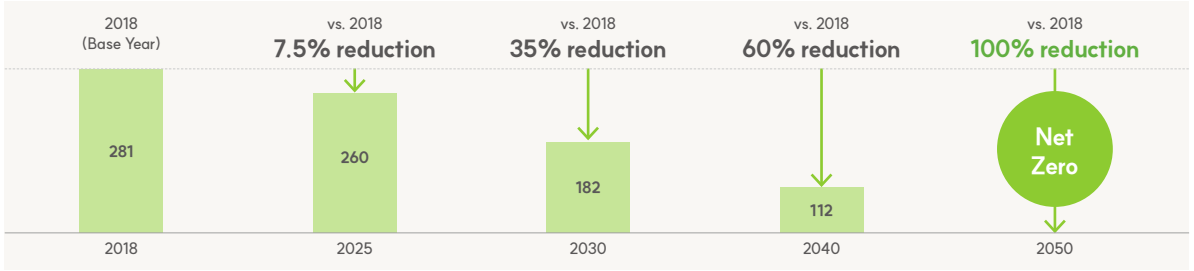
Climate-related Target Oversight and Progress Monitoring

Performance Against Climate-related Targets In 2025, Hanwha Solutions implemented carbon mitigation initiatives with an estimated annual GHG reduction potential of approximately 31,000 tons through energy efficiency enhancements, by-product hydrogen co-firing, and the transition to renewable energy (via PPAs, RECs, and on-site generation). Through these internal mitigation efforts, combined with changes in production volume and utilization rates, 2025 Scope 1 and 2 emissions decreased by approximately 7.5% (around 210,000 tons) compared with the 2018 baseline. Under K-RE100, which targets a transition to 100% renewable electricity by 2050, Hanwha Solutions procured 53.7 GWh of renewable electricity in 2025, representing approximately 1.3% of total electricity consumption of approximately 4,205 GWh, and plans to gradually increase the share of high-additionality procurement mechanisms, including PPAs. For further details on our mitigation activities, please refer to the 'Strategy: Current and Anticipated Direct Mitigation and Adaptation Efforts (p.22)' section of this report.

GHG Reduction Activities

Scope 1·2 Emission Targets and Performance[1)]

(Unit: 10,000 $tCO_2eq$)




1) Correction of previous period's base year emissions due to errors

# Development of Sustainable Products and Technologies

# DEVELOPMENT OF SUSTAINABLE PRODUCTS AND TECHNOLOGIES

E S G

## Governance

### Decision-Making Body

Hanwha Solutions has a management framework in place to strategically drive the development of sustainable products and technologies, focusing on securing future growth engines through next-generation products and forward-looking technologies.

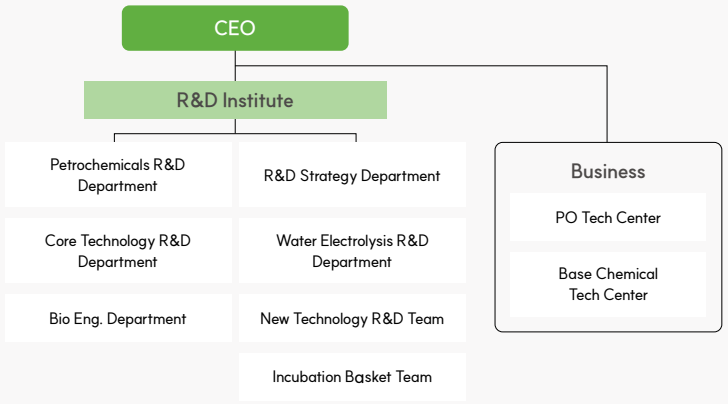
Management Hanwha Solutions' Chemical Division CEO reviews the strategic direction of R&D twice a year and conducts monthly on-site management activities to monitor key R&D initiatives and product development progress. Hanwha Solutions' Qcells CEO monitors development progress through monthly development reports. Hanwha Solutions' Wire & Cable CEO also reviews R&D through monthly reports while the CTO oversees a management framework for the systematic operation of technology marketing and overall R&D activities.

Compensation Tied to Management Performance Hanwha Solutions' Chemical Division incorporates performance in securing sustainable technologies into the KPIs of executives and managers in relevant departments to strengthen the alignment between technology development and mid- to long-term business goals.
Hanwha Solutions' Qcells Division identifies the development and performance of next-generation renewable energy technologies, as well as quality enhancements as its strategic initiatives to accelerate the transition to eco-friendly energy.

Research and Development (R&D) Organization Hanwha Solutions' Chemical Division conducts R&D efforts, led by the R&D Institute, on sustainable products and technologies, such as polyolefin (PO) based on recycled materials, bio-attributed PVC, and water electrolysis technology for hydrogen production.

The Bio Eng. Department is particularly focused on researching cultured meat, which is considered a promising future food business.
Hanwha Solutions' Qcells Division has established domestic and overseas R&D organizations dedicated to solar hardware and software research. These organizations conduct R&D across the full spectrum of solar solutions from high-efficiency solar modules and equipment, to hardware for module integration systems, such as inverters, and their supporting software platforms.
Hanwha Solutions' Wire & Cable Division is driving the development and commercialization of recycled cable jacket products through the CTO-led Cross-Linked Polyethylene (XLPE) Development Team and is collaborating with the Chemical Division to develop decrosslinking technologies. In addition, it has local personnel in Europe and China through the Technical Marketing organization to quickly incorporate customer evaluations and feedback on sustainable products through close collaboration with customers.

R&D Organization of Hanwha Solutions' Chemical Division




R&D Organization of Hanwha Solutions' Qcells Division


R&D Organization of Hanwha Solutions' Wire & Cable Division

## Strategy

### Risks and Opportunities

Identification of Risks and Opportunities The risks, opportunities, associated impacts, and response strategies regarding the development of sustainable products and technologies are as follows.

| Category | Factor | Business Impact | Response Strategy |
|---|---|---|---|
| Risk | Tightening of regulations on fossil-based products | Decline in related sales due to stricter plastic-related regulations and strengthened resource recycling regulations, as well as the need to respond to national plans regarding the use of bio-based raw materials | Establishment of a circular economy system |
| | Changes in customer/consumer behavior and negative perceptions of existing business areas | Decline in sales due to growing demand for circular and low-carbon materials and increasing negative perceptions of existing products, making raw material diversification necessary | Establishment of a circular economy system |
| | Emergence of low-carbon alternative products, transition to low-carbon technologies, and failure of investments in new technologies | Reduced opportunities to enter the market due to leading players' dominance in the low-carbon market and control of core technologies; additional costs incurred in transitioning to low carbon processes or sustainability-related businesses; and the risk of failure in R&D and investment involving emerging sustainability-related technologies | Establishment of an investment process for eco-friendly facilities |
| | Slowdown in market demand and fluctuating profitability for recycled polyethylene (rPE) produced through mechanical recycling (MR) | Slower expansion in the application of rPE, as well as potential fluctuations in the sales performance and profitability of products using recycled materials due to the need for additional R&D, delays in visible progress, and changes in demand. | Application of MR based on client demand and reprioritization of R&D toward new technologies in hard-to-recycle areas, such as decrosslinking |
| Opportunity | Increased renewable energy adoption rates and the enactment of related laws and policies | Expanded opportunities to use green power due to an increase in the national share of renewable energy generation; enhanced corporate reputation; growth of the hydrogen industry ecosystem; rising interest in new businesses such as solar products and renewable energy consulting; and expansion in the power market through the development of new business models, including power brokerage and power market bidding | Expansion of eco-friendly businesses; establishment of a circular economy system; and development of RE100 and renewable energy infrastructure, and leadership in smart energy lifestyles |
| | Rising demand for bio-based and recycled plastics | Demand absorption in the circular economy and low-carbon sectors, and entry into and early capture of new markets such as bio-based and recycled plastics. | Establishment of a circular economy system |
| | Growing interest in solar energy solutions for underutilized land | Sales opportunities secured due to increased demand for solar products optimized for installation on and attachment to various spaces such as farmland, water surfaces, and buildings; and diversification of project stakeholders to include government bodies, public institutions, and cooperatives | Development of RE100 and renewable energy infrastructure, and leadership in smart energy lifestyles |
| | Increasing demand for recycled plastics, including hard-to-recycle materials, and for cable waste resource circulation | Increased demand for recycling solutions for hard-to-recycle waste, such as cross-linked polyethylene (XLPE), beyond MR-based general-purpose recycled materials; and new applications, such as cable jackets, secured through collaboration with wire manufacturers and other players in the value chain | Commercialization of XLPE decrosslinking recycling technology; expansion of applications through partnerships with domestic cable companies; securing waste cable feedstock; and establishment of a quality certification and verification system |

### Response Strategy and Initiatives

Sustainable Product and Technology Expansion Strategy Hanwha Solutions has established a sustainable business strategy focused on smart eco-friendly energy solutions and customer-focused materials. We are conducting R&D and investments to strengthen our product technology capabilities in five strategic areas.

Sustainable Product and Technology Expansion Strategy

| | |
|---|---|
| Investment process for eco-friendly facilities | • Developing and implementing mitigation measures for identified risks |
| Expansion of eco-friendly businesses | • Developing Anion Exchange Membrane Electrolysis Cell (AEMWE) technology<br>• Commercializing cultured meat |
| Establishment of a circular economy system | • Developing mechanically and chemically recycled products<br>• Expanding recycled raw materials and materials such as rPE<br>• Building a resource circulation system through the recycling of waste modules |
| RE100 and renewable energy infrastructure development | • Developing smart green industrial complexes (RE100)<br>• Developing renewable energy infrastructure |
| Leading provider of Total Energy Solutions | • Improving the power generation efficiency of solar products based on cell and module R&D<br>• Expanding solar-ESS integrated system solutions |

## Strategy

### Investment Process for Eco-friendly Facilities

Hanwha Solutions' Chemical Division considers environmental aspects from the facility investment stage to enhance the environmental sustainability of its products, mandating environmental and safety review reports for all facility investments at its domestic plants. During the detailed review process, an economic feasibility analysis is conducted to assess financial effects, while GHG emissions calculations are prepared to reflect changes in GHG emissions associated with fluctuations in electricity consumption. Through this process, both environmental risks and opportunities are incorporated into investment decision-making, enabling a balance between environmental and financial performance.

Chemical Division's Eco-friendly Facility Investment Process

| | |
|---|---|
| 1 Investment Planning | • Reflecting company-wide business plans<br>• Developing mid- to long-term investment plans |
| 2 Pre-investment Review | • Establishing detailed investment plans<br>• Analyzing economic feasibility, costs, and anticipated effects<br>• Including analysis of GHG emissions and mitigation strategies |
| 3 Investment Proposal Process | • Preparing an environmental and safety review report (including assessments on impacts, such as water pollution and hazardous chemical substances)<br>• Preparing a GHG emissions calculation report<br>• Reviewing and approving investment proposals |
| 4 Investment Execution | • Executing investments based on proposal reviews |

### Expansion of Eco-friendly Businesses

Anion Exchange Membrane Water Electrolyzer (AEMWE) R&D Hanwha Solutions' Chemical Division is conducting R&D with the aim of commercializing Anion Exchange Membrane Water Electrolyzer (AEMWE) technology, a key technology in the green hydrogen ecosystem. AEMWE technology is a next-generation electrolysis method that combines the advantages of alkaline water electrolyzer (AWE) and proton exchange membrane water electrolyzer (PEMWE), enabling large-scale hydrogen production with lower capital investment and lower electricity consumption. In particular, the division is pursuing commercialization of AEMWE by securing performance and cost competitiveness through the development of key materials, including anion exchange membranes, as well as proprietary electrode and membrane electrode assembly (MEA) process technologies. Hanwha Solutions aims to commercialize AEMWE technology and secure proprietary technologies to strengthen its competitiveness and expand to global markets.

Securing Eco-friendly Technologies through Research Collaboration Hanwha Solutions is conducting joint research on next-generation green technologies, such as AEM water electrolysis, through an MOU with the Environmental Research Institute of Seoul National University. Through this collaboration, Hanwha Solutions lays the foundation for expanding sustainable technologies by leveraging and securing human resources and strengthening the competitiveness of commercialization-related technologies. In 2025, the existing research agreement was renewed, and four eco-friendly research projects, including a study on water electrolysis technology, were underway. As a result of these research efforts, five patent applications were filed domestically and internationally by 2025, and we plan to continue expanding our patent portfolio going forward.

Developing Cultured Meat Technology Hanwha Solutions established the Bio Eng. Research Department and is building an R&D platform for research on cultured meat and related materials to secure core technologies in these fields. Equipped with advanced processes and analytical facilities, the Research Department conducts systematic technical research to preemptively secure competitive cultured meat technologies. Hanwha Solutions aims to become a leader in the cultured meat industry by the 2030s through business expansion, contributing to addressing global climate change and future food shortages.

## Strategy

### Establishment of Circular Economy Systems

Developing Technologies to Improve Recyclability Hanwha Solutions drives technology development aimed at overcoming the structural limitations of composite materials and enhancing recycling efficiency. Hanwha Solutions' Chemical Division is developing technologies to improve the mechanical recycling of ethylene vinyl acetate (EVA). By applying energy to break the complex cross-linked structure of EVA, the division enables its recyclability while converting it into high-quality recycled resin that minimizes discoloration, odor, and impurities compared to conventional thermal treatment methods. In addition, the division is developing an injection-molded physically foamed midsole material that does not require chemical crosslinking and foaming agents, thereby enhancing the recyclability of manufacturing waste. This material is produced by directly injecting gas during the injection molding process, simplifying the manufacturing process. Hanwha Solutions' Chemical Division aims to drive gradual commercialization in this area based on client evaluations and market conditions by leveraging its proprietary materials and process technologies.

Hanwha Solutions' Wire & Cable Division is developing cross-linked polyethylene (XLPE) recycling technologies. The division has completed laboratory-scale development of a decrosslinking recycling technology for XLPE, the primary material used in waste cables, and is currently conducting pilot-scale validation to establish a foundation for mass production. In addition, through collaboration with domestic cable manufacturers, the division is performing technical validation for commercialization, including assessing the applicability of the decrosslinked resin for cable jackets.

Obtaining Eco-friendly Certifications Hanwha Solutions' Chemical Division renewed its ISCC (International Sustainability & Carbon Certification) Plus certification and is producing bio-attributed products using bio-based raw materials. In addition, for products made with recycled polyethylene (rPE), the division renewed its GRS (Global Recycled Standard) certifications for products with recycled content ratios of 80%, 50%, and 32%.

Eco-friendly Certifications

| Category | Definition | Certified Product Group | Notes |
|---|---|---|---|
| ISCC Plus | International sustainability certification in compliance with the EU Renewable Energy Directive, certifying bio-based and recycled raw materials are used in a sustainable production process | Total 29 product groups, including caustic soda, PO, PVC, and FM | 8 product groups (29 products) renewals (Sep. 2025) |
| GRS | Global resource circulation certification for products containing 20% or more recycled raw materials | Three types of products made with rPE | Certification renewed (Feb. 2026) |

Expanding the Use of Recycled Materials Hanwha Solutions' Chemical Division is expanding product developments using mechanically recycled (MR) waste plastic materials while the Wire & Cable Division is driving development and commercialization of wire jacket products using recycled materials. In addition, the Qcells Division continues to implement initiatives to incorporate recycled-material-based packaging and reduce resource consumption, especially for solar modules.

Products Using Key Recycled Materials by Division

| | Details | 2025 Performance/Goals |
|---|---|---|
| Chemical | Development of products using rPE<br>• Used for packaging material in cosmetics containers<br>• Applied to air caps in packaging automotive parts<br>• Collaboration across various fields, including electrical/electronics, agriculture, and sanitary packaging<br>Adoption of FFS packaging bags using rPE<br>• Around 30% rPE content<br>• Targets all products at the Ulsan Plant and 22 products at the Yeosu Plant | Used 306 tons of post-consumer recycled (PCR) materials in rPE products in 2025[1]<br>Targets annual supply of 1,000 tons of rPE by 2027 |
| Wire & Cable | Development of recycled wire jacket products<br>• Waste plastic (HDPE) was shredded, washed, and reprocessed into recycled material, which accounts for 50% of the jacket product | Aiming for commercialization as product evaluations are underway with selected clients following a 2-ton pilot production |
| Qcells | Use of recycled materials in protective packaging for solar modules<br>• Improved packaging design for all products from a horizontal to vertical configuration, replacing conventional plastic (PP) and plastic film packaging with paper, using all paper-based material except for a small amount that goes into external securing<br>• Continuing to reduce packaging material following switch to paper packaging<br>• Pursuing the replacement of remaining plastic packaging (PET) with biodegradable, eco-friendly materials (PLA, PBAT, etc.)<br>Adoption of FSC-certified packaging materials for Qcells products | Approximately 30% reduction in paper packaging material usage per unit product compared with 2024<br>Targeting adoption in mass production materials in 2026 |

1) Total sum of PCR material used in 2025, composed of 39 tons of LD, 265 tons of LLD, and 2 tons of HD

## Strategy

### RE100 and Renewable Energy Infrastructure Development

Smart Green Industrial Complex (RE100) Development Project Hanwha Solutions' Insight Division is contributing to creating an industrial ecosystem based on renewable energy through the development of H-Techno Valley, which is being developed as the first RE100 industrial complex in Gyeonggi-do, South Korea. H-Techno Valley, which is located in Yanggam-myeon, Hwaseong-si, is a 740,000m² specialized industrial complex for the automotive and semiconductor industries, with plans to install renewable energy facilities such as solar power systems.

As part of the project, the division has established a basic industrial complex management plan requiring tenant companies to install a certain capacity of solar power generation facilities to expand the use of renewable energy. In addition, the division continues to strengthen its support system to help tenant companies stably build and operate these facilities. Through these efforts, the division is establishing a foundation for RE100 compliance, contributing to the reduction of GHG emissions and enhancing eco-friendly competitiveness across the entire industrial complex.

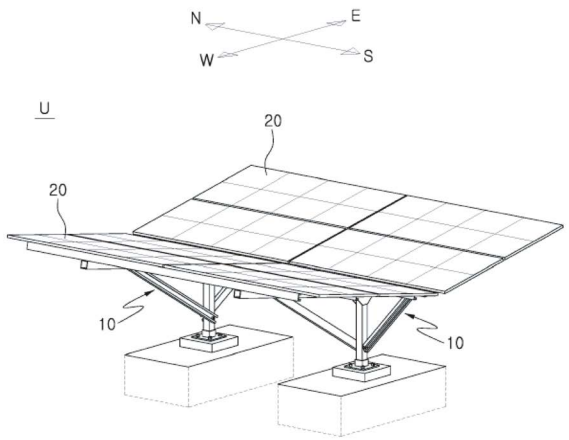
Renewable Energy Development Project Hanwha Solutions' Chemical Division is participating in a national project to establish a water electrolysis-based hydrogen production facility at the Daegwallyeong Wind Farm III in Pyeongchang, Gangwon-do. The project was completed in 2025 and has secured a daily green hydrogen production capacity of one ton through a 2.5 MW-class electrolyzer.

Technology for Improving Infrastructure Efficiency Hanwha Solutions' Insight Division has obtained a patent for a structure that enables east-west directional installation of solar power facilities to address limitations of the conventional method of installing solar power systems facing due south in mountainous areas. This technology has potential in terms of enhancing land utilization, shortening construction periods, improving economic feasibility, and enhancing structural stability. The division plans to gradually expand the application of this patented technology based on project conditions, site features, and overall economics. Through such efforts, the division aims to enhance both the efficiency and cost-effectiveness of solar power installations in the mid- to long-term.

Roadmap for Renewable Energy Infrastructure Development

| Short- to mid-term (3~5 years) | Long-term (6~10 years) |
|---|---|
| • Continue development of the Smart Green Industrial Complex to lay the groundwork for RE100 compliance and expand installation of solar facilities on idle land | • Adopt low-carbon eco-friendly data centers and high-efficiency cooling technologies<br>• Upgrade the smart green industrial complex |

Illustration of the Mounting Structure



## Strategy

### Leading Provider of Total Energy Solutions

Advancing Technological Leadership in the Solar Sector **Hanwha Solutions** is dedicated to securing a competitive edge in solar technology and expanding the use of renewable energy by driving continuous R&D and strategic investments across the entire solar value chain.

**Hanwha Solutions' Qcells Division** independently developed an M10-sized perovskite-crystalline silicon tandem solar cell suitable for commercial production at the end of 2024, achieving a power conversion efficiency of 28.6%, independently certified by Fraunhofer ISE. Following this, the module passed the IEC-standard reliability tests and obtained certification by the global certification body TÜV Rheinland, securing the world's first third-party reliability validation for a commercial-format tandem module. This technology enables more than 20% additional power generation compared to conventional silicon modules (with a module efficiency of 23-24%), expected to offer improved energy yield by providing stable power output in high-temperature and low-light conditions, thereby improving the economics of solar energy. Currently, the division is actively developing scalable manufacturing and module-processing technologies at the Jincheon pilot line, continuously pushing forward to secure the capabilities required for full commercialization.

**Hanwha Solutions' Qcells Division** established a mass production system for microinverters (MI) based on independent module-level MPPT control, securing a competitive edge with a CEC efficiency of 97% in response to tightening safety regulations and demands for installation convenience in the US residential solar market. The Gen 2 system MI, scheduled for release in 2026, is designed to improve energy efficiency and reinforce system competitiveness by boosting output and supporting new business initiatives such as TPO and ESS integration. In addition, the next-generation ESS delivers top-tier performance[1] for the US residential market, featuring a battery capacity of 15.87 kWh and a power output of 11.5 kW. With a scalable design that expands up to 63.48 kWh, it significantly enhances[2] energy independence in off-grid environments.

CASE

**Hanwha Solutions' Qcells Division** participated in the '2025 International Green Energy Expo' and the '2025 World Climate Industry Expo,' solidifying its position as a Total Energy Solutions Provider by showcasing its comprehensive business value chain, from the manufacturing of solar equipment (cells and modules) and infrastructure deployment like agrivoltaics and floating solar, to RE100 energy consulting and its solar sustainability brand, EcoRecycle by Qcells. Moving forward, the division will continuously participate in major renewable energy exhibitions to promote its business across the entire solar lifecycle while further sharpening its competitiveness.


Establishing a Renewable Energy Value Chain **Hanwha Solutions' Qcells Division** invested over KRW 3 trillion in Georgia and established Solar Hub, the largest fully integrated solar manufacturing complex in the United States to strengthen its leadership position in the North American market. Following operations of the existing module plant, ingot and wafer production started in early 2026. With the start of commercial cell production in July 2026, the division will complete its vertically integrated solar value chain operations, spanning ingots, wafers, cell, and modules, within the US. With U.S. production capacities of 3.3 GW each for ingots, wafers, and cells, and 8.6 GW for modules, the division has established the largest solar manufacturing base in the U.S.

**Hanwha Solutions' Qcells Division** leverages its vertically integrated solar value chain to deliver customized total energy solutions, encompassing all areas from product sales and project development to downstream businesses such as power brokerage and sales. In North America, the division provides a one-stop solution, integrating hardware, software, financing, and energy services. Through partnerships with global EMS providers, it has also established local production hubs for module-integrated system hardware, such as microinverters and residential ESS, to ensure a stable supply chain. In Korea, the division is contributing to domestic power grid stabilization by offering power brokerage services based on customized consulting and distributed energy solutions, including renewable energy power forecasting and bidding, to respond to growing corporate demand for renewable energy.

**Hanwha Solutions' Qcells Division** is strengthening its dominance in the U.S. market by participating in large-scale projects based on its EPC competitiveness. In 2025, it completed construction of the Trans Atlas VII (300MW) and IX (150MW) phases of the battery energy storage system (BESS) in La Paz County, Arizona, and obtained commercial operation approval from the California Independent System Operator (CAISO). In addition, the division successfully commenced commercial operations of a 150 MW solar power plant in Missouri, for which it supplied its own manufactured modules and directly performed EPC services.

1) Based on competitor products available in the U.S. market as of end May 2026
2) Actual performance depends on the official certification results at launch

## Strategy

### Investment Financing Activities for Eco-friendly Initiatives

Hanwha Solutions' ESG Bond Framework has been assessed as fully aligned with the Green Bond Principles (GBP) of the International Capital Market Association (ICMA). Based on this framework, all of our issued green bonds, including the matured ESG unsecured public corporate bonds (January 2025) and Shinhan Bank ESG BLCP (March 2026), received the highest ratings of G1 and Green 1, respectively, from external evaluation agencies[1].

Investment Financing for Hanwha Solutions' Eco-friendly Initiatives and Evaluation Status

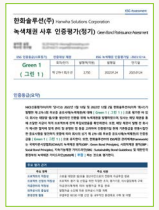
**Hanwha Solutions ESG Unsecured Public Corporate Bonds (Issued Jan. 2022)**

**KRW 275 Bn**

**In December 2023, the full proceeds were allocated to the introduction of large-area wafers and the establishment of high-efficiency solar cell and module production lines incorporating TOPCon technology**

- Received the highest rating (G1, Green 1) in all post-issuance evaluations conducted by external evaluations agencies[1]
- The post-issuance report confirms environmental improvements, such as increased power generation per area, resulting from the adoption of new technologies. Details of the report can be found below.

Post-issuance Report

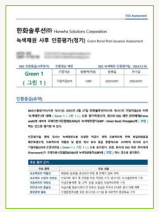


**Shinhan Bank ESG BLCP (Issued Mar. 2023)**

**KRW 100 Bn**

**As of the end of December 2024, the full proceeds were allocated to the Chemical Division's investments in electrolysis facilities and Qcells' conversion of solar cell and module production lines**

- Received the highest rating (Green 1) in the certification assessment by NICE Investors Service
- The evaluation report covers the impact of reduced electricity consumption and GHG emissions through the replacement of outdated electrolysis equipment, as well as the improvements in eco-friendly products resulting from the conversion of solar production lines



1) External evaluation agency: Korea Ratings, NICE Investors Service

## Risk Management

### Risk Management for Sustainable Product and Technology Development

Hanwha Solutions recognizes eco-friendly businesses as a key driver of future growth and is making active efforts to proactively manage and mitigate risks that may arise during their implementation.

Hanwha Solutions' Chemical Division and Qcells Division analyze industry, market, and competitor trends in the fields of sustainable products and technologies and monitor shifts in demand and technology trends through Market Intelligence. Based on these findings, development decisions are made through reviews by R&D and manufacturing organizations and are reflected in mid- to long-term strategic planning.

Hanwha Solutions' Chemical Division holds company-wide R&D strategy meetings twice a year to review the progress of its eco-friendly business initiatives and monitor changes in demand and trends related to eco-friendly products and technologies. Based on these insights, the division carries out risk management activities. It also publishes a weekly internal newsletter covering key industry topics such as liquefied hydrogen stations, CCUS technologies, and lithium market trends, to improve internal access to information and strengthen its strategic response.

Hanwha Solutions' Chemical Division's Bio Eng. Department continuously monitors regulatory and technology trends to stay ahead in the rapidly evolving cultured meat market. The division is also strengthening engagement and collaboration within the global cultured meat ecosystem and partnering with academic, industry, and research institutions such as the Bio-based Future Food Industry Committee (BFFIC) and Good Food Institute (GFI).

Hanwha Solutions' Qcells Division established a Product Lifecycle Process (PLP) to systematically manage every stage of the product lifecycle, from idea generation to product discontinuation. Based on the level of technological innovation, the division clearly defines the roles and responsibilities of its Solar Technology R&D and Module Development organizations, ensuring product reliability and technological competitiveness through phased deliverable verification. Additionally, the division enhances its sustainable product development capabilities by building an efficient development environment based on standardized guidelines and templates. In addition, Hanwha Solutions' Qcells Division gathers insights on demand and market trends regarding its products and technologies through customer surveys and incorporates these findings into its strategy for the development of sustainable products and technologies.

## Metrics and Targets

### Targets and Performance regarding the Development of Sustainable Products and Technologies

Hanwha Solutions sets annual R&D targets for sustainable product developments and monitors key performance.
Hanwha Solutions' Chemical Division has entered into a research partnership with Seoul National University to strengthen its capabilities in manufacturing sustainable products, jointly operating an Environmental Research Institute of Seoul National University since 2022. Hanwha Solutions' Qcells Division operates dedicated customer service teams in each region to gather voice of customers (VOC), reviewing it along with market characteristics, trends, and customer expectations to set targets for the development of sustainable products and technologies. Hanwha Solutions' Wire & Cable Division is expanding its sustainable product developments by incorporating customer input and market demands.

#### 2025 Sustainable Technology Development Plans and Achievements

| Division | | Details | 2025 Plan | 2025 Achievements |
|---|---|---|---|---|
| Chemical | Water electrolysis | Development of technology to prevent catalyst delamination from MEA in water electrolysis | • Optimizing of liquid cell TEM analysis platform for water electrolysis catalysts<br>• Identifying of catalyst layer delamination mechanism<br>• Securing catalyst optimization and electrode stability<br>• Optimizing of direct synthesis cell operating conditions | • Secured advanced analytical capabilities for structural and composition changes and stability of catalysts based on IL-TEM and e-LCTEM<br>• Identified degradation and delamination mechanisms of water electrolysis catalysts<br>• Secured a high-performance electrode combination through optimization and verifying stable acid/base generation efficiency during long-term operations<br>• Secured high-efficiency operating conditions by optimizing direct synthesis cell parameters |
| Wire & Cable | Use of recycled raw materials | Develop recycled jacket products | • Optimizing production and evaluating pilot productions | • Completed production of 2 tons and customer evaluation of selected products |
| Chemical, Wire & Cable | Recycling end-of-life resources | Structural analysis (Cross-linked/Non-cross-linked) of supercritical decrosslinked & physically foamed materials | • Studying crosslinked/non-crosslinked structural variations based on supercritical decrosslinking processes<br>• Analyzing the structure of physically foamed materials and proposing optimal structures | • Secured base data for structural evaluation by analyzing cross-linking methods, crystalline structures, and viscoelastic behaviors<br>• Identified correlations between molecular/micro-structures, crystalline stability, and physical properties of physically foamed materials |
| Qcells | Manufacturing technology | Expanded influence as a solar manufacturer in the U.S. market | • Expanding additional module production lines in the U.S. | • Prepared for commercial production at the 3.3GW G12 PERC cell plant in Cartersville (2026 1H), expected to alleviate the cell supply bottleneck in the U.S. |
| | | Production of high-efficiency, high-output solar modules | • Improving output of N-type silicon solar cells that apply TOPCon technology<br>• Developing technologies to secure efficiency/reliability and start full production and sales | • Prepared for Malaysia G12 TOPCon cell pilot line setup (Q1 2026) and development of advanced items for output optimization |
| | | Production of next-generation perovskite-silicon tandem cells and modules | • Achieving the world's highest efficiency for tandem cells<br>• Securing mass production technology for perovskite solar cells | • Maintained 28.6% efficiency of M10 tandem cells and obtained third-party international certification (Fraunhofer ISE)[1]<br>• Passed the IEC-compliant reliability test by TÜV Rheinland, a global certification body (world-first level based on commercial tandem modules)[2]<br>• Secured long-term reliability and durability by passing international standard durability tests for high/low temperature, UV, and thermal shock |
| | System development | System business | • Developing proprietary products, such as TPO, for the power business, and planning, developing, and launching new products to accelerate expansion of the system business | • Improved renewable energy generation efficiency through the development of advanced, high-efficiency AC modules (microinverters)<br>• Improved renewable energy storage and utilization efficiency through the development of high-efficiency ESS (Energy Storage System) technology<br>• Optimized system design and increased resource efficiency through cost-savings<br>• Advanced verification system to improve product and system reliability<br>• Expanded solar power conversion and energy storage solution businesses to support sustainable energy transition |
| | Integrated solar solutions | Provision of integrated solar solutions, including EPC (engineering, procurement, and construction) services | • Strengthening dominance in the North American market for large-scale EPC projects with an integrated solutions profit model<br>• Establishing a circular economy business model that connects manufacturing, solutions, and recycling | • Strengthened dominance in the North American market for large-scale EPC projects with an integrated solutions profit model<br>• Implemented a recycling system with an annual capacity of 500,000 end-of-life modules through the launch of 'EcoRecycle by Qcells' (2025), securing the foundation for a circular management system that recovers valuable materials, such as aluminum and silver (for details, refer to p.84) |

1) 28.6% efficiency: Verified by Fraunhofer ISE CalLab (as of December 2024, cell-based)
2) Passed the IEC standard reliability and certification tests: Verified by TÜV Rheinland (as of June 2026, module-based)

# Safety and Health Management

# SAFETY AND HEALTH MANAGEMENT

E S G

## Governance

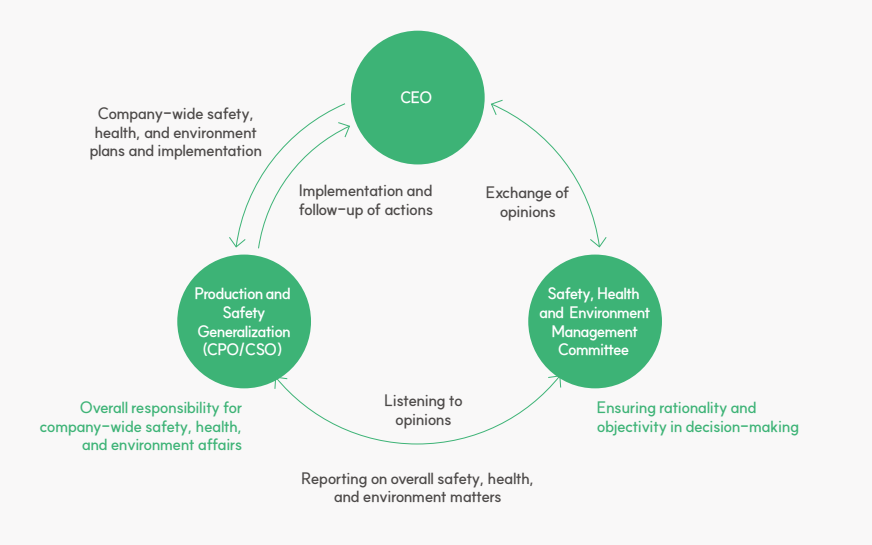
### Governance Body

Hanwha Solutions operates a company-wide safety and health governance framework to manage occupational safety and health risks. Hanwha Solutions' Chemical Division has formed a Safety, Health and Environment (SHE) Management Committee, chaired by the CEO, that reviews key safety and health issues and participates in decision-making regarding related strategies and improvement initiatives to strengthen management's oversight of safety and health. The committee is composed of key executives, including the CEO, the Production and Safety Generalization (CPO/CSO), heads of each business site, and heads of the Corporate Planning Department, the Management Support Office, and the SHE Office. Through regular meetings, the committee shares key issues related to safety and health at each business site and discusses how to address them.

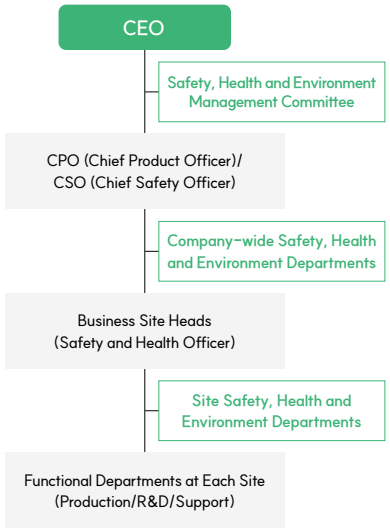
Hanwha Solutions also reviews ESG risks related to safety and health through the ESG Committee under its Board of Directors. These risks are aligned with the Enterprise Risk Management system to develop preventive response plans to ensure an integrated risk management approach for safety, health, and environment management.

Dedicated Safety, Health and Environment (SHE) Management Organization Hanwha Solutions operates separate safety, health, and environment (SHE) management organizations that reflect the characteristics of each industry and business division. Hanwha Solutions' Chemical Division operates a SHE organization led by the Production and Safety Generalization (CPO/CSO), which oversees the planning and implementation of all related activities. At the business site level, site heads are designated as the primary person responsible for on-site safety and health. To enhance expertise, the previously integrated site-level SHE organizations have been separated into the Safety and Health Department and Environment Department. In addition, each site has dedicated teams by function, including production, R&D, and support, that carry out SHE management and loss prevention efforts as part of the site-oriented preventive system.

#### Operations of the Safety, Health and Environment (SHE) Management Committee




#### Chemical Division's Safety and Health Management Organization




#### Key Roles of Chemical Division's Safety and Health Organizations

| Organization | Key Roles |
|---|---|
| CPO/CSO | • Responsible for overall SHE matters of the company<br>• Inspects and assesses SHE implementation at business sites |
| Company-wide SHE Department | • Manages company-wide SHE planning<br>– SHE diagnoses and assessments, and regulatory responses<br>– Establishment/revision of company-wide SHE policies |
| Head of Business Site | • Responsible for the site's overall SHE matters and loss prevention<br>• Performs duties, such as developing accident prevention plans, in accordance with the Occupational Safety and Health Act<br>• Occupational Safety and Health Committee Chair, Supplier Safety and Health Council member |
| Site SHE Department | • Performs duties according to the Occupational Safety and Health Act<br>• Supports the site head and carries out on-site SHE management<br>– Legal compliance and SHE management |
| Site Functional Departments | • Responsible for respective department's SHE matters and loss prevention<br>• Conducts SHE measures, safety inspections, training, etc. |

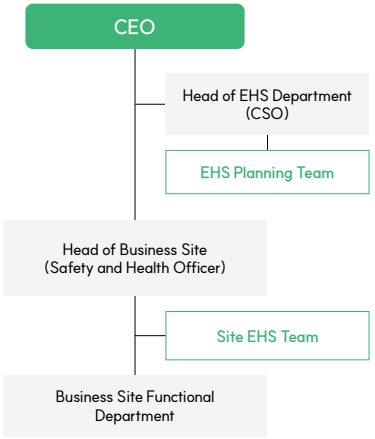
## Governance

### Governance Body

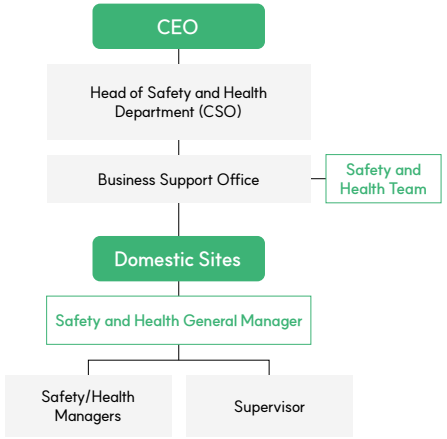
Hanwha Solutions' Qcells Division operates an EHS Planning Team under the EHS Department to systematically manage EHS matters through the development and assessment of EHS policies. At both domestic and overseas sites (including plants and R&D centers), senior safety and health officers are appointed, while dedicated EHS organizations and functional departments oversee compliance with relevant legislation at each site. Through these efforts, the division is establishing an autonomous safety management system that enhances on-site autonomy and execution capabilities, fosters a proactive safety and health culture, and drives continuous operational improvements.

Hanwha Solutions' Insight Division establishes company-wide safety and health policies and objectives with the approval of the division head. Based on these policies, the division operates the Business Support Office that is responsible for the division's safety and health strategies and business site safety management system. The Chief Safety Officer (CSO) is assigned to the Business Support Office, overseeing safety and health affairs across the Insight Division and monitoring and evaluating implementation at each site. Each site appoints a Safety and Health General Manager responsible for overall safety and health and legal compliance. In addition, site-level Safety and Health Managers offer management support and implementation management. In addition, supervisors are responsible for the safety and health of site employees and continuously drive on-site prevention initiatives.

Qcells Safety and Health Management Organization




Insight Safety and Health Management Organization




Safety and Health Councils Hanwha Solutions operates division-level safety and health councils to strengthen incident prevention and response capabilities. These councils conduct regular site inspections and monitoring, while reinforcing on-site implementation of the safety and health system by sharing and reviewing key management matters.

| Councils | Lead | Frequency | Key Agenda Items |
|---|---|---|---|
| **Chemical** | | | |
| SHE Management Committee | Company-wide, site-level | Quarterly | • Review and approval of SHE policy/strategy and overall activities |
| Safety Committee | Company-wide, site-level | Monthly | • Discussion on strengthening the safety and health management system to address key SHE issues and enhance incident prevention efforts |
| VFL(Visible Felt Leadership) | Site-level | Monthly | • Site visits and direct communication with workers to reinforce top management's commitment to safety |
| Monthly Safety Meeting | Site-level | Monthly | • (Site) Implementation of loss prevention activities related to SHE risks<br>• (Department) Review of safety-related activities and gathering employee feedback |
| **Qcells** | | | |
| Conference Call | Head Office | Quarterly | • Communication to promote early adoption of company-wide EHS system, share best practices, and gather feedback between head office and business sites |
| Safety and Health Committee | Site-level | Quarterly | • Listening to employee feedback regarding on-site safety and health issues and implementation of improvements |
| Risk Assessment Councils | Site-level | Monthly/ Weekly | • Decision-making to address unsafe conditions, collection of employee feedback, and sharing of key safety and health matters |
| Management of Change Committee | Site-level | As needed | • Comprehensive risk review through risk assessments and pre-startup inspections during process or equipment changes |
| **Insight** | | | |
| Occupational Safety and Health Committee | Site-level | Quarterly | • Discussion and implementation of safety and health measures for incident prevention |
| Safety and Health Council | Site-level | Monthly | • Discussion on safety and health issues and development of action plans to ensure safety and health at the workplace |
| Safety and Health Meeting | Company-wide, site-level | Monthly | • Review of safety and health status, performance, plans, and monthly safety priorities |
| Labor-Management Consultative Council | Site-level | Every 2 months | • Engagement with employees to hear their opinions regarding on-site safety and health issues, discuss related issues, and develop action plans |
| Risk Assessment Meeting | Site-level | Twice a month | • Identification of on-site risks and development of mitigation measures |

# SAFETY AND HEALTH MANAGEMENT

## Governance

### Governance Body

Compensation Tied to Management Performance Hanwha Solutions incorporates safety and health management performance into the KPIs of key executives, including the CSO, and links these indicators to its compensation system to strengthen management accountability for safety and health.

| Division | Management Performance and Compensation Link |
|---|---|
| Chemical | • Targets for safety incident rates, such as TRIFR and LTIFR, are incorporated into the KPIs of the Production and Safety Generalization (CPO/CSO) and Head of the SHE Office<br>• Safety related items are incorporated into the KPIs of the CPO/CSO and key executives, with a 10% weighting |
| Qcells | • Targets for incident rates, such as FSI, number of injury cases, and improvement rates for environment and safety inspections are incorporated into the KPIs of key executives and business leaders, including Head of EHS Department (CSO), etc. |
| Insight | • Safety related items, such as the annual number of safety accidents, are incorporated into the KPIs of the Head of the Business Support Office (CSO) at a weight of 30% |

### Policy Development

SHE Policy The Safety, Health and Environment (SHE) Policy defines the roles and responsibilities of the Board of Directors and management, functioning as a central pillar of the company-wide governance system spanning strategy development, implementation and evaluation. Hanwha Solutions established the policy in accordance with relevant domestic and international laws and standards, including ISO 45001 and ISO 14001. With approval from the CEOs of each division, we officially announced the policy and have been implementing it across the company. The policy applies to all employees across the organization, and is also recommended for compliance by key stakeholders, including local communities.

**Safety, Health, and Environment (SHE) Policy**

Goal: Achieve zero accidents and Net Zero.

We place safety, health and environment as top priorities in corporate management. To build a safe and clean business site, we implement the following:

1. Under an advanced SHE management system, we cultivate a robust safety culture where all employees willingly adhere to safety protocols.
2. To achieve an accident-free workplace, we eliminate potential risk factors, create safe working environments, and continuously promote the health of our personnel.
3. To contribute to Net Zero, we promote a circular economy of resources, optimize energy use across all processes, and persistently reduce pollutants to establish an eco-friendly facility.
4. We strengthen our SHE cooperation framework through active engagement and communication with stakeholders, including employees, suppliers, customers, and residents.

Chemical Division's SHE Policy

**Environment, Safety, and Health (ESH) Policy**

Goal: Achieve zero accidents and Net Zero.

Hanwha Solutions' Qcells Division prioritizes enviromental sustainability, safety, and health as core values in corporate managemant. We implement the following initiatives to foster an environmentally friendly workplace.

1. We strictly adhere to ESH regulations and cultivate a safety culture where employees actively engage.
2. We ensure a safe and healthy workplace through accident prevention activities focused on risk assessments and adherence to the 10 Safety Principles.
3. To achieve Net Zero, we promote circular economy practices, optimize energy use across all R&D, production, and service operations, and continue efforts to reduce pollutants to establish an eco-friendly workplace.
4. We enhance our ESH cooperation framework through active communication and collaboration with stakeholders, including employees and suppliers.

Qcells Division's EHS Policy

**Safety and Health Management Policy and Goal**

Insight Division will further clarify the role of management representatives and enhance the proactive risk management system in response to stricter occupational safety and health regulations and the expanded responsibilities of clients and management representatives.

Furthermore, we will strengthen our safety and health cooperation framework through trust-based communication with employees, business partners, customers, and the local community, and establish an organizational culture that prioritizes the prevention of workplace accidents above all else.

Safety and Health Management Policy

Achieving Zero Serious Accidents Through Safety Partnerships

Safety and Health Management Goals

Continuously Achieving ZERO Serious Accidents

Safety and Health Sub-Items

- Reducing industrial accidents at partner companies by 10%
- Maintaining a safety rating of Grade A or higher for partner companies
- Supporting systems to strengthen partner companies' safety capabilities
- Keeping the average number of customer accidents over the past three years at or below 3

Insight Division's Safety and Health Policy

## Strategy

### Safety and Health Risk Management

Hanwha Solutions identifies potential safety and health risks at the head office and business site level, categorizing them by risk level based on likelihood and degree of impact. We implement response strategies for risk mitigation, reviewing and updating the strategies each year.

Enterprise Risk Management System

| Division | Risks | Risk Level[1] | Response Measures Taken in 2025 |
|---|---|---|---|
| Chemical | Risk of injury-related accidents (serious industrial accidents including fatalities, etc.) | Minor | • Operate safety and health training (daily and statutory training)<br>• Conduct risk assessment implementation system<br>• Conduct safety assessment and consulting for partner companies |
| | Risk of injury-related accidents (first-aid cases/minor injuries/serious injuries) | Minor | |
| | Risk of fire or explosions (serious accidents leading to prolonged shutdowns or operational disruptions) | Minor | |
| | Risk of safety accidents | Medium | • Confirm risk assessment training for workers<br>• Reinforce on-site supervision |
| | Chemical leaks due to equipment corrosion | Medium | • Manage equipment trend through Computerized Maintenance Management System (CMMS) and Risk-Based Inspection (RBI) systems<br>• Manage measurement of equipment thickness |
| Qcells | Risk of serious industrial accidents (or serious accidents) | Minor | • Conduct safety inspection and assessment led by Head Office<br>• Conduct special safety inspections, when needed<br>• Prepare and distribute OPS (One Page Sheet) on accident cases<br>• Conduct safety management training for supervisors (since 2022, semiannual) |
| | Risk of serious human or property damages due to natural disasters, such as tropical cyclones, heavy rain, heavy snow, or earthquakes | Minor | • Conduct special safety inspections: Seasonal inspections to prepare for floods (annual), winter (annual), thaw season (annual) |
| | Risk of undermining the effectiveness of on-site safety management due to insufficient information sharing and communication | Minor | • Issue monthly '10 Minutes for Safety' (accident cases) and regular Safety and Health Newsletters<br>• Evaluate supervisor duties (annual)<br>• Operate and update the EHS Portal System<br>• Conduct environment and safety department workshop and capability-building training |
| | Risk of weakening the safety culture due to an unclear direction for the autonomous safety culture system | Minor | • Manage environment and safety KPIs<br>• Build an autonomous safety culture |
| Insight | Legal risks under the Serious Accidents Punishment Act due to serious industrial accidents | Medium | • Operate safety and health training (daily and statutory training)<br>• Conduct risk assessment implementation system<br>• Conduct safety assessment and consulting for partner companies |
| | Legal risks under the Occupational Safety and Health Act due to site audits led by the Ministry of Employment and Labor | Medium | |

1) Risk Level: Risks are graded into the five levels of Critical, Major, Medium, Minor, and Insignificant based on likelihood and impact severity

## Strategy

### Response Strategy and Initiatives

Hanwha Solutions has established a mid- to long-term safety and health strategy based on past accident analyses, safety culture assessments, reviews of personnel and equipment, and employee interviews. In line with this strategy, we developed four key strategic initiatives and an annual plan based on which each business site implements its own annual targets and action plans.

#### Chemical Division's Safety and Health Goals and Strategic Initiatives

**Vision** — Create an accident-free and disaster-free workplace

**Goal** — Establish an autonomous safety management system

**Key Strategic Initiatives**

**Advancing the safety management system**

- Operate a robust system for identifying, eliminating, and sharing risk factors
- Conduct Focus on Safety activities (pre-task planning and pre-job safety checks)
- Reinforce compliance with the Safety Golden Rules

**Enhancing safety competency**

- Strengthen safety competencies of junior employees
- Enhance all employees' abilities to assess risks
- Conduct safety awareness campaigns

**Encouraging active on-site engagement**

- Improve the quality of risk assessments and work procedures
- Promote use of the mobile safety suggestion system
- Improve near-miss reporting and follow-ups
- Apply TBM (Tool Box Meeting)
- Strengthen safety management

**Strengthening Safety Leadership**

- Implement the proactive and predictive safety leadership Jump-up program
- Host the Safety Leadership Forum
- Reinforce safety leadership of supervisors

**A global leader in safety, health, and environment**

Division-specific Safety and Health Strategic Initiatives Hanwha Solutions develops key strategic initiatives for safety and health based on the industry characteristics of each of its divisions. Each division then systematically manages the implementation of company-wide safety and health goals through its specific initiatives.

#### Key Strategic Initiatives of Each Division in 2026

**Chemical**

**Advancing the safety management system**
- Strengthen risk management system
- Refine penalty system for basic safety rule violations
- Implement smart safety management system

**Strengthening safety leadership**
- Promote safety leadership in management
- Reinforce safety leadership for supervisors and extend it to partner companies

**Enhancing safety competencies**
- Strengthen hazard-prediction skills through job-specific, hands-on safety training
- Strengthen safety mindset
- Reinforce safety competencies at partner companies
- Develop a program for fostering safety and health specialists

**Encouraging active on-site engagement**
- Strengthen the work safety management system through 'Focus on Safety'
- Promote risk identification
- Allow departments to select their own safety management activities and goals

**Qcells**

**Establishing an autonomous safety culture system**
- Promote eight key practices to build and improve an autonomous safety culture
- Prevent fires/explosions/leak accidents
- Develop EHS program for prospective supervisors

**Conducting environment and safety inspections and corrective actions**
- Reinforce operations of the risk assessment council
- Conduct effective safety and environment assessments and inspections

**Enhancing stakeholder communication**
- Improve access to safety and environmental information systems
- Foster professional communicators
- Develop 'Safety Commitments' that reflect the work characteristics of each team

**Insight**

**Building an autonomous safety culture**
- Self-inspections on the 12 key safety rules
- Operate reporting system for supervisors' safety and health activities

**Reinforcing Risk Assessments**
- Operate team-level risk assessments
- Operate risk assessments for each supplier

**Responding to serious accidents**
- Introducing third-party compliance audits for the Serious Accidents Punishment Act
- Conducting regular inspections to achieve ZERO serious accidents
- Enhance safety awareness by building a safety-focused culture

## Strategy

### Response Strategy and Initiatives

**Operating a Safety and Health Management System** Hanwha Solutions' Chemical and Qcells Divisions have obtained and maintain ISO 45001 certification for their safety and health management systems. In particular, the divisions have processes based on the PDCA (Plan-Do-Check-Act) cycle, as defined in ISO 45001, that are applied to overall safety and health management.

### Reinforcing Safety Leadership

**Cascading Safety Leadership** Hanwha Solutions promotes various safety leadership initiatives to instill a company-wide safety mindset and build an autonomous safety culture.

| Division | Key Initiatives | Details |
|---|---|---|
| Chemical | Operate regular safety and health meetings (Safety Committee) | • Monthly meetings led by the Production and Safety Generalization<br>• Engagement from all executives and heads of the SHE and Technology Planning departments<br>• Review of risk assessments for major hazards, including fires, explosions, and leaks, etc.<br>• Inspection of process safety hazard prediction activities<br>• Sharing of near-miss case studies<br>• Reports on performance of leading safety and health indicators for each business site, including Yeosu and Ulsan |
| Qcells | Safety competency training for supervisors | • EHS functional capability and leadership training for supervisors, including team leaders of domestic business sites<br>• Development of a safety culture through lecture-based, interactive, and coaching-based training<br>• Review of learning effect through comprehension assessments and satisfaction surveys |
| Insight | Safety awareness campaign led by management | • For division heads, executives, and team leaders or above (March 2025)<br>• Safety commitment ceremony and hiking campaign |

**Safety and Health Activities with Leaders** Hanwha Solutions' Chemical Division operates a Safety Leadership Coaching Program to strengthen execution of autonomous safety management. The program is structured so that senior managers, such as executives and team leaders, regularly review and provide feedback on the safety management activities of their direct subordinates, such as team leaders, section chiefs, chief engineers, and shift managers. The program is implemented across all organizational units. In addition, the division operates on-site toolbox meetings (TBM) and critical task observation (CTO) activities to enhance the effectiveness of pre-task briefings and risk assessments. Team leaders also participate in these initiatives, actively reviewing hazards and implementing preventive measures. Hanwha Solutions' Qcells Division operates monthly risk assessment meetings led by plant and center managers along with pre-task TBM to continuously inspect and improve key risks. In addition, the division analyzes accident and incident cases, as well as safety inspection non-conformities, to develop a pool of safety action items for each business site and team. Supervisors, such as team leaders, unit heads, and shift foremen, then eliminate on-site hazards and manage compliance with standard operating procedures (SOP). Hanwha Solutions' Insight Division operates on-site safety initiatives led by the Safety and Health General Manager and leader-level supervisors who take part in daily TBM and risk assessment meetings to inspect hazards and risks and develop necessary improvement measures. Furthermore, the Safety and Health Officer leads labor-management joint inspections and labor-management consultative council meetings to reflect worker opinions and manage potential risks.

**Strengthening Safety Communication** Hanwha Solutions' Chemical Division develops content under the title 'Exploring Our Safety Culture' to promote a strong safety and health culture. The content is shared with all employees and covers best practices in autonomous safety initiatives, accident prevention, and safety culture development, along with key messages emphasized during the Safety, Health and Environment Commitment Contest. In addition, the Production and Safety Generalization sends safety and health letters to all employees to further raise safety awareness. Hanwha Solutions' Qcells Division strengthens its EHS cooperative system through regular EHS conference calls, which help accelerate the company-wide adoption of EHS systems, share best practices, and facilitate communication between the head office and business sites. In addition, the division distributes monthly safety and health content. This includes '10 Minutes for Safety,' a dedicated TBM resource focused on accident analysis and prevention guidelines, and a regular newsletter covering diverse topics from fire prevention to health management, to contribute to spreading a safety culture across all business sites.

## Strategy

### Reinforcing Safety Leadership

VFL (Visible Felt Leadership) Hanwha Solutions' Chemical Division operates Visible Felt Leadership (VFL) activities to reinforce leadership commitment to safety and health. As part of this initiative, executives visit work sites to conduct safety observations and engage in safety conversations, taking place monthly at each team at the Yeosu and Ulsan Plants since 2024. The responsible executive inspects the work environment and identifies hazards while listening to on-site concerns and collecting safety-related feedback from employees. Afterwards, manager meetings are held to share and review key safety issues and response measures with department heads and SHE supervisors. Each department also holds safety briefings to review the day's work status, potential hazards, near-miss cases, recent improvements, and support needs, conducting both site observations and follow-up inspections. VFL activities have expanded beyond routine environment inspections since 2025 and are focused on delivering safety messages from leadership and listening to on-site feedback.

Meanwhile, Hanwha Solutions' Qcells Division operates the 'Top 5 Risks' initiative to prevent accidents at its sites. Based on accident analysis for each site, the top five risk factors are identified, and team leaders from operating departments conduct on-site inspections to eliminate them. In addition, the division continues to implement proactive measures to prevent accidents caused by unsafe conditions and behaviors.

### Improving Safety and Health Competencies

Safety and Health Training for Accident Prevention Hanwha Solutions provides regular safety and health training tailored to each target group in accordance with the Occupational Safety and Health Act and other relevant regulations. Training is offered as a combination of online and in-person training to relevant personnel. Hanwha Solutions' Chemical and Qcells Divisions conduct annual surveys on training needs to reflect them in designing the direction, topics, and methods of its training programs to enhance their effectiveness. In addition, the Insight Division provides regular safety and health training and job-specific training to employees and supervisors to internalize safety awareness and strengthen employee expertise in the area. The division also implements a self-regulatory prevention system that proactively manages workplace hazards and risks by linking feedback on improvements identified during sessions or safety assessments and inspections.

#### Hanwha Solutions' Safety and Health Training Status

| | |
|---|---|
| Number of employees who completed safety training | 4,801 |
| Safety training completion rate based on total headcount | 87.2% |

#### Safety and Health Training by Division

| Division | Period | Target Group | Details |
|---|---|---|---|
| Chemical | Apr. 2025 | Employees | Practical guide to facilities handling hazardous substances |
| | Jun. 2025 | Employees | JSA risk assessment capability-building (theory) |
| | Aug. 2025 | Employees | Explosion protection regulations and applications |
| | Aug. 2025 | Employees | Practical HAZOP training |
| | Oct. 2025 | Employees | Understanding environment/safety facilities-1 (incinerators) |
| | Aug. 2025 | Supervisors | JSA risk assessment capability-building (practice/coaching) |
| Qcells | Mar.~Sep. 2025 | Employees | Risk assessment in practice |
| | Nov. 2025 | Employees | Understanding Process Safety Management (PSM) |
| | Jun. 2025 | Employees | Safety culture competency enhancement training |
| | Sep. 2025 | Employees | Understanding safety and health legislation, regulations, and programs |
| | Aug. 2025 | Employees | Laboratory chemical safety |
| | May ~ Aug. 2025 | Employees | Emergency response and CPR |
| Insight | Monthly | Employees | Regular safety and health training for supervisors/employees |
| | Upon statutory cycle | Employees | Safety and Health Officer Job Training |
| | Monthly | Employees | Sharing recent accident cases and monthly focus areas through safety and health meetings |
| | Monthly | Employees | Inspection feedback and safety and health training |

## Strategy

### Improving Safety and Health Competencies

**Hanwha Solutions and Korea National University of Transportation Sign MOU** Hanwha Solutions' Chemical Division signed a memorandum of understanding (MOU) with Korea National University of Transportation, supporting employees who wish to participate in completing either a four-year program at the university's Future Convergence College or a two-year program at its specialized graduate school. Through this program, the division has secured four employees with master's degrees in safety as of February 2026 and plans to secure four more employees with bachelor's degrees by February 2026.

**Safety Culture Competency Enhancement for Supervisors** Hanwha Solutions' Qcells Division partnered with an external training agency to offer safety personnel, including supervisors, interview and coaching-based training to strengthen their safety culture competencies. The program developed guidelines for practicing a safety culture and covered internal policies and legislation on safety and health, as well as key risks at each business site. In addition, the division plans to develop a capability-building program in this area for prospective supervisors.

### Safety and Health Training for Suppliers

**Advancing Supplier Safety and Health Assessments and Implementing Follow-up Measures** Hanwha Solutions' Chemical Division conducts annual safety and health assessments for on-site suppliers, and post-project assessments within one month of construction completion for non-resident suppliers. The safety levels of suppliers are classified into Grades 1 to 7 in collaboration with an external credit rating agency, comprehensively assessing areas such as safety and health management activities, accident track record, bonus/penalty points, and safety support team monitoring results. Suppliers with excellent grades receive preferential treatment in contracting and rewards, while lower-grade suppliers are supported through mentoring programs and guidelines led by the Safety and Health Team to improve their capabilities. Furthermore, frequent-accident and repeatedly penalized suppliers are excluded from receiving top grades. The division has also been strengthening its supplier safety management system by introducing supplier penalties in 2025 to manage repetitive risky behaviors and enhance safety communication. Hanwha Solutions' Qcells Division reflects supplier SH assessments, their allocation of safety management budgets, and the establishment of safety councils when assessing the safety and health capabilities of suppliers. Based on the results, the division provides training for supplier CEOs and safety and health personnel, as well as support for Risk Assessment Certification Audits. In addition, guidelines are offered to suppliers requiring grade improvements. For suppliers failing to meet safety standards or that demonstrate weak performance, strict measures, such as contract suspension, are applied. Furthermore, the division continuously implements prevention activities with suppliers through regular workplace patrols, joint safety and health inspections, and monthly safety meetings.

**Supplier Safety and Health Assessments** Hanwha Solutions' Qcells Division comprehensively evaluates the safety and health management levels of a total of 175 suppliers based on their SH assessments, safety management budget allocations, and establishment of safety councils. In addition, the division participates in the Risk Assessment Certification Program supervised by the Korea Occupational Safety and Health Agency to improve safety and health management of its suppliers. At the Jincheon Plant, six out of the seven on-site suppliers have obtained the Risk Assessment Certification with the remaining supplier undergoing relevant procedures to obtain certification in 2026. The Qcells Division also conducts regular assessments based on the 'Environment and Safety Supplier Management and Evaluation Guidelines' and reports the results to the Safety and Health Officer. A reporting system is in place to ensure industrial accidents are reported promptly to the Safety and Health Officer while supplier safety risks are proactively managed through regular council meetings with on-site suppliers and quarterly joint safety and health inspections. The Insight Division operates a safety and health assessment framework that covers the entire process from supplier selection to project execution. During the supplier bidding and registration process, the division conducted selection evaluations to verify the safety qualification requirements of 26 suppliers. During project execution, the division introduced regular safety and health assessments to evaluate suppliers' actual risk management capabilities, reviewing compliance with on-site safety rules and the implementation of risk assessments for a total of 32 suppliers.

**Supplier Safety and Health Training** Hanwha Solutions' Qcells Division is committed to supporting supplier engagement in capability-building programs to strengthen their safety and health competencies. The division provides new non-resident suppliers (project-based) with training on EHS and relevant internal standards to enhance their understanding of safety and health management at business sites. At each business site, Hanwha Solutions' Insight Division conducts legally mandated safety and health training sessions for suppliers, such as education upon employment, MSDS, and special education. In total, we have completed 1,282 sessions.

## Strategy

### Improving Supplier Safety and Health Competencies

Collecting Safety and Health Feedback from Suppliers Hanwha Solutions' Chemical Division operates a supplier safety and health council to regularly collect supplier feedback on safety and health matters and respond promptly to supplier suggestions. In 2025, supplier feedback was collected through various channels, including grievance boxes, dedicated supplier communication platforms, and CEO-led roundtable meetings. All submitted suggestions have been fully addressed. Hanwha Solutions' Qcells Division collects supplier feedback through monthly supplier council meetings. In 2025, five suggestions were submitted and successfully addressed, including measures to improve worksite risks such as enhancing illumination at the finished goods warehouse and replacing pH meters and gas detectors. Hanwha Solutions' Insight Division also operates safety and health meetings at its sites and collects feedback from supplier managers and employees through communication channels, such as safety suggestion boxes. All submitted grievances have been addressed, achieving a 100% resolution rate.

Supplier Grievance Channels by Division

| Division | Grievance Channel | No. of grievances received | No. of grievances resolved | Details |
|---|---|---|---|---|
| Chemical[1] | • Regular supplier council meetings<br>• Grievance Box<br>• Supplier communication platform<br>• Meetings with CEO, etc. | 9 cases | 9 cases | • Rest areas for facility safety inspections<br>• Access approval for LPG work vehicles, etc.<br>• Request to prohibit bicycles in loading areas due to high collision risks |
| Qcells | • Regular council meetings<br>• Safety and health suggestion box, etc. | 5 cases | 5 cases | • Increased illumination at finished good warehouses, etc.<br>• Replacement of pH meters and gas detectors |
| Insight[2] | • Safety and health meetings<br>• Safety suggestion box<br>• Labor-Management Consultative Council<br>• Occupational Safety and Health Committee<br>• Safety and health council, etc. | 45 cases | 45 cases | • Additional rest areas for workers<br>• Increasing water sprinkler trucks at business sites<br>• Request for cooling sleeves or cooling neck wraps to prevent heat illnesses, etc. |

1) Including suggestions from the supplier council meetings at Yeosu and Ulsan plants
2) Including the Insight Division's permanent safety and health communication channels at its entire 21 business sites (communication channels refer to social media, risk assessment meetings, occupational safety and health councils, labor-management council meetings, phone calls, and safety and health suggestion boxes, etc.)

## Strategy

### Strengthening Response System for Safety Accidents

Operating an Emergency Organization Hanwha Solutions operates an emergency response system led by the company-wide Crisis Management Committee for systematic and prompt response in the event of environmental accidents, such as safety and health incidents and chemical or pollutant leaks. The Crisis Management Committee is chaired by the CEO while each business site forms its own Emergency Response Committee, designating site emergency directors to oversee site responses. In addition, we develop response scenarios for each emergency type in accordance with emergency management policies to take action immediately when actual accidents occur for prevention of further escalation and minimization of damages.

Emergency Response System


Strengthening Emergency Preparedness through Drills Hanwha Solutions conducts company-wide emergency drills to ensure that employees can respond promptly and systematically in the event of an emergency. Hanwha Solutions' Chemical Division has established site-specific emergency response manuals for work suspension and serious industrial accidents to enable swift action by all employees. Emergency drills are conducted twice a year, once in the first half and once in the second based on each site's emergency response procedures and safety and health plans. Internal policies on emergency response stipulate that prompt action shall be taken in the event of an emergency to minimize human and physical impact on personnel both inside and outside the plant, as well as to the local community. In 2025, the Yeosu Plant conducted a joint emergency drill with the Yeosu Fire Department, while the Ulsan Plant held a joint drill at Ulsan Plants 2 and 3. The R&D Center conducted its own fire drills and training for internal firefighting teams at five of its buildings. After each drill, the entire response process is reviewed to identify areas for improvement and continuously strengthen the effectiveness of the division's emergency response system.

Hanwha Solutions' Qcells Division assesses potential impacts of emergencies on surrounding communities and establishes Chemical Accident Prevention and Management Plans to minimize such risks. These plans are communicated in advance to local communities. Plants and research centers conduct emergency drills twice a year with identified issues being immediately addressed and reflected in future drills. In addition, tailored emergency drills based on site-specific scenarios are operated to continuously upgrade the field-centered response system. In 2025, the division conducted simulation drills of chemical fires and explosions, drawing out improvement measures that led to actionable improvement plans. Furthermore, the division has in place employee guidelines for pollutant-associated risks, as well as emergency response guides for each business site. These guidelines explicitly define the criteria for classifying and determining various emergencies, such as injuries, leaks, fires, explosions, and natural disasters, while prescribing standardized response procedures and detailed step-by-step actions.

Hanwha Solutions' Insight Division has established emergency response regulations to prepare against emergency situations and serious industrial accidents, operating an emergency response system that consists of site-specific response scenarios, an emergency contact list, and definition of roles and responsibilities for each individual. Based on this system, annual emergency drills are carried out to continuously monitor and strengthen response capabilities. In addition, the division has employee manuals on how to respond to risks related to pollutants.

Emergency Drills at Each Division in 2025

Chemical Division's Emergency Drill

Qcells Division's Emergency Drill

Insight Division's Emergency Drill

## Strategy

### Strengthening Response System for Safety Accidents

**Safety Management Agreements** Hanwha Solutions' Chemical Division signed a memorandum of understanding (MOU) with the Korea Gas Safety Corporation to enhance safety management systems for petroleum and chemical facilities and to promote ESG management practices. The partnership aims to upgrade inspection standards and methods and transition to a data-based operational framework. Under the agreement, the division is driving preventive maintenance by introducing risk-based inspection methodologies, having completed system implementation through a total KRW 2.084 billion investment executed over three phases until 2025.

Hanwha Solutions' Chemical Division continues to establish strategic support systems to enhance its safety management practices going forward. Through the MOU, the division also plans to implement a mid- to long-term roadmap for IT-based safety management solutions, enhance safety levels using advanced diagnostic techniques, promote the exchange of safety technologies and talent development, and introduce shared growth programs for suppliers.

**Workplace Safety Management Activities** Hanwha Solutions' Qcells Division systematically classifies and manages high-risk tasks, operating guidelines at each site based on permit to work procedures. Hanwha Solutions' Insight Division uses a risk assessment to manage the health and safety issues of its workers related to using high-risk equipment.

**Workplace Health Management Activities** Hanwha Solutions' Chemical and Qcells Divisions have established health management policies to effectively manage the health of employees and supplier workers. These policies include conducting regular health check-ups, managing individuals with identified health concerns, and assessing and controlling risk factors related to musculoskeletal, cerebral and cardiovascular diseases. In addition, each site conducts semi-annual workplace environment diagnoses to identify harmful substances and protect the health of employees.

Hanwha Solutions' Insight Division establishes workplace environment measurement plans and conducts regular diagnoses in accordance with legal requirements to perform its safety and health duties. To prevent tasks burdensome to the musculoskeletal system, the division identifies high-risk tasks and implements appropriate control measures. It also provides support to protect the health of employees working outdoors to prevent heat- and cold-related illnesses.

Workplace Health Management Activities of Each Division

| Division | Health Management Activities |
|---|---|
| Chemical | In-house inspections of rest areas and provision of humidifiers to maintain appropriate humidity levels |
| | Individual attenuation testing for hearing protection devices and provision of customized earplugs |
| | Noise mapping and posting warning signs for high-noise areas |
| | Heat-related illness prevention (measuring perceived temperature, distributing emergency kits, sending SMS alerts during heatwaves, etc.) |
| | Issuance and management of health monitoring cards for designated employees |
| | Training to prevent musculoskeletal disorders |
| | Mental health awareness training organized by public health centers |
| Qcells | Health consultations and health exams for individuals with identified health concerns |
| | Job fitness evaluations for employees at high risk of cerebrovascular or cardiovascular diseases |
| | Job stress assessments |
| | Emergency response (CPR) training |
| | Training to prevent musculoskeletal disorders |
| | Support for counseling at external psychological counseling centers |
| Insight | Workplace Environment Measurement |
| | Investigation of musculoskeletal risk factors |
| | Job stress assessment |
| | Heat-related illness prevention (measuring perceived temperature, distributing emergency kits, sending SMS alerts during heatwaves, etc.) |
| | Cold-related illness prevention (prevention supplies, such as neck warmers and hot packs, etc.) |
| | Support for rest areas (temperature/humidity control devices, hot/cold water dispensers) |

## Strategy

### Health Promotion Programs

Hanwha Solutions operates health promotion programs aimed at improving the physical and mental well-being of its employees. These programs are based on best practices from exemplary workplaces recognized by the Korea Occupational Safety and Health Agency.

Health Promotion Programs of Each Division

| Division | Health Diagnosis·Medical Support | Health Promotion Program and Activity |
|---|---|---|
| Common | • General and comprehensive health screenings for employees and their spouses | |
| Chemical | • Special health exams for employees working in processes exposed to hazardous substances<br>• Health management and psychological counseling for individuals with identified health concerns | • Health promotion programs focusing on individuals with identified health concerns |
| Qcells | • Nutritional supplements for those in pregnancy (spouse, child)<br>• Special health exams for employees working in processes exposed to hazardous substances | • Customized programs, such as for smoking cessation, healthy eating, alcohol moderation, weight management, psychological counseling, and training on preventing musculoskeletal disorders<br>• Full-time health office and health manager<br>• Health consultations and health newsletters<br>• Low-frequency stimulators to support employee wellness |
| Insight | • Identifies eligible individuals in advance to carry out general and special health examinations<br>• Pre-placement health examinations for employees assigned to tasks requiring special health examinations | • Assess work suitability through pre-placement health examinations<br>• Early identification of health concerns and implementation of preventive measures |

### Promoting a Safety Awareness Culture

Safety Culture Assessment Hanwha Solutions conducts safety culture assessments targeting its employees. Hanwha Solutions' Chemical Division conducted a survey for the assessment, comprising 60 questions across six categories, including safety leadership, routine safety management, and line-level accountability. The division also conducted interviews with employees at various organizational levels to embed a self-directed safety management culture. All heads of production departments and selected team leaders were interviewed to gather feedback on the effectiveness of proactive safety management activities, areas for improvement, and support needs. Based on these insights, the division established 2026 targets and action plans for proactive safety management, along with plans to operate leading safety culture indicators.

Hanwha Solutions' Qcells Division commissions an external professional organization to conduct safety culture assessments every other year to obtain an objective assessment of its safety culture. The survey was designed by analyzing the Hanwha Group's internal assessment framework and the methodology used by the external organization. Following the survey, a comprehensive analysis was carried out by integrating the results and follow-up in-depth interviews. To enhance analytical accuracy, final assessments also incorporated on-site documentation and monitoring, and the results were used to develop strategic directions and key improvement initiatives.

Hanwha Solutions' Insight Division conducts its assessments based on in-depth interviews of safety and health management executives and leaders to understand the organization's safety capabilities and mindset. Results are reflected in individual KPIs to ensure more responsible management of safety and health by leadership. Through such field-oriented assessments, the division is closely monitoring the safety awareness level of its employees.

## Strategy

### Promoting a Safety Awareness Culture

Safety, Health, and Environment (SHE) Awards Hanwha Solutions operates a company-wide SHE award program to encourage employees' voluntary participation in safety and health activities. The Chemical Division invites submissions of outstanding safety and environmental achievements from each business site and selects awardees through a two-step evaluation process, targeting both teams and units that have demonstrated exceptional performance. In 2025, two teams and eight units that contributed to zero-accidents and zero-injuries were awarded at a special ceremony.

Hanwha Solutions' Qcells Division operates an EHS award program to integrate a safety culture into the organization through recognition and awards for environment and safety best practices. Award recipients are selected based on monthly 'best-of-best' criteria, including individuals who have resolved key internal and external environmental and safety issues, business sites that achieved 3-Zero status (zero-accidents, zero-injuries, and zero-violations), and outstanding performers of daily site inspections. Hanwha Solutions' Insight Division operates a division-wide and site-level award program to encourage employee engagement in safety and health efforts. In 2025, excellent business sites and employees were selected for the division-wide award based on participation in initiatives focused on gathering employee feedback and attendance at regular safety and health meetings. In addition, each business site operates its own award programs, reflecting site-specific conditions.

2025 Safety and Health Awards by Division

| Division | Category | | Awards |
|---|---|---|---|
| Chemical | SHE Awards | Team-level | • 2 top excellence teams |
| | | Organizational unit-level | • 4 top excellence, 4 excellence awards |
| Qcells | EHS Recognition | | • 3 outstanding EHS contributors<br>• 9 TF100 business sites<br>• 53 Monthly Best-of-Best teams |
| Insight | Company-level Awards | | • 1 Excellent Site in Practicing Safety and Health<br>• Among SHE initiative participants, 1 Top Excellence, 1 Excellence, and 4 Honorable Mention awards |
| | Site-level Awards | | • 26 outstanding performers were awarded |

Risk Identification and Improvement Activities Hanwha Solutions' Chemical Division continuously identifies and manages risks that are likely to cause serious accidents, focusing on high-risk operations. To achieve this, the division introduced a 'Safety Mileage Program' in 2022 to supplement the previous TOP proposal system and provide incentives to employees who actively participate in risk identification and improvement activities. This program covers themed safety proposals, idea submissions, field-based safety initiatives, and 'near-miss' reports, with accumulated mileage points rewarded based on the registration and evaluation outcomes of proposals. In addition, the Safety Committee conducts process safety risk prediction activities for processes associated with a high risk of major industrial accidents. After screening high-risk factors from each team, all executives at the business site participate in reviewing risk assessment results based on unique process characteristics and operational risks to implement corrective measures for the identified risks. Furthermore, safety reinforcement activities, such as voluntary safety management campaigns, 5S activities (Sort, Set in order, Shine, Standardize, Sustain), self-conducted risk assessments, and Standard Operating Procedure (SOP) revisions, are carried out to maintain a preventive and robust safety management system.

Hanwha Solutions' Qcells Division recognizes safety not only as a matter of regulatory compliance but as a core operational element to be practiced at worksites. Accordingly, the division has strengthened its line responsibility system and potential hazard identification activities since the second half of 2023. To establish a safety management system focused on prevention, frontline workers directly participate in identifying and addressing risk factors to implement safety measures based on their findings. Furthermore, the division developed 'Safety Commitments' based on each team's work characteristics and offers TBM-based on-site coaching to strengthen safety management activities.

In addition, Hanwha Solutions' Insight Division operates a work process in compliance with the Serious Accidents Punishment Act to proactively identify and address hazards and risk factors. The division assesses identified risks through daily workplace patrols and joint labor-management inspections, continuously establishing and implementing improvement measures.

# SAFETY AND HEALTH MANAGEMENT

## Strategy

### Promoting a Safety Awareness Culture

Work Suspension Right Hanwha Solutions provides employees with the right to request temporary suspension of work to supervisors when they recognize a potential risk that can lead to an accident or injury during operations in accordance with the Occupational Safety and Health Act. Employees must immediately suspend work and report to their supervisor when identifying a potential risk. The supervisor shall inspect the site and take necessary corrective actions before resuming operations. Such measures are specified in the safety and health regulations and operational standards of each division and may use different communication and training methods depending on the needs of each division.
In 2025, a total of 17 cases of the right to suspend work were exercised: four at the Chemical Division, ten at the Qcells Division, and three at the Insight Division. Supervisor inspections and corrective measures for all cases have been completed.

Process Safety Management (PSM) The Process Safety Management (PSM) system is a government-certified safety management program designed to prevent major industrial accidents, such as explosions, fires, and toxic chemical leaks that may arise at manufacturing sites that handle high-risk chemicals or operate hazardous processes. In accordance with the Occupational Safety and Health Act, the system is administered by the Ministry of Employment and Labor and the Korea Occupational Safety and Health Agency. PSM applies to workplaces that handle specific hazardous chemicals above regulatory thresholds or operate high-temperature or high-pressure processes. It is widely implemented across various manufacturing sectors, including oil refining, chemical, semiconductor, and solar energy industries. Each site's process safety management is regularly evaluated through compliance assessments, with performance rated across the four grades of P (Excellent), S (Good), M+ (Fair), and M- (Needs Improvement). Hanwha Solutions' Chemical Division's Ulsan Plants 1, 2, and 3 all consistently maintain the highest rating of P in PSM compliance assessments. The Chemical Division continuously operates a process safety management system to maintain this rating while also offering consulting support to small-scale business sites. Hanwha Solutions' Qcells Division operates a company-wide safety management framework based on the 12 core components of PSM, including process-specific risk assessments, establishment of safe work procedures, emergency response planning, and safety training. Based on this framework, the Jincheon Plant received the highest P rating in the 2024 PSM compliance assessment and has maintained the rating as of 2025 In 2025, the plant was selected as a mentor site as part of the 'PSM matching consulting' program to support small-scale business sites that had difficulty implementing safety management systems and offered eight consulting sessions on how to prepare PSM reports and improve compliance levels.

## Risk Management

### Integration with Enterprise Risk Management

Hanwha Solutions systematically manages safety and health risks by integrating them into the Enterprise Risk Management process. Each division identifies risks at the department level and assesses their severity using an enterprise risk assessment matrix. Relevant departments then conduct the initial evaluation to assign risk ratings. Based on these ratings, response measures are established and implemented, followed by assessments on effectiveness and ongoing monitoring. Enterprise risk management activities and related improvement plans are reported to and approved by the Board of Directors once a year.

Enterprise Risk Management System

Qcells Division Selected as a Best Practice in the 2025 PSM Matching Consulting Program


## Risk Management

### Risk Assessment and Processes

Hanwha Solutions operates a safety and health management framework based on its ISO 45001 certified safety and health management system, reviewing operational performance and key issues on an annual basis. Through the review, we assess safety and health risks, analyze current initiatives, and develop improvement measures. Hanwha Solutions' Chemical Division is strengthening its capacity to systematically respond to safety and health risks while monitoring its implementation of mitigation measures. The Yeosu and Ulsan plants have introduced a risk-based inspection (RBI) system to enhance equipment inspection standards, completing transition to a data-based safety management approach in 2025. Hanwha Solutions' Qcells Division identifies and addresses hazards and risks at its sites based on its 'Risk Assessment Meeting Operation Guidelines.' Regular and ad hoc assessments are carried out to continuously monitor risks while routine assessments are facilitated through a mobile application for the environment and safety information system to support real-time risk management. Risk assessments are typically conducted using the 4M (Man, Machine, Media, Management) analysis, and depending on the subject, additional methodologies such as checklists, HAZOP, and JSA are applied. Departments also share weekly updates while risk elimination efforts are made through regular meetings. Hanwha Solutions' Insight Division conducts systematic risk assessments to prevent safety risks in advance. Assessments begin at the start of new constructions and continue through regular and ad hoc assessments conducted twice a month to identify hazards and risks and develop preventive measures. Proposed measures are reviewed by supervisors and the Safety and Health Officer and approved by the site director before being implemented. In addition, routine site inspections help continuously monitor and improve potential risks.

#### Summary of the 2025 Regular Risk Assessment Results - Chemical Division

| Category | Details | |
|---|---|---|
| Participant | Chemical Division's Yeosu and Ulsan Plants | |
| Evaluator | Operators of each department, SHE Supervisors, Supervisors, etc. | |
| Method | Task risk assessment using JSA method | |
| Results (Excerpted) | Risks | Improvement Measure (improvement in risk level[1]) |
| | Risk of overpressure due to line-up errors | • Manage Switch Over Check-List (3 → 2)<br>• Conduct routine inspections of heat exchanger PSVs, and PRDs |
| | Risk of contact and fume inhalation due to splashing during sampling | • Replace drain valve, install NaOH Sample Pot (3 → 2) |
| | Risk of asphyxiation due to inadequate protective gear during confined space work | • Improve protective equipment (3 → 2)<br>• Air supply hose for BA Mask operations<br>• Purchase and provide improved products that prevent detachment |

#### Summary of the 2025 Regular Risk Assessment Results - Qcells Division

| Category | Details | |
|---|---|---|
| Participant | Qcells Division's plants and research centers in Korea | |
| Evaluator | Process Engineers, EHS Officers, Supervisors, and Operators from each department<br>* Evaluation results of relevant departments were further reviewed and revised by the EHS Team | |
| Method | 4M risk assessment | |
| Results (Excerpted) | Risks | Improvement Measures (improvement in risk level[2]) |
| | Inadequate management of forklift and pedestrian walkways in packing area | • Designate pedestrian walkways and mark floor (8→ 4) |
| | Risk of musculoskeletal disorders or dropping objects when handling batteries | • Improve handling with manual stackers (6→ 3) |
| | Risk of tray collisions and maintenance-related accidents due to malfunctions, such as forced shutdowns during operation | • Prevent forced tray release through program improvements (4→ 1) |

#### Summary of the 2025 Regular Risk Assessment Results - Insight Division

| Category | Details | |
|---|---|---|
| Participant | Insight Division's Jade Site | |
| Evaluator | Safety and Health Officers, Safety Managers, Supervisors, employees | |
| Method | Frequency-Severity method | |
| Results (Excerpted) | Risks | Improvement Measures (improvement in risk level[3]) |
| | Risk of being struck or caught under falling trees during logging | • Control work area and wear personal protective equipment (PPE) (6→ 2) |
| | Risk of electric shock during distribution panel operations | • Install locking devices on the primary distribution panel and operation instruction signs on secondary panels (6→ 2) |
| | Risk of inhaling pesticide during pest control | • Wear personal protective equipment (PPE) (6→ 2) |

1) Risk level based on JSA method: Risk levels are determined by combining accident probability (frequency) and the magnitude of consequences (severity) (Risk Level 1: Trivial risk, Level 2: Tolerable, Level 3: Moderate, Level 4: Serious, Level 5: Intolerable)
2) Risk level based on 4M risk assessment: Risk levels are determined by combining severity and probability (frequency) (Risk Level 1~3: Low · Maintain current safety controls, Level 4~6: Medium · Safety training required, Level 8~12: High · Develop risk mitigation measures, Level 15~20: Extreme High · Stop work immediately)
3) Risk level based on frequency-severity method: Risk levels are determined by combining likelihood of accidents and the severity of its consequences (Risk Level 1-2: Routine management, Level 3-4: Tolerable management, Level 6: Intensive management, Level 9: Intolerable)

## Risk Management

### Safety and Health Risk Management Initiatives

**Safety Review** Hanwha Solutions' Chemical Division has transitioned from a company-wide centralized safety review process to a site-led model operated by each site's safety and health team since 2024. This transition was intended to support more in-depth identification of risks by reflecting site-specific characteristics and operating conditions. With on-site safety teams now overseeing inspections, the division is implementing more practical, on-the-ground improvements in a systematic manner. Hanwha Solutions' Qcells Division operates a risk assessment council to promote a culture of safety ownership. Through this council, the division identifies and addresses hazards and risks across its sites for effective risk management. In addition, regular site-level communication on a daily, weekly, and monthly basis enabled identification and resolution of approximately 424 risk factors in 2025, supporting the divisions' ongoing efforts for risk mitigation.

**Safety and Health Inspections at Each Site** Hanwha Solutions systematically operates a wide range of safety and health inspection activities to ensure the safety of its employees.

Safety and Health Inspections in 2025

| Inspection Activity | Lead | Frequency |
|---|---|---|
| Safety and Environment Performance Report | Company-wide, site, department | Monthly |
| Site inspections | Site, department | As needed |
| Joint labor-management inspections | Site, department | Quarterly |
| PSM | Site, department | As needed |
| Management system audits | Site, department | Annual |
| Statutory facilities inspections | Site, department | As needed |
| Process equipment management | Site, department | As needed |
| Industrial accident prevention | Company-wide, site, department | Monthly |
| Department-level inspections | Department | Daily |
| Verification of compliance with construction safety and health log | Site | Quarterly |
| Technical guidance for accident prevention | Site | Monthly |

**On-site Risk Identification** Hanwha Solutions' Chemical Division operates critical task observation (CTO) activities, led by supervisors who are the most familiar with site operations, to proactively identify and address risks. Since 2024, the division has incorporated job safety analysis (JSA) methods into its CTO activities, breaking down tasks into steps to identify potential hazards and accident risks in advance and develop appropriate prevention measures based on its analyses. The JSA method was piloted at Yeosu Plant's maintenance department from August to December 2024. As a result, all previous work procedures were fully integrated into the JSA format, and risk assessments were completed for all 1,898 targeted tasks. In addition, JSA classroom training for all employees and hands-on practical training for supervisors, as well as JSA documentation coaching for each department were completed in 2025.

Hanwha Solutions' Qcells Division analyzed company-wide incident data for serious injuries from the past five years and identified five major types of accidents and their causes, to create an accident casebook. The division also conducts special inspections to prevent accidents that can lead to serious occupational incidents. Furthermore, the division introduced a mobile version of the environment and safety information management system for both site managers and on-site personnel, offering a checklist covering workplace organization, secured walkways, and unsafe behaviors or conditions to support safety inspections. Users can submit inspection results along with photos, which allows for prompt corrective action in areas where risks have been identified. All follow-up actions are documented and shared through the system, supporting real-time site safety management.

2025 JSA-based Improvement Implementations

| Improvement Type | Overall Implementation | Facility Improvements | Establishment/ Revision of Internal Regulations | Changes to Operation/ Management Procedures | Checklist Creation | Safety/Health Signage | Training | PPE | Others |
|---|---|---|---|---|---|---|---|---|---|
| Targeted Cases | 14 cases | 9 cases | - | 2 cases | 1 case | 2 cases | - | - | - |
| Completed Cases | 12 cases | 9 cases | - | 0 | 1 case | 2 cases | - | - | - |
| Completion Rate | 86% | 100% | - | 0% | 100% | 100% | - | - | - |

## Risk Management

### Chemical Risk Management

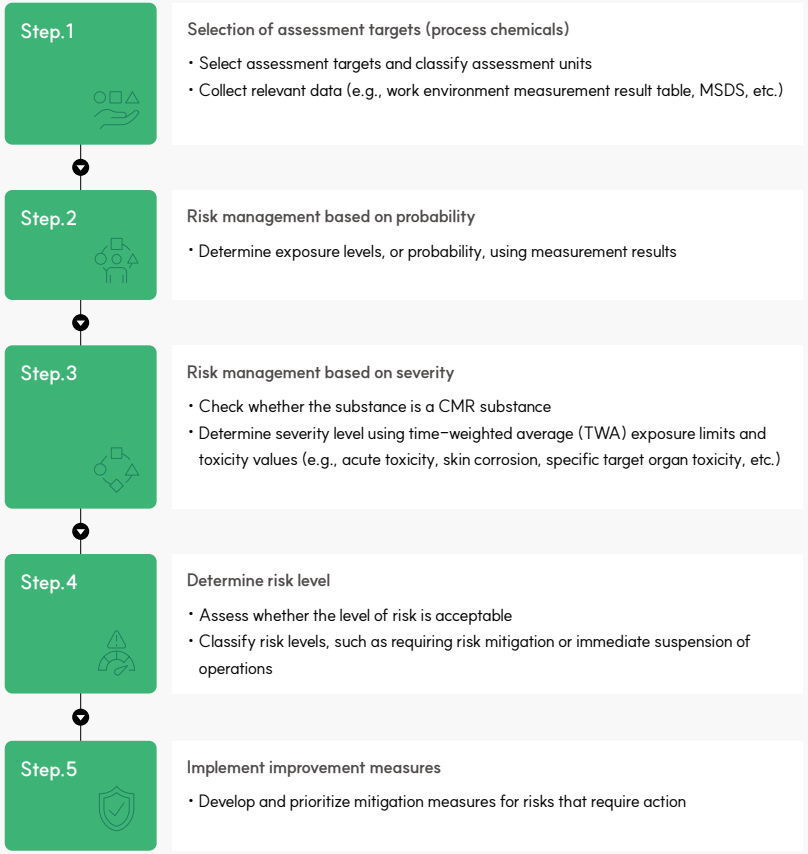
Hanwha Solutions conducts systematic risk assessments of all chemicals used across the company to ensure a safe working environment for its employees. Hanwha Solutions' Chemical Division adopted a chemical assessment methodology called CHARM (Chemical Hazard Risk Management) developed by the Korea Occupational Safety and Health Agency, and conducted a quantitative risk assessment of a total of 8,337 chemical substances used at the Yeosu and Ulsan Plants. Results found that three processes were classified as high-risk based on internal standards, although all were within legal limits, and mid- to long-term plans were developed to reduce the associated risks. Assessment results are shared with relevant departments, and re-assessments are conducted when there are changes in exposure levels or hazard classifications to ensure ongoing management.

Hanwha Solutions' Qcells Division conducted CHARM assessments at its Jincheon Plant in 2025, completing the evaluation of a total of 464 chemical substances handled at its business site. While all chemicals were classified as presenting an acceptable level of risk, the division is strengthening monitoring of local exhaust ventilation systems and applying leak detection tapes to strengthen management at the current risk level.

### Occupational Health and Safety Management System (ISO 45001) Certification

Hanwha Solutions' Chemical Division's entire operations and Qcells Division's Jincheon Plant have obtained and maintain ISO 45001 certification for occupational health and safety management systems. This demonstrates the company's systematic approach to managing occupational safety and health risks in accordance with international standards by identifying and addressing risk factors at business sites in advance.

Chemical Substance Risk Assessment Process



## Metrics and Targets

### Safety and Health Goals

Hanwha Solutions develops an annual company-wide safety and health plan, which is reported to and reviewed by the Board of Directors. We have also established a mid- to long-term roadmap extending to 2032 to build a global-standard safety management system.

**Mission**

**A healthy company built on mutual respect and trust, with a shared commitment to safety**

**Strategic Goal**

**To create an accident-free, injury-free workplace through a collaborative and self-directed safety culture**

| | | Present[1] (2025) | Internalization (2026 ~ 2029) | Execution (2030 ~ 2032) |
|---|---|---|---|---|
| Chemical | LTIFR[2] | 0.20 | 0.25 or lower | 0.10 or lower |
| | TRIFR[3] | 0.89 | 0.70 → 0.40 or lower | 0.30 or lower |
| Qcells | FSI | 1.98 | 1.9 → 1.1 or lower | 0.9 |

### Safety and Health Metrics

Hanwha Solutions has developed safety and health metrics to gain an objective view of safety levels at each division.

| Division | Category | | Indicator | 2025 Target | 2025 Performance | 2026 Target |
|---|---|---|---|---|---|---|
| Chemical | Accident[4] | | Fire/Leaks/ Explosion | 0 | 0 | 0 |
| | | | LTIFR | 0 | 0.20 | 0.25 |
| | Safety Culture[5] | | Safety Leadership[6] | 100 | 95.8 | 94.5 |
| | | | On-site Participation | 100 | 97.8 | 100 |
| Qcells | Accident | Injury Accident[7] | FSI[8] | 2.90 | 1.98 | 1.90 |
| | | Process Accident | Fire/Leaks/ Explosion | 0 Cases | 0 Cases | 0 Cases |
| | | Environmental Safety Inspection and Improvement | Improvement Rate | 100% | 100% | 100% |
| | Safety Culture | Near-miss Incident Management | Reporting Transparency | 1.1 and above | 1.3 | 1.1 and above |
| Insight[9] | Serious Accident | | | 0 Cases | 0 Cases | 0 Cases |
| | Safety Rounds by CSO | | | 13 times | 24 times | 12 times |
| | Safety and Health Support Inspection | | | 27 times | 28 times | 19 times |
| | Safety and Health Evaluation Inspection in Response to the Serious Accidents Punishment Act | | | 20 times | 20 times | 17 times |
| | Safety and Health Meeting | | | 12 times | 12 times | 12 times |
| | Zero-Accident Commitment Ceremony | | | 1 time | 1 time | 1 time |

1) 2025 refers to performance as of the end of 2025
2) LTIFR=(Number of lost time injuries ÷ Total hours worked)×1,000,000
3) TRIFR=(Total recordable injuries ÷ Total hours worked)×1,000,000
4) Employees, suppliers, and visitors
5) Employees
6) Assessment on leader engagement in safety management and impact on employees: Pathological (0~70), Reactive (71~77), Structured (78~82), Proactive (83~89), Benchmark (90~100)
7) Employees and suppliers (on-site/subcontractors included)
8) Data based on work-related incidents and injuries
9) Permanent employees and suppliers (on-site)

# Supplier Sustainability Management

# SUPPLIER SUSTAINABILITY MANAGEMENT

E S G

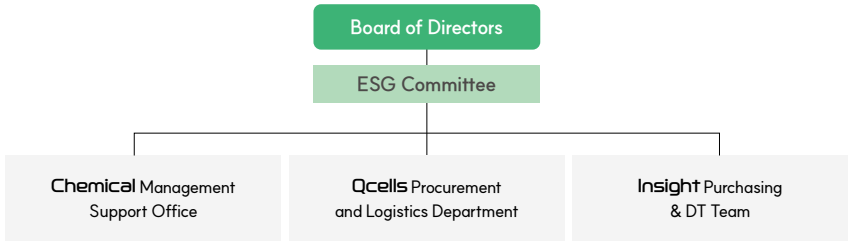
## Governance

### Governance Body

ESG Committee Hanwha Solutions operates the ESG Committee under the Board of Directors to systematically manage ESG risks in the supply chain. The ESG Committee regularly reviews and deliberates on fair trade and shared growth policies, as well as key ESG initiatives related to the supply chain.

Dedicated Organization Hanwha Solutions' procurement activities, supplier evaluations, and supply chain management are overseen by the procurement departments of each division. Hanwha Solutions' Chemical Division regularly reports the findings, results, and follow-up measures of supplier safety and health assessments to the Safety and Health Management Committee. Hanwha Solutions' Qcells Division operates a Safety and Health Council to work with suppliers on an ongoing basis to strengthen their safety management capabilities. In addition, it conducts separate safety and health assessments for suppliers.

Supply Chain ESG Management Organization




Subcontracting Internal Review Committee Hanwha Solutions' Qcells Division operates a Subcontracting Internal Review Committee to promote a fair subcontracting culture and establish a foundation for mutual growth with suppliers. Attended by the procurement teams of each organization, the committee meets at least once a month in accordance with the Korea Fair Trade Commission's guidelines. It conducts pre-assessments and post-reviews on the appropriateness of transactions—including contracts with key suppliers, supplier payments, and the protection of technical data—to systematically ensure compliance with the Monopoly Regulation and Fair Trade Act (MRFTA). This enables the division to prevent risks, identify and address potential violations early, and maintain sound business relationships with suppliers. The committee resumed operations in January 2025 and now convenes monthly.

### Policy Development

Supply Chain Sustainability Management Policy Hanwha Solutions established its supply chain sustainability management policy in 2025. This policy is designed to proactively address potential ESG risks within the supply chain and enhance its sustainability. Approved by the ESG Committee, the policy is posted on Hanwha Solutions' website as a company-wide policy and is publicly available to internal and external stakeholders.

Supply Chain Sustainability Management Policy

Supplier Code of Conduct Hanwha Solutions established its Supplier Code of Conduct for systematic ESG management across the supply chain. The Code requires all suppliers, as well as their lower-tier suppliers and employees, to manage and address key ESG areas, including labor rights, occupational safety and health, environmental protection, and business ethics. A clause on compliance with the Code of Conduct is included in every supplier contract. New suppliers are also required to sign a Pledge of Compliance and Anti-Corruption, clarifying their legal and ethical responsibilities and establishing trust-based business relationships.

Hanwha Solutions' Chemical Division has mandated compliance pledges when registering new suppliers since 2025. It also implements a procurement system that prevents issuance of orders to existing suppliers who have not yet signed the pledge. As of the reporting date, compliance pledges had been obtained from 798 suppliers registered in the procurement system, and we are committed to expanding this requirement to all existing and new suppliers going forward.

Hanwha Solutions' Qcells Division signed compliance pledges with 312 of its 321 newly registered suppliers in 2025, excluding urgent-registered suppliers.

Hanwha Solutions' Insight Division has required new suppliers to submit a Pledge of Compliance and Anti-Corruption when entering a new contract since 2024.

Supplier Code of Conduct

Hanwha Solutions' Qcells Division Supply Chain Management Performance

| | |
|---|---|
| Ratio of Suppliers Who Signed the Pledge of Compliance and Anti-Corruption in 2025 | 97% |

Supplier Selection and Assessment Policy Hanwha Solutions has implemented Supplier Management Regulations to provide customers with high-quality products, clearly defining the roles, responsibilities, and procedures of relevant departments.

## Strategy

### Management of Supply Chain Sustainability Risks

Hanwha Solutions identifies potential supply chain sustainability risks at the corporate level and across its business sites. We classify risk levels based on likelihood and impact, developing and implementing response strategies to minimize them.

| Division | Risks | Risk Level[1] | Response Measures Taken in 2025 |
|---|---|---|---|
| Chemical | Disruptions in supply due to supplier (transport, packaging, shipping) strikes | Medium | • Established and operated a contingency framework for supplier strikes (e.g., cross-functional task force, emergency volume allocation through external hubs, and review of alternative transportation routes and methods)<br>• Regularly sharing market conditions with suppliers and continuous monitoring of labor and industry trends |
| | Delays in maintenance due to equipment and parts shortages or late deliveries | Medium | • Implemented mid- to long-term facility modernization plan and extended lifespan of irreplaceable aging equipment<br>• Proactively secured key facilities and spare parts and developed alternative materials |
| | Disruptions in production and supply due to delays in raw and auxiliary material procurement | Minor | • Managed delivery delays and non-delivery risks by monitoring monthly supply issues<br>• Minimized raw material sourcing risks by diversifying suppliers<br>• Formed strategic partnerships with suppliers (review maintaining and expanding relations based on supplier assessments, holding regular meetings, etc.) |
| Qcells | Rise in raw material costs and supply chain risks due to market changes and geopolitical factors (e.g., pandemic and wars, etc.) | Medium | • Monitored raw material price fluctuations and supply chain risks, such as raw material supplier utilization rates and congestion, etc. |
| | Fluctuation in production plans due to issues in raw material supply | Medium | • Maintained safety stock levels of raw materials<br>• Reviewed alternative transport modes (sea and air transportation) in case of short-term supply issues<br>• Submitted purchase requests in a timely manner considering lead times |
| | Delivery delays to customers due to vessel shortages and natural disasters, etc. (modules/cells) | Medium | • Secured timely vessel space through direct booking with carriers<br>• Secured stable freight capacity and rates through annual contracts with carriers<br>• Reviewed diversification of export means, such as reefer containers and RORO vessels, in case of vessel space issues |
| | Operational disruptions due to non-performance by plant, warehouse, and transportation service providers | Minor | • Prevented operational disruptions by monitoring logistics and through regular discussions<br>• Minimized risks of contract non-fulfillment by specifying indemnification clauses for non-compliance in contracts |
| | Risk of securing alternative raw materials due to sole-source suppliers | Minor | • Continuously managed delivery schedules by material and Open PO status to proactively monitor potential delivery delays<br>• Developed and operated a tracking-based integrated material requirements planning system through Inbound Reports |
| Insight | Risk of non-compliance with the Framework Act on the Construction Industry and the Subcontracting Act | Medium | • Monitored and reviewed legal compliance in supplier selections, contracts, and project implementations<br>• Continued monitoring legislative revisions and recent trends<br>• Conducted training on the Framework Act on the Construction Industry and the Subcontracting Act |
| | Construction delays and rise in costs due to supplier insolvency and disputes, etc. | Minor | • Revised supplier management policies and conducted due diligence during supplier selections<br>• Operated internal ethics reporting channel for suppliers<br>• Documented and embedded lessons learned from past projects |
| | Rise in costs and delivery delays due to supply chain instability | Minor | • Managed a supplier pool to monitor raw material and logistics trends<br>• Held regular supplier meetings<br>• Diversified suppliers and formed strategic partnerships |

1) Risk Level: Risks are graded into the five levels of Critical, Major, Medium, Minor, and Insignificant based on likelihood and impact severity

## Strategy

### Promoting Sustainable Procurement

Hanwha Solutions is committed to fostering a virtuous cycle through eco-friendly procurement and minimizing negative environmental impacts by selecting products with lower carbon emissions. To this end, we provide 'Guidelines for Purchasing Eco-friendly Products' to our supply chain, placing priority on purchasing green-certified products.

**Guidelines for Purchasing Eco-friendly Products** Hanwha Solutions provides suppliers with the 'Guidelines for Purchasing Eco-friendly Products' when requesting quotations to promote carbon reductions across the supply chain. In accordance with the guidelines, suppliers are required to verify whether the relevant materials are covered by government-recognized environmental certifications and submit a list of eco-friendly materials, associated costs, and supporting certifications. The scope of eco-friendly products covers not only the eight categories of green product certifications recognized by the Korean government, but also other environmentally certified items, such as ready-mixed concrete, steel plates and sheets, geotextiles, and architectural coatings. In addition, we expanded our sustainable sourcing in 2025 by incorporating ISCC PLUS-certified materials into our packaging procurement.

**Green Purchasing Performance Tracking System** Hanwha Solutions operates a dedicated system for managing green purchasing and procurement items. Suppliers are required to input the value of eco-friendly materials when submitting quotations through our procurement portal based on which we compile and monitor monthly purchase figures. This enables us to track green purchases quantitatively, encourage the expansion of green procurement, and monitor improvements over time.

**Green Purchasing Initiatives and Management** Hanwha Solutions designates key green purchasing items by department and conducts ongoing reviews. The Procurement Team aggregates annual green purchasing records and promotes eco-friendly procurement through regional meetings and briefing sessions with suppliers. To further reduce carbon emissions across the supply chain, we plan to gradually expand eco-friendly product purchases and are considering granting extra points to suppliers who faithfully implement green purchasing practices when selecting outstanding suppliers. In line with its eco-friendly purchasing strategy, Hanwha Solutions' Chemical Division purchased 820 tons of recycled PE bags in 2025, amounting to KRW 2.2 billion in green purchasing.

#### Major Green Product Certifications

- Eco-label Certification
- Good Recycled (GR) Certification
- Green Certification
- Low Carbon Certification
- Renewable Energy Certificate (REC)
- Excellent Certification of Standby Power Reduction
- High-efficiency Energy Equipment Certification
- Energy Efficiency Grade 1 or Higher Certification

#### Products Managed by Responsible Departments

| Procurement Team | General Affairs Team | Technology Management Team |
|---|---|---|
| Raw and auxiliary materials and equipment | Office supplies, electronics, and rental items | IT consumables and electronic devices |

## Strategy

### Shared Growth Initiatives

Hanwha Solutions conducts various shared growth initiatives, including support for technology, training, and finance, to implement a sustainable supply chain based on shared growth partnerships with suppliers.

| Field | Initiative | Division | Details | 2025 Performance |
|---|---|---|---|---|
| Technical Support | Raw Material Composition Analyses Support | Chemical, Wire & Cable | • Operate a raw material composition analysis and comparison program to support suppliers and clients in saving costs | • Supported a total of 1,780 cases of composition analyses |
| Training Support | Supplier Online Training Support | Hanwha Solutions Company-wide | • Support supplier online training on ESG management and strategic topics | • Provided four training courses (ethical management, Serious Accidents Punishment Act, human rights management, etc.)<br>• Provided training programs worth approximately KRW 8 million to 1,050 employees from 350 suppliers |
| Financial Support | Win-Win Fund | Chemical, Qcells | • Create a KRW 44 billion Win-Win Fund with major banks to provide loans and interest rate reduction benefits to suppliers | • Supported a total of 30 suppliers with approximately KRW 31.4 billion in loans |
| | Win-Win Payment System | Hanwha Solutions Company-wide | • Adopt a Win-Win Payment system with financial institutions to support the financial management of suppliers<br>• Enable suppliers to secure cash quickly at low cost, leveraging Hanwha Solutions' outstanding credit rating | • Provided a total of KRW 113.1 billion through the Win-Win Payment System |
| | Early Payment Program | Hanwha Solutions Company-wide | • Make payments early, ahead of Lunar New Year's and Chuseok holidays to ease the financial burden of suppliers when funding needs increase | • Made early payment of approximately KRW 11.2 billion to a total of 376 suppliers before holidays |
| | Increasing rate of settling payments in cash | Hanwha Solutions Company-wide | • Increase rate of settling payments in cash to support supplier cash flow and business stability | • (Chemical) Made all payments to small- and medium-sized suppliers in cash<br>• (Qcells) Made 99.9% of settlements in cash with early payment terms (within 10 days) for suppliers with fair trade agreements<br>• (Insight) Made settlements in cash for all supplier partners |

### Supplier Development and Support

Open Sourcing Program Hanwha Solutions operates an open sourcing program that allows suppliers with proven capabilities in technology, quality, and cost competitiveness to proactively propose new business opportunities. The program targets companies with applicable expertise in raw and auxiliary materials, packaging, and construction and equipment for the solar and chemical businesses. Upon receiving a proposal, the Open Sourcing Office conducts an internal review and provides qualified suppliers with opportunities to begin new business partnerships.

Open Sourcing Program

Procurement Consultations Hanwha Solutions participates in procurement consultation events organized by public institutions, including the Korea Foundation for Cooperation of Large & Small Business under the Korea Commission for Corporate Partnership. Through these events, we expand collaboration opportunities with small-and medium-sized enterprises (SMEs). In 2025, we took part in 10 consultation sessions, supporting SMEs in marketing their technologies and promoting purchasing and cooperation opportunities.

### Fostering a Culture of Fair Trade

Hanwha Solutions adopts and implements the 'Four Key Fair Trade Practices' based on the subcontracting guidelines set forth by the Korea Fair Trade Commission to promote a culture of fair trade and lay the foundation for shared growth with suppliers. In 2025, we signed fair trade agreements with a total of 150 suppliers.

The Four Key Fair Trade Practices

## Strategy

### Strengthening Supplier Capabilities

ESG Consulting Support for Suppliers Hanwha Solutions' Qcells and Insight Divisions provided ESG consulting services worth KRW 21.5 million for 33 key suppliers based on their ESG assessment results. Focused on small- and medium-sized suppliers with relatively limited resources, the consulting is conducted in partnership with a specialized agency to strengthen suppliers' ESG management capabilities through awareness-raising training and tailored consulting. In addition, special points that can be used in the Shared Growth Mall were given to 13 suppliers whose assessment ratings improved compared with their self-assessment results or the previous year. The divisions also participated in a program hosted by the Korea Environmental Industry & Technology Institute (KEITI) supporting environmental information disclosure and offered consulting in this area to two suppliers in 2025.

Hanwha Solutions' Chemical Division conducted Safety and Health (SH) assessments and consulting for 125 suppliers based on the Serious Accidents Punishment Act. The division supported safety diagnoses and improvements across seven key areas, including management systems, hazards and risks, and safety investments. As a result, the share of companies that received an SA3 rating or higher has increased for three consecutive years[1]. In addition, since December 2025, the division has provided additional points in the post-evaluation process for future outsourced construction project bids to companies with excellent SH ratings (SA3 or higher), offering incentives during the selection of preferred bidders.

SH Assessment

**Calculation of CSM (Construction Safety Management) Rating**

| SA 1 | SA 2 | SA 3 | SA 4 | SA 5 | SA 6 | SA 7 |
|---|---|---|---|---|---|---|
| Top-level safety capabilities | High-level safety capabilities | Excellent safety capabilities | Good safety capabilities | Average safety capabilities | Below-average safety capabilities | Weak safety capabilities |

### Supplier Communication Channels

Supplier VOC Hanwha Solutions collects supplier VOC through both online and offline channels on an ongoing basis. Hanwha Solutions' Chemical Division and Qcells Division visited 19 key suppliers and had phone consultations with 23 suppliers, receiving and addressing various suggestions raised by management and key managers.

In addition, Hanwha Solutions' Chemical Division conducted in-person visits to a total of 10 suppliers in the second half of the year to obtain one-on-one feedback and introduce them to various support initiatives, including the Win-Win Fund, cash payments, and early payments prior to holidays. The division also holds an annual in-person meeting with its leading purchasing suppliers, and in 2025 it provided recognition and rewards, including coffee-truck events, to five outstanding suppliers.

Hanwha Solutions also operates an online dispute resolution channel for suppliers, accepting submissions on an ongoing basis. In 2025, we established the Dispute Resolution Council to promptly resolve disputes arising from transactions with suppliers and promote fair trade practices. We will continue to address supplier feedback through this channel and regularly incorporate supplier perspectives into improvement activities.

Inquiries and Submissions regarding Supplier Disputes

Regular Supplier Meetings Hanwha Solutions' Chemical Division holds regular monthly meetings with key suppliers to build trust and gather on-site feedback for developing practical improvement measures. At the meetings at the Ulsan and Yeosu Plants, various requests were gathered, such as facility improvements and external instructor-led training, and have all been fully addressed.

| | |
|---|---|
| Frequency | Monthly |
| Target Audience | Key suppliers of the Ulsan and Yeosu Plants |
| No. of Actions Taken | Suggestions received: 9 cases<br>Suggestions resolved: 9 cases |

1) Share of suppliers with SA3 Rating or higher in the SH Assessment: Continuously improving from 15% in 2023 and 25% in 2024 to 29% in 2025

## Risk Management

### Integration with the Enterprise Risk Management System

Hanwha Solutions integrates risks related to supply chain sustainability, including logistics and raw material sourcing, into its Enterprise Risk Management process for systematic management. Each division identifies risks through its respective working-level departments and assesses their severity using a company-wide assessment matrix, assigning risk levels through the initial evaluation. Response measures are then developed and implemented according to the assigned level and monitored for their effectiveness. The Enterprise Risk Management activities and improvement plans are reported to and approved by the Board of Directors annually.

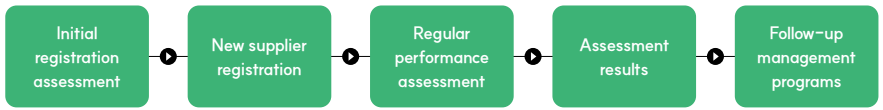
Enterprise Risk Management System

### Supply Chain Sustainability Risk Management

New Supplier Assessment and Registration Hanwha Solutions conducts comprehensive assessments of new suppliers at the time of registration in accordance with internal regulations, such as the 'Supplier Selection and Management Guidelines.' These assessments cover ESG criteria, including safety, the environment, quality, and legal compliance, as well as financial and operational capabilities, such as financial ratios and business stability. This process helps reduce ESG risks in the supply chain and ensures that suppliers are selected and registered based on their financial soundness. Each supplier is then assigned a grade based on the assessment results, and suppliers that do not meet the minimum threshold are limited from bidding and contracting to prevent potential ESG and financial risks.

Regular Assessment of Suppliers Hanwha Solutions conducts regular assessments of both existing and newly registered suppliers to ensure supply chain sustainability.These assessments focus on core ESG factors, including the environment, safety, on-time delivery, quality, legal compliance, and anti-corruption. Suppliers are assigned grades based on a weighted scoring system for each assessment item.
Hanwha Solutions plans to improve its system to automatically issue individual notices to suppliers that fall short of the minimum rating thresholds in the regular supplier assessment. Through such efforts, we aim to drive improvements in supplier performance and strengthen the foundation for sustainable partnerships.

Supplier Assessment and Management Process




Details of Regular Supplier Assessments by Division

| | |
|---|---|
| Chemical | Timing: Regular post-assessments upon completion of construction projects<br>Method:<br>• Written assessment, using a 30-point scale (environment·safety 50%, maintenance 40%, procurement 10%)<br>• Price score 70% + Post-assessment score 30%<br>Use of Results: Suppliers with high scores are given priority in future selection processes |
| Qcells | Timing: Annual regular assessment of existing suppliers<br>Method: Written assessments are conducted and followed by on-site inspections (visits), when the written assessment is insufficient for judgment<br>Use of Results: Grade A suppliers are designated as outstanding suppliers and are not subject to transaction-value limits while Grade D or below are disqualified |
| Insight | Timing: Annual regular assessment of suppliers<br>Method: Grades A-D are assigned based on delivery performance, quality, technical expertise, and past performance<br>Use of Results: Suppliers rated C or below are classified as candidates subject to transaction suspension and managed accordingly |

Monitoring Regular Supplier Assessments Hanwha Solutions' Chemical Division and Qcells Division rate suppliers through regular assessments and take follow-up measures based on the results to continuously manage and improve suppliers' ESG performance. Hanwha Solutions monitors suppliers that require improvements following these assessments, checking the development and implementation of improvement plans and supporting capability-building through ESG management consulting programs. We conduct ESG consulting in partnership with credit rating agencies, providing ESG awareness training through online orientation sessions, self-assessment checklists, data-based diagnostics, and tailored on-site consulting. These efforts aim to systematically address ESG risks and enhance suppliers' ESG management capabilities.
Hanwha Solutions' Chemical Division offers incentives to suppliers with high post-evaluation scores, giving them preferential consideration during future re-selection processes. Hanwha Solutions' Qcells Division offers incentives to suppliers with outstanding evaluation results through the Shared Growth Mall, sponsoring approximately KRW 5 million to 13 suppliers in 2025. Hanwha Solutions' Insight Division also supports suppliers in strengthening their capabilities through ESG management consulting programs.

# SUPPLIER SUSTAINABILITY MANAGEMENT

## Risk Management

### Supply Chain Sustainability Risk Management

Conflict Minerals Management Hanwha Solutions recognizes that the extraction and use of conflict minerals[1] can lead to various social issues, such as human rights violations, environmental destruction, and the funding of armed groups. Accordingly, we comply with the U.S. Conflict Minerals Law and other international regulations while closely managing risks associated with the use of conflict minerals. To prevent such risks, we operate a strict supply chain management policy.

Hanwha Solutions' Qcells Division's module products do not contain conflict minerals, and the division will continue to conduct supply chain due diligence and assessments to minimize related risks.

## Metrics and Targets

### Supply Chain ESG Management Goals

Hanwha Solutions establishes supply chain ESG management targets and manages annual performance to strengthen suppliers' ESG capabilities. Through ESG and SH consulting, we aim to reduce supply chain risks and continuously upgrade the ESG level of our suppliers. In addition, we will further enhance supplier ESG competitiveness by conducting practical support programs to strengthen supplier capabilities.

#### Supplier ESG Management Metrics and Targets

| Division | Activity | 2025 Performance | 2026 Target |
|---|---|---|---|
| Company-wide | Supplier visits for ESG support | 19 companies | 20 companies |
| Chemical Division | Supplier SH consulting | 125 companies | 140 companies |
| Chemical Division | Regular meetings with procurement suppliers | 1 session | 1 session |
| Company-wide | Supplier ESG consulting | 33 companies | 13 companies[2] |

1) Conflict Minerals: Minerals such as tin, tantalum, tungsten, and gold (3TTG) that are mined in conflict zones and may be used to finance armed groups
2) The target number of supported suppliers has been adjusted downward due to a significant increase in the funding amount allocated per supplier

# Transparent Governance

# Transparent Governance

E S G

## Board Composition

### Current Board Composition

Hanwha Solutions' Board of Directors consists of a total of seven members as of the end of March 2026: three executive directors and four independent directors. Independent directors make up 57% of the Board, constituting a majority. Executive director candidates are recommended through a nomination process by the Board of Directors, while candidates for independent directors are recommended by the Outside Director Nomination Committee, established in accordance with relevant laws, the Articles of Incorporation, and Board Regulations. Nominated candidates are appointed following approval at the General Meeting of Shareholders (GMS). Hanwha Solutions transparently discloses information on directors appointed at the General Meeting of Shareholders in accordance with the Commercial Act and the Articles of Incorporation.

Board Composition

Board Composition

(As of the AGM in March 2026)

| Category | Name | Position | Gender (Date of Birth) | Date of Appointment | Term |
|---|---|---|---|---|---|
| Executive Director | Dong Kwan Kim | CEO, Strategy Division | Male (Oct. 1983) | Mar. 24, 2026 (reappointed) | March 2029 AGM |
| | Jung Woon Nam | CEO, Chemical Division | Male (Jan. 1967) | Mar. 24, 2026 (reappointed) | March 2029 AGM |
| | Seung Deok Park | CEO, Qcells Division | Male (Aug. 1970) | Jul. 24, 2025 | March 2027 AGM |
| Independent Director | A Young Lee | Independent Director | Female (May 1973) | Mar. 24, 2026 (reappointed) | March 2029 AGM |
| | Jae Soo Chang | Chairman of the Board | Male (Jul. 1962) | Mar. 25, 2025 (reappointed) | March 2027 AGM |
| | Kwang Ho Song | Independent Director | Male (Jan. 1965) | Mar. 24, 2026 | March 2029 AGM |
| | Seong Ho Bae | Independent Director | Male (Aug. 1978) | Mar. 24, 2026 | March 2029 AGM |

### Board Committees

Hanwha Solutions operates five Board committees, all composed of independent directors, to ensure professionalism and fairness in decision-making. These committees are the Audit Committee, the Outside Director Nomination Committee, the Internal Transactions Committee, the ESG Committee, and the Compensation Committee.

| Committee | Composition | Chair | Members | Key Activities | Operational Policy |
|---|---|---|---|---|---|
| Audit Committee | 3 Independent Directors | A Young Lee | A Young Lee<br>Jae Soo Chang<br>Seong Ho Bae | • Oversees the company's accounting and operations and presents an independent view on management | Audit Committee Regulations |
| Outside Director Nomination Committee | 4 Independent Directors | Kwang Ho Song | Kwang Ho Song<br>Jae Soo Chang<br>A Young Lee<br>Seong Ho Bae | • Established to nominate independent director candidates<br>• Nominates independent directors to the General Meeting of Shareholders | Outside Director Nomination Committee Regulations |
| Internal Transactions Committee | 4 Independent Directors | Kwang Ho Song | Kwang Ho Song<br>Jae Soo Chang<br>A Young Lee<br>Seong Ho Bae | • Conducts preliminary review and approves internal transactions in accordance with the Monopoly Regulation and Fair Trade Act (MRFTA) | Internal Transactions Committee Regulations |
| ESG Committee | 4 Independent Directors | Seong Ho Bae | Seong Ho Bae<br>Jae Soo Chang<br>A Young Lee<br>Kwang Ho Song | • Reviews and approves key ESG policies and issues<br>• Develops the company's mid- to long-term ESG policies<br>• Reviews ESG policy activities and implementation plans<br>• Establishes and revises company ESG policies<br>• Conducts routine/ad hoc assessments of ESG initiatives | ESG Committee Regulations |
| Compensation Committee | 4 Independent Directors | Seong Ho Bae | Seong Ho Bae<br>Jae Soo Chang<br>A Young Lee<br>Kwang Ho Song | • Reviews remuneration ceiling for registered directors<br>• Enhances fairness and transparency in director remuneration | Compensation Committee Regulations |

Audit Committee Hanwha Solutions operates an independent Audit Committee composed entirely of independent directors to enhance transparency in accounting and management, as well as secure a sound internal control system. In accordance with the Articles of Incorporation and the Board Regulations, the committee supports the Board's oversight function and is responsible for safeguarding audit independence, preventing legal and ethical violations, and evaluating and providing recommendations for improvement to internal control over financial reporting. In addition, independent directors with financial expertise are appointed to the Audit Committee to strengthen the professionalism of its activities.

Hanwha Solutions also operates a Business Audit Team to conduct independent audits. Through routine and ad hoc management audits, the team reviews and improves the adequacy of business processes, strengthens risk management frameworks and internal controls, and conducts ethical management audits. It also contributes to preventing compliance and ethical risks by monitoring misconduct. In addition, the Audit Committee established a new Audit Support Team to assist the committee in its operations, reviews agenda items for deliberation and reporting, and provide additional support upon request. In particular, the Audit Committee has the right to consent to the appointment and dismissal of the team members, including the head of the team, thereby enhancing the independence of the internal audit organization.

## Board Operations

### Board Convocation and Proceedings

Hanwha Solutions holds regular board meetings on a quarterly basis to ensure transparency in corporate management and prompt decision-making, and holds additional meetings as needed. In accordance with the Articles of Incorporation, board meetings are required to be called at least seven days in advance, allowing board members sufficient time to thoroughly review the agenda and proposals. All key matters and resolutions are disclosed on our website, ensuring transparency and easy access for shareholders and other stakeholders.

Hanwha Solutions Articles of Incorporation

| | |
|---|---|
| Number of Board Meetings Held in 2025 | 17 |
| 2025 Board Meeting Attendance Rate | 98.7% |

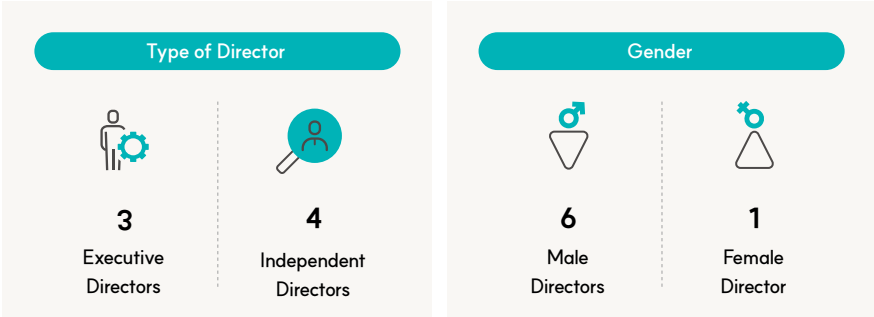
### Board Independence

Hanwha Solutions restricts directors with conflicts of interest from voting on relevant agenda items during board deliberations. This ensures the independence and fairness of board decisions. It also strengthens the system to support objective and balanced outcomes that are not influenced by individual directors. Hanwha Solutions reinforces the Board's independence by carefully reviewing the qualifications of independent directors through the Outside Director Nomination Committee. Information related to director appointments is disclosed transparently prior to the General Meeting of Shareholders (GMS) to allow shareholders to review and evaluate the candidate's qualifications in advance. In 2025, we established a policy to prevent the appointment of executives responsible for undermining corporate value or violating shareholder interests by revising our Corporate Governance Charter. Hanwha Solutions' Articles of Incorporation stipulate that a majority of the Board of Directors shall consist of independent directors to ensure board decisions are made independently of management. In 2024, the roles of the CEO and Chairman of the Board were separated, appointing an independent director as chair. Independent director Jae Soo Chang was appointed Chairman of the Board of Directors at the board meeting held on March 24, 2026.

Independent Director Appointment Process


### Board Diversity

Hanwha Solutions appoints directors regardless of their gender, regional background, or religion, to ensure board diversity. As of the end of March 2026, the Board includes a female director, operating as a fair governance body that makes independent decisions based on a wide range of perspectives. All directors are of Korean nationality.



## Board Operations

### Board Expertise

The Board selects the final candidates based on a comprehensive review of their experience and expertise. Hanwha Solutions publicly discloses the key experiences and areas of expertise of its directors appointed through the General Meeting of Shareholders. The board consists of seven experts from diverse fields, including business management, finance, research & development, and industry, strengthening the board's expertise in decision-making. Hanwha Solutions offers various programs, including training, to support independent directors in effectively fulfilling their roles and responsibilities. In addition, external experts may also be engaged when needed to support their work, in accordance with the Board Regulations. We also provided training for independent directors regarding their duty of loyalty. The Audit Committee is composed exclusively of independent directors, including at least two financial experts who provide expertise in corporate accounting and internal control oversight.

#### Board Skill Matrix

| | Category | Dong Kwan Kim | Jung Woon Nam | Seung Deok Park | A Young Lee[1] | Jae Soo Chang[2] | Kwang Ho Song | Seong Ho Bae[3] |
|---|---|---|---|---|---|---|---|---|
| Expertise | Leadership | ● | ● | ● | ● | ● | ● | ● |
| | CEO experience | ● | ● | ● | | ● | | |
| | Global | ● | | ● | | ● | ● | |
| | Business/Accounting | ● | ● | ● | ● | ● | | ● |
| | Policy/Administration | | | | ● | | | ● |
| | Research/ Development | | | ● | ● | ● | ● | |
| Diversity | Year of First Appointment | 2020 | 2024 | 2026 | 2024 | 2023 | 2026 | 2026 |
| | Independence | | | | ● | ● | ● | ● |
| | Date of Birth | Oct. 1983 | Jan. 1967 | Aug. 1970 | May. 1973 | Jul. 1962 | Jan. 1965 | Aug. 1978 |
| | Nationality | Korea | Korea | Korea | Korea | Korea | Korea | Korea |
| | Gender | Male | Male | Male | Female | Male | Male | Male |

#### Independent Director Training in 2025[4]

| Date | Organizer | Attending Independent Directors | Training Details |
|---|---|---|---|
| Feb. 19, 2025 | KPMG Samjong | Jee Hyeong Park, Jeong Ho Seo, Jae Soo Chang, A Young Lee | Global ESG and disclosure trends |
| Nov. 14, 2025 | Hanwha Solutions Compliance | Jee Hyeong Park, Jeong Ho Seo, Jae Soo Chang, A Young Lee, Satoshi Shima | Key amendments to the Commercial Act and response measures |

1) A Young Lee, independent director and Chair of the Audit Committee, holds a PhD in accounting and is a financial expert in the field of accounting and auditing. Previous positions include Chair of the Audit Committee of the Korean Accounting Association
2) Jae Soo Chang, independent director and Chairman of the Board of Directors, is a technology and industry specialist who has held various executive positions in technology investment and commercialization at major Korean companies
3) Seong Ho Bae, independent director, holds a PhD in business administration and is a Certified Public Accountant (CPA), bringing extensive expertise in accounting and auditing through his experience at an accounting firm and as an advisory member for accounting oversight at the Board of Audit and Inspection
4) As of the end of December 2025, all independent directors had completed the training.

### CEO Candidate Pool Management

Hanwha Solutions established CEO Succession Regulations to maintain management stability and continuity while systematically managing a CEO candidate pool to minimize uncertainties, such as potential leadership gaps. Candidates are selected from both internal and external talent pools based on a comprehensive evaluation of various factors, including expertise, leadership, organizational management skills, strategic thinking, and the desired mindset. For selected candidates, tailored development plans are developed and implemented based on their individual strengths and development needs. In particular, job rotations provide diverse business experiences to practically assess performance capabilities. We also actively support both internal and external training programs to foster self-directed skill enhancement.
Candidate training is mainly provided by the Hanwha HRD Center, Hanwha Group's dedicated training organization. The program includes essential courses on leadership, organizational management, and ethics. Regular 360-degree assessments are carried out to evaluate leadership competencies and provide feedback on the results. In addition, to enhance global management capabilities and professional expertise, we offer top-tier domestic and international MBA and Advanced Management Programs, along with global business school training, supporting the development of the competencies and global networks required of future CEOs.

| | |
|---|---|
| CEO qualifications | • Industry expertise<br>• Leadership and organizational management skills<br>• Sound and ethical mindset |
| Candidate selection and management | • Select and manage short- and long-term successors for all executive positions through the annual SLP (Solutions Leadership Pipeline) session<br>• For CEO candidates, outstanding talent verified through the SLP session are categorized into C-1 to C-3 levels to manage a sound leadership pipeline |
| Evaluation | • Candidate Pool In/Out is determined through annual individual assessments of the selected CEO candidates |
| Training programs | • Differentiated training programs are offered according to the individual growth tracks of selected CEO candidates (C-2 and C-3 levels), strengthening the leadership pipeline<br>• Actual leadership roles and challenging business tasks are assigned to continuously assess and strengthen readiness for C-level roles |
| Nomination and succession | • Following a thorough evaluation of the CEO candidate pool, the most suitable candidate is selected and recommended to the Board of Directors<br>• The Board of Directors conducts a final review of the candidate's managerial competence and qualifications, and confirms executive director candidates<br>• The confirmed candidate is then appointed as CEO through a resolution at the General Meeting of Shareholders and subsequent board meeting |

## Board Operations

### Board Evaluation and Compensation

Board Evaluation Members of the ESG Committee conduct an annual evaluation of the Board of Directors' roles and operations using an objective questionnaire. The results are summarized by the Corporate Planning Team and reported to the Board of Directors.

Evaluation criteria include the Board's performance of its roles and responsibilities (e.g., fair and diligent performance of duty), board structure (composition, independence, leadership, etc.), board operations (procedures, agenda review, engagement of independent directors, and Board committee activities), and evaluation and improvement activities (whether an evaluation process and improvement measures are in place).

In 2025, the Board received an "Excellent" rating, with an average score of 4.53 out of 5. Based on the findings, improvement plans were developed, and both the results and action plans were reported to the Board.

#### Evaluation Process

| ESG Committee Evaluation | Evaluation by Category | Evaluation Results | Use of Results |
|---|---|---|---|
| • Evaluation conducted annually | • Evaluation based on four key components | • 'Excellent' rating across all evaluation items | • Development of improvement plans for areas requiring enhancement<br>• Reporting results and improvement plans to the Board of Directors |

#### 2025 Board Evaluation Result

| Evaluation Criteria | Results | |
|---|---|---|
| Roles and Responsibilities | 4.46/5 | Overall Rating 4.53/5 (29 items) |
| Structure | 4.64/5 | |
| Operations | 4.60/5 | |
| Evaluation and Improvement | 4.00/5 | |

Director Evaluation and Compensation Hanwha Solutions operates a systematic evaluation and compensation framework for directors to promote accountability and sustainable governance. Individual evaluations are conducted regularly. The CEO, as an executive director, undergoes periodic evaluations while independent directors are comprehensively evaluated at the end of their terms based on the appropriateness and expertise of their advisory support for key decisions, as well as their level of engagement. Evaluation results are reported to the Board and reflected in reappointment decisions, reinforcing director accountability.

The compensation limit for directors is objectively reviewed and managed by the Board's Compensation Committee and finalized upon approval at the General Meeting of Shareholders. The CEOs of Hanwha Solutions' Chemical, Qcells, and Insight Divisions are evaluated not only on their financial performance, but also on their non-financial KPIs, assessing the achievement of strategic goals such as progress of implementing each ESG initiative. For unregistered executives, non-financial KPIs are also linked to their compensation based on their specific job and roles. Further details can be found under the 'Compensation Tied to Management Performance' section within each ESG Material Issue.

Through this approach, we strengthen fairness in our compensation system and reinforce a responsible decision-making structure to uphold sound governance. As of 2025, the approved compensation limit for directors was KRW 9 billion with actual payments totaling KRW 3.82 billion. In accordance with applicable regulations, individual compensation details for directors and auditors receiving KRW 500 million or more are disclosed to enhance transparency. In addition, under a system revision in 2024, a portion of base compensation for executives may be granted in the form of RSUs (Restricted Stock Units), which are designed to be held for up to 10 years. This structure aims to encourage executives to make decisions with a long-term outlook and practice responsible management. Hanwha Solutions discloses RSU grants and payments each year through its Annual Report.

RSU Grants and Payments

#### 2025 Director Compensation Details

(Unit: KRW million)

| Category | Total Remuneration | Average per capita compensation | Number of recipients |
|---|---|---|---|
| Registered Directors (excluding independent directors and Audit Committee members) | 3,409 | 852 | 4 |
| Independent Directors (excluding Audit Committee members) | 164 | 82 | 2 |
| Audit Committee Members | 252 | 84 | 3 |
| Total | 3,824 | 425 | 9 |

## Shareholder-friendly Management

### Transparent Disclosure of Management Information

Hanwha Solutions adheres to a principle of fair and prompt information disclosure to enable investors and shareholders to make timely decisions. Accordingly, information regarding our business management is made available through our website and the electronic disclosure system of the Financial Supervisory Service.

Share Issuance and Voting Rights As of March 24, 2026, Hanwha Solutions is authorized to issue[1] up to 500,000,000 shares following the amendment to the Articles of Incorporation. As of December 31, 2025, the total number of shares issued was 174,467,885, consisting of 171,892,536 common shares and 2,575,349 preferred shares. Hanwha Solutions ensures equal rights for all shareholders to participate in collective decision-making.

#### 2025 Voting Rights Status

(As of December 31, 2025)

| Category | | Number of Shares |
|---|---|---|
| Total no. of shares issued | Common | 171,892,536 |
| | Preferred | 2,575,349 |
| Number of shares with no voting rights | Common | 2,804,619 |
| | Preferred | 2,575,349 |
| Number of shares with voting rights | Common | 169,087,917 |
| | Preferred | - |

■ Shares with no voting rights ■ Shares with voting rights


1) In accordance with the amendment to the Articles of Incorporation on March 24, 2026, we have changed the total number of authorized shares to be issued to 500,000,000 shares

### Initiatives to Protect Shareholder Rights

Shareholder Return Policy Hanwha Solutions operated a mid- to long-term shareholder return policy for fiscal years 2023 through 2025 that allocated 20% of free cash flow[2] to shareholder returns and established a minimum dividend of KRW 300 per common share. However, we decided not to pay a year-end dividend for the fiscal year 2025 considering changes in the business environment. In March 2026, we made a Fair Disclosure[3] regarding a new shareholder return policy that will be applied to fiscal years 2026 through 2030. This policy will allocate 10% of consolidated net income to shareholder returns through methods, such as dividends or share buybacks and cancellations, while maintaining the minimum dividend of KRW 300 per common share. At the 2025 Annual General Meeting of Shareholders, the Articles of Incorporation were revised to allow the dividend record date to be set after the dividend determination date to enhance dividend predictability for shareholders. Hanwha Solutions will continue to implement a stable and transparent shareholder return policy from a long-term perspective, comprehensively taking into account its business performance, financial conditions, and investment plans.

Shareholder Return Policy (Public Disclosure)

2) Consolidated operating profit (excluding one-off gains) - net interest expenses - income tax expenses + depreciation & amortization - changes in working capital - CAPEX & acquisition of investment assets
3) For details on the shareholder return policy, please refer to the March 26, 2026 public disclosure titled 'FY2026-FY2030 Shareholder Return Policy Guide'

Shareholder Rights Protection and Communication Activities Hanwha Solutions protects minority shareholders by ensuring their appraisal rights in the event of material corporate changes. We have also adopted electronic voting systems to facilitate more convenient participation in exercising voting rights at the General Meeting of Shareholders. In addition, the electronic proxy voting system expands shareholders' ability to exercise voting rights, while General Meetings of Shareholders are scheduled to avoid peak seasons to encourage actual participation from shareholders. We also operate a shareholder proposal system to promote greater shareholder engagement in business operations. Shareholders holding 0.5% or more of the total number of issued shares are granted the right to propose agenda items or resolutions for the general meeting, which helps foster a shareholder-friendly governance environment.

To strengthen ongoing communication with shareholders, we actively engage in various activities, such as domestic and overseas non-deal roadshows (NDRs), investor relations (IR) presentations, and one-on-one meetings. In 2025, we held four quarterly earnings presentations, six NDRs, ten investor conference and corporate day events, and approximately 185 one-on-one and group meetings. Hanwha Solutions also publishes sustainability reports and corporate governance reports regularly, ensuring transparent communication of its business activities, as well as ESG performance and strategies.

#### Major IR Activities in 2025

| Category | Details | Performance |
|---|---|---|
| Investor Presentations | • Quarterly earnings presentations (conference calls and audio webcasts) and earnings releases in Korean/English<br>• Briefings on key disclosures | Total 4 |
| Non-Deal Roadshows (NDRs) | • Domestic: Regular follow-up NDRs following investor presentations<br>• Overseas: Investor presentation regular NDRs and ad hoc overseas NDRs | Total 6 (5 domestic, 1 overseas) |
| Conferences/Corporate Day | • Meetings with investors through participation in domestic and international conferences and Corporate Day events hosted by securities firms | Total 10 (8 domestic, 2 overseas) |
| 1:1 and Group Investor Visits | • On-demand investor meetings and conference calls | Total 185 meetings |

# ESG PERFORMANCE

Hanwha Solutions identifies ESG issues requiring continuous monitoring across its entire business and manages them systematically through an integrated framework. The 'ESG PERFORMANCE' section highlights our management status, focusing on key ESG initiatives and achievements.

# ENVIRONMENTAL IMPACT MANAGEMENT AND REDUCTION

E S G

## Environmental Management Framework

### Environmental Management Governance

Board of Directors and ESG Committee

Hanwha Solutions' Board of Directors approves the annual safety, health, and environment (SHE) performance and plans, including key environmental performance indicators and initiatives related to Greenhouse Gas (GHG) emissions, air quality, water resources (water use and wastewater), and waste management. On February 20, 2025, the Board approved the SHE Plan for 2025. In addition, the ESG Committee under the Board of Directors is responsible for reviewing and deliberating on environmental impact reduction targets and detailed action plans, including those related to waste and water resources (water use and wastewater). The ESG Committee's authorities and responsibilities are defined in the ESG Committee Regulations.

Role of Management and Considerations in Executive Remuneration

The CEO of Hanwha Solutions' Chemical Division holds overall responsibility for the company's environmental management. At Hanwha Solutions' Qcells Division, the Head of EHS Department (CSO) and site heads receive monthly reports on environmental targets and performance, which they monitor and manage accordingly.

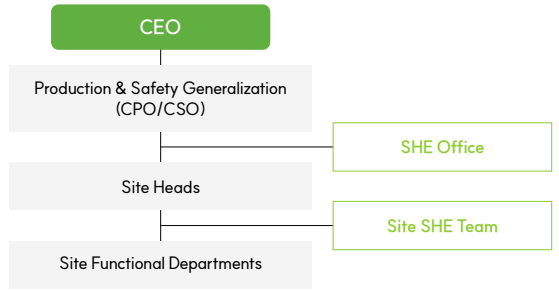
Hanwha Solutions incorporates environmental management performance into its compensation system to ensure management fulfills their responsibilities. The Chemical Division reflects achievement rates against targets for air pollutants, water consumption, and waste disposal, as well as environmental regulatory violations and inspection improvement rates, in the KPIs of the Head of the Safety, Health and Environment Office, executives of the Production Department, and site heads. The Qcells Division reflects environmental safety inspection improvement performance in the KPIs of the Head of EHS Department (CSO), site heads, and the Head of Plant EHS Department.

Environmental Management Implementation Organization

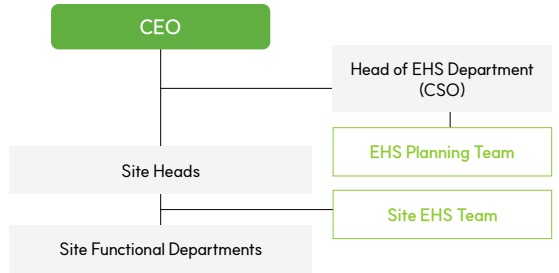
Hanwha Solutions' Chemical Division operates environmental management centered around the Safety, Health & Environmental Office, directly under the Production & Safety Generalization (CPO/CSO). The office is responsible for planning and managing company-wide environmental initiatives, conducting environmental assessments of domestic and overseas sites, monitoring and responding to regulatory changes, and establishing and revising related policies.

In addition, the Environment Team and responsible departments at each business site carry out site-level environmental management activities. At Hanwha Solutions' Qcells Division, environmental management activities are led by the Head of EHS Department (CSO), who oversees the development of environmental policies and regulations, inspections of environmental facilities, diagnoses and assessments, and improvements in environmental performance. Each site also operates an EHS department and designates dedicated EHS personnel in each relevant department to build a cooperative system for managing environmental impact.

Chemical Division's Environmental Management Organization




Qcells Division's Environmental Management Organization



## Environmental Management Strategy

### Environmental Impact Risk Management

Hanwha Solutions identifies risks related to environmental impact and assigns risk levels in accordance with Enterprise Risk Management process. Response plans are developed and implemented to manage the identified risks.

Enterprise Risk Management Framework

| Category | Division | Risks | Risk Level[1] | Response Measures Taken in 2025 |
|---|---|---|---|---|
| Common | Chemical | Risk of environmental accidents (serious incidents such as long-term shutdowns and operational suspensions, etc.) | Medium | • Reduced pollutants and conducted real-time monitoring<br>• Renewed process for responding to environmental incidents<br>• Reinforced safety management of chemical substances |
| | | Legal risks due to non-compliance (fines/penalties of KRW 100 million or more) | Medium | • Monitored and responded to laws and regulations<br>• Tightened pre-approval and internal review processes<br>• Utilized dedicated organizations and external consulting |
| | | Risk of product manufacturing, export, and raw material import disruptions due to inadequate product environmental hazard assessments | Medium | • Responded to substance registration regulations of import/exporting countries<br>• Secured alternative substances to address restriction on hazardous substances |
| | | Compliance and implementation risks related to Integrated Environmental Permit conditions | Medium | • Completed installation of an odor reduction facility |
| | | Demands for facility improvements to meet stricter emission standards and legal compliance requirements | Medium | • Prepared a facility inspection checklist<br>• Completed and reviewed process operation logs by each shift |
| | Qcells | Risk of non-compliance with environmental regulations or internal policy standards by the Pangyo R&D Center | Medium | • Conducted improvement work for managing total nitrogen concentration at Pangyo R&D Center's wastewater treatment center (March 2025)<br>• Established and revised Standard Operating Procedures for all Pangyo R&D Center facilities |
| | | Administrative risks due to non-implementation of required improvements to Integrated Environmental Permit conditions | Minor | • Invested in environmental facility improvements, including 3 additional TMS units and plasma scrubber dilution exhaust separations |
| Air Pollutants | Chemical | Responding to insufficient NOx emission allowances in the 2nd Phase (2025-2029) of the air pollutant cap-and-trade system | Minor | • Applied stricter monitoring of NOx concentrations<br>• Secured optimal allowances through appeals |
| Hazardous Chemicals | Chemical | Response to new hazardous chemical designations | Medium | • Reviewed and implemented facility improvements<br>• Related testing and license/permits<br>• Monitored hazardous chemical substance handling standards for new substances |
| | | Unplanned shutdowns and safety incidents caused by hazardous chemical leaks from damaged pipes in critical processes | Medium | • Conducted ongoing pipe inspections and management<br>• Reviewed and implemented emergency drill scenarios |
| | Qcells | Administrative risks in case of non-compliance of the Chemical Substances Control Act | Minor | • Conducted self-audits and change management for the Chemical Accident Prevention and Management Plan<br>• Implemented daily environmental and safety patrol activities<br>• Preserved management records for hazardous chemical handling facilities |
| | | Chemical exposures and leaks | Medium | • Prepared a pre-loading checklist for chemical charging<br>• Assigned a manager from the relevant department on-site and monitored ACQC (Automatic Clean Quick Coupler) during chemical charging<br>• Implemented routine site inspections by shift workers |
| Water Resources/ Water Pollutants | Chemical | Stricter regular inspections under the Integrated Environmental Management Act | Medium | • Conducted self-inspections by the Environment Team (2 sessions/team)<br>• Strengthened monitoring of outlets (continued) |

1) Risk Level: Risks are graded into the five levels of Critical, Major, Medium, Minor, and Insignificant based on likelihood and impact severity

## Environmental Management Strategy

### Environmental Strategy

Hanwha Solutions' Chemical Division has established three strategic directions for managing environmental management risks, along with specific strategies and goals to reduce environmental impacts. In addition, the division conducts enhanced compliance activities to manage risks related to environmental laws and regulations.

#### Hanwha Solutions' Chemical Division's Environmental Management Strategy

**Vision**

**Nature-Positive Worksites that Coexist with Nature**

**Mission**

**Becoming a global leader in environmental management through eco-friendly practices that protect the planet**

**Strategic Initiatives**

| Establishing an eco-friendly management system | Minimizing environmental impact | Strengthening environmental compliance |
|---|---|---|
| **Encouraging field engagement**<br>• Develop mid- to long-term environmental management strategy<br>• Expand environmental management across the entire value chain<br>• Build a response system for the circular economy<br>• Develop a management framework based on environmental life cycle assessment (LCA) | **Reducing pollutant emissions and improving resource efficiency**<br>• Reduce GHG and air pollutant emissions<br>• Lower water consumption<br>• Reduce waste disposal volume | **Broadening the scope of chemical risk assessments – Domestic and international chemical registration**<br>• (Korea) Register under the Act on the Registration and Evaluation of Chemical Substances and the Consumer Chemical Products and Biocides Safety Control Act<br>• (Overseas) Country-specific chemical registration and DEHCH FCM certification |
| **Securing eco-friendly initiatives and certifications**<br>• Taskforce on Nature-related Financial Disclosures (TNFD), Zero Waste to Landfill (ZWTL), ISO 50001 for energy management systems, etc | **Laying the foundation for promoting biodiversity**<br>• Establish an assessment system for impacts on nature, including biodiversity<br>• Develop and implement conservation measures | **Building a digital-based autonomous environmental management system**<br>• Establish a follow-up management system for Integrated Environmental Permits<br>• Develop and implement voluntary environmental initiatives at the team level<br>• Build an AI/ML-based environmental management system |

**Target**

**Improve ESG rating (KCGS-Environmental category)**

• From A in 2025 to S in 2030

**Improvement of environmental indicators at business sites[1)]**

2030 target vs. 2025 performance

| GHG Intensity (MT/MT) | Air Pollutants Intensity (kg/MT) | Water Consumption Intensity (MT/MT) | Waste Disposal Volume Intensity (kg/MT) |
|---|---|---|---|
| ▼11.4% | ▼28.6% | ▼20.4% | ▲0.6% |

**Chemical substance risk assessment rate (registration/hazard assessment)[2)]**

| 2027 | 2030 |
|---|---|
| 64% | 100% |

1) Based on aggregate data for the Chemical Division

2) Substances subject to registration under the Act on the Registration and Evaluation of Chemical Substances: 171 substances (as of March 2025)

Hanwha Solutions' Qcells Division implements key initiatives, such as identifying potential environmental management risks, managing pollutant emissions and environmental incident risks, and strengthening line accountability in accordance with its EHS (Environment, Health and Safety) mid- to long-term targets and strategies.

#### Hanwha Solutions' Qcells Division's Environmental Management Strategy

**Vision**

**A Zero-Accident, Zero-Injury Workplace based on EHS Principles and Fundamentals**

**Strategic Initiatives**

**Fostering an EHS-first culture**

• Strengthen self-regulated safety management at the department level
• Assess EHS job skills
• Obtain recognition as an outstanding workplace for health promotion

**Achieving environmental and energy optimization**

• Embed the Act on the Integrated Control of Pollutant-discharging Facilities into the organization
• Minimize pollutant emissions
• Respond to energy and climate change issues
• Manage risks focusing on environmental accident prevention

**EHS Risk Management**

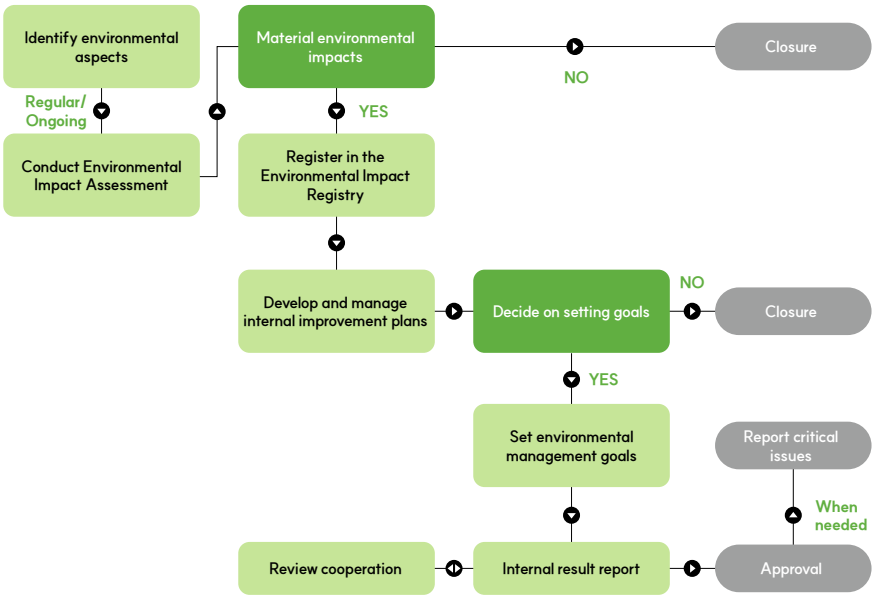
• Improve substandard EHS facilities (environmental facilities, lifts, and PSV improvements)
• Review impact of capacity expansions in advance (forecasting regulatory EHS impacts, etc.)
• Advance EHS systems and CMS management

## Environmental Management Strategy

### Environmental Impact Assessment

Hanwha Solutions has established internal Environmental Impact Assessment (EIA) guidelines based on factors such as regulatory applicability, frequency of occurrence, degree of environmental pollution, and environmental assessment criteria for products. Based on these guidelines, Hanwha Solutions conducts regular EIAs every four years, taking into account the activities of each process and business area. Each team aggregates the results of environmental aspects and the EIA scoring table to determine a final environmental impact grade. This grade is used to identify significant environmental impacts, register them in the internal environmental impact registry, and develop appropriate improvement plans. The head of the Safety, Health & Environment (SHE) team reviews the validity of the goals and detailed targets and provides management support accordingly. In addition, based on the EIA, Hanwha Solutions identifies the risk of environmental incidents as a key risk and establish response strategies. Hanwha Solutions also applies the Locate, Evaluate, Assess, and Prepare (LEAP) approach proposed by the Taskforce on Nature-related Financial Disclosures (TNFD) to identify biodiversity-related risks and opportunities across four directly operated sites worldwide.

#### Environmental Impact Assessment Process




#### Examples of the Environmental Impact Assessment Result

| Department | Process and Area | Environmental Aspect | Environmental Impact | Environmental Impact Level | Follow-up Action |
|---|---|---|---|---|---|
| PVC Production Team | PVC Process | Polymerization Process | Water/Soil/Natural Resources/Noise | L | Maintain current level |
| | | Stripping Process | Water/Waste/Natural Resources | L | Maintain current level |
| OA Production Team | OA Process | Oxo Process | Waste/Soil/Energy/Odor/Noise | L | Maintain current level |
| | HYCO#2 Process | Syngas process | Waste/Soil/Natural Resources/ Energy/Odor/Noise | L | Maintain current level |
| ECH Production Team | ALC Process | ALC reaction process | Air/Waste/Energy/Odor/ Noise | L | Maintain current level |
| | | ALC refining process | Waste/Energy/Odor/ Noise | L | Maintain current level |

### Environmental Training

Hanwha Solutions provides environmental management training for its employees to raise employee awareness and help them respond proactively to changes in environmental laws and policies.

#### Major Environmental Training Sessions Conducted by the Chemical Division

| Training Date | Course | Target Audience | Format | No. of participants |
|---|---|---|---|---|
| Feb 2025 | 1H environmental issues and violations | Environmental staff | In-person/real-time video training | 20 |
| Aug 2025 | 2H environmental issues and violations | Environmental staff | In-person/real-time video training | 20 |
| Oct 2025 | Revisions to the Chemical Substances Control Act | Environmental staff | In-person/real-time video training | 20 |
| Dec 2025 | 2026 environmental issues and violations | Environmental staff | In-person/real-time video training | 20 |

#### Major Environmental Training Sessions Conducted by the Qcells Division

| Training Date | Course | Target Audience | Format | No. of participants |
|---|---|---|---|---|
| Jan ~ Dec, 2025 | Training for those working in hazardous chemical sectors | Employees and on-site contractors | Online | 1,098 |
| May ~ Aug, 2025 | Training for hazardous chemical handlers | Handlers | In-house group training | 325 |
| Mar ~ Dec, 2025 | Training for hazardous chemical managers | Managers | External group training | 31 |
| Mar ~ Jun, 2025 | Training on the internal chemical management system | Relevant departments | Materials circulated | 10 |
| Mar ~ Jun, 2025 | Training on chemical import statements | Relevant departments | Materials circulated | 10 |

## Environmental Management Strategy

### Response to Environmental Management Regulations

Hanwha Solutions monitors the continuously evolving domestic and international legislative landscape regarding environmental management and conducts company-wide environmental inspections to proactively respond to legal requirements and mitigate related risks.

| Environmental Regulations | Hanwha Solutions' Response and Achievements |
|---|---|
| 4th Basic Plan for the Emissions Trading Scheme (ETS) (finalized by the State Council on Dec. 31, 2024) | Hanwha Solutions conducts a range of activities to comply with statutory plans that support the 2030 Nationally Determined Contributions (NDC) and the 2050 Net Zero goals. These activities include enhancing energy efficiency, expanding the use of renewable energy such as solar power, promoting internal reduction projects through process-level carbon mitigation, and optimizing emissions trading strategies. This approach aligns with the targets and policy directions set forth in the 4th Basic Plan for the ETS (2026-2035). |
| 3rd (2024~2028) Basic Plan for Chemical Substance Registration and Evaluation (pre-announcement on Jul. 11, 2024) | Following the reclassification of existing toxic substances into categories of acute human health hazards, chronic human health hazards, and environmental hazards, we plan to classify hazardous chemical handling facilities based on substance types and establish more detailed management standards. In addition, when handling new chemical substances with unverified hazards, we will disclose and manage such substances to minimize potential risks. To address the expansion of restricted, prohibited, or authorized substance designations, we also plan to establish and execute proactive response plans in the regulatory pre-announcement stage. |
| Act on Promotion of Transition to Circular Economy and Society (enacted in 2024) | Hanwha Solutions is preparing for the transition toward a sustainable circular economy through resource efficiency across the entire product lifecycle, from production and consumption to distribution, going beyond focusing on waste minimization, recycling, and disposal. To this end, we are actively implementing initiatives such as reducing source waste and metallic waste generated during production, minimizing natural resource use, promoting the use of recycled materials, and converting existing landfilled waste back into recyclable resources. |
| 3rd Comprehensive Plan to Improve Atmospheric Environment (introduced on Dec. 27, 2022) | Hanwha Solutions has been participating in a joint petrochemical industry initiative since 2025 to effectively respond to the Ministry of Climate, Energy and Environment's tightened air emission standards and cap-and-trade allocations. In line with the Ministry's comprehensive plan, we plan to commission research projects to develop emission reduction roadmaps and optimal operational methodologies tailored to each high-emission facility. Through these efforts, we plan to continue to proactively respond to stricter air regulations and minimize related risks. |
| Integrated Environmental Management System (enacted in 2017) | Hanwha Solutions implements an integrated environmental management system to measure and manage environmental impacts of its business sites. We also operate an internal management framework by installing additional mitigation facilities and enhancing monitoring systems for post-management of environmental facilities.<br>\| Acquisition of Integrated Environmental Permits \| |

| Chemical Division | | Qcells Division |
|---|---|---|
| Yeosu Plant 3, Ulsan Plant 2 (obtained in 2021) | Yeosu Plants 1, 2, Ulsan Plants 1, 3, TDI Site (obtained in 2022) | Jincheon Plant (obtained in 2024) |

### Environmental Management Investments

Hanwha Solutions invests in activities across its business divisions to reduce air pollutant emissions, minimize the impact of hazardous chemicals, and strengthen water resource management to prevent and mitigate environmental management risks.

#### Environmental Facility Investments and Plans

| | | 2025 Performance | 2026 Plan |
|---|---|---|---|
| Investment Cost | | KRW 21.96 billion | KRW 18.13 billion |
| Key Investment Details | Chemical | • (GHG) Construction for increasing hydrogen co-firing in cracking furnaces<br>• (Air pollutants) Implementation of pollutant reduction system in hydrochloric acid production processes<br>• (Air pollutants) New odor reduction facility<br>• (Chemicals) New column process | |
| | Qcells | • (Air pollutants) Installation of ozone generator<br>• (Air pollutants) Installation of backup scrubbers<br>• (Water resources) Installation of flow meters to advance water management<br>• (Water pollutants) Installation of fluoride wastewater treatment facility underway | |

### Environmental Targets and Performance

Hanwha Solutions' Chemical Division monitors indicators, such as air pollutant emissions and water consumption, to track its environmental management performance. In addition, to minimize Hanwha Solutions' environmental impact, the division sets mid- to long-term targets for each factor and monitors progress toward achieving these goals.

#### Chemical Division's Environmental Targets and Performance

| Management Items | Unit | 2025 | | | 2026 | Mid- to long-term target (2030) |
|---|---|---|---|---|---|---|
| | | Target | Performance | Target improvement rate[3] | Target | |
| Greenhouse Gas[1] | MT/MT | 0.39 | 0.38 | -3.1% | 0.37 | 0.33 |
| Air pollutants[1] | kg/MT | 0.02 | 0.02 | -4.5% | 0.02 | 0.02 |
| Water consumption[1] | MT/MT | 2.47 | 2.68 | 8.8% | 2.65 | 2.13 |
| Waste disposal[1] | kg/MT | 4.07 | 3.22 | -21% | 3.24 | 3.24 |
| Energy consumption intensity[2] | GJ/KRW 100m | 559 | 565 | 1.07% | 538 | 485 |

1) Yeosu and Ulsan Plants
2) Chemical Division's business sites subject to the ETS
3) 2025 performance vs. 2025 target

## Environmental Management Strategy

### Environmental Management System

The manufacturing sites of the **Chemical Division** and **Qcells Division** have established environmental management systems in accordance with ISO 14001, the international standard for environmental management systems, and apply them to site environmental management. **Hanwha Solutions** conducts internal and follow-up audits to review system operations and drive improvements to maintain ISO 14001 certification.

ISO 14001 Certifications

| Division | ISO 14001 Certification Status | Initial Certification Date | Validity Period |
|---|---|---|---|
| Chemical | Yeosu Plants 1, 2, TDI | Jan. 16, 2011 | ~ Jan. 8, 2027 |
| | Ulsan Plants 1, 2, 3 | Aug. 29, 2011 | ~ Aug. 25, 2027 |
| | R&D Center | Oct. 6, 2022 | ~ Oct. 15, 2028 |
| Qcells | Jincheon Plant | Aug. 25, 2016 | ~ Aug. 24, 2027 |

### Environmental Management Engagement Activities

CASE

**Hanwha Solutions' Qcells Division** is participating in the National Institute of Environmental Research's Best Available Techniques Reference Document (BREF) Technical Working Group (TWG). As part of its activities, the division published the 'Phase 2 BREF for the Semiconductor Manufacturing Industry' in 2025 and will continue its technical advisory role as a TWG committee member for environmental and energy sectors in 2026.

### Response to Environmental Incidents

**Hanwha Solutions' Chemical** and **Qcells Divisions** have established Environment, Safety and Health Management Regulations and Incident Management Regulations to respond to environmental incidents based on prepared manuals and guidelines. For details on the emergency response system, please refer to the 'Safety and Health Management (p.50)' section of this report.

Emergency Response System

EHS Management Policy

**Incident Management**

In the event of an environmental or safety incident, the incident must be reported to the relevant authorities in compliance with applicable laws, and all related matters shall be handled in accordance with the Incident Management Regulations and Crisis Response Manual Each site is required to establish and operate its own site-specific incident management guidelines and emergency response manuals in accordance with relevant laws and corporate regulations.

In addition, the Integrated Environmental Plan specifies response and recovery measures for each incident type (including root cause investigations) and specific countermeasures based on various environmental pollution scenarios. The incident types covered include chemical or hazardous gas leaks, wastewater and waste spills, and leaks of hazardous substances.

## Air Pollutant Management

### Air Pollutant Management System

Hanwha Solutions' Chemical Division conducts annual environmental inspections covering key environmental areas, including air, water, waste, chemicals, and soil, while monitoring compliance with applicable regulations. In 2025, a 'Company-wide Environmental Inspection Improvement Plan' was carried out, and completed corrective actions for all identified non-conformities. In addition, the division introduced a 'Company-wide Environmental Inspection Enhancement Plan' that includes environmental management audits and site-specific environmental self-inspections based on improvement measures developed by analyzing inspections from 2021 to 2025. Inspections for 21 corporate teams and eight business sites are planned for 2026.

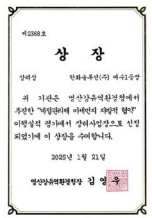
Management of Air Pollutant Emission Standards Hanwha Solutions' Chemical Division strengthens operational monitoring by establishing internal air pollutant emission standards that are 30% stricter than statutory limits and conducting self-measurements of air pollution control facilities. In alignment with the government's 3rd Comprehensive Plan to Improve Atmospheric Environment, the division is implementing emission reduction targets for each key facility. Additionally, in response to the 2nd Phase of the Air Emission Cap-and-Trade System, the division has been working with environmental consulting firms since 2025 to explore site-specific emission optimization strategies and review emission quotas.
Hanwha Solutions' Qcells Division applies internal standards that are stricter than legal emission limits to manage air pollutants. At its key facilities, the division installed Tele-Monitoring Systems (TMS) that trigger alerts when exceeding internal thresholds to enable continuous monitoring and immediate corrective action when internal thresholds are exceeded. In 2025, three additional TMS units were installed to further strengthen management of air pollutants while the division continued to conduct self-inspections of air pollutant reduction facilities and carry out improvement activities. The division also analyzes raw materials used in its processes to substitute NOx-inducing substances and optimize the operational efficiency of treatment facilities.

### Air Pollutant Reduction Activities

Hanwha Solutions' Chemical Division is implementing various air pollutant reduction measures, including the installation of a new odor prevention facility (CTO), hydrogen co-firing burners for cracking furnaces, and a new stripping column process. In addition, the division has completed improvements to legal compliance management, air emissions self-monitoring, and total emissions management functions identified in the 2025 SHE Portal operational review. In collaboration with specialized consultants, the division also initiated a review of site-specific air emission optimization measures in collaboration with specialized consultants and secured official permits after applying for its allocation of total emission allowances for 2026.
Hanwha Solutions' Qcells Division operates air pollution control facilities to remove pollutants generated from production processes. In 2025, the division introduced De-NOx systems at major facilities to reduce particulate matter and nitrogen oxides and plans to expand them horizontally. In 2026, it also plans to install additional pre-scrubbers to further advance the air pollutant treatment system. Hanwha Solutions' Insight Division is also taking systematic measures to reduce fugitive dust emissions by installing wheel washers, mandating use of covers during the transportation of soil and aggregates, and setting up dust control fences.

CASE

Hanwha Solutions' Yeosu Plant 1 received an award of excellence from the Yeongsan River Basin Environmental Office in recognition of its contributions to reducing air pollutants during the 5th Fine Dust (Particulate Matter) Seasonal Control period. Hanwha Solutions' Yesou Plant 1 was acknowledged for its efforts in reducing local particulate matter levels through voluntary agreement-based abatement facility operations and emission cuts, as well as active participation in the government's air quality management policies.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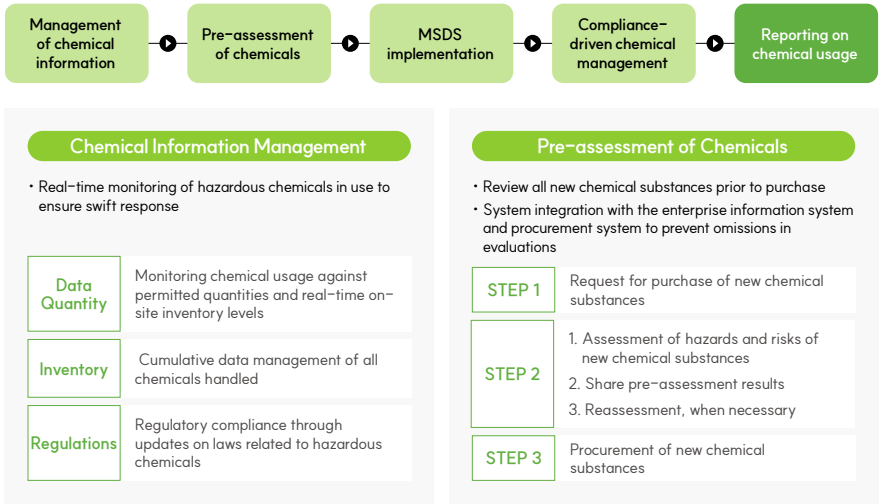
## Hazardous Chemical Management

### Hazardous Chemical Management System

Regulatory Compliance Activities Hanwha Solutions operates a regulatory response system based on the lifecycle of chemical substances. Hanwha Solutions regularly reviews domestic and international chemical regulations and conducts periodic inspections of chemical use, transport, and storage processes to ensure safety at chemical handling facilities.
Hanwha Solutions' Chemical Division manages hazardous chemicals by submitting a chemical accident prevention and management plan and conducting annual self-inspections. The division proactively responds to domestic and international regulations on chemical substances, including the Act on Registration and Evaluation, etc. of Chemicals, the Chemical Control Act, the Biocidal Products Control Act, and the EU REACH Regulation, to protect the safety of all stakeholders.

MSDS-based Management System Hanwha Solutions has developed its own advanced, integrated chemical management system based on MSDS, creating a database of all chemical substances handled across its business sites. This system enables effective management by collecting and reporting data on hazardous chemical usage and plant management status, and other relevant information.

Chemical Risk Assessment Hanwha Solutions conducts chemical risk assessments for all chemical substances it handles using the Chemical Hazard Risk Management (CHARM) methodology and, based on the results, establishes improvement measures and implements them.




### Hazardous Chemical Substances Management Activities

Hanwha Solutions conducts management activities to reduce or eliminate hazardous substances from its products. The Hanwha Solutions' Chemical Division, especially strengthens its response system for chemical regulations by keeping its integrated chemical management system database up-to-date. Hanwha Solutions' Qcells Division also continues to reduce the input of hazardous chemicals in its processes. In 2025, efforts to upgrade wet benches, the high-consumption facilities for hazardous chemicals, enabled reducing nitric acid input per unit of production by 22% at the Jincheon Plant.

## Water Resources and Water Pollutant Management

### Water Resources and Water Pollutant Management System

Key Strategic Initiatives on Water Resources and Water Pollutants Hanwha Solutions analyzes water intake, wastewater treatment, and water pollutant management to develop effective reduction measures, with the goal of advancing its water and wastewater management system.

#### Key Strategic Initiatives

**Wastewater and Water Management·Reduction**

- Develop various water-saving measures
- Conduct company-wide assessment of water reuse
- Set mid- to long-term targets for reducing water usage and wastewater management

**Water Pollutant Management and Reduction**

- Monitor wastewater characteristics of each site
- Upgrade facilities at the wastewater treatment plant
- Monitor concentration of hazardous substances in water
- Implement a real-time analysis system for water pollutant discharge
- Set water quality management targets

### Water Resource Management System

Hanwha Solutions monitors and records daily intake, usage, and discharge volumes with flow meters to manage water consumption. Certain sites also utilize recycled water while wastewater generated from each site is fully treated through third-party treatment facilities. At major sites, primary or secondary treatment is conducted before transferring wastewater to external facilities.

Business Site Water Reuse Assessment Hanwha Solutions' Chemical Division partnered with a specialized agency in 2023 to assess water reuse potential across all sites. This included analyzing the water quality of wastewater, cooling tower blowdown water, and process discharge water. The assessment estimated that approximately 480,000 tons (of the total of 2.61 million tons across all sites) of water per year could be reused at three economically viable sites. Based on the assessment results, the division established reuse targets and a mid- to long-term roadmap for water resource management.

Water Stress Analysis In the first half of 2024, Hanwha Solutions used the SSP3 scenario of the WRI Aqueduct Water Risk Atlas Tool[1] to analyze the company's projected water stress levels in 2030. The analysis found that the Chemical Division's Yeosu Plant and Qcells' Jincheon Plant were located in areas of high water stress, while the Chemical Division's Ulsan Plant was located in an area of medium-high water stress. This analysis confirmed that water supply risks can have a potential impact on business resilience. To mitigate such potential risks, Hanwha Solutions is reviewing the technical and economic feasibility of water recycling facilities with a specialized agency, while also strengthening wastewater and pollutant monitoring and management systems. The Qcells Division is installing flow meters at the Jincheon Plant, which is located in an area of high water stress, to measure water reuse volumes and advance water management. When installations are completed in 2026, this will enable quantifying water reuse performance for more efficient management of water resources and transparent disclosure.

#### Business Site Water Stress Analysis Results

| Business Site | Water Stress Level |
|---|---|
| Ulsan Plant | Medium-high |
| Yeosu Plant | High |
| Jincheon Plant | High |

#### Financial Impact from Water Stress at the Ulsan Plant [2]

| Business Impact | Financial Impact | Response |
|---|---|---|
| • Ulsan has high water stress levels due to frequent water shortages caused by drought, as well as high demand for industrial water from industrial complexes. A rise in water-intake stress can lead to discontinued water supply, which may damage production facilities and infrastructure.<br>• When rise in water intake stress leads to discontinued water supply, it can damage production facilities and infrastructure, resulting in financial losses and reduced revenue from operational suspensions | Financial loss from operational suspensions at business sites resulting from water supply disruptions: Minimum KRW 4.1 billion (1 day) ~ maximum KRW 1.4797 trillion (1 year) | Increase water reuse to address risk of water supply disruptions |

1) Analysis based on WRI Aqueduct Water Risk Atlas' Aqueduct 4.0 Framework (Source: https://www.wri.org/applications/aqueduct/water-risk-atlas)
2) 2024 analysis

## Water Resources and Water Pollutant Management

### Water Pollutant Management

Water Pollutant Management System Hanwha Solutions' Chemical Division sets internal goals to keep water pollutant emissions at 30–50% of the legally permissible discharge limits. In compliance with the self-measurement cycles required under the Integrated Environmental Permit, the division monitors emissions of key water pollutants, such as total organic carbon (TOC), biochemical oxygen demand (BOD), and suspended solids (SS), through internal and external testing and analysis, and establishes and manages reduction targets. Hanwha Solutions' Qcells Division's Jincheon Plant obtained an Integrated Environmental Permit in December 2024 and manages water pollutants in compliance with the applicable self-measurement cycles under the permit. For key water pollutants, the division has established internal management standards that are stricter than regulatory limits, maintaining emissions at an average of 50% of legally permitted levels. The division has installed CCTV cameras at final wastewater discharge points to prevent accidental discharges of hazardous substances and enable continuous monitoring, ensuring that pollutant concentrations remain within legal limits. Hanwha Solutions is advancing the water resources and water quality management system along with pollution reduction measures by analyzing water usage, wastewater treatment, and water pollutant management statuses.

Water Pollutant Management and Reduction Activities Hanwha Solutions' Chemical Division operates a wastewater quality monitoring system to manage the quality of wastewater discharged into rivers through monthly internal water testing and quarterly wastewater composition analyses. The division also operates a segregated management system for stormwater and wastewater to efficiently control wastewater volumes and prevent the risk of untreated wastewater leakage. Hanwha Solutions' Qcells Division analyzes water pollutant concentrations daily at the discharge tank, using an in-house water quality analyzer to monitor key indicators, such as pH, total phosphorus (T-P), total nitrogen (T-N), and SS, in wastewater from each process. Since 2022, the division has installed additional TOC analyzers to expand its internal monitoring scope of key water pollutants. Since 2024, improvements have been continuously made to wastewater treatment facilities to manage pollutant concentrations and wastewater flow. In particular, to enhance the treatment efficiency of high-concentration wastewater, treatment plant expansions and installation of a fluoride treatment facility have been underway since 2025 with plans to further strengthen wastewater management by introducing a pH control system for cooling towers in 2026. Hanwha Solutions' Insight Division operates temporary sedimentation basins and drainage channels to reduce water pollution caused by soil runoff at construction sites. It has also established response measures for oil spills and stocked appropriate spill response materials such as oil absorbents to manage water pollution-related risks.

### Water Resources and Water Pollutant Management Activities and Plan

Hanwha Solutions carries out various activities to reduce water consumption and wastewater generation.

#### Water Resources Management Activities: Current Status and Future Plans

| Division | Management Activities | Future Plans |
|---|---|---|
| Chemical | • Install scrubbers to intermittently operated emission facilities<br>• Reduce water consumption by shutting down water and blower operations after hours<br>• Improvements to process stormwater separation trenches<br>• Make improvements to CTW Blow-down system | • Improve boil-out wastewater treatment methods and modify stormwater trench configurations |
| Qcells | • Reuse concentrate from ultra-pure water manufacturing | • Install flow meters to advance wastewater management |
| Insight | • Recycling surface water from Jade Garden and Jade Palace at wastewater treatment plants for reuse | - |

#### Water Pollutant Management Activities: Current Status and Future Plans

| Division | Management Activities | Future Plans |
|---|---|---|
| Chemical | • Upgrade of pH control system<br>• Expansion of oil skimmer capacity<br>• Installation of stormwater detection and alarm system | • Upgrade aeration diffuser at wastewater treatment plant |
| Qcells | • Construction of fluoride treatment facility at wastewater treatment plant is underway (~2026) | • Improve pH control system for cooling towers |
| Insight | • Temporary sedimentation basins, drainage channels, and silt curtains to mitigate water pollution caused by soil runoff at development and construction sites | - |

CASE

**Hanwha Solutions'** Ulsan Plant 1 was awarded a commendation by the Ministry of Climate, Energy and Environment for its contribution to the water environment by continuously managing pollutants. In 2025, the plant carried out improvements and monitoring of wastewater and non-point source pollution control facilities.

## Waste Management

### Waste Management System

Hanwha Solutions operates waste management standards by division and an intensity-based management system to systematically manage waste generation. In accordance with the environmental management strategy, Hanwha Solutions sets waste disposal intensity targets and regularly monitors waste generated at each site. In addition, we review waste treatment to identify opportunities for recycling waste currently sent to landfill or incineration, while applying management standards tailored to the characteristics of each division.

### Waste Management and Reduction Activities

The Chemical Division conducts site-level analyses of waste generation characteristics and implements reduction plans accordingly to expand the recycling of waste otherwise sent to landfill or incineration. The Qcells Division is driving waste reduction across its processes by upgrading production facilities, substituting hazardous chemicals, and improving sludge moisture content, while also implementing waste separation practices. The Insight Division conducts management activities for waste wood, waste synthetic resins, scrap metal, and waste oil in accordance with the Waste Control Act, while carrying out site-led reduction activities aimed at minimizing waste generation.

Expanding Waste Recycling Hanwha Solutions' Chemical Division is expanding recycling by using the Circulating Resources Certification System to convert process byproducts, which were previously treated as waste, into valuable resources. In 2025, the Yeosu and Ulsan Plants successfully obtained certifications for three items, including waste polyethylene (PE) and waste polyvinyl chloride (PVC), laying the foundation for turning waste into recyclable resources. This effort has enabled the diversion of waste from disposal to recycling, successfully strengthening the division's on-site resource circularity.

Hanwha Solutions' Qcells Division implements the Eco-Assurance System established by the Ministry of Climate, Energy and Environment to promote the recycling of end-of-life solar modules. To ensure proper collection and recycling of distributed modules, the division has joined E-Circulation Governance, a recycling business cooperative, and entrusted it with the treatment process. The division also fulfills its annual recycling obligations by paying required recycling contributions based on the national recycling targets announced each year. In September 2024, the division signed a memorandum of understanding (MOU) with Korea Zinc to collaborate on a solar panel recycling project aimed at building a resource circulation system. Through this partnership, the division is working to recover and recycle key materials, such as aluminum, copper, and silver, from manufacturing waste generated during solar module production. Hanwha Solutions' Qcells Division is also promoting the conversion of waste acid into recyclable materials to expand recycling of hazardous waste. Waste acid, a key hazardous waste generated in Qcells Division processes, was previously treated entirely through neutralization because the mixture of various inorganic acids made recycling difficult. However, successful recycling trials since August 2025 have expanded its recycling rate to 9% with plans to further increase recycling going forward.

Investments in Resource Circulation Hanwha Solutions' Qcells Division officially launched 'EcoRecycle by Qcells,' its solar module recycling brand in the U.S. in June 2025. After establishing the EcoRecycle Team in 2024, a dedicated entity was set up in the U.S. in 2025 with plans to fully launch business operations in 2026 following the start of plant operations in Georgia in 2025. The business focuses on collecting end-of-life solar modules and extracting valuable materials, such as aluminum and silver, using in-house-developed high-purity separation technologies. These recovered materials are then recycled back into solar module production, creating a sustainable 'produce-use-recycle' circular economy. High-efficiency recycling facilities have been introduced for the business with plans to build a nationwide distribution and sales network in the U.S. along with an integrated online platform. Hanwha Solutions' Qcells Division aims to recycle approximately 500,000 modules per year through this business, expanding resource circulation and reducing carbon emissions at the same time to strengthen sustainable manufacturing capabilities in the solar cell supply chain.

# BIODIVERSITY MANAGEMENT AND CONSERVATION

E S G

## Biodiversity Management Framework

### Biodiversity Management Governance

Hanwha Solutions recognizes biodiversity management and conservation as key elements of sustainable business operations. Therefore, Hanwha Solutions operates a management system to minimize negative impacts on biodiversity and mitigate related risks. Hanwha Solutions grants the ESG Committee the authority and responsibility to review biodiversity conservation goals and detailed implementation plans, and to oversee biodiversity-related activities and performance, by explicitly defining these roles in the ESG Committee Regulations.

### Biodiversity Management System

Hanwha Solutions' Chemical Division conducted site-specific natural environment analyses based on the TNFD (Taskforce on Nature-related Financial Disclosures) approach in 2024 and established a phased roadmap to proactively respond to mandatory global ESG disclosure standards and to strengthen its biodiversity management system. The division continuously monitors developments and revisions in key biodiversity-related disclosure standards to ensure that its roadmap remains aligned with evolving requirements. Through these efforts, the division aims to enhance its biodiversity response capabilities. It also plans to gradually expand biodiversity conservation efforts by establishing goals that support ecosystem resilience.

The division also includes the impact of waste from production processes on soil contamination as part of its environmental impact assessments and evaluates the magnitude and materiality of such impacts. Based on the results, a systematic management plan to protect the ecosystem surrounding its business sites has also been established, including setting appropriate response targets. For substances subject to soil management, primary protective measures, such as installing dedicated storage facilities and containment walls, are in place while secondary safety measures are also being implemented through installation and operation of pollutant detection and alarm devices.

The Chemical Division has defined the establishment of a foundation for enhancing biodiversity as a key initiative and continues to manage and monitor related efforts as part of its environmental management strategy.

Hanwha Solutions' Biodiversity Roadmap

| ~2027 | | | ~2028 |
|---|---|---|---|
| Establish nature and biodiversity management governance | Expand assessment scope | Enhance natural and biodiversity-related competencies | Establish transition plan and disclose relevant information |
| ① Establish decision-making structures through the ESG Committee and the Safety and Health Management Committee<br>② Establish a department dedicated to nature and biodiversity within the organization, designate responsibilities, and define related roles for management<br>③ Disclose the TNFD assessment process and findings of the four business sites | ① Extend assessment to upstream and downstream beyond own operation business sites<br>② Prioritize identified risks and opportunities<br>③ Assess the financial impact of identified risks and opportunities<br>④ Adopt short-, medium-, and long-term scenarios to address nature-related risks and opportunities<br>⑤ Assess Hanwha Solutions' resilience under each scenario | ① Provide training to the Board of Directors and members to strengthen capabilities related to nature and biodiversity<br>② Support internal stakeholders in developing and embedding nature and biodiversity-related knowledge and skills<br>③ Continuously monitor relevant disclosure guidelines and evaluation tools | ① Reflect assessments of value chain-wide impacts, dependencies, risks, and opportunities in relevant departments, including procurement and production<br>② Establish nature-related targets and transition plans aligned with the 23 action targets of the Kunming-Montreal Global Biodiversity Framework (GBF)[1]<br>③ Track and report on the achievement of the established targets<br>④ Set SBTN(Science Based Targets Network) targets and review target validation<br>⑤ Establish an Enterprise Risk Management system that integrates the TCFD and TNFD risk management frameworks |

1) GBF (Global Biodiversity Framework): A post-2020 global biodiversity framework under the UN Convention on Biological Diversity (CBD), outlining international targets and implementation plans for biodiversity conservation

## Biodiversity Management and Conservation Activities

### Conservation of rare, endemic, and endangered plant species

Hanwha Solutions' Insight Division operates Jade Garden, a botanical garden located in Chuncheon, where it conserves 42 rare plant species and 30 endemic species in accordance with the Korea Forest Service's 2025 list of rare and endemic plants. It also protects eight plant species designated as Class II endangered species by the Ministry of Climate, Energy and Environment. A 2025 comprehensive botanical survey confirmed the presence of rare, endemic, and endangered plant species.

| Category | Species |
|---|---|
| Rare plant species | Abeliophyllum distichum (white forsythia), Abies koreana (Korean fir), Allium senescens, Allium ochotense, Anemone koraiensis, and 37 other species |
| Endemic plant species | Asarum macranthum, Miyamayomena koraiensis, Berberis koreana, Buxus koreana, Celtis choseniana and 25 other species |
| Endangered plant species | Astilboides tabularis, Cotoneaster wilsonii, Eleutherococcus senticosus, Iris laevigata, Kirengeshoma koreana, and three other species |

### Conservation of Endangered Wildlife

Hanwha Solutions' Insight Division is engaged in the conservation of the Siberian flying squirrel (designated as Natural Monument No. 328 and classified as a Class II endangered species in Korea). To support the protection of this species, the division conducts regular ecological monitoring in collaboration with an ecological research agency and cleans dedicated nests once a year as part of their maintenance and management. In 2025, eight of the existing 37 nesting sites were replaced due to aging. While the population is estimated to be gradually increasing, its precise size remains difficult to determine. Therefore, the division will continue to monitor and support the protection of the species.

### Ecosystem Conservation Activities

Hanwha Solutions' Chemical Division's Daejeon Site is contributing to the sustainability of local communities and the natural environment through continuous initiatives aimed at enhancing biodiversity and restoring ecosystems. At the Gyeryongsan National Park forest restoration site, invasive plant removal activities were carried out on two occasions, establishing a foundation for restoration across an area of approximately 3,000 m². A total of 300 trees, including 150 elms and 150 kousa dogwoods, were also planted to restore native vegetation and expand carbon sinks. Furthermore, the division engaged in habitat management across a total area of 7,846 m² through two environmental cleanup campaigns around inland wetlands and the Meokbaengigol wetland. Two genetic resource (species) monitoring sessions and two ecological education programs also contributed to maintaining healthy habitats and raising awareness of ecological conservation.

In addition, the Daejeon Site operates water stations and distributed 150 reusable tumblers to promote a plastic-free lifestyle and recycling culture, reducing roughly 450kg of single-use plastic waste.

### Catch-and-Release of Gold-spotted Pond Frogs at Dangjin Solar Farm 2

Hanwha Solutions' Insight Division identified the presence of gold-spotted pond frogs, designated as an endangered species by the Ministry of Climate, Energy and Environment, within its project site during the development of a solar power plant on salt-affected sites in Chorakdo-ri, Dangjin. To prevent habitat degradation and the extinction of the local population identified through an environmental impact assessment, the frogs were captured and relocated to an alternative habitat.

Prior to construction in 2023, 3,627 gold-spotted pond frogs were initially captured and released at Gojan Reservoir in Dangjin. A subsequent post-environmental impact assessment then confirmed the re-emergence of the species within the project site. Therefore, in 2024, an abandoned paddy wetland within the Unit 2 project district was selected as an alternative habitat, where a total of 1,044 individuals were recaptured and re-released. Furthermore, to verify whether the released frogs successfully maintain a stable life cycle in their alternative habitat, post-monitoring will be conducted twice a month from May to September for three years from 2025 through 2027 to investigate their spawning and active seasons.

## Biodiversity Management and Conservation Activities

### Ecosystem Conservation Activities in National Parks

Hanwha Solutions has continuously engaged in carbon reduction and ecological conservation initiatives in the Jirisan area through partnerships with the Korea National Park Service since 2021. This effort has since expanded into a company-wide ESG program where each business site actively participates in connection with its neighboring national park. Accordingly, the Ulsan Plant collaborates with Gyeongju National Park, and the Daejeon Site partners with Gyeryongsan National Park to conduct regional environmental conservation activities. Although some business sites are not located adjacent to a national park, they actively participate in conservation initiatives with nearby national parks, strengthening company-wide ESG implementation. Acknowledged for such contributions, Hanwha Solutions received the Presidential Citation at the 6th National Park Day ceremony in 2026 for its work in protecting national parks and enhancing biodiversity.

### Net Zero Volunteer Group Activities

Hanwha Solutions' Chemical Division's Ulsan Plant carried out a total of 156 volunteer hours at Gyeongju National Park, with 52 participants. Volunteer work included forest pest monitoring, invasive plant removal, Bulguksa Temple drainage system maintenance, and environmental cleanup activities. In addition, KRW 5 million in annual project funding was provided to install a soil moisture sensor system to monitor environmental changes within the Hwangryong Wetland in the Tohamsan District. This initiative contributed to diagnosing and analyzing the wetland's condition, helping to establish comprehensive plans for its conservation and management.

Installation of Data Logger and Temperature/Humidity Sensor

Maintenance of Bulguksa Temple's Drainage System

Monitoring of Forest Pests and Diseases

### Climate Change Response Station Project

Hanwha Solutions signed an MOU with the Korea National Park Service in 2021 and has since engaged in various activities to reduce carbon emissions and conserve ecosystems. In particular, to address concerns about habitat degradation and biodiversity loss due to climate change, we are participating in the 'Climate Change Response Station Project for Long-term Ecosystem Monitoring'. This project aims to facilitate the early detection of climate change impacts and support the development of effective response measures.

#### Long-term Ecosystem Monitoring Activities in Jirisan National Park

| Activity | Details | 2025 Achievements |
|---|---|---|
| Phenological monitoring of indicator species | Observing 10 plant species (e.g., azalea, royal azalea, dogtooth violet, Hemerocallis hakuunensis, Hypericum ascyron, hosta, aster, Cirsium setidens, etc.) in the permanent sampling plot and changes in the flowering period of one specific plant species, as well as the breeding period of one amphibian species | Completed monitoring of flowering periods in 2025 |
| Monitoring breeding periods of tit species by elevation | Monitoring breeding periods of tit species along altitudes ranging from 700 to 1,600 meters, using artificial nest boxes and motion-sensor cameras | Completed monitoring of breeding periods in 2025 |
| Monitoring seasonal freezing/thawing cycles and changes in snowfall | Monitoring freezing/thawing cycles and snowfall changes using time-lapse cameras installed in Sesokgyo and Bukhaedogyo areas | Completed climate change monitoring in 2025 |

#### Research Collaboration and Public Outreach with Relevant Organizations

| Category | Details | 2025 Achievements |
|---|---|---|
| Research collaboration with domestic and international institutions, and rental of station facilities and equipment | Conducted field studies on climate-vulnerable species in Jirisan and identified new native habitats in collaboration with institutions such as the Korean Society of Plant Taxonomists | • Used by 118 researchers (412 cumulative over four years), including from the National Institute of Biological Resources and Kyungpook National University<br>• Usage increased by 78% compared with 2022 |
| Collection of subalpine genetic resources and seed deposits to the seed vault | Collected genetic resources of subalpine coniferous and native species and deposited seeds in the seed vault | • Secured 4.76 million seeds from 54 species, including Abies koreana and Sedum kamtschaticum |
| Citizen scientist training program for the public | Provided training (at least twice annually) on identifying seasonal indicator species and observation methods, to facilitate nationwide simultaneous monitoring of climate change impacts and foster public awareness of the climate crisis | • Training on phenological monitoring and species vulnerability surveys (400 cumulative participants over 4 years) |
| Promotion of the station via SNS and development of an illustrated ecological guidebook on alpine plants of the Korean Peninsula | Used collected data (photos and videos) to produce climate change communication materials and to develop an ecological guidebook on alpine plants of the Korean Peninsula | • Developed 42 educational resources using monitoring data (videos)<br>• Shared outcomes and exchanged knowledge with international organizations including NEON (U.S.)<br>• Collected data for the development of an ecological guidebook on alpine plants of the Korean Peninsula |

## Biodiversity Management and Conservation Activities

### Environmental Education Programs

Hanwha Solutions' Insight Division offers environmental education at Jade Garden to promote biodiversity conservation, offering two programs, 'Bee Explorers' and 'Blue Garden,' in 2025. Approximately 60 children participated in 2025, contributing to greater awareness of the importance of biodiversity and the environment. The division expects these programs to provide meaningful educational opportunities that help future generations understand the value of biodiversity and the need for environmental protection. In particular, the 'Bee Explorers' program was awarded for its excellence at the 2025 Arboretums and Botanical Gardens Outstanding Educational Program Contest hosted by the Korea National Arboretum under the Korea Forest Service.

Bee Explorers

Blue Garden

### Supporting Ecological Environments within Industrial Complexes

Hanwha Solutions' Insight Division is assessing potential habitat loss and increased roadkill risks resulting from the impacts of industrial complex development on local ecosystems and biodiversity. To prevent these outcomes, the division implements measures to create suitable environments and support the conservation of flora and fauna habitats by establishing microhabitats[1], ecological bridges, and ecological corridors.

1) Microhabitats: Localized habitats, such as fallen leaves, damp soil, and crevices between rocks, that support small organisms, such as protists and insects

#### 2025 Activities

| Industrial Complex | Details | |
|---|---|---|
| Anseong Techno Valley | Installation of an ecobridge on the southeastern side of the project site to prevent habitat fragmentation for wildlife | One 15m ecological bridge |
| Hwaseong H-Techno Valley | Installation of ecological corridors to prevent small animals from becoming trapped and dying in drainage ditches or catch basins | Installed at 30m intervals along the side ditches |
| 2nd Yongin Techno Valley | Development of mitigation measures by area (natural ecosystem, air environment, water environment, etc.) | |
| West Ochang Techno Valley | Installation of microhabitats (log piles, rock piles) on the southern side of the complex to enhance biodiversity, focusing on small animals | Five 12m² log piles, Three 12m² rock piles |

## Management of Biodiversity-related Risks (LEAP)

### Biodiversity-related Risk Assessment

Hanwha Solutions assessed 29 global sites (including 16 key own operations and upstream locations) in 2024, using the LEAP approach outlined by the TNFD. Based on the results, we conducted process-level analyses of nature-related impacts and dependencies at the four own operation sites to identify associated risks and opportunities.

Biodiversity-related Risk Identification Process and Results based on the LEAP Approach

| | Locate | Evaluate | Assess | Prepare |
|---|---|---|---|---|
| Analytical Tool | • GIS (Geographic Information System)<br>• 4 layers of nature-related data | • SBTN[1] (impact screening)<br>• ENCORE (identification of impacts and dependencies) | • WWF BRF[2]<br>• Sensitive areas and results of impact and dependency identification | • Analysis results of the previous stage<br>• Hanwha Solutions internal data |
| Process | • Conduct a GIS-based assessment for 29 sites<br>• Identify sites as sensitive areas if rated 'High' or above in five or more of the 14 data layers | • Select major domestic sites located in sensitive areas and exposed to high water-related risks, such as Yeosu, Ulsan, and Jincheon, as targets for impact and dependency assessment<br>• Use ENCORE Tool to identify process-specific natural impacts and dependencies | • Identify risks using the results of the nature status and process-specific impact and dependency analyses<br>• Identify opportunities in the risk mitigation process based on identified risks | • Identify disclosure requirements from TNFD, SBTN, CSRD, CDP, etc., and conduct a gap analysis based on current disclosure status<br>• Establish response plans by reflecting ESG governance, current activities, and future plans |
| Analysis Results | **Importance of Biodiversity**<br>Chemical Yeosu's Hydrogenated Hydrocarbon Resin (H-HCR)<br><br>**Ecosystem Integrity**<br>Qcells Jincheon<br><br>**Physical Water Risk**<br>Chemical Yeosu 1·2·3, H-HCR, Ulsan 1·2·3<br><br>**Importance of Ecosystem Services**<br>Chemical Yeosu 1·2·3, H-HCR, Qcells Jincheon | • Significant impacts were observed in water use, GHG emissions, and pollution of water and soil, with a strong dependency on water-related services | • Physical Risk: Water supply, facility damage due to natural disasters, risks related to securing raw materials and vessel space<br>• Transition Risk: Reputational risk<br>• Opportunity: Resource efficiency and sustainable use, ecosystem protection, restoration, and regeneration | • Physical Risk: Establish response plans for water resources, GHG emissions, and pollutants<br>• Opportunity: Continue efforts to explore resource efficiency items and ecosystem restoration projects<br>• Enhance the risk management system by establishing a mid- to long-term nature-positive roadmap and linking it to company-wide business strategies |

| Division | Site | Impact on Nature | | | Dependency | | |
|---|---|---|---|---|---|---|---|
| | | Very High | High | Medium | Very High | High | Medium |
| Chemical | Yeosu1 | GHG | Water use, air, water, soil pollution, waste, use of terrestrial ecosystem | ND | ND | Ground-water, surface water | Protection from floods and storms |
| | Yeosu2 | GHG | Pollution | Air, water, soil pollution | ND | ND | Protection from floods and storms |
| | Yeosu3, Yeosu H-HCR | Water Use | Combined water and soil pollution | GHG | ND | ND | ND |
| | Ulsan1 | GHG, Water Use | Air, water, soil pollution, waste | ND | ND | Ground-water, surface water | Protection from floods and storms |
| | Ulsan2, Ulsan3 | Water Use | Combined water and soil pollution | Air pollution | ND | ND | ND |
| Qcells | Jincheon | ND | Water, soil pollution | Waste, pollution | ND | ND | Ground-water, surface water |

4.0 and above | 3.0~3.9 | 2.0~2.9 | Below 2.0

| Category | Chemical | | Qcells |
|---|---|---|---|
| | Yeosu 1·2·3 H-HCR | Ulsan 1,2,3 | Jincheon |
| Tropical Cyclone | | | |
| Contamination | | | |
| Landslides and ground settlement | | | |
| Media interest | | | |
| Protected and conservation areas | | | |
| Region of international interest | | | |
| Labor/human rights | | | |
| Water scarcity | | | |
| Restriction on wildlife availability | | | |
| Water quality | | | |
| Fire hazard | | | |
| Heatwaves | | | |
| Air quality | | | |
| Species crises | | | |

1) SBTN (Science Based Targets Network): A global non-profit organization that supports setting science-based targets for nature. It provides an impact and dependency screening tool based on the ENCORE database, as well as methodologies for setting science-based targets related to freshwater and terrestrial ecosystems
2) WWF BRF (WWF Biodiversity Risk Filter): A biodiversity risk screening platform provided by the World Wide Fund for Nature (WWF), a global non-profit organization dedicated to nature conservation

## Identification of Biodiversity Risks and Opportunities

### Biodiversity Risk Assessment

Hanwha Solutions identified key nature-related risks and their potential financial impacts on the business by cross-checking the identified risks against those identified through the LEAP approach in 2024. The identified risks and financial impacts will be reflected in our internal activities and strategic planning in the future. In addition, opportunities were identified based on the risk assessment results from Hanwha Solutions' four sites and an analysis of TNFD nature-related opportunity types.

#### Identified Nature-related Risks and Financial Impacts

| | | |
|---|---|---|
| Physical Risk | Acute | Asset losses and restoration costs resulting from facility damage caused by ground subsidence and landslides |
| | | Asset losses and restoration costs resulting from facility damage caused by tropical cyclones and pluvial floods |
| | Chronic | Increased operating costs resulting from process disruptions caused by heatwaves and reduced labor productivity caused by heat-related illnesses among employees |
| | | Increased water intake costs and operating costs due to water quality risks and water supply disruptions (Chemical Division) |
| | | Minimum financial loss of KRW 4.1 billion per day is expected in the event of an operational shutdown due to water shortages and water withdrawal constraints at the Ulsan Plant |
| Transition Risk | Legal & Reputation | Legal costs related to public health and ecosystem contamination caused by hazardous substances released during manufacturing processes or contained in products, as well as reputational damage resulting in decreased sales |
| | | Reputational damage and lost sales resulting from loss of local tourism and research resources due to habitat degradation and biodiversity loss |
| | | Legal costs from lawsuits due to conflict with the local community over intensified water stress, resulting in reputational damage and decrease in sales |
| | Policy | Increased compliance costs to meet stricter nature-related regulations (e.g., personnel expenses, operational costs, fines for non-compliance) |
| | Market | Reduced demand for and sales of products with higher environmental impacts due to growing market preference for low-carbon, low-impact alternatives |
| | Technology | Devaluation of existing assets due to the development of low-carbon, low-environmental impact process technologies |

| | | |
|---|---|---|
| Opportunity | Resource Efficiency | Reduction of operating costs through improved water use intensity and water reuse (Chemical Division) Estimated operating cost savings of KRW 1.17 billion over 10 years through process wastewater reuse at the Yeosu Plant |
| | Capital Access | Securing access to green and nature-related funds, bonds, and loans, and raising capital to implement related projects |
| | Market | Creation of new revenue streams by entering new markets for low-carbon, low-impact products |
| | | Receiving government incentives for entering new markets |
| | Products and Services | Diversification of products and services and enhancement of business model resilience through the launch of low-carbon, low-impact products |
| | Reputation | Enhanced stakeholder reputation through addressing nature-related issues and contributing to ecosystem restoration |
| | | Increased influence on government policy through collaborative participation in nature-related initiatives and external engagement, and strengthened corporate brand value |
| | Sustainable Use of Natural Resources | Reduction of operating costs through water reuse |
| | | Mitigation of risks related to water supply instability |
| | Ecosystem Protection, Restoration, and Regeneration | Deployment of nature-based flood and landslide mitigation infrastructure in alignment with the 'Avoid-Minimize-Restore-Offset' hierarchy |

## Response to Biodiversity Risks and Opportunities

### Response Strategy for Biodiversity Risks and Opportunities

Hanwha Solutions develops response strategies based on analyses of how biodiversity-related risks and opportunities affect its business. In establishing these strategies, we fully consider our ESG governance, current improvement initiatives, and future plans. Through a balanced, integrated approach, we aim to minimize negative impacts on biodiversity and maximize positive contributions.

Response Strategy


- Advance GHG reduction initiatives through the use of renewable electricity and transition to byproduct hydrogen-based fuels
- Develop mechanical recycling technologies for petrochemical products and produce recycled polyethylene (rPE) products
- **Chemical Division:** Conduct product life cycle assessments (LCA) and achieve/renew Environmental Product Declaration (EPD)
- **Qcells Division:** Implement carbon footprint certification for solar modules in Korea
- Develop phthalate-free plasticizers (ECO-DEHCH)

Climate Action

Development of Sustainable Products and Technologies


- Establish internal environmental impact assessment standards and conduct regular (every three years) and ad-hoc (facility additions/expansions, capacity expansions, new equipment, material revisions, regulatory updates, etc.) assessments for each unit process and work area
- Maintain an environmental impact log and develop an internal improvement plan
- Set intensity targets for air pollutant emissions
- Set intensity targets for waste disposal
- Participate in local government ecosystem restoration projects
  (The **Chemical Division** is seeking opportunities to join marine ecosystem conservation efforts)
  - **Chemical Division:** Donated KRW 35 million from 2022 to 2025 through an ESG management partnership with Gyeongju National Park and conducted 882 hours of volunteer work through the Net Zero Volunteer Group (ecological restoration of degraded land, wetland restoration and monitoring, and invasive plant removal)

Environmental Impact Management and Reduction


- Set intensity targets for water consumption
- Conduct daily monitoring of wastewater characteristics by process through water quality analysis laboratories at each site
- Invest in blowdown water and wastewater reuse facilities in response to raw water shortages
- Expand water reuse

Environmental Impact Management and Reduction


- Replace and upgrade aging facilities to enhance process safety and prevent accidents
- Invest in facilities, such as vacuum carts, to prevent chemical leak accidents
- Redesign dust collectors to prevent damaged packaging material and dust generated by packaging machine malfunctions
- Establish standards and conduct monthly inspections to prevent fire hazards at waste oil storage sites
- Perform routine internal inspections of soil contamination prevention facilities

# TALENT MANAGEMENT

E S G

## Talent Acquisition

### Desired Talent Attributes

Hanwha Solutions selects talent based on its talent model, the 'Great Challenger,' as part of its commitment to move beyond its role as a Local Champion and become a Global Champion. In addition, based on our mission, vision, and core mindsets aligned with our talent model, we are actively embedding our organizational culture to ensure that employees understand and put our shared direction into practice.

Hanwha Solutions conducted mini web-based online training for employees to foster an organizational culture rooted in its talent model. The training program required passing an exam and submitting an assignment for completion. In addition, we are strengthening the foundation for practicing the 'Great Challenger' mindset through various engagement activities, including posting in-house posters, as well as conducting related training sessions and workshops.

Hanwha Solutions Talent Model

### Talent Acquisition Strategy

Hanwha Solutions continuously operates a wide range of talent acquisition programs to secure top-tier talent, including industry-academia partnerships and scholarship support. We are also expanding our touchpoints by providing recruitment information and career consulting through social media channels, such as Instagram and YouTube, while enhancing accessibility and efficiency of our hiring process by utilizing digital-based recruitment methods, including virtual interviews. In addition, job postings by function are made available through 'Hanwha-In,' Hanwha Group's recruiting platform, to support talent acquisition based on job fit using a talent database and rolling recruitment system. Meanwhile, Hanwha Solutions' Chemical Division took part in an industry-academia partnership project in 2025 with SUM, the joint university business strategy association which includes members from Hanyang University and Ewha Womans University. Through this initiative, we provided students with practical experience while capturing their creative insights, contributing to fostering future talent.

### Talent Recruitment

Hanwha Solutions recruits new and experienced professionals to hire talent that fit its Great Challenger talent model. For the recruitment of experienced professionals, relevant departments are directly involved in the hiring process to implement a competency-based recruitment strategy.

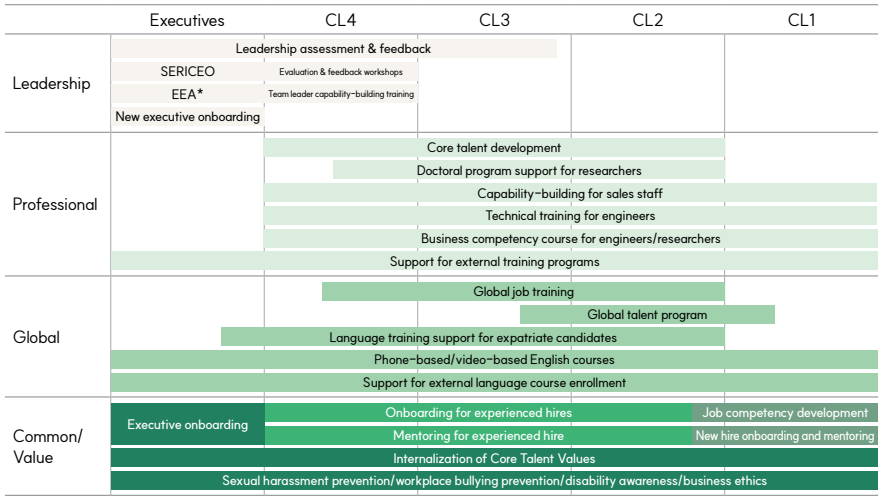
To operate a fair and consistent recruitment process, we conduct prior training for interviewers. This training ensures that interviewers thoroughly understand key considerations and desirable standards for conducting interviews as part of our systematic recruitment process.

## Talent Development

### Talent Development Strategy

Hanwha Solutions establishes career development plans for all employees and implements a structured talent development strategy. We define key talent profiles required for each role as future-ready leaders, global experts, and functional specialists, and provide tailored training programs accordingly. We also conduct competency assessments based on the Hanwha talent model to measure and manage learning outcomes before and after training. These individual assessment results are used for future training and coaching to support the continuous development of employee capabilities.

Company-wide Training Framework




* Execution Excellence Academy

## Talent Development

### New Employee Development and Retention Programs

Hanwha Solutions provides structured onboarding and training programs to support new employees adapt smoothly and systematically develop capabilities. Introductory training enhances understanding of the company and its businesses and equips new hires with essential job skills. For engineers and R&D personnel who require specialized knowledge, we provide additional technical and job-specific training. Mentoring programs between senior and junior employees also help enhance practical skills and foster stronger bonds among employees through close mentor-mentee relationships.

### Fostering Future-ready Leaders

Hanwha Solutions provides systematic leadership training to cultivate the next generation of leaders for the future and to strengthen the company's overall competitiveness.

Division Training Programs for Fostering Future-ready Leaders

| Division | Talent Development Program |
|---|---|
| Chemical | • Workshop for team leaders on strengthening performance coaching skills<br>– Enhances understanding of ongoing and continuous performance management<br>• 1:1 coaching program with external professional coaches<br>– Objective assessment of individual leadership strengths and weaknesses, reflecting results in organization operations and employee management practices |
| Qcells | • Onboarding program for newly appointed team leaders<br>– Supports learning of core competencies required in team leaders for them to adapt quickly and contribute effectively |
| Insight | • Leadership training for executives and team leaders<br>– Identifies strengths and areas for improvement based on leadership assessment<br>– Survey found a high satisfaction rate of 95% regarding effectiveness of training |

### Fostering Global Professionals

Hanwha Solutions operates various programs to help employees grow into globally competent professionals in line with global business expansion. We strengthen expertise of expatriate candidates through support for language courses and also provide structured language development opportunities to employees, including one-on-one language coaching, online language courses, and support for enrolling in external language institutes, to enhance their global competitiveness. By offering opportunities to work overseas to employees at all levels, including junior staff, we help employees develop global capabilities through direct collaboration with local employees.
Hanwha Solutions' Wire & Cable Division provides global leadership mentoring for team leaders and operates training on global organizational culture while also supporting training for individuals to further strengthen competencies.

### Fostering Functional Specialists

Hanwha Solutions' Qcells Division continuously works to internalize technical competencies and enhance training satisfaction by expanding online and offline in-house instructor programs. In 2025, the division selected and trained in-house instructors to lead both theoretical and practice-oriented courses. The theoretical courses covered the understanding of TOPCon cells and solar raw/auxiliary materials, the module reliability evaluation process, and import/export logistics and bonded factory operations. The practice-oriented courses included process data analysis, quality inspection data analysis, and practical AutoCAD application. In 2025, we operated a total of 16 in-house instructor-led courses, including eight new courses, while also converting a total of six courses, including the Basic Solar Cell Course, into online formats to improve employee access to training. Moving forward in 2026, the division plans to further enhance the workplace applicability of its training outcomes by operating a total of 16 courses, including 13 new courses led by in-house instructors.

Solar Power Industry Job Training Programs

| Category | Details |
|---|---|
| Course | Understanding solar module certification |
| Participants | Completed by a total of 45 participants |
| Description | 1) Define direction for developments based on understanding of certifications for crystalline solar module products<br>2) Utilize understanding of different certification types and processes |

# TALENT MANAGEMENT

## Talent Development

**Fostering Digital Talent** Hanwha Solutions recognizes the ability to understand and apply AI in the workplace as a key driver of future competitiveness and continues to expand learning opportunities and practical support to strengthen employees' AI capabilities. Through AI Academy, a self-directed learning space within our proprietary generative AI platform, Agent H, we provide practical, work-oriented content covering AI fundamentals, the latest trends, real-world business applications, and prompt engineering guidance. In addition, we promote AI literacy and deepen employees' understanding of technological and industry developments through company-wide training programs and the publication of in-depth reports. In particular, the Chemical Division promotes leadership AI literacy through specialized training for executives. The training is offered across multiple sites, including the head office and key business sites, focusing on practical workplace application to enhance on-site relevance and effectiveness. Moving forward, the division plans to connect these initiatives with No/Low-code-based automation environments to support autonomous AI utilization and workflow innovation. Furthermore, AI training will be integrated into onboarding programs for new hires and promotion-linked learning curricula to continuously strengthen the internalization of AI capabilities across the company.

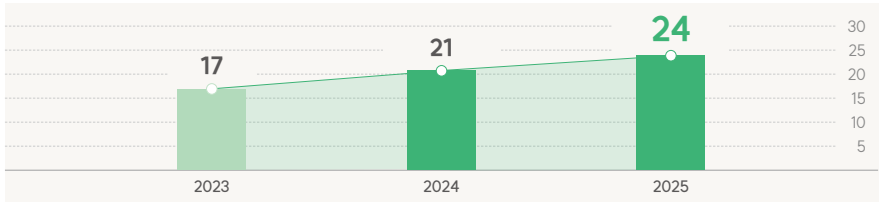
**Career Management Programs** Hanwha Solutions operates a career management support program called 'Job Market' for internal recruitment when additional personnel are required. Upon the completion of business planning, we announce recruitment plans for additional roles, when needed. This allows employees to apply for positions that align with their skills and interests, offering opportunities to manage their careers in a planned and proactive way.

The Job Market program is available not only in Korea but also at our overseas operations, where employees can apply for internal openings. The HR department conducts annual surveys and ongoing one-on-one interviews to understand employees' concerns and career development needs. We also provide feedback on job performance and reputation for individuals, helping each employee design a career path based on their strengths and aspirations. This supports greater job engagement and satisfaction. For executive-levels, Hanwha Solutions offers training opportunities through leading domestic and international Advanced Management Programs (AMPs), which deliver practical executive knowledge. We also offer Global Management Programs (GMPs) to identify and develop next-generation leaders while strengthening overall global competitiveness.

**Engineer Job Training** Hanwha Solutions develops and operates division-specific training roadmaps through its Technology Training Center to cultivate outstanding engineering talent. We provide level-specific customized training across areas including production, quality, maintenance, protective relays, equipment inspection, environment & safety, digitization, and common business skills to strengthen job expertise. Hanwha Solutions' Chemical Division and Wire & Cable Division hold 'Engineer Day' events where teams share process and work innovations, enhancing employee understanding of their work and offering a venue for communication and engagement. Hanwha Solutions' Qcells makes these training programs available to non-engineering staff, including office employees, as well. Meanwhile, Hanwha Solutions' Insight Division also supports employees to voluntarily participate in training courses offered by external institutions to strengthen their job competencies.

**Support for Certification Acquisition** Hanwha Solutions' Technology Training Center actively encourages employees to obtain job-related certifications and licenses to strengthen their professional expertise. To support this, we provide financial assistance for related expenses such as textbook fees, course tuition, and exam fees. We also maintain a structured system to track certification achievements and promote ongoing self-development. In addition to training programs for production workers, Hanwha Solutions offers a variety of job-relevant training programs to salaried employees. As a result, 24 general administrative employees obtained job-related certifications in 2025, an increase of three certifications from the previous year.

Number of General Administrative Employees with Job-related Certifications




**Pre-retirement and Life Planning** Hanwha Solutions offers systematic support for employees in preparing for a stable life after retirement. For those aged 50 and above who are approaching retirement, we operate training programs on topics including, retirement planning, personal finance, social engagement, and leveraging public support. We also provide career planning programs for reemployment and entrepreneurship, along with tailored consultation sessions.

## Evaluation and Compensation

### Performance Evaluation System

Hanwha Solutions implements a performance evaluation system based on Management by Objectives (MBO). At the beginning of the year, employees set individual goals, conduct mid-year check-ins through ongoing feedback from managers and peers, and receive final performance ratings through a comprehensive year-end evaluation.

To ensure fairness, we apply an absolute evaluation approach. The Super H system enables employees to request feedback from organizational heads and colleagues freely to exchange views. By strengthening alignment between individual goals and the organization's overall objectives, we help employees create results based on a clear understanding of the organization's strategic directions.

### Promotion and Compensation Systems

Hanwha Solutions has reduced tenure requirements for each career level and introduced a Fast Track system to ensure that all employees can grow based on their capabilities, regardless of job level, age, or gender. In addition, we have enhanced fairness in evaluations through an absolute evaluation method and established a fair HR system through promotion review sessions based on roles and competencies. Beginning in 2025, 360-degree assessments were extended to employees at the CL3 and CL4 levels, who are candidates for team leader roles. The evaluation examines alignment with our talent model and assesses key leadership competencies from a 360-degree perspective while feedback is used to further support individual development. Hanwha Solutions discontinued the short-term incentive system for management in 2020 and adopted an RSU program to discourage short-term decision-making and promote responsible management from a long-term perspective. Designed with a vesting period of up to ten years, the RSU program fosters a sense of ownership among management and encourages focus on the company's sustainable growth.

#### Promotion and Compensation Systems

**Promotion System**

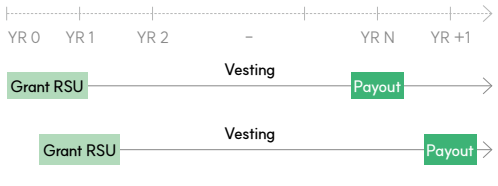
Comprehensive promotion sessions based on roles and competencies

| | |
|---|---|
| Verify mandatory requirements | • Adjusted weighting of comprehensive performance evaluation ratings<br>• Assessment based on leadership<br>• Verification of fundamental job knowledge |
| Operate session | • Review of competency and 360-degree assessment results<br>• Company-wide session |
| Make final decision | • Final approval by CEO |

**Compensation System**

The value of RSUs fluctuates with the company's stock price throughout the vesting period. This helps encourage long-term value-oriented decision-making, motivate employees, and foster a sense of ownership.

Example of an RSU Schedule (Vesting Period: Year N)




## Employee Benefits

Hanwha Solutions offers various employee benefits that promote job satisfaction, foster engagement, and attract and retain top talent. We also actively support improved quality of life for our employees and their families by fostering a family-friendly work environment. To this end, Hanwha Solutions revised its existing 'Dad Leave' program to provide up to 30 days of leave in line with recent changes in labor regulations. This underscores our ongoing efforts to promote shared parenting responsibilities and promote a family-friendly workplace culture.

#### Employee Benefit Programs

| Category | Employee Benefits |
|---|---|
| Health | Medical expenses, health checkups, in-house fitness facilities, group accident insurance |
| Living Support | Commuter bus service, employee cafeteria and housing, housing loan support |
| Life Events | Special leave and financial assistance for key life events |
| Refresh/Leisure | Sabbatical month, in-house club activity support |
| Maternity/Parenting | Mom's Package, reduced working hours during pregnancy, time for prenatal exams, and Mom's Room |
| | Leave for miscarriage or stillbirth, pre- and postnatal leave, paid nursing hours |
| | Congratulatory bonus for children's enrollment and tuition support, in-house daycare center |
| | Dad Leave program (total 30 days) |
| Work-Life Balance | Flexible work arrangements (staggered hours) |

## Employee Communication

### Management Communication

Hanwha Solutions actively promotes communication with management to strengthen trust within the organization and enhance employee motivation.

| Division | Key Communication and Achievements |
|---|---|
| Chemical | • Regular 'Meeting with the CEO' sessions to strengthen direct communication between management and employees (five sessions in 2025)<br>• Group meetings with the Head of the Management Support Office, roundtable discussions with the Head of Production and Safety |
| Qcells | • CEO-employee townhall meeting (2026)<br>• Listening to employee grievances and suggestions and seeking solutions |
| Insight | • Quarterly or semiannual business unit-level meetings between respective executives and team members<br>• Business briefings by the Division Head in the first/second half of the year |
| Wire & Cable | • Monthly report meetings with the Division CEO and employees to share key issues, performance, and initiatives |

### Promoting Internal Communication

Hanwha Solutions' Chemical Division and Wire & Cable Division promote employee communication by sharing the latest company news through internal bulletin boards and hosting various events. In addition, team exchange programs and communication events fostering interdepartmental communication at business sites contribute to strengthening cooperation and mutual understanding. Meanwhile, Hanwha Solutions' Qcells Division held a townhall meeting where senior management met with employees to share the company's strategic direction in the global business environment and current issues, enhancing employee motivation and engagement. Hanwha Solutions' Insight Division operates the 'Pizza Insighting' program (employee pizza socials) to strengthen interdepartmental exchanges and communication. This initiative combines pizza gatherings with team-building activities, positioning itself as a key activity where members can bond in a fun atmosphere and strengthen cross-team engagement. Sharing the outcomes of these activities internally enhances mutual understanding of other departments' work and fosters cross-functional collaboration.

### Labor-Management Relations Built on Trust

Hanwha Solutions operates various communication channels to guarantee fair labor rights and build trust-based cooperative relations between labor and management. Each business site gathers input from employees through the labor-management council and grievance channels, promoting a sound organizational culture and improved working environment.

| Division | Key Communication and Achievements |
|---|---|
| Chemical | • Distinguishes communication channels by job group, operating a communication channel for salaried employees and labor-management council for professional roles |
| Qcells | • Operates 'Q-Board' for general staff, promoting employee rights and interests<br>• Operates 'Hanmaeum Council' for professional roles as part of the dual labor-management communication channel |
| Insight | • Operates a labor-management council, sharing the council's outcome with all council members to enhance transparency |

## Organizational Culture

### Organizational Culture Diagnosis

Hanwha Solutions conducts an annual organizational culture survey for all employees to assess 'Ways of Working' and collective 'Mindset'. The survey is accessible via mobile and web platforms and uses a five-point scale to evaluate seven key areas, including vision, strategy, leadership, and purpose of work. Employees are also encouraged to provide feedback freely. The results help identify employee perceptions, level and weaknesses of the current culture, and areas for improvement. Based on the findings, we are continuously pursuing initiatives to strengthen our organizational culture.

| Division | Key Communication and Achievements |
|---|---|
| Chemical | • CEO weekly meeting observation program: Offering junior-level employees the opportunity to attend executive meetings and communicate with management |
| Insight | • Operation of 'Reno TFT,' an organization dedicated to improving organizational culture, and establishment of an employee feedback collection and execution system based on the division's Code of Conduct<br>• Creative Group initiative: Initiative that forms task forces to develop selected employee ideas following proposal reviews and evaluations, with rewards provided based on performance outcomes |

# HUMAN RIGHTS AND DIVERSITY

E S G

## Human Rights Management System

### Human Rights Management Organization

Hanwha Solutions operates a human rights management governance system to respect and protect the rights of all stakeholders who may be directly or indirectly affected by its business operations. The ESG Committee receives annual reports on findings from human rights due diligence, grievance handling, and human rights risk assessments and responses, and manages and oversees our overall human rights management. In addition, by reviewing and approving revisions to related policies, such as the Human Rights Management Charter and Guidelines, the Committee ensures that our human rights commitments are effectively implemented.

Human Rights Management Organization and Roles


| Organization | Role |
|---|---|
| Human Rights Management Council | • Conduct overall evaluation of human rights due diligence and discuss areas for improvement |
| ESG Secretariat | • Carry out human rights due diligence process<br>• Operate the Human Rights Management Council<br>• Report to the ESG Committee |
| Human Rights related Departments | • Identify and assess human rights risks<br>• Plan and implement mitigation measures<br>• Evaluate the effectiveness of mitigation outcomes |

### Human Rights Management Policy

Hanwha Solutions implements a human rights policy to respect and protect the human rights of all stakeholders directly or indirectly associated with our business activities, including employees, suppliers, local communities, and customers.
The policy was approved by the Board of Directors and is publicly available on the Hanwha Solutions website. Our human rights policy upholds internationally recognized human rights standards and guidelines. These include the UN Guiding Principles on Business and Human Rights (UNGPs); the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work and its core conventions—covering freedom of association, the prohibition of forced and child labor, and the prohibition of discrimination; and the OECD (Organization for Economic Cooperation and Development) Guidelines for Multinational Enterprises. The policy also sets out our strategic direction and implementation framework for ensuring compliance with these international standards.

Human Rights Management Policy

### Human Rights Management Strategy

Human Rights Management Roadmap Hanwha Solutions established a mid- to long-term roadmap to ensure the systematic implementation and integration of human rights management throughout the organization. In 2025, to advance our human rights management system, we improved our human rights due diligence procedures and expanded implementation to all domestic sites. Furthermore, to elevate our human rights management and build a foundation for ongoing compliance, we operate annual action plans and remain committed to progressively enhancing human rights management practices.

Mid- to Long-term Human Rights Management Roadmap

## Human Rights Risk Management

### Human Rights Risk Due Diligence

Hanwha Solutions conducts an annual human rights survey and Human Rights Impact Assessment (HRIA) targeting both internal and external stakeholders. Internal stakeholders include groups that may be vulnerable to human rights risks, such as female employees, employees with disabilities, new hires, pregnant employees, parents of infants and toddlers, and non-regular workers, while external stakeholders include key suppliers. The results of the HRIA, related mitigation measures, and assessments of their effectiveness are reported annually to the Board of Directors through the ESG Committee. In addition, the Head of the ESG Secretariat may establish and revise detailed operational standards for the human rights risk due diligence process, as necessary.

#### Human Rights Risk Management Process

| | |
|---|---|
| Identifying human rights risks | • Employee self-assessment using checklist<br>• Identify key risks based on internal data, such as grievances handled and safety and health issues |
| Prioritizing assessments | • Grade risks based on likelihood and impact |
| Planning and implementing mitigation measures | • Develop and implement mitigation measures for identified risks |
| Evaluating effectiveness of measures | • HR and Procurement departments of each division evaluate the effectiveness of employee and supplier mitigation measures<br>• Evaluate and monitor the effectiveness of mitigation measures using High, Medium, and Low ratings. |
| Reporting and disclosing results | • Report results of the Human Rights Impact Assessment, mitigation measures and their evaluation results to the ESG Committee, once a year |

Overview of 2025 Human Rights Due Diligence Hanwha Solutions conducted human rights due diligence covering 100% of its domestic sites, including the head office and each of its divisions. The 2025 assessment found no human rights issues across any of the items in our human rights management checklist.

In particular, we enhanced our human rights risk assessment methodology as part of the 2025 due diligence process. Items were scored based on the severity, scope, and remediability of human rights risks, and the combined scores were used to classify the overall risk level. In addition, we incorporated detailed criteria based on the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises to assess and manage the materiality of human rights impacts more systematically.

#### Overview of Employee Human Rights Due Diligence

| | |
|---|---|
| Target Audience | • Strategy/Operations Division, Chemical (Head Office, R&D Center, Ulsan/Yeosu Plants), Qcells (Head Office, Jincheon Plant), Insight (Head Office, Jade business site, MUWA LAB site) |
| Human Rights Management Checklist | • Non-discrimination principle in working conditions<br>• Right to fair and favorable working conditions<br>• Freedom of association and right to collective bargaining<br>• Prohibition of forced labor<br>• Prohibition of child labor<br>• Guarantee of occupational safety<br>• Guarantee of environmental rights |

#### Overview of Human Rights Risk Assessment

| | |
|---|---|
| Evaluation of severity | • Quantitative assessment based on scale, scope, and remediability, using a 3-point scale |

| Scale | | Scope | | Remediability | |
|---|---|---|---|---|---|
| 3-points | Material human rights violation, prolonged mental distress | 3-points | Impact on multiple or overall business sites/lines/suppliers | 3-points | Permanent damage or requires long-term recovery |
| 2-points | Injury/loss that requires treatment/compensation | 2-points | Limited to certain teams/processes/suppliers | 2-points | Requires significant time, cost, and professional treatment |
| 1-points | Trivial or short-term damages that can be quickly recovered | 1-points | Individual or small number of cases | 1-points | Remediable in the short-term or with simple measures |

## Human Rights Risk Management

**Employee Human Rights Due Diligence Results** Hanwha Solutions examined potential human rights risks through the employee Human Rights Impact Assessment, focusing on key areas, including the work environment, discrimination and harassment, occupational safety and health, maternity protection, and work-life balance. For key issues identified through the assessment, we review improvement plans in collaboration with relevant departments and continuously monitor the implementation and effectiveness of mitigation measures. In 2025, we assessed the identified potential risks with a particular focus on vulnerable groups, including female employees, employees with disabilities, and pregnant employees, and confirmed that no separate risk rating was assigned based on vulnerability factors.

### 2025 Human Rights Risk Assessment Results

| Area | Human Rights Risk | Risk Level[1] | Risk Mitigation Measure | Effectiveness of Measure | Improvement Effectiveness[2] |
|---|---|---|---|---|---|
| Work Environment | Concerns over insufficient protection of employee rights due to changes in maternity protection laws | III | • Reflect legislative revisions for infertility treatment leave<br>• Use internal announcements and inform employees of revised policies | • Strengthened alignment of programs related to the protection of employee rights | • High |
| | Potential violation of employee rights due to insufficient grievance handling process | II | • Develop company-wide grievance handling process and training relevant personnel<br>• Standardize grievance processing system at each business site | • Handled 100% of grievances submitted<br>• Maintaining 0% complaints after follow-up measures | • High |
| Environment · Health | Possible industrial incidents due to undermined safety culture | III | • Conducted company-wide safety training and shared incident cases based on actual incidents | • 2025 TRIFR recorded 0.89<br>– A 33% improvement compared to the previous year | • High |
| | Employee health concerns due to exposure to pollutants | III | • Strengthen prevention facilities and pollutant mitigation activities<br>• Routine measurement and management of emission concentration levels | • 13% reduction vs. air pollutant intensity targets | • High |
| | Potential impact on the local community's living environment due to fugitive dust | III | • Strengthening operation of additional sprinkling systems to reduce fugitive dust | • Sprinkling system operation hours increased by 30% | • High |

1) Risks are classified into Level I, Level II, Level III, and No Risk in descending order of risk, comprehensively considering severity, scope, and remediability of potential human rights impacts
2) Classified into High, Medium, and Low based on the degree of improvement effectiveness

**Human Rights Due Diligence for Suppliers** Hanwha Solutions conducts human rights due diligence on key suppliers to assess and safeguard the human rights of their employees. This due diligence process is structured into four stages: Self-Assessment, On-site Assessment, Consulting, and Follow-up Monitoring. In 2025, we integrated supplier human rights indicators into our ESG assessment checklist and conducted self-assessments and on-site assessments for 33 key suppliers.

The evaluation revealed areas requiring improvement in certain suppliers, particularly regarding non-discrimination in working conditions, the guarantee of fair and favorable working conditions, freedom of association and collective bargaining, and occupational safety. To address these findings, we are actively supporting corrective actions through customized consulting tailored to each supplier's specific needs.

## Human Rights Risk Management

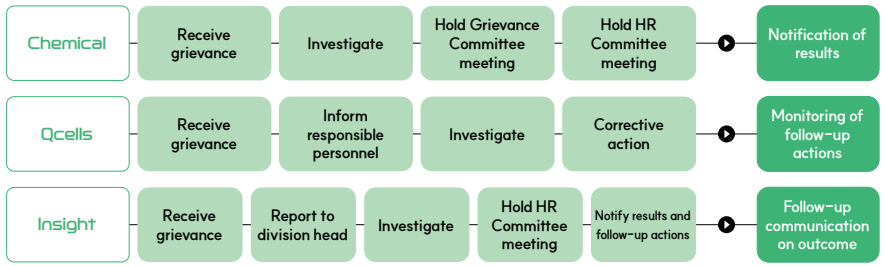
### Human Rights Grievance Counseling and Reporting System

Hanwha Solutions operates human rights grievance and reporting channels to prevent and respond promptly to human rights violations, such as sexual harassment, physical or verbal abuse, and workplace bullying that employees may experience in the course of their work. These channels are managed at the division level, and grievances submitted through various reporting channels are addressed promptly and fairly. All reported cases undergo an investigation process to verify the facts, and appropriate actions are determined through the HR Committee. We strictly ensure anonymity to protect reporters and victims from any form of discrimination, disadvantage, or retaliation. In 2025, a total of nine human rights grievances were received, and protective measures were completed for 100% of the reported cases.
In addition, Hanwha Solutions operates separate channels to address human rights grievances from suppliers. These grievances can be submitted either online or in person through channels provided by each division while in 2025, zero cases were submitted.

#### Grievance Counseling and Reporting Channels by Division

| Division | Human Rights Grievance Channels |
|---|---|
| Chemical, Wire & Cable | • HR hotline, designated grievance officers at each business site |
| Qcells | • Global Ethics Hotline |
| Insight | • Insight exclusive online HR hotline, offline grievance box, designated grievance counselors at each business site |

#### Grievance Handling Process by Division




### Promoting Employee Diversity

Non-discrimination Principle Hanwha Solutions adheres to a non-discrimination principle to guarantee equal opportunities for all employees. We prohibit discrimination in recruitment, job placement, promotion, compensation, training, and benefits based on gender, religion, disability, political opinion, social status, nationality, race, or any other factors. We continue to monitor diversity at the company in accordance with relevant legislation and the International Labour Organization (ILO) conventions.

Enhancing Diversity Hanwha Solutions is committed to creating a workplace based on diversity and inclusion where all employees can reach their full potential, free from discrimination. We operate programs that support work-life balance for female employees, such as maternal and parental benefits, and conduct initiatives to foster a family-friendly organizational culture to prevent career breaks as the Chemical Division continues to maintain its family-friendly workplace certification. The division operates a certified interviewer program and training to ensure a fair and transparent recruitment system and offers equal opportunities to all applicants by applying consistent evaluation criteria. The division also expands workplace diversity by giving extra points to individuals with registered disabilities and eligible veterans and their families. Meanwhile, Hanwha Solutions' Qcells Division operates a sports team for persons with disabilities to promote an inclusive social culture and generate social value. As of 2025, the team consists of 39 athletes, and the division offers support such as uniforms, training equipment, and training facility rentals. The division also provides monthly salaries to the athletes to help improve their performance.

Human Rights and Diversity Training Hanwha Solutions conducts regular annual human rights training including mandatory courses, such as on workplace harassment prevention, sexual harassment prevention, personal data protection, and disability awareness, as well as non-mandatory training on topics, such as child abuse prevention and reporter protection. Through such training, we aim to raise human rights awareness and foster a sound organizational culture among all employees, including contract and temporary employees. For business sites in the service sector, we also provide training for mandatory reporting of abuse against persons with disabilities, enhancing understanding of vulnerable groups and strengthening protective systems.

#### 2025 Human Rights Training

**Training topics: Workplace harassment prevention, sexual harassment prevention, disability awareness**

| Division | Total Training Hours | No. of Participants Average | Training Hours per Person |
|---|---|---|---|
| Strategy/Operations | 597 | 199 | 3.0 |
| Chemical | 3,237 | 1,079 | 3.0 |
| Qcells | 7,989 | 2,663 | 3.0 |
| Insight | 1,126 | 306 | 3.7 |
| Total | 12,949 | 4,247 | 3.0 |

# COMMUNITY DEVELOPMENT AND SHARED GROWTH

E S G

## Social Contribution Framework

### Social Contribution Governance

Hanwha Solutions operates a Social Contribution Operations Committee under the oversight of the ESG Committee to effectively implement its social contribution vision and strategy.

Social Contribution Governance System


**Social Contribution Operations Committee Composition and Role**

① Review annual performance and approve activity plans
② Audit and review appropriate use of donations
③ Develop measures to verify compliance with applicable laws, regulations, and guidelines
④ Convene Operations Committee meetings and make decisions on urgent matters (as needed)
⑤ Promote employee awareness and encourage voluntary participation in social contribution
⑥ Incorporate feedback and develop improvement measures for more effective operations of social contribution

Hanwha Solutions actively addresses local issues and fosters shared growth by working closely with a diverse range of stakeholders. To this end, we collaborate with local councils such as the Community Social Security Council, Social Welfare Council, Yeosu Industrial Complex Joint Development Council, and the Business Community Support Committee of the Korea Chamber of Commerce and Industry. Through these partnerships, we gather input and collaboratively plan and carry out community initiatives. In particular, the Hanwha Solutions' Chemical Division continuously engages with a community advisory group to collect a wide range of perspectives and contribute to solving environmental and social issues while supporting local development.

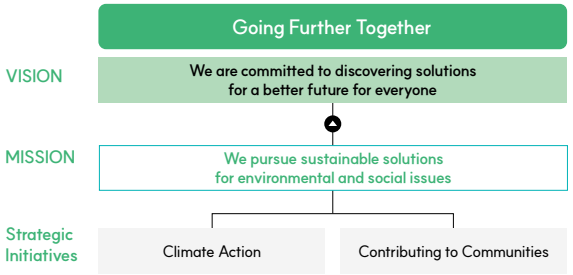
Hanwha Solutions' Qcells Division also maintains ongoing communication with local stakeholders through dedicated departments at each site. Based on the feedback received, the division identifies local issues and works together to explore collaborative solutions.

In addition, Hanwha Solutions operates an Ethical Management Hotline on its website. We expects this channel to serve as a foundation for expanding positive impacts not only within the company but also across the broader industrial ecosystem and local communities.

### Social Contribution Strategy

Hanwha Solutions has established a social contribution strategy focused on climate action and community engagement. Based on this system, we carry out a wide range of initiatives. Our Code of Ethics Practice Guidelines also include provisions related to social contribution, such as community engagement, environmental protection, and biodiversity conservation.

Social Contribution Strategy




Social Contribution Achievements

| Number of participants | Participation Hours |
|---|---|
| Total Number of Participants | Total Hours |
| 917 | 5,386 |

## Social Contribution Framework

### Mid- to Long-term Social Contribution Goals

Hanwha Solutions is systematically fulfilling its social responsibilities by establishing mid- to long-term goals and a phased action plan for community engagement. Moving forward, we remain committed to developing impactful and sustainable social contribution programs, further strengthening our communication with local communities.

Mid- to Long-term Goals for Promoting Social Contribution

| | 2024~2025 | 2026~2027 | 2028~2030 |
|---|---|---|---|
| | Strengthen local community-based social contribution | Promote social contribution initiatives that engage vulnerable groups | Develop business-aligned social contribution |
| Natural Ecosystem Conservation | Lay the foundation for climate action programs | Stabilize climate action programs | Advance climate action programs |
| | • Completed construction of Climate Change Response Station<br>• 19 sessions of wetland management and cleanup activities to strengthen biodiversity and local value<br>• Installed one soil moisture sensor for wetland management<br>• Planted 1,300 trees for ecosystem restoration (cumulative) | • Strengthen monitoring of Climate Change Response Station<br>• Record 30 sessions of wetland management and cleanup activities to strengthen biodiversity and local value (cumulative)<br>• Plant 2,000 trees for ecosystem restoration (cumulative) | • Add Climate Change Response Stations (Odaesan)<br>• Record 50 sessions of wetland management and cleanup activities to strengthen biodiversity and local value (cumulative)<br>• Plant 2,500 trees for ecosystem restoration (cumulative) |
| Local Community Support | Develop customized local programs based on feedback from the community advisory committee and drive outreach initiatives for the underprivileged | Provide support for environment improvements aimed at the elderly and neglected areas in the local community | Implement core programs that create social value aligned with the company's business model |
| | • 120 homes renovated through the Love House Project[1] since 2003 | • Complete renovations for a cumulative total of 130 homes through the Love House Project | • Complete renovations for a cumulative total of 150 homes through the Love House Project |

1) Areas of home repair include wallpaper, flooring, windows, and electrical wiring

## Social Responsibility Activities

### Identifying and Managing Negative Impacts on Local Communities

Hanwha Solutions' Chemical Division conducts systematic assessments of the direct and indirect impacts of its business activities on local communities and implements management measures to proactively address negative impacts. By continuously analyzing outcomes, assessing effectiveness, and communicating regularly with various consultative bodies, the division strengthens trust with local communities. through regular communication with various councils. Moving forward, the division will continue to actively listen to community voices and expand its positive contributions to society.

Negative Impact Management Process

**① Identifying and recognizing issues**

- Recognizes the direct and indirect impacts of corporate activities on local communities and gathers feedback through communication with various councils
- Plans to strengthen early risk identification and prompt response system by utilizing the Ethical Management Hotline channel

**Case Study**

Hanwha Solutions' Chemical Division recognized the negative impacts of deteriorating residential conditions on the safety, health, and energy efficiency of vulnerable households and identified the need for a 'Residential Environment Renewal Project' to improve their quality of life instead of simply providing one-time financial assistance. Together with local governments and social welfare groups, we selected target households and designed a program that can deliver tailored housing improvement solutions that enhance both living conditions and energy efficiency.

**② Response and management**

- Assesses situations through division-level personnel and conducts fact-checks and root cause analysis through relevant departments
- Implements solutions based on cooperation with local communities and establishes preventive measures

**Case Study**

Hanwha Solutions' Chemical Division carried out activities with the aim of resolving structural issues in deteriorated homes, enhancing energy efficiency and securing safety. Specifically, the project created a safer environment by replacing wallpaper and flooring, removing mold, reinforcing insulation and upgrading windows to minimize energy loss, and replacing outdated electrical systems and facilities. In partnership with local social welfare organizations, the entire process helped establish a sustainable residential improvement system that goes beyond temporary assistance.

**③ Outcome analysis and assessment**

- Analyzes the outcomes and assesses the effectiveness of community initiatives implemented to mitigate issues identified through communication channels

**Case Study**

The 'Residential Environment Renewal Project' exceeded its implementation target, contributing to improving the living environments and safety of vulnerable housing groups. In particular, we identified tangible impacts, including enhanced energy efficiency through insulation upgrades, reduced health risks from improved indoor environments, and increased living satisfaction and sense of security among beneficiary households. Through the Love House Project, which began in 2003, we aim to renovate a cumulative total of 150 homes by 2030. Moving forward, we also plan to expand the scope of beneficiaries and establish a methodology to quantify the project's carbon reduction effects.

## Social Responsibility Activities

### Climate Action

#### Supporting Solar Power Systems for Energy-vulnerable Groups

**Background and Key Issues**

- Hanwha Solutions' Qcells Division is leveraging renewable energy to support energy-vulnerable groups struggling with rising energy costs and limited energy access.

**Key Activities**

- The division signed an MOU with organizations, including the Korea Energy Agency, to provide free 20kW solar power systems to social welfare facilities in the Busan area. This support helps reduce electricity cost burdens and improves energy efficiency for these facilities, while actively expanding clean energy distribution and promoting mutual growth with local communities. The solar power installations also enable communities to use renewable energy reliably, contributing to the spread of sustainable energy.

**Expected Outcomes**

- Installation of 20 kW solar power systems at welfare facilities to lower their electricity costs and expand clean-energy adoption in local communities. Generation of renewable electricity through the systems, with an expected annual reduction of 12 $tCO_2eq$ in carbon emissions.


#### Healthy Streams Campaign

**Background and Key Issues**

- Hanwha Solutions' Qcells Division carried out a 'Healthy Streams' campaign to improve the water quality of local streams and rivers.

**Key Activities**

- The Qcells Division partnered with the Jincheon Volunteer Center in the first half of 2025 to take part in an EM (Effective Microorganisms) mudball-making initiative.
- Twenty-five interns from the division completed an educational session on the principles of EM and its water purification benefits and made EM fermentation liquid and mudballs themselves. They then threw the EM mudballs into the nearby Baekgok Stream, actively participating in practical efforts to restore the local environment and protect the ecosystem.

**Expected Outcomes**

- Beneficial microorganisms contained in EM mudballs, with expected effects on water quality purification and soil improvement in nearby streams

## Social Responsibility Activities

### Contributing to Local Communities

#### Providing Educational and Psychological Support for Vulnerable Children

**Background and Key Issues**

- Hanwha Solutions' Chemical Division operates various hands-on experiential and educational programs to support the healthy development and emotional well-being of children from vulnerable groups.

**Key Activities**

- Since 2023, the division has been operating an eco-friendly ecological education program for children seven times a year. The program is led by professional environmental educators to deliver a structured curriculum. Also, since 2021, the division has been offering 1:1 tailored programs by professional counselors to provide art, play, and language therapy for children affected by abuse. Through these efforts, the Chemical Division supports the emotional stability and recovery of these children, while also offering cultural experiences activities to foster the holistic development of children in local communities.

**Expected Outcomes**

- Enhanced environmental awareness among 10 children through seven annual environmental education sessions
- Emotional stability and language development support through continuous care for 5-7 children receiving psychological therapy
- Contribution to improved social skills and self-esteem in children through the operation of cultural experience activities


#### Support for Safe and Improved Living Conditions for Vulnerable Groups and Local Communities

**Background and Key Issues**

- Hanwha Solutions' Chemical Division partners with the Ministry of Justice and other affiliates of Hanwha Solutions to carry out projects to improve living conditions for the underprivileged in local communities.

**Key Activities**

- The division provides home improvement services, including residential space expansions, electrical facility repairs, window screen replacements, and home appliance repairs. It also partners with healthcare providers to contribute to stable livelihood and enhanced housing welfare for local communities.

**Expected Outcomes**

- Provision of home repair services, such as electrical repairs, wallpapering, flooring, window renewals, and screen replacements for 360 households and five senior centers, and nutritional support for over 150 vulnerable households, expected to improve the living environments for local residents


#### Urban Regeneration Murals

**Background and Key Issues**

- Hanwha Solutions' Chemical Division carried out an urban regeneration project that focuses on transforming aging walls in neglected areas into vibrant murals.

**Key Activities**

- Improving the living environment and revitalizing local communities through the urban regeneration mural project.

**Expected Outcomes**

- Improvement of the spaces used by local residents, elevating perceived satisfaction (27 beneficiaries)
- Improvement of the local landscape and enhancement of Crime Prevention Through Environmental Design (CPTED) effects

## Social Responsibility Activities

### Contributing to Local Communities

#### Operating a Sports Team for Persons With Disabilities

**Background and Key Issues**

- Hanwha Solutions' Qcells Division operates a sports team for persons with disabilities, consisting of 39 athletes across six disciplines. The division provides monthly salaries, custom uniforms, and training equipment to improve the performance of the athletes.

**Key Activities**

- At the 45th National Para Games, the team won a total of 32 medals, including the most medals in powerlifting.
- Notably, Sang-hoon Hwang participated in the powerlifting event again in 2025 following 2024, breaking all existing Korean records and achieving a triple crown.

**Expected Outcomes**

- Creation of 39 jobs by employing athletes with disabilities, contributing to the promotion and wider participation in para sports within local communities


#### School Box Support Program

**Background and Key Issues**

- Hanwha Solutions' Qcells Division carried out a 'School Box Support Event,' funded by voluntary employee donations, for children from near-poor households in the Jincheon area.

**Key Activities**

- Partnering with social welfare officials from the Jincheon County Welfare Department, the division took part in a community outreach program to assemble and distribute school supply kits to underprivileged children to create shared social value.

**Expected Outcomes**

- Assembly and delivery of 34 school supply kits using voluntary employee donations, providing practical support to underprivileged groups and strengthening ties with local community

#### Meal of Love Event

**Background and Key Issues**

- Hanwha Solutions' Qcells Division conducted a 'Meal of Love' event to provide healthy meals during severe summer heat.

**Key Activities**

- The division conducted a 'Meal of Love' event in partnership with social welfare officials from the Jincheon County Welfare Department.
- Meals were provided to users of the community welfare center for the disabled, day care service beneficiaries, and nearby residents with disabilities.

**Expected Outcomes**

- Provision of meals to 188 individuals through voluntary employee donations, offering practical support to vulnerable groups in the local community and fostering greater understanding and empathy through direct engagement with people with disabilities

# PRODUCT RESPONSIBILITY AND CUSTOMER SATISFACTION

E S G

## Quality Management Framework

### Quality Management Governance

Hanwha Solutions operates a quality management governance structure that ensures its policies are clearly communicated from top management to on-site operations. This governance enables us to assign quality-related roles and responsibilities systematically across the organization.

Hanwha Solutions' Chemical Division assigns specialized quality management teams and personnel by process, production stage, and product type. Both the Yeosu and Ulsan Plants operate structured quality management systems. Each plant is led by the Quality Assurance Team Leader and is supported by safety and environment supervisors, as well as quality innovation teams. Under these units, product-specific quality management teams are organized to support efficient quality control.

Hanwha Solutions' Qcells Division operates an established quality management system that encompasses raw material quality, cell quality, module quality, and customer quality. In 2025, the division reorganized its quality teams, integrating the raw material quality team into the cell & module quality organization, while the customer quality team was divided into dedicated domestic and overseas units. In 2026, the Quality Excellence Office was established to oversee the division's overall quality management and operate a division-wide quality assurance program. Hanwha Solutions' Insight Division assigns quality personnel to each EPC project site to manage quality at the project level.

### Quality Management Policy

Hanwha Solutions establishes and implements a quality management policy to maintain consistent product quality and ensure that all employees understand its quality objectives and standards. The policy is approved by the CEO and distributed to each team and posted for all employees to view. We also make it available to external stakeholders through our website. Hanwha Solutions' Chemical Division places customer value at the center of its business and aims to strengthen its position as a global chemical company by delivering high-quality products and services based on mutual growth.

Hanwha Solutions' Qcells Division established four key quality enhancement initiatives for product categories that require strengthened quality control, aiming to enhance competitiveness and maximize customer satisfaction. Hanwha Solutions' Insight Division operates quality policies that focus on prompt responses and recurrence prevention, while ensuring product performance and guaranteeing stable operational quality to meet customer expectations.

Chemical Division's Quality Management Policy

## Quality Management Activities

### Strengthening Quality Management

Customer-focused Quality Management Hanwha Solutions operates customer response and quality management initiatives to manage risks related to quality issues. Hanwha Solutions' Chemical Division conducts customer visits through programs such as Hello Orange at the Yeosu Plant and T/S (technical service) at the Ulsan Plant, to understand their needs and provide technical support. In 2025, seven visits were made to the Yeosu Plant and 18 visits to the Ulsan Plant as part of this initiative, enhancing customer satisfaction. Also in 2025, quality management guidelines based on product grade were revised, further strengthening our quality standards to minimize customer complaints and improve satisfaction. For large-scale project contracts in the U.S., Hanwha Solutions' Qcells Division reflects customer requirements throughout the entire process, from the contract stage to production stage. During plant system inspections, customer requirements are incorporated into standardized audit scopes within contracts. Following contract signing, audits are conducted for products supplied to multiple customers.

Hanwha Solutions' Insight Division applies quality management standards that reflect customer needs and project characteristics in EPC projects. Issues and claims that may arise during the operational phase are addressed by each relevant project manager with appropriate improvement measures. These cases create a reference for when similar claims occur in the future to drive continuous quality improvement.

## Quality Management Activities

### Strengthening Quality Control

Strengthening Quality Control in Production Hanwha Solutions operates systematic quality control across all production processes to secure consistent product quality by reflecting product specification requirements of the Chemical and Qcells Divisions' products.

Key Quality Management Activities by Division

| | |
|---|---|
| Chemical | • Conducting TOP (Total Operation Performance) programs that encourage all employees to propose ideas<br>• Holding strategic S&OP (Sales and Operation Planning) meetings at the division level<br>• (Yeosu Plant) Operating a quality collaboration system among business sites (2 quality exchange sessions/year)<br>• (Yeosu Plant) Building an automated system for the W&C product determination process<br>• (Yeosu Plant) Improving the work environment and safety for basic chemical product sampling<br>• (Ulsan Plant) Advancing quality control in line with increased production of high value-added products |
| Qcells | • Reducing cell-related defect rates from 0.087% to 0.067% by improving module yield and introducing deep-learning inspections for finished cells<br>• Reducing the process defect rate by 0.27%p through module quality monitoring and preventive quality management measures<br>• Enhancing cell shipment quality by introducing deep-learning-based inspection and strengthening shipment reliability inspection<br>• Strengthening raw material quality by introducing specialized inspections (managing oxygen and carbon concentrations on wafer/screen surfaces using FT-IR; monitoring thermal behavior of EVA using DSC; and inspecting screen specifications using automated optical microscopy) |

Fostering Talent for Quality Management Hanwha Solutions operates quality training programs to foster talent and embed a quality-first culture across the entire organization, alongside raising company-wide awareness of quality.

Hanwha Solutions' Chemical Division provides site-specific quality training to drive continuous improvement. At the Yeosu Plant, employees completed specialized training in water treatment agent quality control and automated foreign matter analysis in 2025. In 2026, the plant plans to expand practical training courses, including obtaining ISO auditor certifications, utilizing control charts, and implementing statistical process control. The division will also continue to foster a quality-centric mindset among new hires by operating internal introductory courses on quality assurance. At the Ulsan Plant, employees completed practical training on the analysis and utilization of Quality Costs (Q-Cost) in 2025. For 2026, the plant plans to support its quality assurance system through training programs focused on statistical quality control and quality planning and strategy development.

Hanwha Solutions' Qcells Division operates training for obtaining ISO auditor certifications, as well as educational programs in data analysis using Orange3 (a no-code data analysis and machine learning tool), R, and Python, and statistical analysis based on Excel. Furthermore, in 2026, the division plans to introduce new training courses on Quality Control (QC) 7 Tools, process and quality inspection data analysis, and Spotfire-based data analysis.

### Quality Management Certifications

Hanwha Solutions systematically manages quality-related risks by obtaining, maintaining, and managing quality certifications for each business division, ensuring the delivery of high-quality products and services to its customers. In addition, as part of the ISO 9001 quality management system certification process, we conduct risk assessments on customer safety and health.

Status of Quality Certifications by Division

| | |
|---|---|
| Chemical | • Quality Management System certification (ISO 9001:2015)<br>• Bureau of Indian Standards (BIS) certification (renewed) for Polyethylene (PE), Wire & Cable, Polyvinyl Chloride (PVC), PSR, Vinyl Chloride Monomer (VCM), Epichlorohydrin (ECH), and Chlor Alkali (CA) product deliveries<br>• KS certification (Korean Industrial Standards) for CA chlorine, hydrochloric acid, and caustic soda products<br>• Food Contact Material (FCM) compliance certification from Japan's JCII for seven PE grades (including LLD3120 and LD955)<br>• NSF (National Sanitation Foundation) certification for CA caustic soda and CPVC resin products<br>• Sanitary safety certification for CA Hypo water treatment chemical |
| Qcells | • Quality management system certification (ISO 9001:2015)<br>• PV module quality (PQP, Product Qualification Program) certification<br>• Global certifications for solar module products (IEC, UL, KS, CFP) |

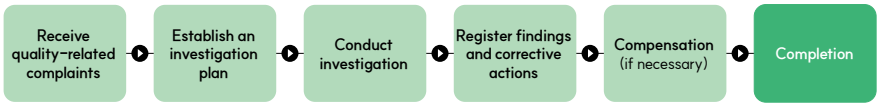
## Quality Management Activities

### Strengthening Customer Communication

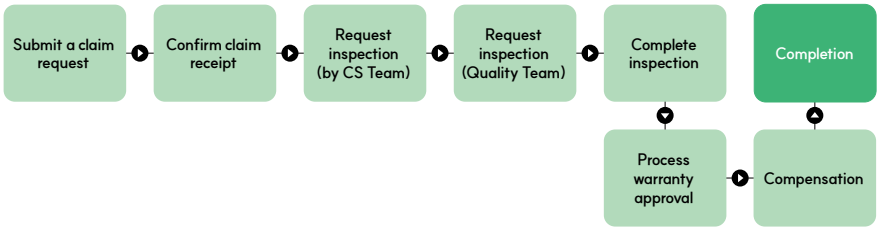
Hanwha Solutions operates various customer communication channels and actively reflects customer feedback and suggestions to proactively prevent quality-related risks.

Voice of Customer (VOC) System Hanwha Solutions operates a Voice of Customer (VOC) management system to manage customer suggestions and complaints. VOCs are received, analyzed, and addressed in accordance with established procedures. Root causes of claims are carefully identified, and preventive measures are established based on the findings, ensuring active incorporation of customer feedback into quality improvement efforts.

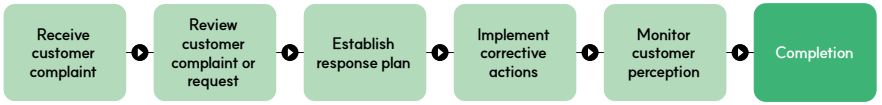
VOC Handling Procedures by Hanwha Solutions' Chemical Division




VOC Handling Procedures by Hanwha Solutions' Qcells Division




VOC Handling Procedures by Hanwha Solutions' Insight Division




1) When Hanwha Solutions is not deemed responsible, resolution is pursued through consultation with the customer

Enhancing Customer Satisfaction Hanwha Solutions places the highest value on customer satisfaction and continuously enhances its products and services by actively reflecting customer feedback across all business divisions.

Hanwha Solutions' Chemical Division conducts customer satisfaction surveys every other year and expanded the survey scope in 2025 to include not only the PVC business but also the CA and FM businesses, further reinforcing its efforts to enhance satisfaction and monitor customer satisfaction across all operations.

Hanwha Solutions' Qcells Division's quality is managed based on standards up to three times more stringent than those of the IEC (International Electrotechnical Commission). The division also conducts regular evaluations on standard test conditions (STC) and performance with domestic testing institutions such as YU, KCL, and Chungbuk TP. Such rigorous management enables the division to earn strong recognition from global certification bodies regarding the high quality of its products.

Hanwha Solutions' Insight Division's Urban Development Business Unit conducts annual year-end email surveys of customers relocating to industrial complexes under development to identify their utility usage plans and demand. These surveys, based on client email contacts gathered at the time of contract, help ensure smooth move-ins and timely utility provisioning.

Hanwha Solutions' Qcells Division's Product Quality and Reliability Highlights (2025)

| Kiwa PVEL 2025 PV Module Reliability Scorecard | EUPD 2025 TOP Brand PV | RETC 2025 PV Module Index | Module Market Share in the U.S. by Wood Mackenzie |
|---|---|---|---|
| • Kiwa PVEL PV module reliability assessment<br>– Selected for the 'TOP Performer' grade for 10 consecutive years | • Received seal from Germany's EUPD Research<br>– Selected in the U.S. for four consecutive years<br>– Selected in Europe for 12 consecutive years | • Evaluation by RETC, a U.S.-based third-party solar test center<br>– 'Highest Achievement in Performance' for two consecutive years | • Assessing market share in the U.S. module market<br>– No.1 in the U.S. residential module market for eight consecutive years<br>– No.1 in the U.S. commercial module market for seven consecutive years |

# PRIVACY AND CYBERSECURITY

E S G

## Information Security Framework

### Information Security Governance

Hanwha Solutions operates a structured information security governance system to protect the information of customers and suppliers and ensure compliance with domestic and international laws and regulations.

Hanwha Solutions' information security system is operated under the leadership of the Information Security Office and managed by the Chief Information Security Officer (CISO). The Office is responsible for personal data protection, administrative security, incident response, system security, and security planning and assessments across the company and its overseas operations. It also drives the establishment and revision of security policies and the planning and implementation of related initiatives.

#### Reporting System for Information Security


### Information Security and Privacy Policies

Information Security Policy Hanwha Solutions implements an internal information security policy based on relevant domestic laws and regulations. This policy serves as the foundation for our information security system. Revisions to the Information Security Policy reflecting changes in personal information protection laws and regulations, as well as internal and external security environment changes, are approved by the Chief Information Security Officer (CISO), the DT Head, and the CEO of each business division. The revised policies are published on our internal groupware platform, Cleverse, to ensure that all employees are informed of the change.

Privacy Policy Hanwha Solutions has appointed dedicated personnel responsible for overseeing all matters related to personal information protection, including inquiries, complaints, and remediation. To safeguard personal data, each division operates its own privacy policy in accordance with the Personal Information Protection Act. In 2025, these policies were revised to reflect changes in the internal and external environment.

#### Hanwha Solutions Privacy Policies by Division

Hanwha Solutions' Chemical Division
Hanwha Solutions' Qcells Division
Hanwha Solutions' Insight Division

### Information Security Strategy

Setting Information Security Goals Hanwha Solutions establishes annual information security goals that reflect the business direction and changes in internal and external environments to strengthen its overall management system. To support the achievement of these goals, we develop detailed targets and action plans that address heightened information security risks arising from global business expansion and the growing need to enhance domestic security systems.

#### Information Security Goals and Strategies

| | |
|---|---|
| Establishing a globally integrated information security governance system | • Conduct regular security inspections at domestic and overseas business sites and support improvements<br>• Improve information security levels<br>• Expand the adoption of advanced information security measures across domestic and overseas operations |
| Enhancing incident response and raising employee awareness of security | • Respond to new vulnerabilities and anomalies<br>• Conduct phishing response training for employees at domestic and overseas sites<br>• Provide ongoing information security training and guidance to domestic and overseas employees |
| Strengthening response to information security risks | • Perform simulated cyberattack tests<br>• Identify and address vulnerabilities through security verification<br>• Establish an attack surface management system |

#### The Four Key Areas of Information Security Management

1. Establishing, implementing, and improving information security plans
2. Identifying and assessing information security risks and establishing countermeasures
3. Conducting regular reviews of the current status and implementing improvements
4. Planning and implementing information security training and simulation exercises

## Information Security Activities

### Enhancing Information Security Incident Response Capabilities

Security Incident Response Drills Hanwha Solutions raises awareness of security incidents and strengthens its response capabilities by conducting preventive training programs based on real-world scenarios. We conducted phishing email simulation training for domestic and overseas operations using various scenarios, such as invoice, résumé, buyer, and quotation impersonation. Each division also carried out simulated penetration testing exercises tailored to the characteristics of its respective business area, including attacks exploiting internal network vulnerabilities.

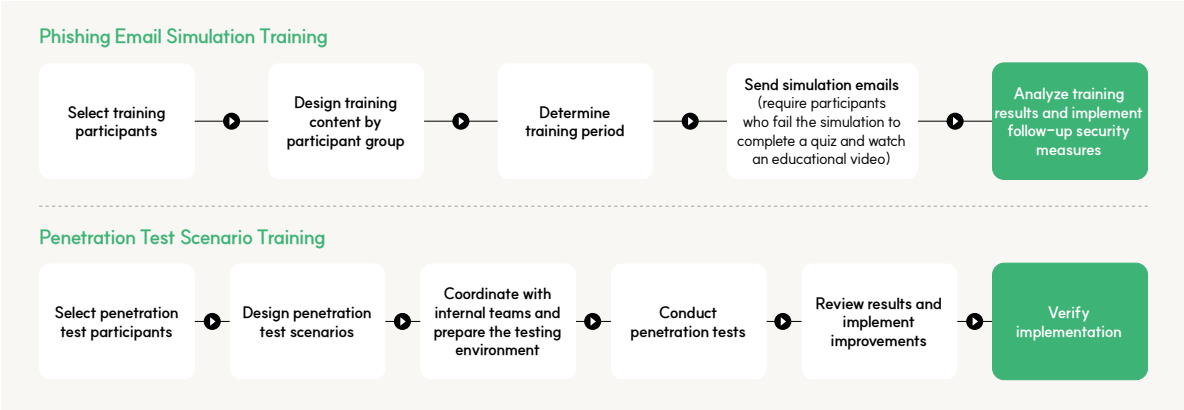
Information Security Activities at Overseas Sites Hanwha Solutions strengthened the information security management systems of its overseas operations by conducting assessments and improvements based on Cybersecurity Performance Goals (CPG). We also conducted phishing email simulation exercises in the first and second halves of the year, and distributed security training materials to help employees overseas understand proper cybersecurity response procedures.

Operation of a Cybersecurity Monitoring Center Hanwha Solutions operates a 24/7 integrated security monitoring center to respond promptly to cyber threats and breaches. Through real-time traffic monitoring, we detect and block malicious codes and external hacking attempts at an early stage. When the volume of data transmission surpasses a certain threshold, the system immediately identifies it and initiates countermeasures. This allows us to effectively block malicious and suspicious traffic and protect our information assets.

### Raising Employee Awareness of Information Security

Employee Training on Information Security Hanwha Solutions strengthens its employees' capabilities to respond to cyber threats and fosters a sense of security accountability by sharing security education content through the internal bulletin board. With recent escalations in domestic and international hacking and ransomware attacks, security incidents involving malicious emails and generative AI have become more frequent. In line with such changes, we operated training programs on key topics, such as AI phishing prevention, precautions when using generative AI, internet safety guidelines, and personal security management manuals, to raise employee security awareness and support effective responses to diverse risks. Additionally, we conduct information security awareness training specifically designed for new hires to ensure a secure onboarding process.

Training Procedures for Cybersecurity Incident Response



## Information Security Activities

### Information Security Risk Management

Infrastructure Vulnerability Assessments Hanwha Solutions conducts infrastructure vulnerability assessments twice a year to verify the security status of its IT systems while continuously addressing vulnerabilities identified through these assessments. We also review and mitigate security vulnerabilities during the introduction of new assets or systems and apply secure coding practices to rigorously assess system security.

Attack Surface Management (ASM) The term 'attack surface' refers to externally exposed systems, unmanaged security vulnerabilities, and exposed accounts or system information. Hanwha Solutions has established an attack surface management (ASM) framework to preemptively manage these risks. Through this system, we proactively detect and respond to potential attack surfaces that are exposed to the internet and could be exploited in actual hacking attempts. We also immediately investigate and respond to any newly discovered vulnerabilities, integrating them into our security review procedures to prevent security incidents.

Data Protection Hanwha Solutions implements cybersecurity measures along with data protection activities to safeguard its assets. All employees are required to install key security programs on their PCs, such as document encryption solutions (DRM, Digital Rights Management) and device control solutions (DLP, Data Loss Prevention) to encrypt work documents and control access to storage devices such as USB drives, reinforcing our data security practices.

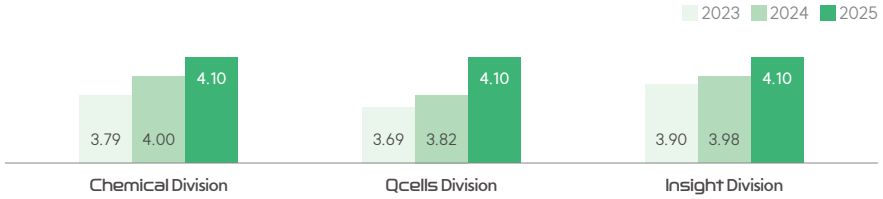
Customer Data Management Hanwha Solutions operates a rigorous management system to protect customers' personal information. When employees handle customer data, we verify the appropriateness of its use and access rights. To prevent unauthorized external access, we have established access control procedures. We also maintain Personal Data Protection Liability Insurance and conduct regular inspections of our personal information processing systems to protect data subjects' rights and ensure safe data management. Additionally, we provide training for employees who handle personal data to further strengthen customer privacy protection.

Information Security Maturity Assessment Hanwha Solutions uses its internally developed 'information security maturity' model to conduct annual measurements of management and physical security, information system security management, information system operations, and personal data protection levels with a detailed checklist for each area. Improvement items identified through the assessment are reflected in our information security goals and continuously addressed. We also monitor whether these improvements have been effectively implemented.

#### Information Security Maturity Assessment Areas

| Assessment Areas | Detailed Evaluation Items |
|---|---|
| Management and physical security | Establishment and operation of an information security management system, management of information assets, etc. |
| Information system security management | Servers, networks, databases, PCs, and cloud environments |
| Information system operations | Security vulnerability and patch management, along with backup and log handling |
| Personal data protection | Collection, use, destruction, and provision of personal data |

#### 2025 Information Security Maturity Assessment Results




### Supplier Information Security Risk Management

Hanwha Solutions requires all suppliers to sign a security agreement as part of their contracts to manage the risk of sensitive company information or personal data leaks through suppliers. Upon contract termination, we verify whether personal data has been properly managed and disposed of. Furthermore, we include supplier personnel who use our email system in Hanwha Solutions' quarterly phishing simulation training to conduct information security training for suppliers.

# COMPLIANCE AND ETHICS MANAGEMENT

E S G

## Compliance and Ethics Management Governance

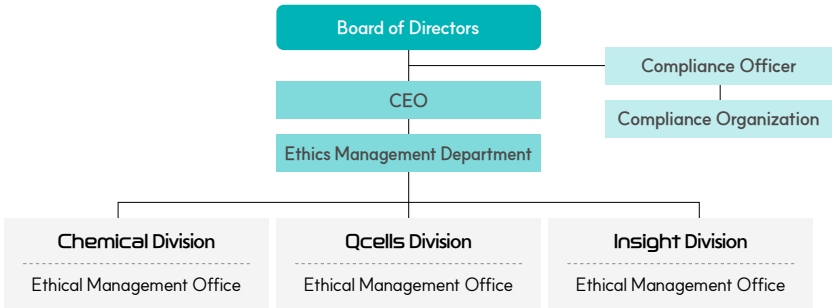
Hanwha Solutions understands the importance of compliance and ethics management and operates a governance system overseen by the Board of Directors to ensure a structured and proactive approach. The Board annually reviews our overall compliance activities, including anti-corruption and risk management initiatives, corruption risk identification and response plans, evaluations of the effectiveness of improvement measures, and the status and results of ISO certifications related to anti-corruption and compliance management. In addition, the Board has approved our Code of Ethics and delegated authority to the Compliance Office, the department responsible for ethics management, to develop its Practice Guidelines. Based on this authority, the Compliance Office has issued the Code of Ethics Practice Guidelines in accordance with Article 26 of the Code.

### Working-level Organizations for Compliance and Ethics Management

Hanwha Solutions has a Compliance Officer and Compliance Organization under the Board of Directors, conducting compliance reviews twice a year, with the Compliance Officer reporting the results to the Board. The Compliance Office, which is responsible for ethical management, operates an Ethical Management Office within each business division. Compliance activities include quarterly compliance training and monthly distribution of compliance letters. We also integrate non-financial metrics, such as compliance audits and training, into the KPIs of compliance officers. To ensure legal and regulatory compliance in internal transactions, Hanwha Solutions established the Internal Transactions Committee, composed of independent directors, under the Board of Directors to manage and oversee matters such as large-scale internal transactions. In addition, we operate a Insider Trading Review Committee. This committee is composed of relevant executives, including those responsible for fair trade, strategic planning, and legal affairs to deliberate extensively on contract legitimacy, the appropriateness of transaction terms, and the legality of other agreements.

At Hanwha Solutions, the CEO and internal control officer conduct an annual review of the internal control over financial reporting with the results reported to the Audit Committee, the Board of Directors, and the General Meeting of Shareholders. The Audit Committee evaluates internal control over financial reporting based on best practice guidelines and collaborates with the external auditor to validate audit plans and results.

Ethics and Compliance Management Organization




## Ethical Management Policy

Hanwha Solutions has established an Ethical Management Policy to address risks related to compliance and ethics management. The Ethical Management Policy is supported by concrete strategies, as outlined in the table below, to ensure its effective implementation. Through these efforts, Hanwha Solutions aims to strengthen employees' awareness of compliance, enhance their capacity for ethical decision-making, and proactively prevent risks of corruption and legal violations.

Hanwha Solutions implements ethical management based on its Compliance and Anti-corruption Policy, Code of Ethics, and H-Standard. These are Hanwha Solutions' core principles: maintaining integrity and transparency in all business activities, promoting fair business practices, and upholding social responsibility.

| Ethical Management | Core Principles | Strategy |
|---|---|---|
| Compliance and Anti-corruption Policy | Compliance with laws and regulations, anti-corruption, fair trade practices | Fair trade compliance program, internal transaction management, regulatory compliance |
| Code of Ethics | Integrity and transparency-based management, responsible decision-making | Reporting system, management of internal transactions |
| H-Standard | Code of conduct for employees, prevention of conflicts of interest | Reporting system, embedding ethics and compliance |

## Ethical Management Policy

### Compliance and Anti-corruption Policy

Our Compliance and Anti-corruption Policy and Code of Conduct form a critical foundation for transparency, ethical business practices, and sustainable growth, providing clear principles to foster a fair and ethical environment for all employees and stakeholders.

Compliance and Anti-corruption Policy and Code of Conduct

**Compliance and Anti-corruption Policy**

**Policy**

① Recognize the importance of compliance and anti-corruption and ensure trust and transparency among employees and customers
② Comply with relevant laws and internal regulations
③ Prohibit bribery and other forms of corruption
④ Maintain a clear distinction between public and private interests and ensure fair opportunities
⑤ Foster a compliance and anti-corruption culture that considers conflicts of interest
⑥ Ensure employees can raise concerns without fear of retaliation
⑦ Secure the authority and independence of the compliance officer

**Code of Conduct**

① Complying with compliance and anti-corruption laws and regulations
② Adhering to internal policies related to compliance and anti-corruption
③ Strictly eliminating all forms of corrupt practices
④ Providing fair opportunities to all employees
⑤ Fostering a corporate culture of compliance and anti-corruption

### Code of Ethics

The Code of Ethics articulates our ethical commitments to customers, suppliers, employees, and society, setting a clear direction for responsible business practices. The accompanying guidelines outline specific principles of conduct for putting these values into practice. Furthermore, in 2025, we revised our Guidelines to strengthen policies concerning anti-corruption, anti-retaliation for whistleblowers, anti-money laundering, and the prohibition of animal testing. In particular, the revised anti-corruption guidelines clearly define and strictly prohibit acts of bribery, conflicts of interest, and facilitation payments.

Code of Ethics | Code of Ethics Practice Guidelines

**Code of Ethics**

**Code of Ethics**

① Responsibility and obligations to customers
② Compliance with laws and respect for the principles of a free market economy
③ Mutual growth with suppliers
④ Core ethical principles for employees
⑤ Responsibility to employees
⑥ Responsibility to the nation and society

**Practice Guidelines**

① Guidelines on the selection of suppliers and fair trade practices
② Guidelines on the acceptance of money, gifts, and entertainment
③ Guidelines on the use of company assets
④ Guidelines on anti-money laundering practices
⑤ Guidelines on document/account manipulation and false reporting
⑥ Guidelines on environmental management practices
⑦ Guidelines on fair trade and the prevention of unfair competition
⑧ Guidelines on other basic employee ethics
⑨ Compliance with and enforcement of the guidelines

### H-Standard

Hanwha Solutions operates H-Standard, a standard for all employees to adhere to in performing their work. Hanwha Solutions seeks to build a healthy and dynamic organizational culture, pursue mutual growth with customers and suppliers, uphold social values, and align with international standards. These efforts are rooted in our core values of dedication and integrity.

H-Standard

| Category | Principles | Detailed Guidelines |
|---|---|---|
| Individual | Sincerity and dignity | Maintain dignity and integrity as a proud member of Hanwha Solutions, and fulfill one's responsibilities with honesty and sincerity. |
| | Execution of duties in a fair and transparent manner | Perform duties fairly and transparently in accordance with laws, common sense, and principles, and refrain from giving or receiving any gifts or benefits in relation to work. |
| Company | Respect and consideration for colleagues | Respect colleagues' dignity, embrace diversity, and do not engage in verbal or physical abuse, sexual harassment, bullying, or unjust work orders. |
| | Safe and healthy work environment | Follow all safety and health standards to ensure a safe working environment and help foster a healthy and energetic workplace culture. |
| | Protection of company assets and information | Use the company's financial and tangible/intangible assets appropriately for business purposes, and safeguard confidential company information such as trade secrets. |
| | Harmony with the company | Do not pursue illegal personal gain, and in cases of conflict of interest arising from personal relationships, ensure that company interests are not compromised. |
| Society | Respect for customers | Respect the diverse opinions of customers and do one's utmost to earn their trust and satisfaction. |
| | Shared growth with business partners | Pursue mutual benefit and shared growth with business partners as trusted collaborators and avoid any unfair practices. |
| | Respect for social values | Uphold universal social values and respect societal norms and commitments, building trust in the company's conduct |
| | Adherence to global standards | Comply with global standards and respect the local cultures and values of international communities. |

## Spreading Ethical Management

### Reporting Channel

Hanwha Solutions operates an anonymous, independent reporting channel to support ethical management. The hotline runs 24/7 year-round and is available on the company intranet and through the HOTLINE section of the corporate website, so external stakeholders can also submit reports. The system supports multiple languages, including Korean and English, making it accessible to global employees and external stakeholders. When reports regarding compliance and ethics, such as fraud, violations of social values, or conflicts of interest, are received, the Ethical Management Office promptly investigates the facts and takes appropriate action in accordance with relevant laws and regulations.

Furthermore, we have protective measures in place, such as guaranteeing anonymity through strict confidentiality and identity protection, as well as preventing any retaliation against whistleblowers through liability reduction. Notably, in 2025, we also codified the prohibition of disadvantageous treatment against whistleblowers.

We also proactively promote the reporting system to our employees through our existing compliance guidelines and training programs.

#### Reinforcements to the Reporting System in 2025

| | |
|---|---|
| 1 Specified identity protection | Disclosing identity of reporter without prior consent is strictly prohibited |
| 2 Expanded protection | Prohibits retaliation for reporting, testimony, or evidence submission |
| 3 New disciplinary mitigation clause | Allows full or partial disciplinary mitigation for unintentional or non-gross negligence identified in the reporting process |
| 4 Additional reporting channel | Added the website HOTLINE as an official reporting channel |
| 5 Reinforced protection obligation | Reinforced the company's protection responsibility by codifying prohibition of disadvantages against whistleblowers |

#### Reporting System Process

| | Steps | Details |
|---|---|---|
| 1 | Receive report | • Receive reports through the ethical management HOTLINE or internal system |
| 2 | Classify report and request cooperation | • Determine investigation lead (relevant division or management)<br>• Request cooperation from relevant departments |
| 3 | Investigate report | • Conduct fact check of the report (analyze report data, interview the person reported and his/her team, etc.) |
| 4 | Confirm and report outcome of actions taken | • Prepare report on investigation results<br>• Hold HR Committee meeting and determine disciplinary measures |

#### Key Items for Report

| Report Items | Examples |
|---|---|
| Receiving and borrowing gifts and hospitality | Receiving or borrowing money, gifts, or entertainment from business partners or external stakeholders |
| Leaking internal data | Unauthorized disclosure or external transfer of proprietary company information or trade secrets |
| Theft, embezzlement, misuse of assets | Theft of office assets, personal use of company expenses, and personal use of corporate credit card |
| Improper solicitation and unjust demands | Improper solicitation of favors, preferential treatment requests, or demands for personal benefits in personnel and business transactions |
| Abuse of authority | Unjust work instructions, insulting language or behavior, and abuse of power or authority |
| Document falsification and fraudulent reporting | Falsification of performance, expenses, or records and reports |
| Preferential treatment, equity Participation, concurrent positions | All activities involving companies with potential conflicts of interest |
| Other ethical policy violations | Violations of the Code of Ethics, Code of Conduct, or other internal regulations |

### Embedding Ethics and Compliance

Hanwha Solutions provides regular ethics and compliance training for all employees, including part-time and contract-based employees. Led by the Compliance Office, training in 2025 covered a range of legislative topics including the Monopoly Regulation and Fair Trade Act (MRFTA), subcontracting act, and trade secret protection. These efforts help employees consistently adhere to ethical standards and meet legal requirements.

In addition to regular training, Hanwha Solutions implements various communication initiatives such as compliance letters and ethics messages. Monthly compliance letters share recent developments and best practices, while messages from the CEO or ethics officer, typically sent during holidays, encourage legal compliance and promote a culture of integrity.

#### Ethics and Compliance Training in 2025

| Target | Course Name | Date |
|---|---|---|
| All employees | Training on trade secret protection | Mar. 10, 2025 |
| | Training on the MRFTA | Mar. 31, 2025 |
| | Training on the Subcontracting Act | Jun. 25, 2025 |
| | Revisions to guidelines on related-party transactions review | Sep. 15, 2025 |
| | Legislative and policy trends of the new administration | Oct. 16, 2025 |
| Tandem TF | Training on trade secret protection | Apr. 21, 2025 |
| Experienced new joiners | Training on trade secret protection | May 22, 2025<br>Nov. 18, 2025 |
| New joiners | Training on trade secret protection | Jun. 10, 2025 |

## Fair Trade

### Compliance Program (CP)

Hanwha Solutions has established Practice Guidelines and conducts ongoing monitoring to strengthen our fair trade compliance efforts with suppliers. We ensure equal opportunities for all suppliers and operate systems to prevent violations before they occur.

As part of our fair trade compliance program, we maintain an internal compliance framework to ensure adherence to fair trade regulations and enhance trust in our business practices. A Compliance Program Manager, entrusted with full authority and responsibility by the CEO, oversees the program while a dedicated department supports the Compliance Program Manager by managing day-to-day operations. This structure supports the development of a fair trade compliance culture across the organization.

**8 Core elements of Hanwha Group's CP (Compliance Program)**

① Establishment and implementation of CP standards and procedures
- Helping employees understand and comply with fair trade regulations by establishing and implementing relevant standards and procedures

② Top management's commitment and support for compliance
- Publicly declaring the CEO's commitment to compliance and actively supporting CP operations

③ Appointment of a Compliance Program Manager
- Assigning a manager under the highest decision-making body to oversee CP operations with full authority and responsibility

④ Development and use of a CP manual
- Developing manuals that incorporate fair trade laws and CP guidelines
- Ensuring easy access and use for employees

⑤ Ongoing and systematic compliance
- Providing regular, structured training on fair trade laws and CP requirements, especially for key departments

⑥ Establishment of an internal monitoring system
- Establishing monitoring and audit systems to prevent and detect violations early
- Providing regular reports on the findings

⑦ Disciplinary action for violations
- Imposing disciplinary measures in accordance with internal regulations for violations of fair trade laws
- Establishing measures to prevent recurrence

⑧ Evaluation and improvement of effectiveness
- Conducting regular evaluations to ensure the continuous operation of CP
- Implementing improvement measures based on evaluation results

### Results of the Unfair Trade Risk Assessment

Hanwha Solutions identifies and manages risks related to unfair trade practices of each division as part of its efforts to establish a fair and transparent business environment. We operate a tiered risk assessment framework and regularly monitor key risks such as collusion among industry peers, omission of internal transaction reviews, and improper solicitation. According to the assessed risk level, corrective actions and follow-up monitoring are implemented.

Assessment and Response Activities for Fair Trade-related Risks by Division

| Division | Risk | Assessment results | Follow-up actions | Planned actions | Effectiveness of actions taken |
|---|---|---|---|---|---|
| Chemical | Fines due to violation of the Fair Trade Act | Medium | • Proactive review of risks (legal consultation, department alignment, etc.)<br>• Training on the Monopoly Regulation and Fair Trade Act (MRFTA)/ Subcontracting Act<br>• Signing Compliance Commitments and operating internal reporting channel<br>• Holding regular supplier meetings | • Inform employees on the risk of violating the MRFTA<br>• Obtain review from the Legal Team prior to contract execution and ensure compliance with all contract requirements | • Proactively prevents potential legal violations and reduces risk by securing contract integrity |
| Qcells | Non-compliance risk due to unsigned standard subcontracting agreements | Major | • Compliance training on the MRFTA and Subcontracting Act, etc.<br>• Proactive review of risks (legal consultation, department alignment, etc.) | • Monitor contracts by trade through the Subcontracting Internal Review Committee<br>• Inform teams/manager of unsigned contracts for prompt execution<br>• Strengthen internal awareness of subcontracting agreements | • Maintaining zero unsigned contracts through ongoing monitoring |
| Insight | Risk of fair trade (unfair assistance) issues | Medium | • Proactive review of risks (legal consultation, department alignment, etc.)<br>• Developing internal trading review process and distributing guidelines | • Ongoing review of unfair assistance issues and price adequacy for internal transactions<br>• Implement continuous change management to prevent unfair assistance risks | • Operate an internal control system to prevent potential legal violations<br>• Ensure the appropriateness of intercompany transactions and enhance compliance awareness |

## Activities to Strengthen Compliance

### Compliance Review

Hanwha Solutions' Compliance Office, the compliance support organization, conducted a review of all departments regarding compliance with civil and commercial laws, antitrust regulations, and other relevant legislation. Hanwha Solutions conducted compliance reviews for the first half of 2025 in September and for the second half in February 2026. We identified two non-compliance cases in each half of 2025. In response, disciplinary measures were taken in accordance with internal regulations, and issues raised by supervisory authorities were promptly addressed. We have completed the payment of administrative fines and confirmed that all necessary equipment replacements, repairs, and follow-up measures have been fully implemented.

**STEP 1. Prepare and plan**
- Led by the Compliance Office
- Plan reviews in consultation with compliance officers

**STEP 2. Conduct review**
- Routine and ad hoc reviews
- Department-level reviews using standardized checklist

**STEP 3. Submit results and implement actions**
- Submit non-compliance issues and corrective action plan
- Monitor implementation

**STEP 4. Follow up and report**
- Report to the Board of Directors
- Develop follow-up plan

### Compliance Goals and Performance

Hanwha Solutions manages quantitative indicators for compliance and ethical management to strengthen its compliance and ethics performance. We enhance the operational effectiveness of our ethics and compliance framework and ensure that our strategic goals, such as preventing corruption and establishing a fair trade order, translate into actual performance. By monitoring these quantitative metrics, we preemptively identify risks, derive improvements for internal controls, and support the integration of a sustainable ethical management culture.

#### Compliance Goals and Performance

| Category | 2025 Targets | 2025 Performance |
|---|---|---|
| Compliance review | • Semiannual compliance review led by the Compliance Office for each department | • Two regular compliance reviews (including on anti-money laundering in 2H)<br>• Three anti-corruption assessments |
| Internal transactions management | • Internal Transactions Committee reviews and approves internal transactions subject to the Monopoly Regulation and Fair Trade Act | • 35 resolutions on internal trade and all 35 approved<br>• 100% attendance rate by committee members |
| Embedding ethics and compliance | • At least one training session per quarter for employees involved in relevant tasks<br>• Monthly compliance letters | • Four quarterly training sessions and additional ad hoc training<br>• 12 compliance letters prepared and posted |
| Enterprise risk management | • Each department identifies risks related to unfair trade and anti-competition<br>• Identified risks are graded and quantified<br>• Develop and implement mitigation plans and plans to address risks | • Completed risk identification and risk grading by division, and execution of mitigation plans<br>• Improved risks based on effectiveness assessment |
| Compliance review and risk management at the Board level | • Board-level discussions when annual compliance support activities and company-wide risk management matters are reported to the Board for approval<br>• Board-level measures to prevent and mitigate unfair trade and anti-competitive practices | • Three reports made to the Board of Directors in 2025 (compliance support activities and company-wide risk management outcome, etc.) |
| Protection of whistleblowers | • Adherence to procedures for handling internal reports and protection of whistleblowers | • Six reports received and six reviewed by the organization<br>• Among the reviewed cases, one was confirmed<br>• 0 employees subject to disciplinary measures regarding confirmed cases |

#### 2025 Compliance Review Results

| Category | 2025 1H Activities | 2025 2H Activities |
|---|---|---|
| Date | Sep. 11, 2025 ~ Sep. 30, 2025<br>(review of 2025 1H activities held in Sep 2025) | Jan. 30, 2026 ~ Feb. 11, 2026<br>(review of 2025 2H activities held in Jan-Feb 2026) |
| Objective | To recognize internal processes for applying legislation and confirm compliance intent | |
| Target | All divisions | |
| Review Items | Civil, commercial, and criminal laws, fair trade, anti-competition, permits and licenses, etc. | |
| Review of Results and Corrective Actions | • Each department conducted compliance review based on a checklist<br>• Results are sent to the Compliance Office | • Compliance Office confirms and takes action when anomalies are found in the review results<br>• Report to Board of Directors |

## Activities to Strengthen Compliance

### Response to Compliance Regulations

Hanwha Solutions monitors developments in domestic and international compliance-related legislation. We actively pursue responsive measures and track the outcomes of these efforts.

| Applicable Domestic/International Laws | Response Activities |
|---|---|
| Monopoly Regulation and Fair Trade Act | • Developing and distributing guidelines for reporting the inclusion or exclusion of affiliates |
| Subcontracting Act | • Notifying relevant parties of legislative amendments, conducting legal reviews on compliance with disclosure requirements, including scope, applicable entities, and effective periods, and completing required disclosures<br>• Distributing practical guidelines and providing standard contract templates<br>• Reviewing the overall legal compliance of processes related to the supply price indexing system |
| Act on the Promotion of Mutually Beneficial Cooperation between Large Enterprises and Small and Medium Enterprises | |
| Unfair Competition Prevention Act | • Conducting internal assessments and revising relevant internal regulations |

### Strengthening Management of Internal Transactions

Hanwha Solutions rigorously manages the appropriateness and legal compliance of internal transactions as part of its ethics management. To this end, we have established a Insider Trading Review Committee within the Board of Directors, which reviews and approves transactions requiring board approval under applicable laws. In addition, key internal transactions are reviewed by the Insider Trading Review Committee. Through these measures, Hanwha Solutions works to prevent unfair transactions between affiliates, foster a fair and transparent business ecosystem, and protect the rights and interests of its suppliers and customers. We also prohibit illegal cartel conduct and unfair trade practices and adhere to the principles of fair trade to establish a transparent and equitable trading culture.

### Internal Control over Financial Reporting (ICFR)

Hanwha Solutions has established a dedicated Internal Control over Financial Reporting (ICFR) team to strengthen the Enterprise Risk Management framework and ensure effective operation of internal controls. Furthermore, we continuously monitor key internal and external factors that impact our internal control over financial reporting system, such as changes in the business environment and regulatory amendments, to proactively identify and mitigate potential risks.

In particular, in response to increasingly stringent fraud risk management requirements, including the recent amendments to the Detailed Enforcement Rules of the External Audit Regulations, we have strengthened controls over fraud risks related to treasury activities through external expert consultations and internal review procedures. In addition, by transparently disclosing how these internal controls are operated, we have improved our ability to manage treasury risks while enhancing the reliability and efficiency of our internal control system.

Hanwha Solutions collaborated with external accounting experts to develop operational plans for key domestic and overseas subsidiaries to establish consolidated internal control over financial reporting. We are currently reviewing the evaluation procedures in response to the expansion of scope of consolidation and the roll-out of operational guidelines. We also promote accounting transparency and reliability of financial reporting through group-wide ethics codes, fraud prevention programs, and consolidated closing controls.

The CEO and the Internal Accounting Control Officer report on the operations of the internal control over financial reporting system to the Audit Committee, the Board of Directors, and the General Meeting of Shareholders. Meanwhile, the Audit Committee evaluates the adequacy and effectiveness of the system through management reports and regular communication with the external auditor.

Hanwha Solutions also provides regular training to members of the Audit Committee to enhance their understanding of their roles and responsibilities, internal control over financial reporting, and the latest regulatory developments. In addition, we support effective audit operations by sharing periodic updates on the external auditor's findings regarding financial audits and internal controls.

## Ethics and Compliance Certifications

Hanwha Solutions addresses corruption and compliance risks within the organization effectively and enhances the international credibility of its management framework by obtaining ISO 37001 (Anti-Bribery Management System) and ISO 37301 (Compliance Management System) certifications. Guided by these standards, we manage an annual cycle that includes identifying legal non-compliance and corruption risks, developing and executing response plans, and evaluating the effectiveness of these measures. Furthermore, we continuously monitor the system's implementation level and track areas for improvement through regular audits.

In 2025, the ISO 37001 and 37301 audit found no non-conformities or major deficiencies, and response plans have been developed for recommended improvements, including incorporating the Management Review Report. In addition to the audit results, we reported the status of our anti-bribery management system to the Board of Directors, including procedures for identifying and assessing bribery risks, establishing and implementing response plans, and evaluating the effectiveness of corrective measures.

### Ethics and Compliance System Certifications

| Certifications | Key Risks Addressed | Objectives and Key Audit Criteria |
|---|---|---|
| ISO 37001 (Anti-bribery Management System) | Bribery and corruption risks, conflicts of interest | • Procedures in place to prevent bribery<br>• Training for employees and suppliers on anti-corruption and compliance<br>• Reporting and disciplinary procedures in the event of corruption |
| ISO 37301 (Compliance Management System) | Compliance risks | • Maturity of the organization's compliance culture<br>• Leadership and accountability of management<br>• Evaluation of legal compliance and internal control systems |

### Overview and Results of ISO Post-certification Audits in 2025

| Category | | Details |
|---|---|---|
| Common | Date/Scope | • November 25~26, 2025 / All Divisions |
| | Objective | • To verify compliance with audit criteria, confirm effective understanding, and assess alignment with the organization's policies and objectives.<br>• To assess management and effectiveness<br>• To verify corrective actions for identified non-conformities<br>• To assess whether the management system meets all legal, regulatory, and customer requirements.<br>• To identify potential improvement areas in the management system |
| Surveillance Audit (ISO 37001) | Results | • No non-conformities (3 opportunities for improvement) |
| | Response Plan | • Issues identified during the Audit Team's audit will be reflected in the Management Review Report |
| Surveillance Audit (ISO 37301) | Results | • No non-conformities (1 opportunity for improvement) |
| | Response Plan | • Enhance handover of relevant documents during personnel changes. |

# RISK MANAGEMENT

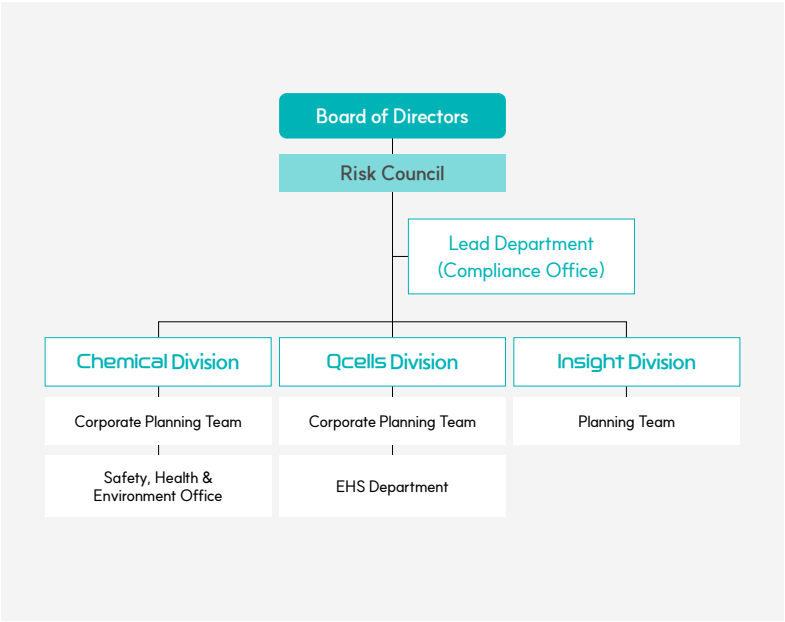
E S G

## Risk Management Framework

### Risk Management Governance

Hanwha Solutions operates a risk management framework for identifying various risks that may arise while conducting business activities. Enterprise Risk Management is carried out in stages by the Board of Directors, Risk Council, lead department, and working-level departments. Hanwha Solutions operates its Risk Council to enhance the effectiveness of risk management and coordinate and review risk-related matters across departments. The council performs deliberation functions within the Enterprise Risk Management system, reviewing the adequacy of risk identification results, risk assessments, and mitigation action plans submitted by working-level departments, and proposes directions for improvement when necessary. The Strategy Division's Compliance Office serves as the lead department for risk management and oversees all related duties, including establishing the company-wide risk management plan and operating the risk assessment framework. Furthermore, it ensures the transparency and systematic nature of risk management by facilitating deliberations of the Risk Council and reporting key matters to the Board of Directors when necessary. Meanwhile, working-level departments are the primary owners of company-wide risk response. They directly identify and evaluate various risks that may arise at business sites, and classify risk levels based on severity, impact, and likelihood. Based on these assessments, they establish and execute mitigation action plans to proactively prevent risks and minimize potential damages, demonstrating precision in terms of execution and initial response within the risk management system.

Risk Management Organization




**Risk Council**

Composition: Working-level responsible persons at the team leader level or above at relevant departments (*secretary is designated by the Compliance Office)

Frequency: Regular meetings held at least once a year and upon demand

Key deliberation items

- Reviewing the appropriateness of the risk management plan and key areas of focus
- Reviewing the risk identification and assessment results submitted by working-level departments
- Coordinating between departments and setting the direction for improvement regarding risks
- Evaluating the adequacy of proposed response plans, reviewing outcomes and evaluation reports
- Assessing the need to establish or revise risk-related policies and procedures

**Lead Department (Compliance Office)**

Key role

- Establishing the company-wide risk management framework and operational standards
- Reviewing and finalizing risk assessments and response plans
- Consolidating results from working-level departments and determining risk levels
- Reporting annual risk assessments and response activities to the board of directors
- Operating the Risk Council and serving as its secretariat
- Updating the risk management system in response to legal and environmental changes

**Working-level Departments**

Key role

- Identifying and assessing risks at the business or organizational level at least once a year
- Preparing risk assessment tables and reporting to the lead department
- Developing and implementing response plans, conducting follow-up evaluations and reports
- Participating in the Risk council and coordinating risk levels, when necessary

## Risk Management Activities

### Risk Management Process

Hanwha Solutions operates a risk management process to manage risks that may arise across the company's business activities. To strengthen Enterprise Risk Management, we revised our risk management regulations by clearly defining procedures and developing detailed implementation rules and supporting policies.

Our risk management process consists of five key stages: identifying risks, assessing risks, developing and implementing response plans, evaluating the outcomes of those actions, and reporting to and obtaining approval from the Board of Directors. Each business division conducts risk identification and assessment using standardized risk assessment templates. Based on the assessment results, the Compliance Office develops and implements response measures and monitors the effectiveness of those actions. These outcomes are then reported to the Board by the head of the Compliance Office, who is head of the risk management department, for final approval.

Regular risk assessments are conducted in the first quarter of each year with results reported to the Board. In addition, ad hoc risk assessments are conducted when needed. Each department also conducts ongoing monitoring and reassessments of potential risks and takes immediate response measures when necessary. This entire risk management process is carried out over the course of a year and plays a critical role in enhancing the structure and efficiency of our risk management efforts.

Risk Management Process

| | |
|---|---|
| 1 Risk identification | • Identifying risks by working-level departments<br>• Each division fills out assessment template |
| 2 Risk assessment | • Conducting initial risk assessment by relevant departments and classifying risk levels<br>• Reassessing risks by the Risk Council, if necessary |
| 3 Development and implementation of response plan | • Notifying working-level departments of final risk levels by the lead department<br>• Preparing risk response plans by working-level departments<br>• Developing response plans for each risk |
| 4 Evaluation of response outcomes | • Implementing response plans and preparing outcome reports and follow-up plans<br>• Assessing the effectiveness of the response and re-evaluating risk levels assigned to the working-level departments<br>• Conducting risk level-based meetings |
| 5 Reporting to and approval by the Board of Directors | • Preparing improvement measures through Risk Council meetings<br>• Reporting and obtaining Board approval on annual risk management outcomes |

Risk Assessment and Management Approach Hanwha Solutions evaluates risks based on their likelihood of occurrence and severity of impact. Likelihood is categorized into five levels based on historical occurrences and future probability. Impact severity is comprehensively assessed across the five levels of Insignificant, Minor, Moderate, Major, and Critical Impact based on scale of financial loss, compliance impact, stakeholder impact, and reputational impact. By combining likelihood and impact severity, a final risk rating is assigned across five levels: Critical, Major, Medium, Minor, and Insignificant. Working-level departments establish and implement response plans and evaluate their effectiveness according to these risk levels. The results of corrective actions taken for each risk level are then reviewed by the lead department, deliberated by the Risk Council, and reported to the Board of Directors.

## Risk Management Activities

### Management of Tax-related Risks

Hanwha Solutions strictly complies with the tax laws and regulations of each country in which it conducts business and faithfully fulfills its tax filing and payment obligations. In response to the changing tax environment, we continuously monitor relevant laws and regulations, and practice responsible tax payment based on a transparent tax management system.

#### Tax Summary

| Category | Unit | 2024 | 2025 |
|---|---|---|---|
| Profit(Loss) before income tax | KRW million | (1,423,701) | (837,968) |
| Income tax expense (benefit) | KRW million | (315,645) | (225,142) |
| Effective tax rate | % | N/A | N/A |
| Corporate income taxes paid | KRW million | 71,760 | 70,669 |
| Cash tax rate | % | N/A | N/A |

#### Corporate Income Tax Overview by Region on a Consolidated Basis (2025)

(Unit: KRW million)

| Category | Country | Company/Entity Name | No. of Entities | Key Business | Sales[1)] | Operating Profit (Loss)[1)] | Income Tax Expense (Benefit)[1)] |
|---|---|---|---|---|---|---|---|
| Domestic | | | | | | | |
| Korea | | Hanwha Solutions, Hanwha Advanced Materials, Hanwha e-ssential, Hanwha City Development, etc. | 29 | Petrochemical raw materials, petrochemical processing, solar products and services, electronic materials, real estate development and supply | 6,674,112 | (482,423) | (114,940) |
| Overseas | | | | | | | |
| Europe | Netherlands | Q ENERGY Europe NL Holdings B.V., etc. | 3 | Solar power | 3,488 | (1,973) | - |
| | Germany | Hanwha Q CELLS GmbH., etc. | 26 | Solar related products, Solar power generation | 717,201 | (277,378) | (9,245) |
| Asia | Malaysia | Hanwha Q CELLS Malaysia Sdn. Bhd., etc. | 3 | Solar products manufacturing | 393,501 | 31,314 | 2,099 |
| | Japan | Hanwha Solutions Japan G.K., etc. | 3 | Solar materials | 20,589 | 2,381 | 33 |
| | China | Hanwha Chemical(Ningbo) Co., Ltd., etc. | 6 | Chemical compounds, automotive parts material | 428,872 | (37,675) | 941 |
| | Thailand | Hanwha Chemical(Thailand) Co.,Ltd., etc. | 2 | Chemical compounds | 31,979 | 1,570 | 128 |
| North America | United States | Hanwha Q Cells Americas Holdings. Corp., etc. | 128 | Solar products and services, recycling end-of-life solar modules, automotive parts manufacturing, processing | 6,781,285 | 383,352 | (139,796) |
| South America | Chile | Hanwha Q CELLS Chile SPA | 1 | Construction and sales of solar power systems | 341 | (1,823) | - |
| Others | | | 229 | - | 163,408 | 3,446 | 5,544 |

1) Amount before consolidation adjustments

## Risk Management Activities

### Risk Identification and Management by Division

Hanwha Solutions established and implemented response plans for key identified risks in 2025, evaluated the effectiveness of the actions taken, and reported it to the Board of Directors.

Key Risks by Division

| Category | Identified Key Risks | Risk Mitigation Measures and Results | Future Plans | Effectiveness of Measures |
|---|---|---|---|---|
| Strategy/ Operations | Liquidity risks | • Developed daily, weekly, monthly, quarterly cashflow plans and analyzed performance<br>• Weekly monitoring of each division's cash flow plans and daily monitoring of cashflow needs<br>• Managing funds by period | • Update weekly cashflow plans of each division, check daily cash requirements, and manage available funds by period relative to cash needs<br>• Strengthen communication and management of non-recurring cash demands | • Minimizing risks through continuous response efforts<br>• No change in factors determining risk level |
| | Risk of patent infringement | • Analyzed patent infringements in each development stage, conducted regular monitoring, and implemented measures to avoid infringement | • Proactively eliminate potential risks through ongoing inspection of internal processes regarding each division's cash inflow/outflow and make improvements, when needed | • Minimizing risks through continuous response efforts<br>• No change in factors determining risk level |
| Chemical | Changes in consumer behavior and negative perception of existing business | • Identified trends of existing business areas<br>• Provided carbon footprint data and life cycle assessment (LCA) outcome for products<br>• Addressed recyclable and bio-based material certification | • Calculate and disclose carbon footprint data | • Expanding the use of eco-friendly materials and disclosing product carbon footprints are expected to facilitate the transition to eco-friendly products and reduce future regulatory risks. |
| | Increasing demand for renewable energy use | • Identified renewable energy business needs and monitored relative policies<br>• Evaluated the economics of sourcing renewable energy and developed a sourcing plan | • Continue monitoring relevant government policies and voice opinions<br>• Monitor renewable energy sourcing/prices | • Improving management through ongoing monitoring |
| Qcells | Risk of non-compliance with the Subcontracting Act due to failure to enter into standard subcontract agreements | • Proactive assessment of risks through legal consultations and cross-departmental alignment<br>• Training for internal employees on the Monopoly Regulation and Fair Trade Act and Subcontracting Act<br>• Held regular meetings with suppliers | • Operate Internal Review Committee to monitor subcontract agreements<br>• Inform relevant departments and take prompt action regarding unsigned contracts and reinforce awareness of contract execution | • Reducing likelihood by identifying risks in advance<br>• Lowering risk level from Major to Medium |
| | Risk of fair trade violations arising from supplier misconduct | • Operated an ethics reporting channel for internal and external stakeholders | • Conduct compliance training for internal employees<br>• Compliance and anti-corruption commitments signed by suppliers | • Reducing likelihood by identifying risks in advance<br>• Lowering risk level from Major to Medium |
| | Risk of safety and environmental accidents | • Identified and managed safety and environmental accident risk factors<br>• Managed waste by business site and production line<br>• Conducted training for employees to respond to emergency situations | • Prevent accidents and conduct safety training through monthly inspections on near-miss incidents<br>• Conduct monthly production line inspections and waste disposal processes<br>• Establish a continuous emergency response system and conduct regular training | • Reducing likelihood and impact by identifying risks in advance<br>• Lowering risk level from Major to Medium |
| Insight | Risk of suspension of new projects in case of slowdown in the real estate business | • Developed flexibility measures for project timeline in line with business cycles | • Continue monitoring real estate business trends and permit/license efforts<br>• Conduct regular reviews on standards for securing demand and adjusting project timeline | • Reducing likelihood by applying standards for securing demand in advance<br>• Maintaining risk level of Medium |

## Risk Management Activities

### Risk Management by Type

Hanwha Solutions systematically manages risks by categorizing them into financial and non-financial risks. Financial risks include financial volatility, including market, liquidity, and capital risks, as well as tax-related risks. Non-financial risks cover external risks, including climate change and market environments, as well as ESG-related risks, such as human rights and occupational safety and health. We manage risks by identifying key risk factors by category and calculating their respective risk levels. In 2025, in accordance with the enterprise risk management regulations, we established and executed response plans for major company-wide financial and non-financial risks. These risk management activities are regularly reported to the Board of Directors.

Key Risk Response Measures and ESG Issues

| Category | Identified Key Risks | Actions Taken |
|---|---|---|
| Financial risk | Financial risks (e.g., internal controls, liquidity risks) | • Designing, operating, and evaluating internal control over financial reporting<br>• Analyzing daily, weekly, monthly, and quarterly cash flow plans and performance<br>• Managing the risk of fund misappropriation by refining step-by-step internal processes from supplier registration to payment |
| Non-financial risk | Climate risks (e.g., changes in consumer behavior, growing customer and investor demands for climate disclosures and ESG assessment results) | • Implementing reduction activities such as purchasing renewable electricity (e.g., Renewable Energy Certificates (RECs), Power Purchase Agreement (PPA))<br>• Monitoring domestic and international GHG-related regulations including the Emissions Trading Scheme and carbon border taxes (Carbon Border Adjustment Mechanism (CBAM) and the Clean Competition Act (CCA))<br>• Disclosing climate and environmental information (e.g., sustainability reports, environmental information disclosure) |
| | Market risks (e.g., market uncertainties regarding costs and selling price, as well as interest rate hikes) | • Expanding the share of new businesses and liquidating receivables and assets<br>• Analyzing investment costs and conducting sensitivity analyses by factoring in exchange rate fluctuations during economic feasibility reviews<br>• Promoting the production and sale of bio-attributed PVC to address the risk of rising fossil-based raw material prices |
| | Safety risks (serious industrial accidents, fires and explosions, product defects) | • Conducting safety awareness and culture initiatives (e.g., training, supplier consulting, risk assessments)<br>• Carrying out safety and health inspections at each business site (special inspections, safe work permit systems and accident casebooks)<br>• Obtaining and renewing ISO 45001 certification for health and safety management systems |
| | Supply chain sustainability risks (logistics disruptions due to strikes, use of raw materials from Xinjiang, China) | • Monitoring raw material safety stock levels and supply conditions (e.g., supplier operating rates, price congestions, price fluctuations and other risks)<br>• Minimizing raw material supply risks by diversifying the supply chain and establishing strategic partnerships<br>• Operating a response framework for supplier labor strikes (e.g., cross-functional TF, evaluating alternative logistics routes and methods) |
| | Industry-specific risks<br>(Chemical Division: Quality control risks) | • Operating On-site Client Service (Hello Orange, Yeosu) and Client Technical Services (T/S, Ulsan) to proactively identify and respond to client quality issues and requirements<br>• Standardizing quality management processes and minimizing quality risks from human error by maintaining international certifications (such as ISO) and conducting regular quality training for all employees |
| | Industry-specific risks<br>(Qcells Division: Product development risks) | • Operating multi-layered verification across the product development process<br>• Proactively responding to updates in certification standards by regularly monitoring major product certification standards (e.g., IEC, UL, and KS) and conducting technical exchange meetings<br>• Preventing internal technology leaks and patent infringement through NDAs and implementing information security solutions<br>• Conducting raw material evaluations and product reliability tests (STR, LTR, PMP) in the event of BOM changes<br>• Conducting proactive analysis and developing responses for potential risks regarding new product launch delays |

# ESG FACTBOOK

## Economic

### Consolidated Financial Statement[1)]

(Unit: KRW million)

| Category | 2023 | 2024 | 2025 |
|---|---|---|---|
| Assets | | | |
| Current assets | 9,797,372 | 10,882,665 | 12,636,722 |
| Cash and cash equivalents | 1,958,055 | 2,184,381 | 2,470,461 |
| FVPL-financial assets | 43,361 | - | - |
| Other financial assets | 336,352 | 385,043 | 457,478 |
| Accounts receivables and other receivables | 3,176,119 | 2,956,245 | 2,725,600 |
| Other current assets | 794,431 | 946,832 | 1,132,891 |
| Inventories | 3,447,481 | 4,257,548 | 5,679,939 |
| Current income tax assets | 41,573 | 55,313 | 73,579 |
| Non-current assets held for sale | - | 97,303 | 96,774 |
| Non-current assets | 14,993,052 | 19,154,166 | 20,507,289 |
| FVTPL- financial assets | 280,682 | 232,709 | 581,496 |
| FVOCI-financial assets | 8,695 | 8,629 | 35,076 |
| Other financial assets | 205,259 | 263,762 | 228,042 |
| Long-term sales receivables and other receivables | 687,454 | 146,017 | 455,878 |
| Investments in associates and joint ventures | 4,159,718 | 4,930,447 | 5,037,384 |
| Investment property | 191,667 | 196,568 | 162,308 |
| Property, Plant, and Equipment | 7,049,783 | 10,726,964 | 11,181,814 |
| Intangible assets | 1,772,576 | 1,755,743 | 1,846,420 |
| Right-of-use assets | 226,467 | 294,969 | 312,146 |
| Other non-current assets | 226,456 | 308,992 | 230,573 |
| Deferred tax assets | 184,295 | 289,366 | 436,152 |
| Total Assets | 24,790,424 | 30,036,831 | 33,144,011 |

1) From 2024, financial and non-financial businesses have been disclosed on a consolidated basis

| Category | 2023 | 2024 | 2025 |
|---|---|---|---|
| Liabilities | | | |
| Current liabilities | 8,734,110 | 11,707,552 | 12,735,854 |
| Accounts payables and other payables | 2,108,399 | 2,923,263 | 3,165,194 |
| Borrowings | 3,788,198 | 6,299,067 | 7,125,323 |
| Other financial liabilities | 2,023,899 | 1,206,747 | 1,174,943 |
| Provisions | 43,031 | 69,368 | 46,600 |
| Other current liabilities | 727,536 | 1,150,314 | 1,219,967 |
| Current corporate tax liabilities | 43,047 | 36,077 | 3,827 |
| Liabilities held for sale | - | 22,716 | - |
| Non-current liabilities | 6,776,077 | 7,722,423 | 9,223,118 |
| Long-term accounts payables and other payables | 47,801 | 50,436 | 58,120 |
| Long-term borrowings | 5,561,746 | 6,422,869 | 7,852,018 |
| Other financial liabilities | 468,022 | 454,595 | 517,692 |
| Net defined benefit liabilities | 356,453 | 343,427 | 281,078 |
| Long-term employee benefit liabilities | 30,188 | 42,613 | 61,745 |
| Provisions | 133,910 | 156,403 | 172,787 |
| Other non-current liabilities | 8,088 | 20,034 | 19,452 |
| Deferred tax liabilities | 169,869 | 232,046 | 260,226 |
| Total liabilities | 15,510,187 | 19,429,975 | 21,958,972 |
| Equity | | | |
| Equity attributable to owners of the parent company | 8,117,167 | 9,449,650 | 9,101,238 |
| Capital stock | 888,569 | 888,569 | 888,569 |
| Hybrid capital securities | 0 | 696,794 | 696,794 |
| Capital surplus | 1,496,294 | 1,562,421 | 1,771,425 |
| Capital adjustment | -135,082 | -150,372 | -150,547 |
| Accumulated other comprehensive income | 257,959 | 2,319,802 | 2,451,926 |
| Retained earnings | 5,609,427 | 4,132,436 | 3,443,071 |
| Non-controlling interest | 1,163,070 | 1,157,206 | 2,083,801 |
| Total capital | 9,280,237 | 10,606,856 | 11,185,039 |
| Total liabilities and equity | 24,790,424 | 30,036,831 | 33,144,011 |

## Environmental

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Greenhouse Gas (GHG) | | | | | |
| Total GHG emissions (Scope 1+Scope2) | Separate[1] | tCO2eq | 2,472,717 | 2,501,219 | 2,602,064 |
| | Consolidated[1)2)3)] | | 2,959,725 | 2,933,135 | 3,041,425 |
| Direct GHG emissions (Scope 1) | Separate[1] | | 362,207 | 378,618 | 352,046 |
| | Subsidiaries[2] | | 124,586 | 124,122 | 113,223 |
| | Associates/Joint ventures | | Included in Scope 3 Cat. 15 | | |
| Indirect GHG emissions (Scope 2) | Separate[1] | | 2,110,510 | 2,122,601 | 2,250,018 |
| | Subsidiaries[2)4)] | | 362,422 | 307,794 | 326,139 |
| | Associates/Joint ventures | | Included in Scope 3 Cat. 15 | | |
| Other indirect GHG emissions (Scope 3)[5] | Subtotal[5)6)] | | 8,607,106 | 9,833,725 | 9,454,352 |
| | 1. Purchased goods and services[6)7)] | | 6,650,653 | 7,459,136 | 7,418,196 |
| | 2. Capital goods | | 67 | 24 | 163 |
| | 3. Fuel and energy related activities | | 161,967 | 305,790 | 319,348 |
| | 4. Upstream transportation and distribution[8] | | 46,589 | 78,113 | 80,217 |
| | 5. Waste generated in operations | | 16,091 | 15,341 | 20,967 |
| | 6. Business travel | | 3,676 | 3,415 | 3,576 |
| | 7. Employee commuting | | 7,140 | 6,320 | 4,266 |
| | 8. Upstream leased assets | | Not calculated | Not calculated | Not calculated |
| | 9. Downstream transportation and distribution[8)9)] | | 115,621 | 147 | 4,011 |
| | 10. Processing of sold products[10] | | Not calculated | Not calculated | Not calculated |
| | 11. Use of sold products | | 0 | 0 | 0 |
| | 12. End-of-life treatment of sold products | | 2,685 | 3,121 | 2,846 |
| | 13. Downstream leased assets | | 81 | 72 | 17 |
| | 14. Franchises | | 0 | 0 | 0 |
| | 15. Investments[6] | | 1,602,537 | 1,962,246 | 1,600,745 |
| Biogenic $CO_2$ emissions | | | 0 | 0 | 0 |
| Emission intensity[11] | | tCO2eq/ KRW 100 million | 34 | 40 | 45 |

* Environmental reporting scope: (GHG separate basis and energy consumption) Sites subject to Korea's Emissions Trading Scheme, including the Seoul head office, Yeosu, Ulsan, Jincheon, Eumseong, Asan, Pungse, Pangyo, and Chuncheon sites (emissions from sites and facilities added through the business acquisition from Company A (July 1, 2024) have been reflected since 2024), (Consolidated GHG) Major domestic and overseas subsidiaries that include manufacturing facilities
** Total figures may differ by ±1 due to rounding
1) Separate Basis: 2024 data has been restated following the Ministry of Climate, Energy and Environment's evaluation of validity
2) Subsidiary: 2024 data has been restated due to error corrections
3) Total of emissions on a separate basis and emissions from certain subsidiaries
4) Including reductions from renewable energy consumption
5) 2025 Scope 3 emissions were calculated and verified for the Chemical and Qcells Divisions while the Insight Division's emissions were excluded due to its negligible share
6) 2023 and 2024 data have been restated due to improved data integrity and calculation standards

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Energy use | | | | | | |
| Total energy consumption[8)12)] | | | GJ | 26,339,807 | 24,888,381 | 25,038,525 |
| Direct energy consumption | Subtotal | | | 4,529,553 | 4,514,043 | 3,841,071 |
| | Gasoline | | | 9,410 | 10,935 | 8,834 |
| | Diesel | | | 26,255 | 16,308 | 27,489 |
| | Kerosene | | | 8,236 | 7,891 | 7,550 |
| | LNG | | | 2,363,771 | 2,388,324 | 2,162,610 |
| | LPG | | | 604,479 | 580,967 | 508,071 |
| | Other | | | 1,517,402 | 1,509,619 | 1,126,516 |
| Indirect energy consumption and sales | Consumption | Subtotal[8] | | 21,810,255 | 20,374,338 | 21,197,454 |
| | | Electricity[8] | | 15,638,081 | 14,416,939 | 15,329,688 |
| | | Steam | | 6,172,174 | 5,957,399 | 5,867,766 |
| | Self-generation | Subtotal | | 14,995 | 20,717 | 25,791 |
| | | Electricity | | 14,995 | 20,717 | 25,791 |
| | | Cooling | | 0 | 0 | 0 |
| | | Heating | | 0 | 0 | 0 |
| | | Steam | | 0 | 0 | 0 |
| | Sales volume | Subtotal | | 0 | 0 | 0 |
| | | Electricity | | 0 | 0 | 0 |
| | | Cooling | | 0 | 0 | 0 |
| | | Heating | | 0 | 0 | 0 |
| | | Steam | | 0 | 0 | 0 |
| Energy consumption intensity[13] | | | GJ/KRW 100million | 359 | 403 | 436 |
| Energy consumption outside the organization | | | GJ | N/A | N/A | N/A |
| Renewable energy consumption | | | MWh | 92,033 | 45,146 | 53,690 |
| Renewable energy consumption rate (based on energy consumption)[8] | | | % | 1.3 | 0.7 | 0.8 |
| Renewable electricity consumption rate (based on electricity consumption) | | | | 2.1 | 1.1 | 1.3 |

7) If biogenic $CO_2$ emissions from purchased raw materials are included, Scope 3 Category 1 emissions amounted to 7,453,240 tons in 2024 and 6,902,968 tons in 2023
8) 2023 data has been restated due to improved data integrity and calculation standards
9) Limited to the Chemical Division, as emissions from the Qcells Division's product transportation were considered emissions from purchased services and were calculated under the category 4
10) Scope 3 Category 10 emissions were excluded for the Chemical Division as reasonable estimation is not possible for B2B intermediate product sales based on GHG Protocol and WBCSD guidelines, and were also excluded for the Qcells Division's products (solar modules) which are finished products
11) 2024 data has been restated due to changes in emissions and sales
12) The application of the electricity conversion factor (1MWh=3.6GJ) has resulted in discrepancies between total energy consumption and the verified assurance statement
13) 2023 and 2024 data have been restated due to changes in separate basis sales data

## Environmental

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Water | | | | | | |
| Water withdrawal | Total water withdrawal[1] | | ton | 18,388,463 | 19,637,546 | 20,043,761 |
| | By type | Freshwater[1] | | 18,388,463 | 19,637,546 | 20,043,761 |
| | | Others | | 0 | 0 | 0 |
| | By source | Surface water | | 0 | 131,223 | 112,280 |
| | | Groundwater | | 11,875 | 359,631 | 287,591 |
| | | Seawater | | 0 | 0 | 0 |
| | | Produced water | | 0 | 0 | 0 |
| | | Third-party water[1] | | 18,376,588 | 19,146,692 | 19,643,889 |
| | Water withdrawal from water-stressed areas[1][2] | | | 14,924,358 | 15,722,443 | 16,307,853 |
| | Water intensity | | ton/KRW 100 million | 250 | 318 | 349 |
| Water Discharge (wastewater) | Total water discharge[3] | | ton | 9,926,327 | 11,479,827 | 10,045,444 |
| | By type | Freshwater[3] | | 2,048,117 | 2,949,200 | 2,733,457 |
| | | Others | | 7,878,210 | 8,530,627 | 7,311,987 |
| | Location | Surface water | | 317,610 | 307,815 | 258,287 |
| | | Groundwater | | 0 | 0 | 0 |
| | | Seawater | | 2,532,737 | 2,777,968 | 1,041,724 |
| | | Treated/discharged through third-party[3] | | 7,075,980 | 8,394,044 | 8,745,433 |
| | Water discharged from water-stressed areas[1][2] | | | 7,778,203 | 8,937,301 | 7,463,910 |
| Water consumption | Total water consumption[3] | | ton | 8,462,136 | 8,157,719 | 9,997,864 |
| | Total volume of reused water | | | 1,435,827 | 1,572,758 | 1,465,741 |
| | Water reuse rate[3] | | % | 7.2 | 7.4 | 6.8 |
| Water and Air Pollutants | | | | | | |
| Water pollutants | TOC | | ton | 236 | 145 | 308 |
| | BOD | | | 165 | 128 | 187 |
| | SS | | | 222 | 326 | 392 |
| Air pollutants | ODS | | tCFC-eq | 0 | 0 | 0 |
| | NOx | | ton | 205 | 212 | 206 |
| | SOx | | | 10 | 9 | 11 |
| | Dust | | | 16.8 | 15.4 | 14.7 |

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Environmental certifications | | | | | |
| Percentage of ISO 14001 certified business sites[7] | | % | 69.2 | 66.7 | 66.7 |
| Number of certified business sites | | Number of sites | 9 | 8 | 8 |
| Number of sites subject to certification[3] | | | 13 | 12 | 12 |
| Green business | | | | | |
| Eco-friendly products | Sales[4] | KRW 100 million | 22,026 | 17,047 | 12,258 |
| | Percentage of sales[5] | % | 30.0 | 27.6 | 21.4 |
| Eco-friendly R&D expenditure | Eco-friendly R&D expenditure | KRW 100 million | 1,529 | 1,766 | 1,655 |
| | Percentage of R&D expenditure against sales | % | 2.1 | 2.9 | 2.9 |
| Eco-friendly patents | | Number | 158 | 220 | 401 |
| Eco-friendly Purchases | | | | | |
| Total purchase[6] | | KRW 100 million | 60,046 | 54,186 | 49,035 |
| Eco-friendly products and services purchase[7][8] | | | 1 | 28 | 23 |
| Eco-friendly products and services purchase rate[8] | | % | 0.001 | 0.052 | 0.046 |
| Environmental Training | | | | | |
| Training hours | | hours | 26,816 | 28,552 | 19,791 |
| Employees who participated in environmental training | | persons | 5,051 | 3,306 | 2,722 |
| Business sites assessed for environmental risks[1] | | Number of sites | 9 | 11 | 11 |
| Business sites operating with associated environmental risks[7] | | | 13 | 12 | 12 |

* Environmental reporting scope: (Water) Chemical and Qcells Divisions' domestic business sites including the Seoul head office, Yeosu, Ulsan, Jincheon, Eumseong, Asan, Pungse, and Pangyo; and the Insight Division's Jade business site (Water and Air Pollutants) sites subject to domestic licenses and permits regarding relevant pollutants
** Total figures may differ by ±1 due to rounding
1) 2024 data has been restated due to change in aggregation methodology and error correction
2) Regions classified as having "High" water stress or above according to the WRI Aqueduct Water Risk Atlas
3) 2023 and 2024 data have been restated due to change in aggregation methodology or error correction
4) Product sales from eligible activities under the Korean Green Taxonomy
5) 2023 and 2024 have been restated due to change in separate-basis sales data
6) Based on total purchases from suppliers
7) Amount spent on products and services with eco-friendly certifications (for details, refer to p. 62 of this report)
8) 2023 and 2024 data have been restated due to change in aggregation methodology

## Environmental

| Category | | | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|
| Waste | | | | | | | | |
| Waste generation | Total waste generated | | | | ton | 101,232 | 98,605 | 94,729 |
| | Waste intensity | | | | ton/KRW 100 million | 1.4 | 1.6 | 1.7 |
| | Designated (hazardous) waste generated | | | | ton | 49,217 | 56,915 | 54,334 |
| | General (non-hazardous) waste generated | | | | | 52,014 | 41,691 | 40,395 |
| Waste disposal | Total waste disposed | | | | | 59,193 | 67,239 | 56,158 |
| | Designated (hazardous waste) | Subtotal | | | ton | 35,427 | 44,497 | 38,019 |
| | | By type | Landfilling | | | 249 | 110 | 193 |
| | | | Incineration | | | 5,045 | 4,464 | 3,785 |
| | | | Others | | | 30,132 | 39,923 | 34,040 |
| | | By method | On-site | | | 0 | 0 | 0 |
| | | | Off-site | | | 35,427 | 44,497 | 38,019 |
| | General (non-hazardous waste) | Subtotal | | | | 23,766 | 22,742 | 18,139 |
| | | By type | Landfilling | | | 21,227 | 19,322 | 14,138 |
| | | | Incineration | | | 2,538 | 2,131 | 2,740 |
| | | | Others | | | 0 | 1,289 | 1,261 |
| | | By Method | On-site | | | 136 | 0 | 0 |
| | | | Off-site | | | 23,630 | 22,742 | 18,139 |

* Environmental reporting scope: (Waste) Business sites subject to reporting under the Allbaro system
** Total figures may differ by ±1 due to rounding

| Category | | | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|
| Waste | | | | | | | | |
| Waste recycling | Total waste recycled | | | | ton | 42,039 | 31,366 | 38,572 |
| | Total waste recycling rate | | | | % | 41.5 | 31.8 | 40.7 |
| | Designated (hazardous waste) | Subtotal | | | ton | 13,790 | 12,417 | 16,315 |
| | | By type | Pre-treatment for reuse | | | 0 | 0 | 0 |
| | | | Recycling | | | 13,790 | 12,417 | 16,315 |
| | | | Other recovery | | | 0 | 0 | 0 |
| | | By Method | On-site | | | 79 | 0 | 0 |
| | | | Off-site | | | 13,712 | 12,417 | 16,315 |
| | General (non-hazardous waste) | Subtotal | | | | 28,248 | 18,949 | 22,257 |
| | | By type | Pre-treatment for reuse | | | 0 | 0 | 0 |
| | | | Recycling | | | 28,248 | 18,949 | 22,257 |
| | | | Other recovery | | | 0 | 0 | 0 |
| | | By Method | On-site | | | 0 | 0 | 0 |
| | | | Off-site | | | 28,248 | 18,949 | 22,257 |
| Violation of environmental laws and regulations | | | | | | | | |
| Number of violations of environment-related laws and regulations[1] | | | | | cases | 3 | 4 | 1 |
| Environmental fines and penalties[1] | | | | | KRW 10,000 | 408 | 850 | 0 |

1) 2023 and 2024 data have been restated due to error

| Category | | | Unit | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Business Site | | | | Yeosu | Ulsan | Others | Total | Yeosu | Ulsan | Others | Total | Yeosu | Ulsan | Others | Total |
| Water withdrawal | By source | Surface water | ton | 0 | 0 | 0 | 0 | 0 | 0 | 131,223 | 131,223 | 0 | 0 | 112,280 | 112,280 |
| | | Groundwater | | 0 | 0 | 11,875 | 11,875 | 0 | 0 | 359,631 | 359,631 | 0 | 0 | 287,591 | 287,591 |
| | | Seawater | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Produced water | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Third-party water[1] | | 12,507,564 | 3,351,540 | 2,517,484 | 18,376,588 | 12,760,994 | 3,357,420 | 3,028,278 | 19,146,692 | 13,394,975 | 3,277,026 | 2,971,888 | 19,643,889 |
| Water consumption | Total water consumption[2] | | | 6,422,484 | 1,264,650 | 775,002 | 8,462,136 | 5,975,497 | 1,328,235 | 853,987 | 8,157,719 | 8,003,931 | 1,119,936 | 874,450 | 9,997,864 |
| | Total water reused | | | 921,177 | 514,650 | 0 | 1,435,827 | 1,041,318 | 531,440 | 0 | 1,572,758 | 855,124 | 610,617 | 0 | 1,465,741 |

*Environmental reporting scope: (Water) Chemical and Qcells Divisions' domestic business sites including the Seoul head office, Yeosu, Ulsan, Jincheon, Eumseong, Asan, Pungse, and Pangyo; and the Insight Division's Jade business site
** Total figures may differ by ±1 due to rounding
1) 2024 data has been restated due to error
2) 2023 and 2024 data have been restated due to change in aggregation methodology and error correction

## Social

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Employee Status | | | | | |
| Total number of employees | | persons | 6,004 | 5,910 | 5,503 |
| By gender | Male | | 5,250 | 5,162 | 4,738 |
| | Female | | 754 | 748 | 765 |
| By age group | Ages under 30 | | 1,653 | 1,194 | 869 |
| | Ages 30 to 49 | | 3,344 | 3,737 | 3,734 |
| | Ages 50 and above | | 1,007 | 979 | 900 |
| By job level | Male executives | | 101 | 132 | 82 |
| | Female executives | | 5 | 5 | 5 |
| | Male managers | | 1,115 | 1,274 | 1,121 |
| | Female managers | | 199 | 209 | 214 |
| | Male non-managers | | 3,310 | 3,063 | 2,898 |
| | Female non-managers | | 369 | 302 | 320 |
| | Middle managers | | 550 | 557 | 589 |
| | Staff | | 355 | 368 | 274 |
| | Non-managers | | 3,679 | 3,365 | 3,218 |
| By occupation | Management | | 108 | 137 | 87 |
| | General | | 1,632 | 1,907 | 1,747 |
| | R&D | | 566 | 554 | 426 |
| | Office | | 183 | 179 | 167 |
| | Professional | | 3,325 | 3,016 | 2,916 |
| | Contract | | 190 | 117 | 160 |
| By region | Domestic | | 5,987 | 5,874 | 5,454 |
| | Overseas[1] | | 17 | 36 | 49 |
| Registered executives | Subtotal | | 10 | 9 | 9 |
| | Male | | 9 | 8 | 8 |
| | Female | | 1 | 1 | 1 |

1) 2023 has been restated due to change in aggregation methodology

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Employee Status | | | | | |
| Full-time employees | Full-time employees | persons | 5,791 | 5,763 | 5,344 |
| | Percentage of full-time employees | % | 96.5 | 97.5 | 97.1 |
| | Male full-time employees | persons | 5,078 | 5,060 | 4,625 |
| | Female full-time employees | | 713 | 703 | 719 |
| Temporary employees | Temporary employees | persons | 213 | 147 | 159 |
| | Percentage of temporary employees | % | 3.5 | 2.5 | 2.9 |
| | Male temporary employees | persons | 170 | 102 | 113 |
| | Female temporary employees | | 43 | 45 | 46 |
| Non-affiliated workers | Male | | 1,292 | 933 | 1,081 |
| | Female | | 196 | 187 | 219 |
| Years of Service | | | | | |
| Average years of service | | years | 9.8 | 10.1 | 10.3 |
| Recruitment | | | | | |
| Total number of new hires | | persons | 666 | 369 | 319 |
| By gender | Male | | 540 | 307 | 218 |
| | Female | | 126 | 62 | 101 |
| By age group | Ages under 30 | | 367 | 123 | 101 |
| | Ages 30 to 49 | | 261 | 219 | 182 |
| | Ages 50 and above | | 38 | 27 | 36 |
| By employment type | Full-time employees (new hires) | | 205 | 39 | 67 |
| | Full-time employees (experienced) | | 244 | 227 | 154 |
| | Temporary employees | | 217 | 103 | 98 |
| Employment Diversity | | | | | |
| Female | Number of female employees | persons | 754 | 748 | 765 |
| Female talent | Number of female managers (manager level and above) | | 204 | 214 | 219 |
| | Percentage of female managers | % | 14.4 | 13.2 | 15.4 |
| Minorities | Employees with disabilities | persons | 54 | 82 | 81 |
| | National veterans | | 113 | 98 | 94 |
| | Foreigners | | 10 | 19 | 33 |

## Social

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Turnover and retirement | | | | | |
| Total turnover[1)2)] | | persons | 565 | 586 | 441 |
| By gender | Male[1)2)] | | 505 | 483 | 369 |
| | Female[1)2)] | | 60 | 103 | 72 |
| By age group | Under 30[1)2)] | | 241 | 144 | 92 |
| | 30s[1)2)] | | 189 | 222 | 117 |
| | 40s[1)2)] | | 53 | 103 | 80 |
| | 50 or older[1)2)] | | 82 | 117 | 152 |
| Voluntary turnover rate[2)] | | % | 0.90 | 1.26 | 0.94 |
| Voluntary turnover | Subtotal[1)2)] | persons | 211 | 301 | 214 |
| Labor relations | | | | | |
| Labor union | Employee eligible for membership[2)] | persons | 1,166 | 1,184 | 1,132 |
| | Union members[2)] | | 1,166 | 1,184 | 1,115 |
| | Union membership rate | % | 100 | 100 | 98.5 |
| Labor-management council | Number of agenda items | cases | 533 | 528 | 442 |
| Employee benefits | | | | | |
| Employee benefit expenses | Total benefit costs | KRW million | 107,730 | 101,563 | 94,818 |
| | Benefit cost per person | | 18 | 17 | 17 |
| Childcare leave | | | | | |
| Employees who took childcare leave[3)] | Male | persons | 138 | 182 | 101 |
| Parental leave | | | | | |
| Employees who used parental leave | Male | persons | 25 | 31 | 72 |
| | Female[1)] | | 29 | 37 | 88 |
| Employees who plan to return from parental leave | Male | | 11 | 25 | 45 |
| | Female | | 29 | 42 | 47 |
| Employees who returned from parental leave | Male | | 11 | 25 | 35 |
| | Female | | 27 | 42 | 43 |
| Return rate from parental leave | Male | % | 100.0 | 100.0 | 77.8 |
| | Female | | 93.1 | 100.0 | 91.5 |

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Occupational Safety and Health Management System | | | | | |
| Percentage of business sites certified for occupational safety and health | | % | 70.0 | 55.6 | 55.6 |
| Number of certified business sites | | Number of sites | 7 | 5 | 5 |
| Number of business sites subject to certification | | | 10 | 9 | 9 |
| Occupational Safety and Health Investments | | | | | |
| Occupational Safety and Health investment cost[4)5)] | Total | KRW million | 116,500 | 86,096 | 78,931 |
| | Repair costs | | 84,713 | 62,941 | 53,103 |
| | Inspections, diagnostics, and consulting | | 7,099 | 4,354 | 4,064 |
| | Training and education | | 268 | 284 | 295 |
| | Safety and protective | | 1,932 | 1,413 | 2,112 |
| | Workplace environment and health checkups | | 2,202 | 2,035 | 2,262 |
| | Rewards and campaigns | | 1,516 | 674 | 1,292 |
| | Others | | 18,770 | 14,395 | 15,803 |
| Scope of the Occupational Safety and Health management system | | | | | |
| Scope of the Occupational Safety and Health management system | Number of workers | persons | 7,311 | 6,733 | 6,107 |
| | Number of employees (Hanwha Solutions) | | 5,707 | 5,324 | 4,835 |
| | Proportion of employees (Hanwha Solutions) | % | 78.1 | 79.1 | 79.2 |
| | Number of employees of suppliers | persons | 1,604 | 1,409 | 1,272 |

* Total figures may differ by ±1 due to rounding
1) 2023 data has been recalculated due to change in aggregation methodology
2) 2024 data has been recalculated due to change in aggregation methodology
3) The number of employees who took 'Dad Leave' which is paternity leave beyond statutory requirements
4) 2024 data has been restated based on occupational safety and health investment costs
5) Occupational safety and health investment costs are subject to change by year based on business characteristics, investment plans, and timing of investment execution. The decline in 2025 investment costs is due to the completion of certain key investments and changes in the scale of project executions.

## Social

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Occupational accidents | | | | | |
| Total number of business sites | | Number of sites | 26 | 31 | 30 |
| Business sites with work-related accident cases | Number of sites | Number of sites | 5 | 4 | 5 |
| | Percentage of sites | % | 19.2 | 12.9 | 16.7 |
| Number of accident cases | Employees (Hanwha Solutions) | cases | 9 | 6 | 2 |
| | Suppliers | | 9 | 2 | 5 |
| Number of serious accidents (fatalities excluded) | Employees (Hanwha Solutions) | | 0 | 0 | 0 |
| | Suppliers | | 0 | 0 | 0 |
| Rate of occupational accidents[1] | Employees (Hanwha Solutions) | % | 0.2 | 0.1 | 0.04 |
| | Suppliers | | 0.6 | 0.1 | 0.4 |
| Rate of serious accidents (fatalities excluded) | Employees (Hanwha Solutions) | | 0 | 0 | 0 |
| | Suppliers | | 0 | 0 | 0 |
| Number of fatalities | Employees (Hanwha Solutions) | persons | 0 | 0 | 0 |
| | Suppliers | | 0 | 0 | 0 |
| Fatality rate per 10,000 persons | | Fatality rate per 10,000 persons | 0 | 0 | 0 |
| Occupational illness frequency rate (OIFR) | Employees (Hanwha Solutions) | Cases per 1 million working hours | 0 | 0 | 0 |
| | Suppliers | | 0 | 0 | 0 |
| Total working hours[1][2] | Employees (Hanwha Solutions) | hours | 11,982,564 | 11,950,752 | 11,040,348 |
| | Suppliers | | 6,707,212 | 5,834,648 | 6,163,890 |
| Lost time injury frequency rate (LTIFR) | Employees (Hanwha Solutions) | Cases per 1 million working hours | 0.75 | 0.50 | 0.18 |
| | Suppliers[1][2] | | 1.34 | 0.34 | 0.81 |
| Safety training | Employees | persons | 5,792 | 4,999 | 4,801 |
| | Suppliers | | 3,573 | 3,737 | 3,439 |
| Safety risk assessment | | | | | |
| Business operating sites assessed for safety risks | | Number of sites | 26 | 31 | 30 |
| Business operating sites related to safety risks | | | 26 | 31 | 30 |

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Occupational illnesses | | | | | | |
| Business sites with work-related illness cases[1] | Number of sites | | Number of sites | 1 | 0 | 0 |
| | Percentage of sites | | % | 4 | 0 | 0 |
| Number of occupational illness cases | Employees[1] | | cases | 2 | 0 | 0 |
| | Suppliers | | | 0 | 0 | 0 |
| Employee training and career development | | | | | | |
| Average training hours per person[3] | Training hours per employee | | Hours per person | 14.1 | 11.4 | 7.8 |
| | Total employee training hours | | hours | 84,817 | 67,239 | 42,868 |
| By gender[3] | Male | Total training hours | hours | 75,570 | 56,978 | 32,739 |
| | | Average training hours per person | Hours per person | 14.4 | 11.0 | 6.9 |
| | Female | Total training hours | hours | 9,246 | 10,261 | 10,129 |
| | | Average training hours per person | Hours per person | 12.3 | 13.7 | 13.2 |
| By employment type[3] | Full-time employees | Total training hours | hours | 50,564 | 60,960 | 41,617 |
| | | Average training hours per person | Hours per person | 8.7 | 10.6 | 7.8 |
| | Temporary employees | Total training hours | hours | 34,253 | 6,278 | 1,251 |
| | | Average training hours per person | Hours per person | 160.8 | 42.7 | 7.9 |

* Total figures may differ by ±1 due to rounding
1) 2023 data in the previous report has been restated due to error
2) 2024 data in the previous report has been restated due to error
3) 2024 data has been recalculated due to change in aggregation methodology

## Social

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Performance evaluation | | | | | | |
| Number of employees subject to performance evaluation[1] | Subtotal | | persons | 3,865 | 5,147 | 5,184 |
| | By gender | Male | | 3,279 | 4,586 | 4,464 |
| | | Female | | 586 | 561 | 720 |
| | By job level | Manager | | 279 | 859 | 466 |
| | | Staff | | 3,586 | 4,288 | 4,718 |
| Employees who received regular performance evaluations[1] | Subtotal | | | 3,865 | 5,147 | 5,184 |
| | By gender | Male | | 3,279 | 4,586 | 4,464 |
| | | Female | | 586 | 561 | 720 |
| | By job level | Manager | | 279 | 859 | 466 |
| | | Staff | | 3,586 | 4,288 | 4,718 |
| Percentage of employees who received regular performance evaluations | | | % | 100 | 100 | 100 |

* Total figure may differ by ±1 due to rounding
1) 2023 data has been recalculated due to change in aggregation methodology
2) Including customer personal information and customer data
3) 2023 data has been restated to correct a data entry error from the previous report
4) Donations are calculated including contributions from the company and employees

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Equal Opportunity | | | | | | |
| Ratio of female to male salary | | | % | 67.7 | 68.5 | 66.4 |
| Average salary per person | Male | | KRW million | 99 | 92 | 92 |
| | Female | | | 67 | 63 | 61 |
| Customer Satisfaction | | | | | | |
| Customer VOCs | Number of customer complaints received | | cases | 527 | 1,823 | 1,200 |
| | Number of customer complaints resolved | | | 525 | 1,806 | 1,195 |
| | Customer complaint resolution rate | | % | 99.6 | 99.1 | 99.6 |
| Customer Data Privacy | | | | | | |
| Number of customer data privacy breaches[2] | Number of customer data leaks | | cases | 0 | 0 | 0 |
| | Number of customer data thefts | | | 0 | 0 | 0 |
| | Number of customer data losses | | | 0 | 0 | 0 |
| | Number of customer data breaches and substantiated privacy complaints | | | 0 | 0 | 0 |
| | Number of customer data breaches or cybersecurity incidents | | | 0 | 0 | 0 |
| | Total monetary losses due to customer data breaches or cybersecurity incidents, including fines or penalties paid | | KRW million | 0 | 0 | 0 |
| Social Contribution | | | | | | |
| Amount donated[4] | Total amount donated | | KRW million | 9,806 | 11,977 | 16,223 |
| | Investment in social welfare | | | 3,874 | 8,532 | 14,061 |
| | Investment in education and scholarships | | | 3,200 | 2,697 | 1,807 |
| | Investment in environment and culture | | | 2,617 | 334 | 255 |
| | Others | | | 116 | 414 | 100 |
| Win-win Partnership | | | | | | |
| Supplier status | Total number of suppliers | | Number of companies | 3,448 | 3,768 | 3,917 |
| | Number of newly registered suppliers | | | 555 | 629 | 577 |
| | Total purchase amount from suppliers[3] | | KRW million | 6,004,639 | 5,418,591 | 4,903,465 |
| Supplier support | Financial assistance | Total budget | | 51,000 | 44,000 | 44,000 |
| | | Amount executed | | 19,928 | 23,559 | 31,400 |
| Supplier grievance handling | Number of grievances received | | cases | 20 | 19 | 42 |
| | Number of grievances resolved | | | 20 | 12 | 42 |
| | Grievance resolution rate | | % | 100 | 63.2 | 100 |

## Social

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Supply Chain ESG Management | | | | | | |
| Selection of new suppliers | Number of new suppliers screened for environmental standards | | Number of companies | 71 | 30 | 28 |
| | Percentage of new suppliers screened for environmental standards | | % | 12.8 | 4.8 | 4.9 |
| | Number of new suppliers screened for social standards | | Number of companies | 71 | 30 | 28 |
| | Percentage of new suppliers screened for social standards | | % | 12.8 | 4.8 | 4.9 |
| Supplier Evaluation | Number of suppliers assessed for environmental impact | | Number of companies | 13 | 16 | 30 |
| | Number of suppliers identified as having significant negative environmental impacts | Subtotal | | 3 | 0 | 0 |
| | | Number of suppliers that developed improvement plans based on assessment result | | 3 | 0 | 0 |
| | | Percentage of suppliers that developed improvement plans based on assessment results | % | 100 | 0 | 0 |
| | | Number of suppliers whose contracts were terminated based on assessment results | Number of companies | 0 | 0 | 0 |
| | | Percentage of suppliers whose contracts were terminated based on assessment results | % | 0 | 0 | 0 |
| | Number of suppliers assessed for social impact | | Number of companies | 150 | 158 | 155 |
| | Number of suppliers identified as having significant negative social impacts | Subtotal | | 11 | 12 | 3 |
| | | Number of suppliers that developed improvement plans based on assessment result | | 11 | 12 | 3 |
| | | Percentage of suppliers that developed improvement plans based on assessment results | % | 100 | 100 | 100 |
| | | Number of suppliers whose contracts were terminated based on assessment results | Number of companies | 0 | 0 | 0 |
| | | Percentage of suppliers whose contracts were terminated based on assessment results | % | 0 | 0 | 0 |

## Governance

| Category | | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|
| Board of Directors and Committees | | | | | | |
| Status of the Board of Directors | Total | | persons | 10 | 9 | 9 |
| | Executive director | | | 3 | 3 | 3 |
| | Independent Director (non-executive) | Number of Independent Directors | | 6 | 5 | 5 |
| | | Percentage of Independent Directors | % | 60 | 56 | 56 |
| | Other non-executive directors | | persons | 1 | 1 | 1 |
| | Female director | Number of female directors | | 1 | 1 | 1 |
| | | Percentage of female directors | % | 10 | 11 | 11 |
| | Foreign director | Number of foreign directors | persons | 2 | 1 | 1 |
| | | Percentage of foreign directors | % | 20 | 11 | 11 |
| | Attendance rate | Executive director | | 95 | 98 | 98 |
| | | Independent director (non-executive) | | 95 | 97 | 99 |
| | | Other non-executive director | | 88 | 100 | 100 |
| | Number of board meetings held | | sessions | 14 | 15 | 17 |
| | Average tenure of directors[1] | | months | 39 | 32 | 43 |
| | Agenda item | Number of agenda items | cases | 111 | 118 | 101 |
| | | Number of agenda items opposed by independent director | | 0 | 0 | 0 |
| Status of Board Committees | Audit Committee | Percentage of independent directors | % | 100 | 100 | 100 |
| | | Number of meetings held | sessions | 8 | 7 | 7 |
| | | Attendance rate | % | 100 | 100 | 100 |
| | | Percentage of female directors | | 0 | 33 | 33 |
| | Internal Transactions Committee | Percentage of independent directors | | 100 | 100 | 100 |
| | | Number of meetings held | sessions | 11 | 11 | 13 |
| | | Attendance rate[2] | % | 95.5 | 100 | 100 |
| | | Percentage of female directors | | 0 | 25 | 25 |
| | Independent Director Nomination Committee | Percentage of independent directors | | 100 | 100 | 100 |
| | | Number of meetings held | sessions | 1 | 1 | 1 |
| | | Attendance rate | % | 100 | 100 | 100 |
| | | Percentage of female directors | | 0 | 25 | 25 |
| Status of Board Committees | ESG Committee | Percentage of Independent Directors | % | 100 | 100 | 100 |
| | | Number of meetings held | sessions | 6 | 6 | 6 |
| | | Attendance rate | % | 100 | 100 | 100 |
| | | Percentage of female directors | | 0 | 25 | 25 |
| | Compensation Committee[3] | Percentage of Independent Directors | | 100 | 100 | 100 |
| | | Number of meetings held | sessions | 0 | 4 | 3 |
| | | Attendance rate | % | N/A | 100 | 100 |
| | | Percentage of female directors | | 0 | 25 | 25 |
| Remuneration | Highest remuneration | | KRW million | 3,601 | 7,680 | 5,041 |
| | Employees (excluding highest remuneration) | | | 95 | 86 | 85 |
| Ethics and compliance | | | | | | |
| Anti-corruption risk assessment | Number of business sites assessed for anti-corruption risks | | Number of sites | 11 | 31 | 30 |
| | Total number of business sites | | | 11 | 31 | 30 |
| | Percentage of business sites assessed for anti-corruption risks | | % | 100 | 100 | 100 |
| Anti-corruption communication and training | | | | | | |
| Anti-corruption (ethics) training | Total hours of ethics training | | hours | 1,280 | 882 | 360 |
| | Number of participants | | persons | 764 | 147 | 180 |
| | Number of executives who completed ethics training | | | 28 | 29 | 27 |
| | Number of employees who completed ethics training | | | 736 | 118 | 153 |
| Anti-corruption (ethics) violations | Number of ethics code violations | | cases | 9 | 18 | 67 |
| | Disciplinary actions against employees | | | 2 | 39 | 67 |
| | Termination of contracts with suppliers | | | 0 | 0 | 0 |
| Fair trade training | Number of persons who completed training[4] | | persons | 88 | 0 | 79 |
| | Number of training sessions | Employees | sessions | 1 | 3 | 2 |
| | | Suppliers | | 0 | 0 | 0 |
| Fair trade | Number of legal consultations on fair trade[5] | | cases | N/A | 4 | 5 |
| Internal compliance reporting status | Total number of reports received | | | 3 | 0 | 6 |
| | Number of cases resolved | | | 3 | 0 | 6 |

1) 2023 and 2024 data has been restated due to errors
2) 2023 data has been restated due to errors
3) Newly set up on December 20, 2023
4) Unable to identify the number of employees completed due to group-wide training programs conducted in 2024
5) Legal management system introduced in 2024

## Governance

| Category | | Unit | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| Anti-competitive practices | | | | | |
| Legal actions related to anti-competitive practices | | cases | 0 | 0 | 0 |
| Legal and competition law violations | | | | | |
| Compliance violations | Subtotal | cases | 4 | 5 | 1 |
| | Number of monetary penalties | | 4 | 5 | 0 |
| | Number of non-monetary penalties[1)] | | 0 | 0 | 1 |
| Total amount of fines imposed | Cases occurred during the current reporting period | KRW million | 4.6 | 8.9 | 0 |

1) Including warnings issued in 2025

# APPENDIX

# SUSTAINABILITY COMMITMENTS

## UN SDGs Commitment

Hanwha Solutions promotes ESG management activities based on the detailed goals of the SDGs and aims to contribute to the achievement of the UN Sustainable Development Goals (SDGs).

| UN SDGs | Response Objectives | | Detailed Objectives | Hanwha Solutions' Key Activities |
|---|---|---|---|---|
|  | Ensure healthy lives and promote well-being for all at all ages | 3.8 | Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all | • Setting goals to achieve incident and injury-free workplaces<br>• Strengthening safety leadership and implementing measures to address serious accidents<br>• Conducting workplace health management activities and promoting employee wellness programs<br>• Implementing the right to suspend work to ensure worker safety<br>• Conducting chemical risk assessments |
| | | 3.9 | By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination | |
|  | Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | 4.5 | By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations | • Operating and supporting a para sports team<br>• Providing counseling and psychological support for children affected by abuse |
|  | Ensure access to affordable, reliable, sustainable and modern energy for all | 7.2 | By 2030, increase substantially the share of renewable energy in the global energy mix | • Establishing a total solar value chain in Georgia, U.S.<br>• Developing anion exchange membrane water electrolysis technology for green hydrogen commercialization<br>• Developing and producing perovskite tandem-cells in-house to achieve world-leading power conversion efficiency of 28.6%<br>• Implementing renewable energy facilities in RE100 smart green industrial complex development projects |
| | | 7.3 | By 2030, double the global rate of improvement in energy efficiency | |
|  | Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | 8.3 | Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services | • Enhancing supplier ESG and SH assessment systems and providing consulting support<br>• Expanding excellent suppliers through the open-sourcing system<br>• Supporting suppliers through the creation of a win-win fund<br>• Participating in procurement consultations hosted by the Agricultural and fishery Cooperation Foundation |
|  | Ensure sustainable consumption and production patterns | 12.5 | By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse | • Diversifying the application of recycled rPE materials<br>• Launching EcoRecycle by Qcells, a solar module recycling brand |
|  | Take urgent action to combat climate change and its impacts | 13.2 | Integrate climate change measures into national policies, strategies and planning | • Reducing Greenhouse Gas (GHG) emissions and expanding renewable energy use to achieve 2050 Net Zero<br>• Supporting climate change-related initiatives such as TCFD and K-RE100 |
| | | 13.3 | Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning | |
|  | Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | 15.4 | By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development | • Setting biodiversity targets through 2028<br>• Conducting endangered species protection activities<br>• Conserving ecosystems through an MOU with the Korea National Park Service<br>• Conducting environmental impact assessments and community cleanup activities at workplaces |
|  | Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels | 16.5 | Substantially reduce corruption and bribery in all their forms | • Managing company-wide risks<br>• Acquiring ISO 37301 (compliance management system) and ISO 37001 (anti-bribery management system) certifications across all business units<br>• Operating a fair-trade compliance program<br>• Operating a report system that ensures anonymity and independence |
| | | 16.6 | Develop effective, accountable and transparent institutions at all levels | |

## UNGC Commitment

Hanwha Solutions supports the 10 principles of the UN Global Compact (UNGC) on human rights, labour, environment, and anti-corruption. These principles are integrated into all aspects of our corporate activities.

| Category | UNGC Ten Principles | Hanwha Solutions' Key Activities |
|---|---|---|
| Human Rights | Principle 1. Businesses should support and respect the protection of internationally proclaimed human rights; and | Hanwha Solutions adheres to the conventions of the International Labour Organization (ILO) as well as global labor laws and regulations. We incorporate provisions regarding the respect and protection of human rights into our Code of Ethics and actively conduct human rights education to enhance awareness and promote the advancement of human rights. |
| | Principle 2. make sure that they are not complicit in human rights abuses. | |
| Labour | Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | Hanwha Solutions complies with the Constitution and relevant laws to protect the right of employees that must be respected fundamentally, such as the freedom of association, collective bargaining, and collective action, and promotes win-win cooperation by holding quarterly labor-management councils. |
| | Principle 4. the elimination of all forms of forced and compulsory labour; | Hanwha Solutions excludes all forms of forced labor. |
| | Principle 5. the effective abolition of child labour; and | Hanwha Solutions prohibits the employment of minors and child labor. |
| | Principle 6. the elimination of discrimination in respect of employment and occupation. | Hanwha Solutions guarantees equal opportunities to all applicants, operates a fair recruitment system, and does not discriminate in hiring, placement, promotion, salary, or education based on gender, religion, political opinion, social status, nationality, or race. |
| Environment | Principle 7. Businesses should support a precautionary approach to environmental challenges; | To actively respond to the climate crisis, Hanwha Solutions declared 2050 Net Zero in November 2021 and is pursuing various environmental impact reduction activities, such as increasing hydrogen co-firing power generation to leap forward as a global environmental management leader. In addition, Hanwha Solutions continues to maintain ISO 14001 (environmental management systems) and ISO 45001 (health and safety management systems) certification for the sustainable operation of the SHE management system. |
| | Principle 8. undertake initiatives to promote greater environmental responsibility; and | Hanwha Solutions has declared its support for the TCFD and discloses information in accordance with TCFD recommendations. By participating in climate change-related initiatives such as K-RE100, we prioritize ESG management activities and minimize environmental impacts for sustainable growth. |
| | Principle 9. encourage the development and diffusion of environmentally friendly technologies. | Hanwha Solutions is committed to expanding its support and investment in the development of eco-friendly technologies, such as solar power. We aim to contribute to the creation of a sustainable environment by actively seeking and discovering eco-friendly business models. |
| Anti-corruption | Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery. | Hanwha Solutions has continuously maintained its certifications by renewing our Compliance Management System (ISO 37301) and undergoing surveillance audits for the Anti-bribery Management System (ISO 37001), thereby upholding transparent and ethical management practices at a global standard. |

# GRI STANDARDS

| Indicator | | Description | Page | Notes |
|---|---|---|---|---|
| General disclosures | | | | |
| GRI 2: General disclosures | 2-1 | Organizational details | 6, 8 | |
| | 2-2 | Entities included in the organization's sustainability reporting | 6 | |
| | 2-3 | Reporting period, frequency and contact point | 2 | |
| | 2-4 | Restatements of information | - | The restated information is included in the relevant section |
| | 2-5 | External assurance | 144-148 | |
| | 2-6 | Activities, value chain and other business relationships | 6 | |
| | 2-7 | Employees | 129 | |
| | 2-8 | Workers who are not employees | 129 | |
| | 2-9 | Governance structure and composition | 68 | |
| | 2-10 | Nomination and selection of the highest governance body | 69 | |
| | 2-11 | Chair of the highest governance body | 69 | |
| | 2-12 | Role of the highest governance body in overseeing the management of impacts | 11, 18, 32, 41, 60, 68, 74, 85, 97, 101, 106 | |
| | 2-13 | Delegation of responsibility for managing impacts | 68 | |
| | 2-14 | Role of the highest governance body in sustainability reporting | 68 | |
| | 2-15 | Conflicts of interest | 68 | |
| | 2-16 | Communication of critical concerns | 119, 120, 121, 122, 123 | |
| | 2-17 | Collective knowledge of the highest governance body | 70 | |
| | 2-18 | Evaluation of the performance of the highest governance body | 71 | |
| | 2-19 | Remuneration policies | 71 | |
| | 2-20 | Process to determine remuneration | 71 | |
| | 2-21 | Annual total compensation ratio | 71, 134 | |
| | 2-22 | Statement on sustainable development strategy | 5, 10 | |
| | 2-23 | Policy commitments | 43, 138, 143 | |
| | 2-24 | Embedding policy commitments | 28, 43, 60, 97, 106, 109, 112, 113 | |
| | 2-25 | Processes to remediate negative impacts | 44, 61, 75, 77, 79, 81, 83, 98, 102, 106, 115, 120 | |
| | 2-26 | Mechanisms for seeking advice and raising concerns | 100, 114, 115 | |
| | 2-27 | Compliance with laws and regulations | 112-118, 134-135 | |
| | 2-28 | Membership associations | 149 | |
| | 2-29 | Approach to stakeholder engagement | 13 | |
| | 2-30 | Collective bargaining agreements | 130 | |

| Indicator | | Description | Page | Notes |
|---|---|---|---|---|
| Material Topics | | | | |
| GRI 3: Material topics | 3-1 | Process to determine material topics | 14 | |
| | 3-2 | List of material topics | 15 | |
| Climate Action | | | | |
| GRI 3: Material topics | 3-3 | Management of material topics | 15, 18-30 | |
| GRI 302: Energy | 302-1 | Energy consumption within the organization | 126 | |
| | 302-2 | Energy consumption outside the organization | 126 | |
| | 302-3 | Energy intensity | 126 | |
| | 302-4 | Reduction of energy consumption | 126 | |
| GRI 305: Emissions | 305-1 | Direct (Scope 1) GHG emissions | 126 | |
| | 305-2 | Indirect (Scope 2) GHG emissions | 126 | |
| | 305-3 | Other indirect (Scope 3) GHG emissions | 126 | |
| | 305-4 | GHG emissions intensity | 126 | |
| | 305-5 | Reduction of GHG emissions | 126 | |
| | 305-6 | Emissions of ozone-depleting substances (ODS) | 127 | |
| | 305-7 | NOx, SOx, and other significant air emissions | 127 | |
| Sustainable Products and Services | | | | |
| GRI 3: Material topics | 3-3 | Management of material topics | 15, 32-39 | |
| GRI 301: Raw material | 301-2 | Recycled input materials used | 35, 84 | |
| | 301-3 | Reclaimed products and their packaging materials | 84 | |
| Safety and Health Management | | | | |
| GRI 3: Material topics | 3-3 | Management of material topics | 15, 41-58 | |
| GRI 403: Occupational health and safety | 403-1 | Occupational health and safety management system | 41-43 | |
| | 403-2 | Hazard identification, risk assessment, and incident investigation | 55, 56, 57 | |
| | 403-3 | Occupational health services | 56-57 | |
| | 403-4 | Worker participation, consultation and communication on occupational health and safety | 46-49 | |
| | 403-5 | Worker training on occupational health and safety | 47, 131 | |
| | 403-6 | Promotion of worker health | 52 | |
| | 403-7 | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | 44, 45, 54, 56 | |
| | 403-8 | Workers covered by an occupational health and safety management system | 130 | |
| | 403-9 | Work-related injuries | 131 | |
| | 403-10 | Work-related illness | 131 | |

# GRI STANDARDS

| Indicator | | Description | Page | Notes |
|---|---|---|---|---|
| ESG Management in the Supply Chain | | | | |
| GRI 3: Material topics | 3-3 | Management of material topics | 15, 60-66 | |
| GRI 308: Supplier | 308-1 | New suppliers that were screened using environmental criteria | 65, 133 | |
| | 308-2 | Negative environmental impacts in the supply chain and actions taken | 65, 133 | |
| GRI 414: Supplier social assessment | 414-1 | New suppliers that were screened using social criteria | 65, 133 | |
| | 414-2 | Negative social impacts in the supply chain and actions taken | 61-66, 133 | |
| Transparent Governance | | | | |
| GRI 3: Material topics | 3-3 | Management of material topics | 15, 68-72 | |
| General Topic | | | | |
| GRI 101: Biodiversity | 101-1 | Policies to halt and reverse biodiversity loss | 85 | |
| | 101-2 | Management of biodiversity impacts | 86-88, 91 | |
| | 101-4 | Identification of biodiversity impacts | 89 | |
| | 101-5 | Locations with biodiversity impacts | 89 | |
| | 101-6 | Direct drivers of biodiversity loss | 86, 88, 89 | |
| | 101-7 | Changes to the state of biodiversity | 86, 87 | |
| | 101-8 | Ecosystem services | 90 | |
| GRI 201: Economic performance | 201-1 | Direct economic value generated and distributed | 7, 132 | |
| | 201-2 | Financial implications and other risks and opportunities due to climate change | 19, 20 | |
| GRI 205: Anti-corruption | 205-1 | Operations assessed for risks related to corruption | 118, 134 | |
| | 205-2 | Communication and training about anti-corruption policies and procedures | 112-114, 134 | |
| | 205-3 | Confirmed incidents of corruption and actions taken | 113, 134 | |
| GRI 206: Anti-competitive behavior | 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | 115-116, 135 | |
| GRI 401: Employment | 401-1 | New employee hires and employee turnover | 129, 130 | |
| | 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | 95 | |
| | 401-3 | Parental leave | 130 | |
| GRI 402: Labor/ management relations | 402-1 | Minimum notice periods regarding operational changes | - | |

| Indicator | | Description | Page | Notes |
|---|---|---|---|---|
| GRI 404: Training and Education | 404-1 | Average hours of training per year per employee | 131 | |
| | 404-2 | Programs for upgrading employee skills and transition assistance programs | 92-94 | |
| | 404-3 | Percentage of employees receiving regular performance and career development reviews | 132 | |
| GRI 405: Diversity and equal opportunity | 405-1 | Diversity of governance bodies and employees | 134 | |
| | 405-2 | Ratio of basic salary and remuneration of women to men | 132 | |
| GRI 406: Non-discrimination | 406-1 | Incidents of discrimination and corrective actions taken | 100 | |
| 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 | 99 | |
| GRI 408: Child labor | 408-1 | Operations and suppliers at significant risk for incidents of child labor | 99 | |
| GRI 409: Forced or compulsory labor | 409-1 | Operations and suppliers at significant risk for incidents of forced labor | 99 | |
| GRI 410: Security practices | 410-1 | Security personnel trained in human rights policies or procedures | - | Not applicable |
| GRI 411: Rights of indigenous peoples | 411-1 | Incidents of violations involving rights of indigenous peoples | - | Not applicable |
| GRI 416: Customer health and safety | 416-1 | Assessment of the health and safety impacts of product and service categories | 106-108 | Quality related issues are classified under general issues for this report and therefore contents regarding safety and health assessment are not included. |
| | 416-2 | Incidents of non-compliance regarding the health and safety impacts of product and service categories | - | Not applicable |
| GRI 417: Marketing and labeling | 417-1 | Requirements for product and service information and labeling | - | Not applicable |
| | 417-2 | Incidents of non-compliance concerning product and service information and labeling | - | Not applicable |
| | 417-3 | Incidents of non-compliance concerning marketing communications | - | No fair-trade violations during the reporting period |
| GRI 418: Customer privacy | 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data | 132 | |

# SASB INDEX

## Sector: Chemicals[1)]

Table 1. Sustainability Disclosure Topics & Accounting Metrics

| Topic | Code | Accounting Metric[3)] | Hanwha Solutions Report[2)] 2025 |
|---|---|---|---|
| Greenhouse Gas Emissions | RT-CH-110a.1[3)] | Gross global Scope 1 emissions | 465,268 $tCO_2eq$ |
| | | Percentage covered under emissions-limiting regulations | 77.9% |
| | RT-CH-110a.2 | Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets | p.18, 21, 22, 29, 30 |
| Air Quality | RT-CH-120a.1 | (1) NOx (nitrogen oxides) (excluding $N_2O$ (nitrous oxide)) | 205.6 ton |
| | | (2) SOx (sulfur oxides) | 11.2 ton |
| | | (3) Volatile organic compounds (VOCs) | Not calculated |
| | | (4) Hazardous air pollutants (HAPs) | Not calculated |
| Energy Management | RT-CH-130a.1<br>RR-ST-130a.1 | (1) Total energy consumed | 25,038,525.0 GJ |
| | | (2) Percentage of grid electricity | 60.3% |
| | | (3) Percentage of renewable energy | 0.8% |
| | | (4) Total self-generated energy | 25,790.8 GJ |
| Water Management | RT-CH-140a.1<br>RR-ST-140a.1 | (1) Total water withdrawn | 20,043,760.9 $m^3$ |
| | | (2) Total water consumed and percentage of each in regions with High or Extremely High baseline water stress | 16,307,853 $m^3$, 81.4% |
| | RT-CH-140a.2 | Number of incidents of non-compliance associated with water quality permits, standards, and regulations | 0 |
| | RT-CH-140a.3<br>RR-ST-140a.2 | Description of water management risks and discussion of strategies and practices to mitigate those risks | p.82-83 |
| Hazardous Waste Management | RT-CH-150a.1 | Amount of hazardous waste generated | 54,334.0 ton |
| | RR-ST-150a.1 | Percentage recycled | 30.0% |
| Community Relations | RT-CH-210a.1 | Discussion of engagement processes to manage risks and opportunities associated with community interests | p.101-105 |
| Workforce Health & Safety | RT-CH-320a.1 | Total recordable incident rate (TRIR) for (a)direct employees and for (b)contract employees | LTIFR Employees 0.2 / Suppliers 0.8 |
| | | Fatality rate for (a)direct employees and for (b)contract employees | Employees 0% / Suppliers 0% |
| | RT-CH-320a.2 | Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks | p.54-57, 131 |
| Product Design for Use-phase Efficiency | RT-CH-410a.1 | Revenue from products designed for use-phase resource efficiency | Not applicable |

1) Based on the Chemical, Qcells, and Insight Divisions
2) For metrics with a page reference, please refer to the relevant section in the Sustainability Report.
3) [RT-CH-110a.1] is on a consolidated basis while all other indicators are on a separate basis

# SASB INDEX

## Sector: Chemicals[1)]

| Table 1. Sustainability Disclosure Topics & Accounting Metrics | | | Hanwha Solutions Report[2)] |
|---|---|---|---|
| Topic | Code | Accounting Metric | 2025 |
| Chemical safety and environmental responsibility | RT-CH-410b.1 | (1) Percentage of products that contain Globally Harmonised System of Classification and Labelling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances | Not applicable |
| | | (2) Percentage of such products that have undergone hazard assessments | **Chemical Division** 100%, **Qcells Division** Not applicable |
| | RT-CH-410b.2 | (1) Discussion of strategy for the management of chemicals of concern | p.81 |
| | | (2) Discussion of strategies to develop alternatives with reduced human or environmental impact | p.81 |
| Genetically modified organisms (GMOs) | RT-CH-410c.1 | Percentage of products by revenue that contain genetically modified organisms (GMOs) | Not applicable |
| Management of legal and regulatory environmental requirements | RT-CH-530a.1 | Discussion of corporate positions related to government regulations or policy proposals that address environmental and social factors affecting the industry | p.23, 78 |
| Process safety, emergency preparedness, and response | RT-CH-540a.1 | Process Safety Incidents Count (PSIC) | Not applicable |
| | | Process Safety Total Incident Rate (PSTIR) | Not applicable |
| | | Process Safety Incident Severity Rate (PSISR) | Not applicable |
| | RT-CH-540a.2 | Number of transport incidents | Not applicable |

## Sector: Solar Technology & Project Developers[1)]

| Table 1. Sustainability Disclosure Topics & Accounting Metrics | | | Hanwha Solutions Report[2)] |
|---|---|---|---|
| Topic | Code | Accounting Metric | 2025 |
| Hazardous waste management | RR-ST-150a.2 | Number and aggregate quantity of reportable spills, quantity recovered | Not applicable |
| Ecological impacts of project development | RR-ST-160a.1 | Number and duration of project delays related to ecological impacts | Not applicable |
| | RR-ST-160a.2 | Description of efforts in solar energy system project development to address community and ecological impacts | p.36-37 |
| Management of energy infrastructure integration & related regulations | RR-ST-410a.1 | Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks | p.19-22, 33 |
| | RR-ST-410a.2 | Description of risks and opportunities associated with energy policy and its effect on the integration of solar energy into existing energy infrastructure | p.19-22, 33 |
| Product life cycle management | RR-ST-410b.2 | Weight of end-of-life material recovered, percentage recycled | No products have reached their end-of-life (domestic manufacturing plant completed after 2015) |
| | RR-ST-410b.4 | Description of approach and strategies to design products for high value recycling | p.35, 84 |
| Material sourcing | RR-ST-440a.1 | Description of the management of risks associated with the use of critical materials | p.35, 37-39, 66 |
| | RR-ST-440a.2 | Description of the management of environmental risks associated with the polysilicon supply chain | p.37-39 |

1) Based on the **Chemical**, **Qcells**, and **Insight Divisions**
2) For metrics with a page reference, please refer to the relevant section in the Sustainability Report.

# ESG POLICIES

## Code of Ethics

Hanwha Solutions established a Code of Ethics to guide actions and value judgments regarding the environment, fair trade, unfair competition, and community participation, along with practice guidelines outlining behavioral standards for Hanwha Solutions and its employees. Pursuant to Article 28, the Code of Ethics was enacted with the approval of the Board of Directors on August 11, 2020. Since then, the authority to establish the Code of Ethics implementation guidelines was delegated to the department responsible for ethical management, and the Compliance Office, as the department responsible for ethical management, then formulated the Code of Ethics Implementation Guidelines (Article 26 of the Code of Ethics).

### Policies Related to Fair Trade and Unfair Competition

[Code of Ethics]
Chapter 3 Compliance with laws and the free market economy
Article 8 (Compliance with laws and commercial customs)
① We comply with all applicable laws and regulations in all regions where we operate and conduct business by respecting commercial customs.
② We do not engage in any acts that violate domestic and international fair trade laws.
③ Employees stationed overseas shall be familiar with the laws and commercial customs of the region and avoid violating them.
Article 9 (Free market economy)
① We support market competition in all regions under the principle of free competition.
② We practice fair competition with competitors based on mutual respect and do not infringe on their interests or unfairly exploit their weaknesses.
③ We do not slander competitors or make groundless comparisons through advertisements.
④ We obtain and utilize information in compliance with laws and commercial customs.

[Code of Ethics Implementation Guidelines]
**Ⅵ. Implementation guidelines related to fair trade and unfair competition prevention**
Basic guidelines and goals
1) We recognize and comply with the laws and regulations on fair trade in all contracts, transactions, and other business relationships involving legal or factual stakeholders. This includes prohibitions against abuse of market dominance, unreasonable collaborative acts, unfair trade practices, resale price maintenance, and the provision of undue benefits to related parties. We act in a manner that ensures no violation of fair trade laws.
2) We ensure compliance with the Unfair Competition Prevention and Trade Secret Protection Act and related laws (the 'Unfair Competition Laws') in all legal and factual relationships, including employee recruitment, research and development, and business negotiations or consultations with third parties, where others' trade secrets, ideas, or intellectual property rights may be involved.
3) We aim to achieve zero cases of violations of fair trade laws, such as unfair trade practices involving abuse of a superior bargaining position, and violations of the Unfair Competition Laws, such as infringement of trade secrets or acts of unfair competition, by faithfully implementing the above guidelines and the following action plans.

### Community Engagement Policy

[Code of Ethics Implementation Guidelines]
**Ⅴ. Implementation guidelines related to environmental management**
4) Biodiversity Conservation
A. We engage in cleanup activities in collaboration with local communities to protect the environment and actively participate in social contribution programs aimed at restoring natural ecosystems and conserving biodiversity.
B. We recognize the importance of ecosystem restoration and biodiversity conservation, assess the potential impacts of our business activities on local biodiversity, and take all possible measures to minimize any negative effects.

# GREENHOUSE GAS VERIFICATION STATEMENT(SCOPE 1·2)

## INDEPENDENT VERIFICATION OPINION
## HANWHA SOLUTIONS CORPORATION

### Introduction

DNV Business Assurance Korea Ltd. ("DNV") was commissioned by **HANWHA SOLUTIONS CORPORATION** ("Company") to perform third-party verification of Greenhouse Gas Statement for the calendar year 2025. The company is responsible for the preparation of the GHG statement on the basis set out within the guidelines on the operation of GHG-ETS(Notification No. 2025-64 of Ministry of Environment). The Company has full responsibility of the GHG statement. According to terms of contract, DNV expressly disclaims any liability or responsibility for any decisions, based upon the verification opinion.

### Scope of Verification

The GHG emissions data covered by our verification is based on the GHG statement submitted to the competent authority.

- Organizational boundary: **Hanwha Solutions** (**Chemical, Qcells** and **Insight** in Korea)
- Operational boundary: Direct Emissions (Scope 1) and Indirect Emissions (Scope 2)
- Reporting period: 2025.01.01 ~2025.12.31

### Verification Approach

The verification has been conducted in accordance with the verification principles and tasks outlined in the guidelines on the operation of GHG-ETS (Notification No. 2025-64 of Ministry of Environment) and the verification guideline for GHG-ETS (Notification No. 2025-165 of Ministry of Environment) based upon a reasonable level of assurance. DNV planned and concluded our work so as to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a verification opinion with 2.5% materiality level. As part of the verification process, we have reviewed as follows;

- Adequacy of GHG data control, collection and emission calculation and report process
- The GHG statement is based on measurements and has inherent limitations that may arise from the process of calculating, estimating, and finalizing the reported data.

### Conclusions

Based on the verification conducted, the information related to the GHG statement has been properly calculated and reported.

- DNV presents an 'Unmodified' opinion on Greenhouse Gas Emissions

| Category | Greenhouse Gas Emissions ($tCO_2eq.$) | | | Energy Consumption (TJ) |
|---|---|---|---|---|
| | Direct emission (Scope 1) | Indirect emissions (Scope 2) | Total emissions | |
| Emissions for the preceding three based on years 4th commitment period | 362,383.591 | 2,242,185.936 | 2,604,560 | 50,344 |
| Emissions for surrender of emissions permits | 352,045.707 | 2,250,018.148 | 2,602,053 | |

* In order to report the GHG emissions and Energy consumption as an integer, the value on the opinion might be different from the actual number with ± 1 tCO2-eq.

2026. 6. 09

Country Representative **Lee, Jang Sup**

DNV Business Assurance Korea Ltd.

This Verification Opinion is valid as of the date of the issuance. Please note that this Verification Opinion would be revised if any material discrepancy which may impact on the Greenhouse Gas Emissions of the company is subsequently brought to our attention. In the event of ambiguity or contradiction in this opinion between English version and Korean version, Korean shall be given precedent.
DNV Business Assurance Korea : 1, Jong-ro, Jongno-gu, Seoul, Republic of Korea

PRJN-1148023-AST-ENG

# GREENHOUSE GAS VERIFICATION STATEMENT(SCOPE 3)

## LRQA Independent Assurance Statement Relating to HANWHA SOLUTIONS CORPORATION's Greenhouse Gas (GHG) Emissions Inventory for the calendar year 2025

This Assurance Statement has been prepared for **HANWHA SOLUTIONS CORPORATION** in accordance with our contract.

### Terms of engagement

LRQA was commissioned by **HANWHA SOLUTIONS CORPORATION** (**Hanwha Solutions**) to provide independent assurance on its GHG emissions inventory for the calendar year 2025 (here after referred to as "the report") against the assurance criteria below to a limited level of assurance and materiality of 5% using ISO 14064-3:2019, 'Specification with guidance for validation and verification of greenhouse gas assertions'.

Our assurance engagement covered domestic operations and activities of **Hanwha Solutions' Chemical** and **Qcells division**, and specifically the following requirements:

- Evaluating conformance with Corporate Value Chain (Scope 3) Accounting and Reporting Standard[1)]
- Evaluating the accuracy and reliability of data and information for other indirect GHG emissions (Scope 3).

The main activities of **Hanwha Solutions** include manufacturing of petrochemical products and solar modules, and the GHG emissions have been consolidated using an operational control approach.

LRQA's responsibility is only to **Hanwha Solutions**. LRQA disclaims any liability or responsibility to others as explained in the end footnote. **Hanwha Solutions'** responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of **Hanwha Solutions.**

### LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that **Hanwha Solutions** has not, in all material respects:

- Met the requirements above; and
- Disclosed accurate and reliable data and information as summarized in Table 1 below.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of 5%.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Interviewing key people of the organization responsible for managing GHG emissions data and records;
- Reviewing processes related to the control of GHG emissions data and records;
- Reviewing whether GHG emissions have been calculated with parameters from recognized sources;
- Visiting **Hanwha Solutions'** headquarters and Jincheon plant, and reviewing additional evidence made available by **Hanwha Solutions;** and
- Verifying historical GHG emissions data and records at an aggregated level for the calendar year 2025.

### LRQA's standards, competence and independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 General principles and requirements for bodies validating and verifying environmental information and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

The verification engagement is the only work undertaken by LRQA for **Hanwha Solutions** and as such does not compromise our independence or impartiality.

Dated: 30 May 2026

**Byung-Gil Lim** LRQA Lead Verifier

On behalf of LRQA Limited

2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea

1) https://www.ghgprotocol.org

LRQA reference: SEO00001527, SEO00001528

# GREENHOUSE GAS VERIFICATION STATEMENT(SCOPE 3)

## LRQA Independent Assurance Statement Relating to HANWHA SOLUTIONS CORPORATION's Greenhouse Gas (GHG) Emissions Inventory for the calendar year 2025

Table 1. Summary of HANWHA SOLUTIONS CORPORATION's Chemical and Qcells division (domestic), GHG Emissions Inventory 2025

| Scope of GHG emissions | Tonnes $CO_2e$ |
|---|---|
| Other Indirect GHG emissions (Scope 3) | |
| Purchased goods & services – production of raw material purchased | 7,418,196 |
| Capital goods – production of electronic devices and home appliances purchased | 163 |
| Fuel and energy related activities – upstream emissions of fuel and electricity purchased | 319,348 |
| Upstream transportation and distribution – transportation of purchased raw material and subcontracted logistics services for the distribution of sold products | 80,217 |
| Waste generated in operations – treatment of waste generated from operations | 20,967 |
| Business travel | 3,576 |
| Employee commuting | 4,266 |
| Downstream transportation and distribution* – transportation of sold products, excluding logistics services purchased by Hanwha Solutions. | 4,011 |
| Use of sold products** | 0 |
| End-of-life treatment of sold products – treatment of packaging materials for sold products | 2,846 |
| Downstream leased assets – operation of building leased by Hanwha Solutions | 17 |
| Franchises | 0 |
| Investments – joint ventures, associates and investees | 1,600,745 |
| **Total** | **9,454,352** |

* The quantity of GHG emissions for the 'Downstream transportation and distribution' category is limited to the Chemical division. Product transportation for the Qcells division is classified as purchased services and is consolidated into the 'Upstream transportation and distribution' category.
** The quantity of GHG emissions for the 'Use of sold products' category may not be zero if the assumptions applied change.

# INDEPENDENT ASSURANCE STATEMENT

## To readers of 2026 Hanwha Solutions Sustainability Report

### Introduction

Korea Management Registrar (KMR) was engaged to conduct an independent assurance of 2026 **Hanwha Solutions** Sustainability Report for the year ending December 31, 2025. The preparation, information and internal control of the report are the sole responsibility of **Hanwha Solutions's** the management. KMR's responsibility is to comply with the agreed engagement and express an opinion to **Hanwha Solutions's** management.

### Subject Matter

The reporting boundaries included the performance and activities of sustainability-related organizations as described in **Hanwha Solutions's** report:
· 2026 **Hanwha Solutions** Sustainability Report

### Reference Standard

· GRI Standards 2021

### Assurance criteria

KMR applied the quality management system in accordance with ISO 17029 and KMR EDV 01, and carried out the verification in accordance with the assurance criteria of AA1000AS v3 and KMR's proprietary SRV1000. Under AA1000AS v3, we assessed the adherence to the four principles presented in AA1000AP:2018-Inclusivity, Materiality, Responsiveness, and Impact-and evaluated the reliability and quality of the data and information using. Under SRV1000, we conducted a multidimensional review aimed at zero data errors, applying expert judgment to determine the materiality criteria.
· ISO 17029 : 2019, ISO 14065 : 2020, AA1000AS v3 : 2020 (AccountAbility),
AA1000AP : 2018 (AccountAbility), SRV 1000 : 2022 (KMR), KMR EDV 01 : 2024 (KMR)
· Levels of assurance/materiality: AA1000AS v3 – Type 2/moderate

### Scope of assurance

The information subject to verification in the sustainability report is as follows.
· GRI Standards 2021 reporting principles
· Universal Standards
  – GRI 2 General Disclosures 2021
  – GRI 3 Material Topics 2021
· Topic Specific Standards
– GRI 101: Biodiversity(101-1, 101-2, 101-4, 101-5, 101-6, 101-7, 101-8),
– GRI 201: Economic Performance(201-1, 201-2), GRI 205: Anti-corruption, GRI 206: Anti-competitive Behavior,
– GRI 301: Materials(301-2, 301-3), GRI 302: Energy(302-1, 302-2, 302-3, 302-4), GRI 305: Emissions, GRI 308: Supplier Environmental Assessment,
– GRI 401: Employment, GRI 403: Occupational Health and Safety, GRI 404: Training and Education, GRI 405: Diversity and Equal Opportunity, GRI 406: Non-discrimination, GRI 407: Freedom of Association and Collective Bargaining, GRI 408: Child Labor, GRI 409: Forced or Compulsory Labor, GRI 410: Security Practices, GRI 411: Rights of Indigenous Peoples, GRI 414: Supplier Social Assessment, GRI 416: Customer Health and Safety, GRI 417: Marketing and Labeling, GRI 418: Customer Privacy

As for the reporting boundary, information external to the organization was excluded from the scope of assurance.

### KMR's Approach

Our Assurance Team undertook the following activities for the agreed scope of assurance using the standard outlined above:
· Evaluating the appropriateness of the reference standard used as a basis for preparing sustainability information and the reliability of the materiality assessment process and its findings;
· Conducting inquiries to understand the data management and control environment, processes, and information systems (the effectiveness of controls was not tested);
· Evaluating the appropriateness and consistency of the methodology for estimation (note that the underlying data was not tested and KMR has not made any estimates);
· Visiting the headquarters, determining visit sites based on the site's contribution to sustainability and the possibility of unexpected changes since the previous period and sampling data, and carrying out due diligence on a limited number of source records at the sites visited;
· Interviewing people in charge of preparing the report;
· Considering whether the presentation and disclosures of sustainability information are accurate and clearly defined;
· Identifying errors through comparison and check against underlying information, recalculation, analyses, and backtracking; and
· Evaluating the reliability and balance of information based on independent external sources, public databases, and press releases.

### Limitations and Recommendations

The absence of generally accepted reporting frameworks or well-established practices on which to draw to evaluate and measure non-financial information allows for different measures and measuring techniques, which can affect comparability between entities. Therefore, our assurance team relied on professional judgment. In a limited assurance engagement, the scope of the risk assessment procedures and the subsequent procedures performed in response to the assessed risks are limited than in a reasonable assurance engagement. Our assurance team conducted our work to a limited extent through inquiries, analysis, and limited sampling based on the assumption that the data and information provided by **Hanwha Solutions** are complete and sufficient. To overcome these limitations, we confirmed the quality and reliability of the information by referring to independent external sources and public databases, such as DART and the National GHGs Management System (NGMS).

# INDEPENDENT ASSURANCE STATEMENT

## To readers of 2026 Hanwha Solutions Sustainability Report

### Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with **Hanwha Solutions** 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. We found that the report was prepared in accordance with the criteria presented by **Hanwha Solutions**, and nothing comes to our attention to suggest that the evidence obtained regarding its content is insufficient to provide a basis for our opinion. Our opinion on the principles is as follows:

Inclusivity
**Hanwha Solutions** 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
**Hanwha Solutions** 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
**Hanwha Solutions** 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 **Hanwha Solutions's** actions.

Impact
**Hanwha Solutions** 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 sustainability performance data, including Business Performance, ESG Highlights, Assessment and Development of Competencies for Governance and Oversight, Oversight Methods of Decision-Making Bodies, Climate-Related Risks and Opportunities, Strategy and Decision-Making, Climate Resilience Assessment and Scenario Analysis, Climate-Related Metrics, Expansion of Eco-Friendly Business, Establishment of a Circular Economy System, Green Business Investment and Financing Activities, Expansion of Sustainable Procurement, Environmental Management Strategy, Environmental Training and Education, Environmental Targets and Performance, Air Pollutant Management System, Air Pollutant Reduction Activities, Hazardous Chemical Management Activities, Water Resource and Water Pollutant Reduction Activities, Waste Management and Reduction Activities, Protection of Rare and Endemic Plants and Endangered Plant Species, Ecosystem Conservation Activities, Climate Change Response Station Operation, Diversity Enhancement Activities, Employee Status, Average Length of Service, New Hires, Persons with Disabilities, National Merit Recipients, Turnover and Retirement data. 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.

### KMR's Competence, Independence, and Quality Control

Korea Management Registrar (KMR) is a verification body for the Republic of Korea Emissions Trading Scheme (K-ETS), accredited to ISO/IEC 17029:2019 (Conformity Assessment – General principles and requirements for validation and verification bodies), ISO 14067, the additional accreditation criteria ISO 14065, and ISO/IEC 17021:2015 (Requirements for bodies providing audit and certification of management systems). Additionally, KMR maintains a comprehensive quality control system that includes documented policies and procedures of the KMR EDV 01:2024 (ESG Disclosure Assurance System) based on ISO/IEC 17029 requirements and compliant with IAASB ISQM1:2022 (International Standard on Quality Management 1 by the International Auditing and Assurance Standards Board). Furthermore, KMR adheres to the ethical requirements of integrity, objectivity, professional competence and due care, confidentiality, and professional behavior in accordance with the IESBA Code:2023 (International Code of Ethics for Professional Accountants). Our assurance team consists of sustainability experts. Other than providing an independent assurance, KMR has no other contract with **Hanwha Solutions** and did not provide any services to **Hanwha Solutions** that could compromise the independence of our work.

### Limitations of Use

This assurance statement is made solely for the management of **Hanwha Solutions** for the purpose of enhancing an understanding of the organization's sustainability performance and activities. We assume no liability or responsibility for its use by third parties other than the management of **Hanwha Solutions**. As this assurance statement may be subject to revision after the assurance date below, we recommend verifying whether this is the latest version.

KMR 한국경영인증원 Korea Management Registrar
SRV1000 Sustainability Committee Assurance
AA1000 Licensed Report 000-129/V3-N5OVM

June 22, 2026
CEO **Eun-Ju Hwang**

E. J Hwang

# AWARDS AND MEMBERSHIPS

## Major Awards (2024~2026 1H)

| Division | Awards | Awarded by |
|---|---|---|
| Chemical | Prime Minister's Commendation at the 2024 Korea Energy Awards (Yeosu Plant) | Korea Energy Agency |
| | Plaque of Appreciation from the President of the Korea National Park Service (Ulsan Plant) | Korea National Park Service |
| | Recipient of the 105th IR52 Jang Young-Shil Award in 2024 (for semiconductive compound) | Korea Industrial Technology Association |
| | Awarded as an Outstanding Company (Award of Recognition) at the 2024 Performance Review of the Voluntary Agreement on Particulate Matter and Air Pollutant Total Load Management | Ministry of Climate, Energy and Environment, Yeongsan River Basin Environmental Office |
| | Presidential Citation for contributing to the protection of national parks and enhancement of biodiversity | Ministry of Climate, Energy and Environment, Korea National Park Service |
| | Recognized for excellence in voluntary participation of fine dust seasonal control (Yeosu) | Yeongsan River Basin Environmental Office |
| | Recognized as '2025 Most Outstanding Plant in Safety Management at the Yeosu Industrial Complex' (Yeosu) | City of Yeosu |
| | Recognized in two areas of the CDP Korea Awards (Excellence in Carbon Management Sector Honors (Raw Materials Sector) and Water Security) | CDP Korea |
| | Award of Recognition for reducing pollutants as part of total air pollution load management (Yeosu) | Yeongsan River Basin Environmental Office |
| | Plaque of Appreciation from the Korea Disabled Veterans Organization (Ulsan) | Korea Disabled Veterans Organization |
| | National Fire Agency Commissioner's Award for Hazardous Materials Safety (Yeosu) | National Fire Agency |
| Qcells | Recognized as a 2026 Top Brand PV by EUPD Research, marking 5 consecutive years in the U.S. and 13 in Europe | EUPD Research |
| | Ranked No.1 in the U.S. residential PV module market for 8 consecutive years, and in the commercial market for 7 consecutive years | Wood Mackenzie |
| | Recognized by Germany's 2026 Life & Living Award for 7 consecutive years | DISQ & ntv |
| | Named TOP Performer for 11 consecutive years in the 2026 PV Module Reliability Scorecard | Kiwa PVEL |
| | Recognized as the Overall Highest Achiever in the 2026 PVMI (PV Module Index) | RETC(Renewable Energy Test Center) |
| | Named '2025 Tier 1 Cleantech Company' by S&P Global | S&P Global |

## Major Association Memberships

| | | |
|---|---|---|
| Construction Guarantee | Construction Association of Korea | Korea Chamber of Commerce and Industry |
| Korea Housing Construction Association | Korea Developer Association | Bio-based Future Food Industry Committee |
| Energy Transition Forum Korea | The Federation of Korean Industries | Electric Contractors' Financial Cooperative |
| Korea Emissions Market Association | Korea International Trade Association | Korea Construction Engineers Association |
| Korea Industrial Technology Association | Korea Golf Course Business Association, Gangwon Regional Council | Korea Vinyl Environmental Council |
| Korea Electric Engineers Association | Korea Listed Companies Association | Korea Chemical Industry Association |
| Korea Plastic Industry Cooperative | Korean Society for Safety | Korea Electrical Contractors Association |
| International Isocyanate Institute | Korea Chlor Alkali Industry Association | Korea Photovoltaic Industry Association |
| Korea Fire Facility Association | Korea Smart Grid Association | American Chamber of Commerce in Korea |
| Fire Industry Guarantee Union | Korea New & Renewable Energy Association | Korea-U.S. Economic Council |


Hanwha Solutions