

2024 LOTTE ENERGY MATERIALS SUSTAINABILITY REPORT



ABOUT THIS REPORT

Overview

LOTTE ENERGY MATERIALS published its first sustainability report in June 2024 to transparently disclose its efforts to promote sustainable management and its key achievements, and to actively communicate with stakeholders based on this. Through this report, we shared not only our financial performance, but also our ESG management strategies and non-financial performance. LOTTE ENERGY MATERIALS will actively collect opinions from stakeholders by publishing a sustainability report every year and reflect them in its management activities.

Reporting Period and Scope

The reporting period is from January 1, 2024, to December 31, 2024, and includes some of the data from the first half of 2025 for important information that may affect stakeholders. For quantitative performance, data from the past three years have been included to identify trends. The scope of non-financial performance reporting includes ESG performance of the domestic business sites of LOTTE ENERGY MATERIALS, and some non-financial data includes the performance of overseas subsidiaries. In cases where caution is required regarding the scope and boundaries of the report, the scope and boundaries have been separately indicated in the footnotes.

Reporting Principles and Preparation Criteria

This report was prepared in accordance with GRI (Global Reporting Initiative) Standards 2021, an international sustainability reporting guideline, and the UN Sustainable Development Goals and the key disclosure indicators of the SASB (Sustainability Accounting Standards Board), which take into account the characteristics of each industry. In terms of financial performance, it was prepared based on consolidated financial statements based on K-IFRS.

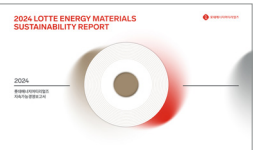
Verification of the Report

In order to ensure the reliability and fairness of the financial and non-financial information contained in this report, third-party assurance was conducted by the Korea Management Registrar, an independent professional organization, and the assurance results can be found in the assurance statement on page 99 of the report. The Korea Management Registrar has no conflict of interest that may undermine the independence and fairness of the assurance other than providing third-party assurance services to LOTTE ENERGY MATERIALS.

Report Publisher

Published by	LOTTE ENERGY MATERIALS Corporation, 17F, Gangnam Building, 396 Seocho-daero, Seocho-gu, Seoul
Publication date	June 2025
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COVER STORY



The cover of the 2024 LOTTE ENERGY MATERIALS Sustainability Report simply captures the shape of a precisely wound coil and the colors that spread out softly. This simple design, which eliminates unnecessary elements, symbolizes the warmth of technological innovation and the way the company's values naturally permeate society and customers. In addition, the layers that are stacked up on top of each other mean that we are building the company's performance and future step by step. This is also connected to the innovation and vision of LOTTE ENERGY MATERIALS, which will become the core of the battery materials market.

INTERACTIVE PDF

To better understand the 2024 LOTTE ENERGY MATERIALS Sustainability Report, you can click on the icons within the report or the table of contents title located at the top of every page to move to the corresponding page.

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CEO MESSAGE

Dear stakeholders, I am Yeon-seop Kim, CEO of LOTTE ENERGY MATERIALS.

2024 was a year of unprecedented international political instability and uncertainty due to global climate change. LOTTE ENERGY MATERIALS has been making continuous efforts to overcome these market uncertainties and short-term difficulties and secure mid- to long-term growth. We are implementing reforms by adding social and environmental value creation to our stable financial structure and pursuing coexistence and growth with all stakeholders, including local communities. In order to secure continuous growth momentum, we will establish the following ESG STRATEGIES and pursue related activities.

LOTTE ENERGY MATERIALS is responding to climate change and promoting the transition to low-carbon industries. We have set a goal of reducing greenhouse gas emissions by 32.7% by 2030 compared to 2022 and achieving carbon neutrality by 2050. To achieve this, we aim to increase the use of renewable energy in our domestic and overseas business sites. We are actively considering PPA and REC contracts for our Malaysian business site, and our Spanish business site, currently under construction, plans to use new and renewable energy (e.g., our own solar power generations) upon completion of the business site by taking advantage of the region's favorable location for securing renewable energy. Through this, we will grow into a company that takes the lead in climate change and works towards a low-carbon transition.

LOTTE ENERGY MATERIALS will strive to create social value. We are aware that the environment and human society influence each other, and we are expanding the use of renewable raw materials to reduce the use of natural resources and avoid environmental and human rights issues in the course of business. We will have built a management system that is beneficial to both the environment and society, and created an environment that's conducive for growth together with our management partners to increase social value. In addition, we will strengthen our internal system to secure transparency, fairness, and expertise in corporate activities, and sincerely promote ESG management for a sustainable future.

LOTTE ENERGY MATERIALS will enhance sustainability through innovative company-wide business portfolio optimization. In order to secure new growth engines in line with the paradigm change in the battery market, we are expanding our secondary battery value chain, including through mass production of next-generation battery materials such as sulfide-based solid electrolytes and LFP cathode active materials. We will do our best to complete the company-wide business portfolio advancement without a hitch by improving the operational efficiency and composition of our business and strengthening our financial soundness, even amid the structural changes in the market.

LOTTE ENERGY MATERIALS is facing new situations and creating new pathways at every moment. All of our employees will do their best to overcome the current difficulties with a positive outlook and gain the trust of our customers and stakeholders. We hope you will join LOTTE ENERGY MATERIALS on its journey with continued interest and support. Thank you.

“

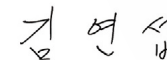
LOTTE ENERGY MATERIALS is a leading company in secondary battery materials, and is growing into a sustainable company that embodies eco- friendly values and contributes to creating a better life for all mankind. We ask for your continued interest and warm encouragement in the new future we will create.

”

June 2025

CEO of LOTTE ENERGY MATERIALS

Yeon-seop Kim




ABOUT LOTTE ENERGY MATERIALS

About us

LOTTE ENERGY MATERIALS, a new member of the LOTTE Group since March 2023, was established in 1987 and is the only company in the industry that produces hybrid copper foil products that has ultra-thin/high strength/high stretch properties at the same time, and is recognized for its excellent technology by global advanced battery companies.

In addition, we are focusing on strengthening our R&D capabilities to increase future value through the development of next-generation, high value-added materials (solid electrolytes, cathode active materials, silicon anode active materials, HVLP4 copper foil for AI accelerators, etc.) to proactively respond to market demand. We are growing every year as a leading materials company in the secondary battery market through global bases in Malaysia, Europe, and North America, and are also increasing the proportion of recycled raw materials. We will grow into a company that practices environmentally friendly management in line with the increasingly strict demands of the international community and global market.

As of December 2024

Company name	LOTTE ENERGY MATERIALS Corporation
Date of establishment	August 11, 1987
CEO	Yeon-seop Kim
Head office	63-25 Seokam-ro 3-gil, Iksan-si, Jeollabuk-do
Number of employees	642 (as of 2024)
Business areas	Elecfoil (battery foil, circuit foil) and construction



Core values



Growth strategies



ABOUT LOTTE ENERGY MATERIALS

History

1987 – 1999

1987

- Establishment of Deoksan Metal Co., Ltd. (currently LOTTE ENERGY MATERIALS)

1989

- Completion of Iksan Plant 1 in Iksan, Jeollabuk-do, and Korea's first production of Elecfoil¹⁾

1992

- Establishment of the Elecfoil Development Technology Research Institute

1999

- Selected for having one of Korea's top 100 technologies in the 20th century (Hosted by the Ministry of Science and Technology)

¹⁾ Elecfoil (Electrodeposited Copper Foil):
Thin copper foil made by electrolyzing a copper sulfate solution

2001 – 2009

2001

- Development of L2B Elecfoil for secondary batteries for the first time in Korea

2002

- Certification of Elecfoil as a world-class product (by the Ministry of Knowledge Economy)

2004

- Development of ultra-thin Elecfoil for PDPs (plasma display panels)

2005

- Development of Elecfoil for FPCBs (flexible printed circuit boards)

2006

- Development of LUT Elecfoil for semiconductor PKG for the first time in Korea

2007

- Development of Elecfoil for CTP (cell to pack)

2009

- Development of High-End L2K Elecfoil for secondary batteries (a high-capacity/high-power product)

2011 – 2019

2011

- Listed on the KOSPI (020150)

2013

- Development of High-End L2S Elecfoil for secondary batteries for the first time in the world (an ultra-thin/high-strength/high-stretch hybrid product)
- Development of High-End ST7 Elecfoil for secondary batteries for the first time in the world (a high-strength product)
- Completion of Iksan Plant 2 in Iksan, Jeollabuk-do
- Acquisition of ISO 9001 (quality management system)
- certification Acquisition of IATF 16949 (automobile quality management system) certification

2015

- Development of High-End L2S Elecfoil (4 μm/5 μm) for secondary batteries for the first time in the world (an ultra-thin/high-strength/high-stretch hybrid product)

2018

- Acquisition of ISO 14001 (environmental management system) certification

2019

- Development of High-End L2H Elecfoil for secondary batteries (a high-stretch product)
- Development of High-End ST9 Elecfoil for secondary batteries for the first time in the world (an ultra-high-strength product)
- Development of low-profile copper foil LSP Elecfoil for 5G signal transmission
- Development of Elecfoil for FCCL
- Completion of Plant 1 of the Malaysian production site

2020 – 2024

2020

- Completion of Plant 2 of the Malaysian production site

2022

- Acquisition of ISO 45001 (safety and health management system) certification
- Development of low-profile ultra-thin UTS Elecfoil for PKG
- Completion of Plants 3 and 4 of the Malaysian production site

2023

- LOTTE ENERGY MATERIALS officially launch
- Development of 0.5-1.0 μm thick, low-profile, ultra-thin UTZ Elecfoil

2024

- Completion of the solid electrolyte pilot
- Completion of Plants 5 and 6 of the Malaysian production site

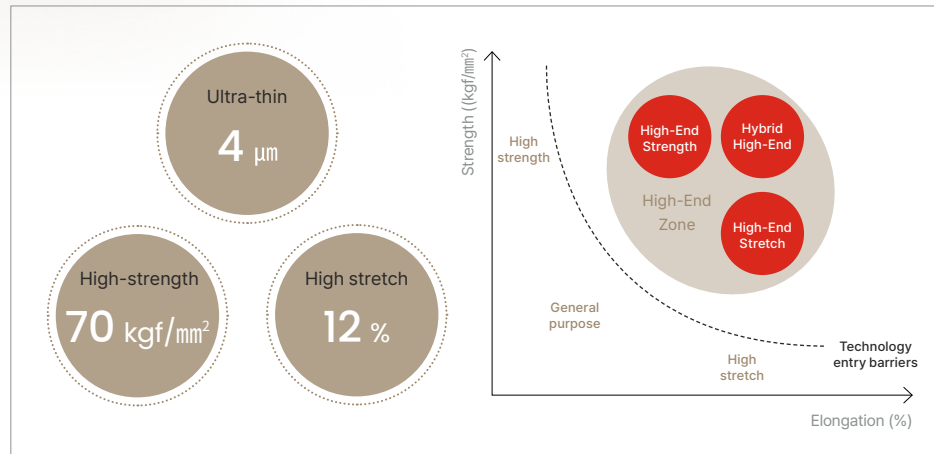
MATERIALS FOR GREEN BUSINESS

Introduction to business

Elecfail

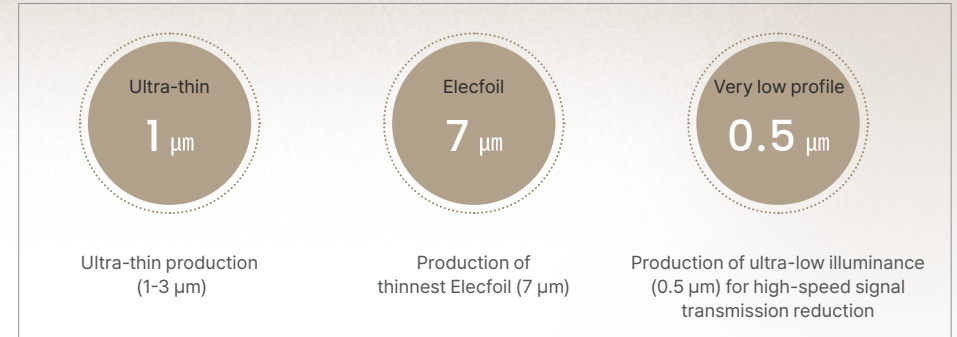
High-End Elecfail

Copper foil for batteries is a core component used in electric vehicles as a negative current collector material for lithium-ion batteries. LOTTE ENERGY MATERIALS is developing and mass-producing High-End Elecfail that meets the high-strength/high-stretch properties required to improve the driving range, charge/discharge safety, and energy density of electric vehicles. In particular, it is leading the industry based on the properties and patents of Korea's only hybrid copper foil products that simultaneously satisfy ultra-thinness/high-strength/high-stretch requirements.



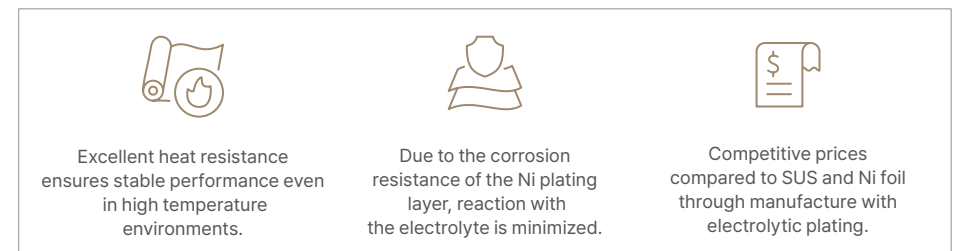
The only circuit foil in Korea

Circuit foil is a thin copper foil that is used for PCBs (printed circuit boards). It is a key material created by precipitating copper from a CuSO₄ (copper sulfate) electrolyte, obtained by dissolving copper wire and putting it through an advanced process, and is used in a wide range of electronic products, including AI accelerators, TVs, computers, and smartphones. LOTTE ENERGY MATERIALS has focused on the miniaturization and multi-functionality of advanced electronic devices, and has risen to the top in the world in market share in this field through the early development and commercialization of Korea's only high-function special circuit foil.



LDN (Ni plated Cu foil)

LDN is a core material designed for next-generation solid-state batteries in which nickel is plated on existing copper foil. Copper foil, which was used as a conventional negative current collector, is vulnerable to corrosion, so corrosion-resistant materials such as SUS and Ni were used as alternatives, but these materials had low cost efficiency and had limitations due to compatibility issues with existing processes. LOTTE ENERGY MATERIALS' nickel-plated copper foil solves these problems and has excellent heat resistance and corrosion resistance, which can maximize the performance of solid-state batteries. In addition, nickel-plated copper foil satisfies requirements such as no pin holes, no defects, low profile, specific tensile strength, and elongation, and is positioned as an important material for solid-state batteries, the so-called 'dream battery.' Thanks to these properties, nickel-plated copper foil contributes significantly to improving the stability and performance of solid-state batteries, and is attracting attention as a core material for next-generation energy storage solutions.



MATERIALS FOR GREEN BUSINESS

Introduction to business

R&D

Development of next-generation advanced materials

LOTTE ENERGY MATERIALS is accelerating the development of next-generation battery materials to lead the market and create new future growth engines based on industry-leading technology. In particular, it aims to grow into a sustainable battery materials company through the development of solid electrolytes, high-producibility LFP cathode active materials, and silicon composite anode active materials. LOTTE ENERGY MATERIALS is carrying out the following advanced material development projects.

Solid electrolyte

Solid electrolytes are solid-state electrolytes that transfer ions, and offer higher stability and energy density than existing liquid electrolytes. They are safe because there is no risk of leakage or ignition, and they are attracting attention as a key material for implementing ASSBs (all-solid-state batteries). Solid electrolytes are divided into sulfide, oxide, and polymer types, and there are differences in ion conductivity and stability. They are used in electric vehicles, ESSs (energy storage systems) and mobile devices to improve battery performance and lifespan, and enable high voltage and high energy density. In addition, all-solid-state batteries are in the spotlight in the next-generation battery market because they have higher energy efficiency and a longer lifespan than existing lithium-ion batteries. LOTTE ENERGY MATERIALS is studying how to maximize the performance of solid electrolytes by securing high ion conductivity, controlling the particle size, and applying liquid synthesis technology, and also how to maintain stable ion conductivity in specific environments.



High ion conductivity



Excellent electrochemical stability



Ability to supply ultrafine particles



Excellent electrode contact

LFP cathode active materials

LFP cathode active materials have recently been attracting attention in the battery market. As consumer demands for battery safety has increased due to recent electric vehicle battery fires, the preference for LFP batteries that are safer against fire and explosion is increasing. LFP cathode active materials can control particle size according to customer needs and boast high compression density and a long lifespan. Thanks to these properties, LFP batteries can implement optimized physical properties and electrochemical performance, providing high reliability in various applications, including electric vehicles.



Increased customer freedom of choice through product particle size control that meets requirements



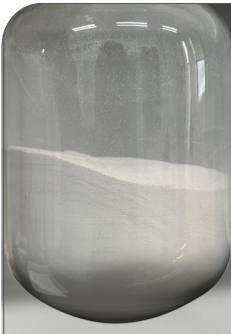
Mass production of uniform high-quality products (securing wet grinding & spray drying know-how)



Securing high compression density & life performance

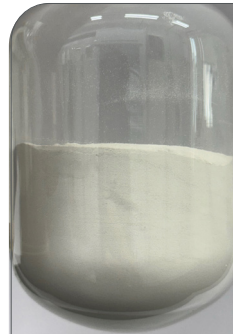
Silicon composite anode active materials

LOTTE ENERGY MATERIALS is developing Si-C cathode materials with a focus on cost competitiveness. It aims to mass produce the materials between 2026 and 2027, and plans to expand its business into the silicon-based next-generation cathode material market through its equity investment in Enwires in 2023.



Sulfide-based solid electrolyte

Our sulfide-based solid electrolytes feature high ionic conductivity and excellent electrode contact properties due to the application of dry/wet synthesis technology.



Halide-based solid electrolyte

Our halide-based solid electrolytes provide excellent electrochemical and oxidation stability.

MATERIALS FOR GREEN BUSINESS

Introduction to business

Application

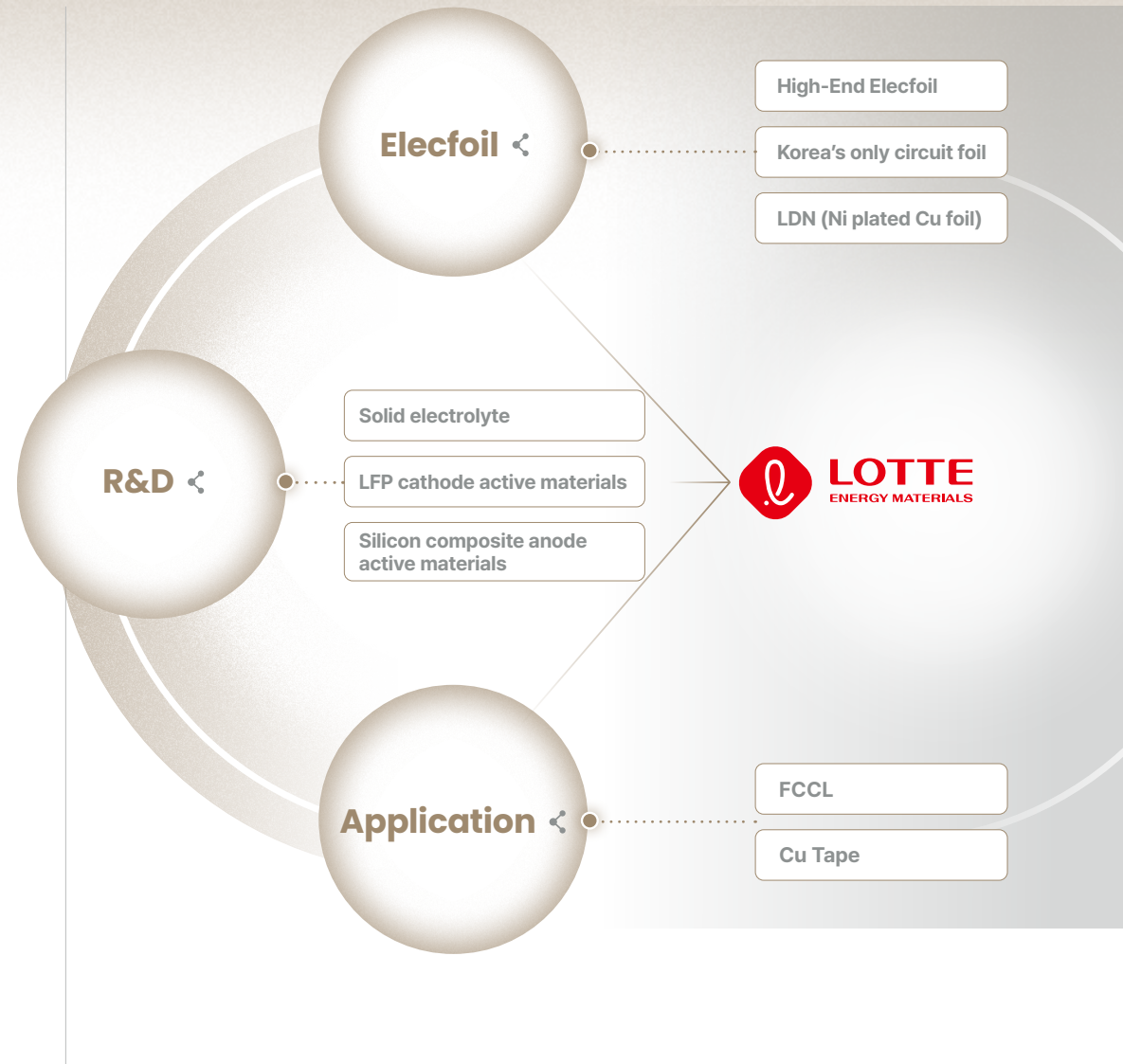
FCCL (Flexible Copper Clad Laminate)

FCCL is a material for FPCBs (flexible printed circuit boards) that is used to laminate copper foil and insulating film. The substrate of a smartphone must use FPCBs because it is flexible and must be bent for component placement. FCCL, one of the main materials for FPCBs, is an essential material that affects heat generation, various signal interferences, and speed within the smartphone depending on the material and performance. LOTTE ENERGY MATERIALS supplies high-performance FCCL to global smartphone manufacturers, and is recognized for its technological prowess.



Cu Tape (Copper Adhesive Tape)

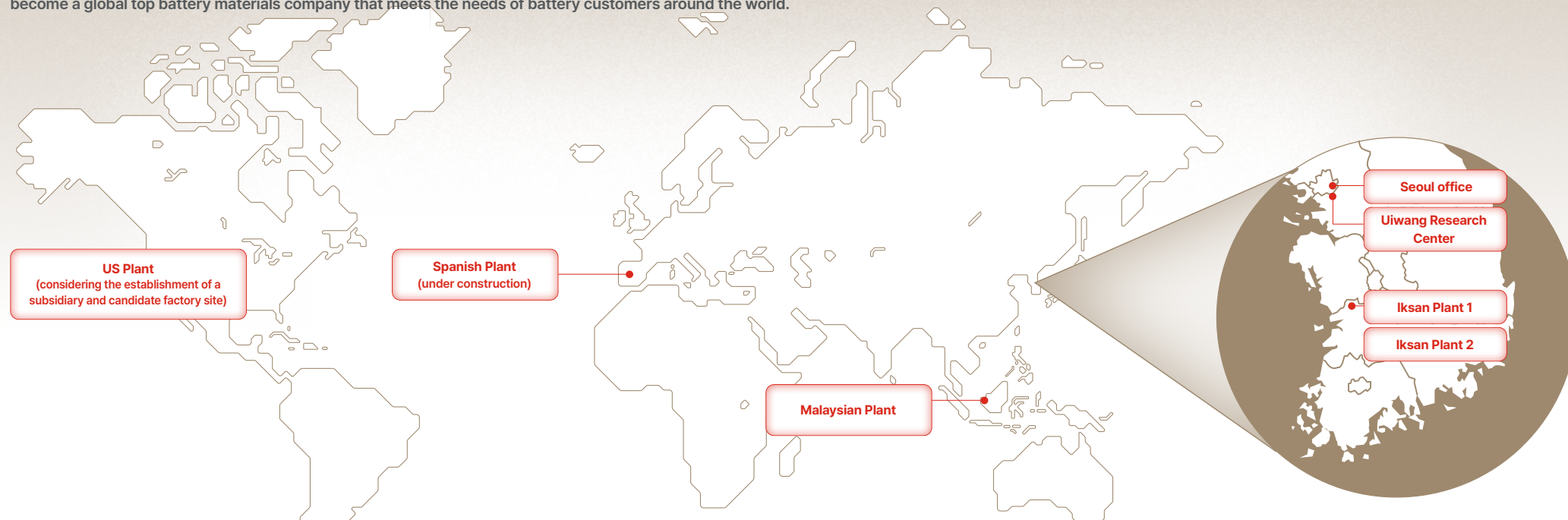
Cu Tape is an essential material for small and medium-sized devices (smartphones, tablets, cars, TVs, etc.) that require miniaturization and light weight. It effectively dissipates heat from components that generate a lot of heat, such as high performance CPUs and motherboards, and reduces malfunctions in electronic devices by blocking and alleviating electromagnetic interference.



MATERIALS FOR GREEN BUSINESS

Business sites

LOTTE ENERGY MATERIALS is expanding its business beyond Korea to the world. In particular, it is accelerating its growth with the production of High-End copper foil. It is leading the Asian market by operating a plant in Malaysia, and is planning to enter the European market by establishing a new plant in Spain. In addition, it is considering the establishment of a factory in the United States, and is expanding investments to become a global top battery materials company that meets the needs of battery customers around the world.



Seoul office	LOTTE ENERGY MATERIALS is located in the Gangnam Building in Seocho-gu, and is leading the copper foil industry based on its overwhelming technological prowess. It aims to become the global No. 1 in High-End copper foil through new business, domestic and international product sales, and management support.	17F, Gangnam Building, 396 Seocho-daero, Seocho-gu, Seoul
Uiwang Research Center	The Uiwang Research Center is focusing its research capabilities on strengthening product competitiveness and securing original technologies. It is accelerating the development of new businesses in next-generation battery materials and promising future industries, such as sulfide-based solid electrolytes, high-productivity LFP cathode active materials, and silicon composite cathode active materials.	4F, 50 Obongsandan 3-ro, Uiwang, Gyeonggi-do
Iksan Plant 1	Iksan Plant 1 is the first in Korea to successfully produce copper foil, and is a key base leading the advanced materials industry. It is performing its role as a mother plant that develops new products and process technologies, including High-End copper foil.	63-25 Seokam-ro 3-gil, Iksan, Jeonbuk-do
Iksan Plant 2	Iksan Plant 2 is producing high value-added application products and preparing for the mass production of next-generation products by establishing pilot lines for next-generation battery materials such as sulfide-based solid electrolytes and high-productivity LFP cathode active materials in response to the changing mobility paradigm.	11 Sandan-gu Pyeong-gil, Iksan, Jeonbuk-do

Malaysian Plant	The Malaysian smart factory, which has excellent infrastructure, is its strength is the first major base for the domestic copper foil industry to successfully enter overseas markets. It supplies high-quality products to global customers based on the highest level of cost competitiveness and eco-friendly energy produced through hydroelectric power generation.	Sama Jaya FIZ MTLD, Block 12, Kuching, Sarawak, Malaysia 93450
Spanish Plant (under construction)	The Spanish smart factory is located in a temperate climate with little temperature difference throughout the year, making it an ideal location for copper foil production and quality control. It has a stable power grid based on eco-friendly energy such as wind and solar energy, and plans to supply High-End products to major European customers based on differentiated product technology.	Mont-roig del Camp, Tarragona, Spain 43892
US Plant (considering the establishment of a subsidiary and candidate factory site)	The United States has the largest demand for eco-friendly vehicles, and is a strategic base that we have entered in response to our customers' needs. We aim to respond promptly to various external variables such as the US Inflation Reduction Act (IRA), supply high-quality products to major battery companies and global auto OEMs located throughout North America, and achieve dominance in the High-End copper foil market.	(undecided)

SUSTAINABILITY STRATEGY

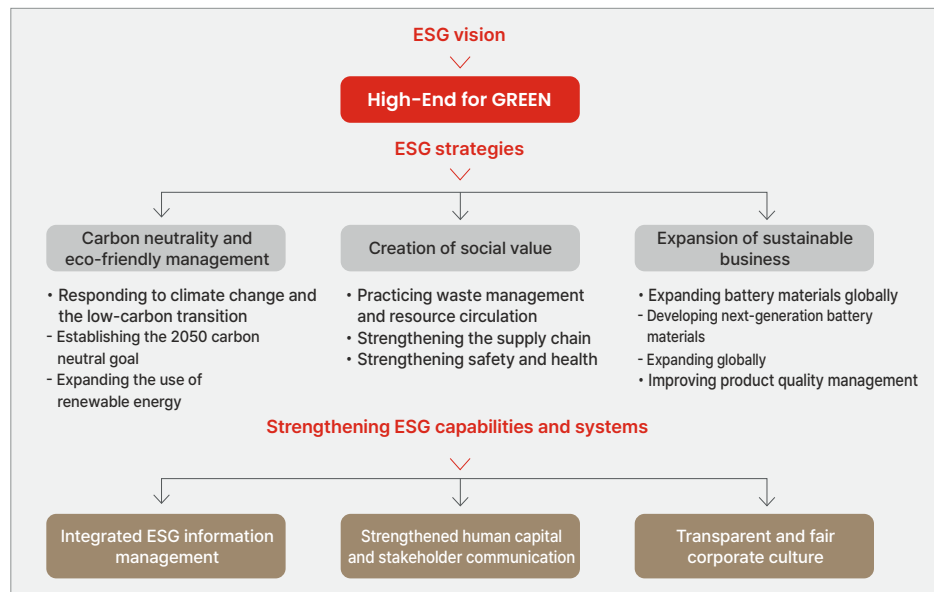
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ESG STRATEGIES and GOVERNANCE SYSTEM

ESG MANAGEMENT SYSTEM

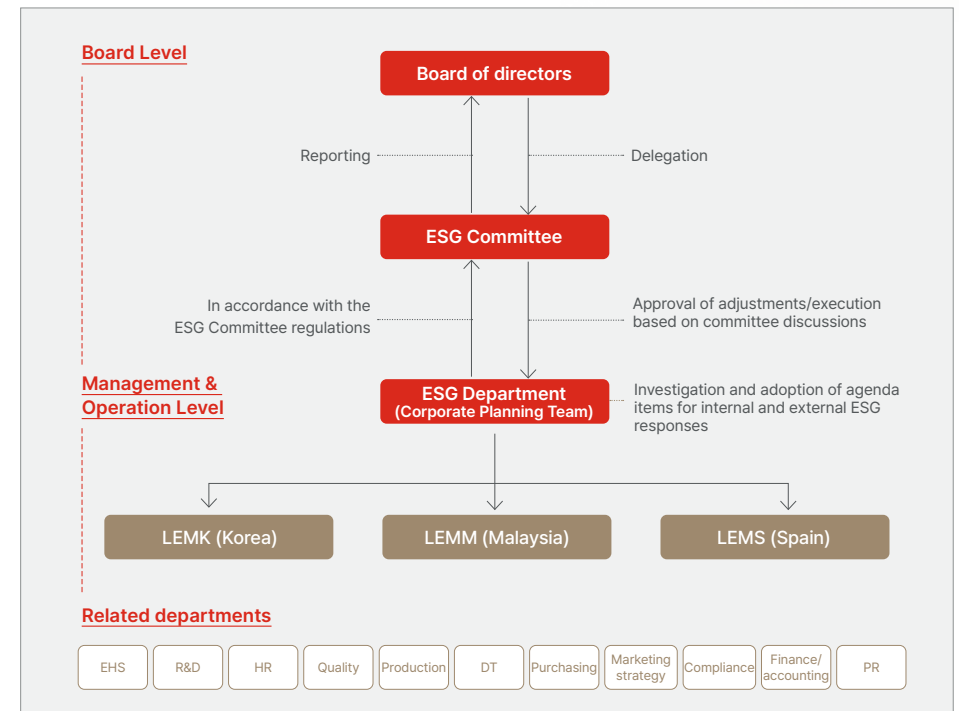
ESG management vision and strategy

LOTTE ENERGY MATERIALS has set ESG management goals to continuously grow in the global market, and established the ESG Committee within the board of directors in December 2023 to make decisions on establishing company-wide ESG management strategies, performance evaluations, and stakeholder communication. In order to achieve our ESG management goals, we will reflect global trends, actively communicate with stakeholders, and strive to become a trustworthy company by more systematically establishing sustainable management strategies. LOTTE ENERGY MATERIALS aims to pursue carbon neutrality, environmentally friendly management, social value creation, and sustainable business expansion as ESG strategies. For carbon neutrality and environmentally friendly management, we established a roadmap to reduce greenhouse gas emissions by 32.7% compared to 2022 and achieve carbon neutrality by 2050. In order to create social value, we plan to manage waste generated at our business sites and expand the use of recycled raw materials. We also plan to strengthen supply chain management and workplace safety and health. Furthermore, we plan to expand our sustainable business by developing next-generation battery materials, expand our global business, and improve product quality management.



ESG management operation system

LOTTE ENERGY MATERIALS established the ESG Committee in 2023 and designated the ESG Department to proactively respond to ESG requirements and global regulations in the secondary battery industry. The ESG Committee makes decisions on major agenda items so that it can proactively respond to customer demand and perform internal ESG management tasks, and the ESG Department manages and monitors company-wide requirements. LOTTE ENERGY MATERIALS' ESG Department is in charge of executing sustainability and ESG-related strategies/plans in response to internal and external demands, and works closely with related departments to plan and support the execution of company-wide ESG management tasks and performance improvements. In addition, it plans and supports the execution of sustainability and ESG management tasks by consolidated companies such as LEMK, LEMM, and LEMS.

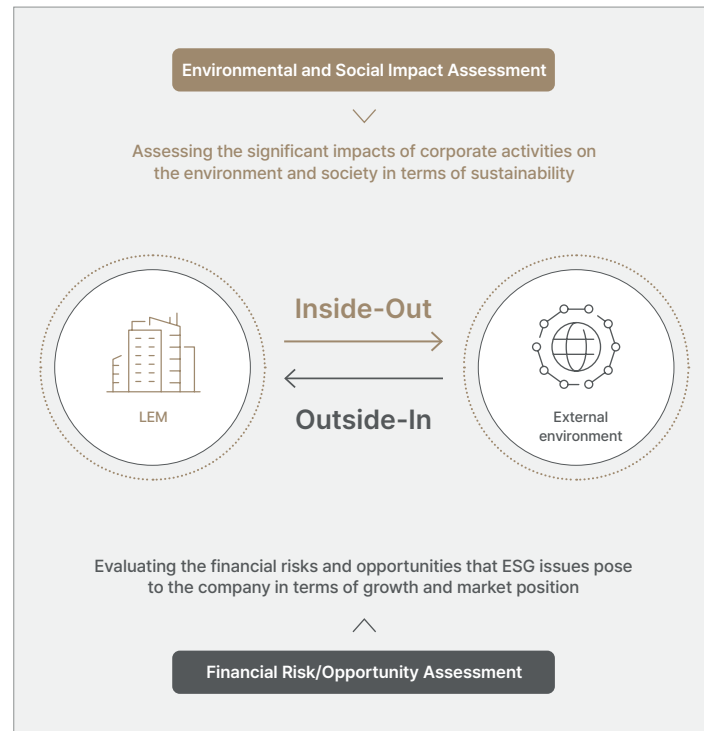


ESG STRATEGIES and GOVERNANCE SYSTEM

Materiality assessment

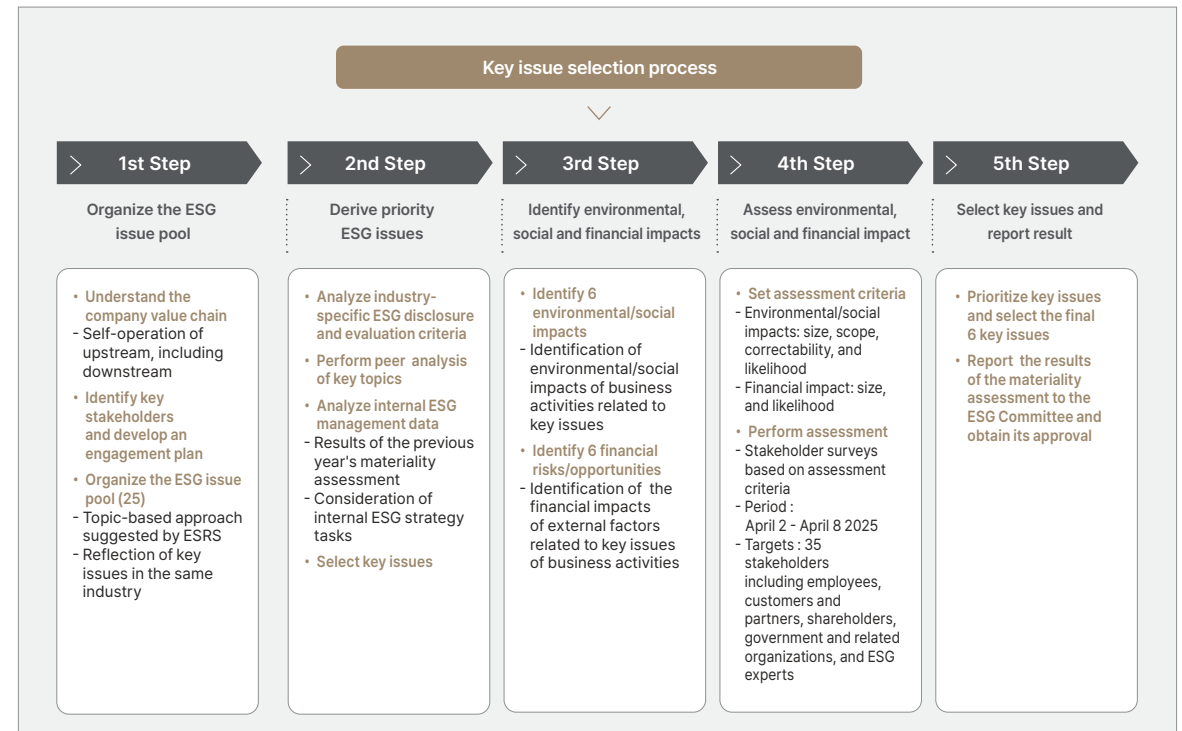
Materiality assessment

LOTTE ENERGY MATERIALS conducted a materiality assessment to identify ESG issues that may have a significant impact on management activities and reflected stakeholder opinions in the process. The 2024 materiality assessment, which was conducted by applying the concept of double materiality, includes both an inside-out perspective of the impact that a company's management activities can have on the environment and society, and an outside-in perspective of the impact that external sustainability and ESG-related factors can have on the company's financial status.



Material issue selection process

In order to identify key ESG issues, we created a pool of 25 issues related to the company by analyzing internal and external ESG trends and disclosure guidelines, benchmarking global advanced companies, and reflecting industry issues. Among these, we derived our key ESG issues by considering the direction of internal sustainability, industry-based disclosure and evaluation initiative requirements, major reporting issues of similar companies, and material issues at each stage of the value chain. Then, we derived the final material issues through a process of identifying and evaluating the environmental, social, and financial impacts of the derived ESG priority issues.



ESG STRATEGIES and GOVERNANCE SYSTEM

Results of the materiality assessment

LOTTE ENERGY MATERIALS was selected for a total of six material issues, including 'climate change,' 'low-carbon transition,' 'waste management and resource circulation,' 'supply chain management,' 'employee and process safety,' and 'ethical management,' based on an environmental/social impact assessment and financial impact assessment. Of these, 'supply chain management' and 'ethical management' were selected as new material issues. The materiality assessment process and results were reported to the ESG Committee under the board of directors in April 2025 to internalize sustainability in decision-making across all management.

Results of identifying material issues

Impact level: ● (Very low), ●● (Low), ●●● (Neither), ●●●● (High), ●●●●● (Very high)

Rank		Risks and opportunities	Environmental/ social impact level	Financial impact level
1	Environmental	Climate change	●●●●●	●●●●○
2		Low-carbon transition	●●●●○	●●●●○
3		Waste management and resource circulation	●●●●○	●●●●○
4	Social	Supply chain management	●●○○○	●●●●○
5		Employee and process safety	●●○○○	●●●●○
6	Governance	Ethical management	●●●○○	●○○○○

Material issue management plan

LOTTE ENERGY MATERIALS systematically identifies and manages risks and opportunities through active communication, which includes collecting stakeholder opinions on the six material issues.

Key issue	Risks and opportunities	Management plan and strategy tasks	Page	GRI Index
Climate change	<ul style="list-style-type: none"> Increased investment in facilities to reduce carbon emissions Increased productivity and sales due to increased investment in response to growing demand for eco-friendly products Increased emission permit purchase costs due to rising emission permit prices and stricter emission regulations 	<ul style="list-style-type: none"> Establishing and implementing the 2050 carbon neutrality roadmap Establishing a carbon reduction plan across the value chain and the complying with emissions trading regulations 	30-31, 34, 63, 65	GRI 305: Emissions
Low-carbon transition	<ul style="list-style-type: none"> Reducing electricity costs through renewable energy purchase agreements Reducing greenhouse gas emissions by investing in business facilities 	<ul style="list-style-type: none"> Purchasing renewable energy Improving energy efficiency through the replacement of aging facilities and the conversion to zero-emission vehicles 	30-31, 65	GRI 302: Energy
Waste management and resource circulation	<ul style="list-style-type: none"> Possible shortage of sustainable materials Increasing sales of products using recycled raw materials by strengthening resource circulation 	<ul style="list-style-type: none"> Managing waste emissions and acquiring ZWTL certification Establishing goals for the use of renewable raw materials 	32, 34, 45, 66	GRI 301: Materials GRI 306: Waste
Supply chain management	<ul style="list-style-type: none"> Increased demand for supply chain management that takes into account environmental impacts, supplier relationships, procurement practices, technology use, and overall efficiency Strengthening supply chain management, and increased costs of responding to environmental impacts and human rights violations resulting from business implementation 	<ul style="list-style-type: none"> Reviewing response plans for partner requirements Establishing a mid- to long-term strategy for supply chain risk management (reviewing plans for ESG assessment, support, education, etc.) 	44	GRI 308: Supplier Environmental Assessment GRI 414: Supplier Social Assessment
Employee and process safety	<ul style="list-style-type: none"> Improving productivity and enhancing market competitiveness Work disruption due to loss of industrial manpower Decrease in productivity and quality Punishment and damages for violations of safety-related laws 	<ul style="list-style-type: none"> Strengthening safety and health governance Conducting risk assessments and improving risk factors Establishing emergency response systems and processes Expanding safety and health education and training 	35-37, 67-68	GRI 403: Occupational Health and Safety
Ethical management	<ul style="list-style-type: none"> Contributing to social awareness through the formation of an ethical organizational culture (e.g., establishing ethical management standards and conducting regular training) Decrease in revenue and market share Punishment and damages for violations of laws 	<ul style="list-style-type: none"> Conducting monitoring through regular/special audits, operation of an internal accounting management system Conducting ethics and fair trade training for employees Providing ethical management consulting and operating unethical behavior reporting channels Operating a fair trade voluntary compliance program 	53-58	GRI 205: Anti-corruption GRI 206: Anti-competitive behavior

Stakeholder participation and communication

Stakeholder classification and response activities

LOTTE ENERGY MATERIALS classifies stakeholders who directly or indirectly affect or are affected by management activities into core, strategic, and other stakeholders. We actively collect stakeholder opinions through appropriate communication channels for each stakeholder to identify key concerns and carry out response activities. As ESG regulations are strengthened and investor interest in ESG management increases, related requirements through interactions between stakeholders are also increasing. LOTTE ENERGY MATERIALS will continue to do its best to conduct fair management activities and provide transparent information through active communication with stakeholders.

Classification and definition of stakeholders

Classification	Core	Strategy	Other
Definition	Groups for which LOTTE ENERGY MATERIALS has legal, financial and operational responsibility	Groups that influence LOTTE ENERGY MATERIALS' performance	Groups affected by LOTTE ENERGY MATERIALS' business activities
Characteristics	Play essential roles for the survival of the company	Play essential roles for the Company in responding to specific issues	Stakeholders other than core and strategic groups
Stakeholder group	Employees, customers and investors	Partners, government and related organizations, and local communities	Media, NGOs, research institutes, experts, etc.

Communication channels and response activities by stakeholder

Classification	Stakeholders	Main concerns	Communication channels	Response activities
Internal	Employees	<ul style="list-style-type: none"> Fair compensation Welfare Safe working environment Labor-management relations Mid- to long-term vision Communication with employees Work-life balance 	<ul style="list-style-type: none"> Labor-Management Council Management performance sharing meeting Employee portal Junior board Job training Employee survey HR Sessions Strategy workshops Company newsletter 	<ul style="list-style-type: none"> Offering Parental leave Operating complaint handling channels Supporting health check-ups Hosting Work-life Balance Day Operating the Safety and Health Committee Conducting organizational culture programs for employees (events)
External	Shareholders and investors	<ul style="list-style-type: none"> Transparent management activities and disclosures Improvements in governance Diversification of business portfolio Business performance 	<ul style="list-style-type: none"> Shareholders' meeting Investor relations Performance announcements Disclosures (ongoing) IR meetings (ongoing) Call Handling (ongoing) Sustainability reports 	<ul style="list-style-type: none"> Holding IR conferences and NDRs at home and abroad Disclosing financial/non-financial information
	Customers	<ul style="list-style-type: none"> Product quality Stability of the supply chain ESG management activities 	<ul style="list-style-type: none"> Websites Brochures Exhibitions and fairs Promotional videos 	<ul style="list-style-type: none"> Acquiring ISO certification Developing next-generation products Securing supply agreements through MOUs Expansion of the renewable energy supply
	Partners	<ul style="list-style-type: none"> Strengthening of communication with partners 	<ul style="list-style-type: none"> Meetings Surveys Reporting channel 	<ul style="list-style-type: none"> Reporting channel operations
	Local communities	<ul style="list-style-type: none"> Social contributions Reduction of local environmental impacts 	<ul style="list-style-type: none"> Social contribution activities Community communication channel 	<ul style="list-style-type: none"> Conducting social contribution activities Supporting community communication and activities
	National and local governments	<ul style="list-style-type: none"> Job creation Compliance with environmental/safety/human rights regulations ESG related trade 	<ul style="list-style-type: none"> Meetings with related associations Fair Trade Commission 	<ul style="list-style-type: none"> Understanding global ESG regulations and trends Responding to government policies and guidelines Participating in government-sponsored meetings Reviewing participation in national projects

2024 ESG PERFORMANCE

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ESG HIGHLIGHTS

Sustainability status

2023

Joined the Korea Business Council for Sustainable Development



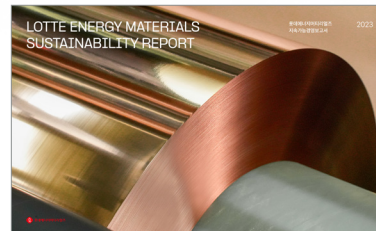
Joined the Korea Battery Industry Association



Acquired ECV certification
(Environmental Claim Validation)

2024

Published the 2023 Sustainability Report



Won the President's Award at the
50th National Quality Management Convention
(November 20, 2024)

2025

Renewed ISO Certifications

- ISO 14001 (Environmental Management System)
- ISO 45001 (Safety and Health Management System)
- ISO 9001 (Quality Management System)

Renewed IATF 16949 Certification
(Automotive Parts Quality Management)

Established the 2050 Carbon Neutrality
Roadmap Strategy

Won the High-End Hybrid Elecfoil Award
at the 2025 Inter Battery Awards
(February 24, 2025)



ESG HIGHLIGHTS

Key ESG Achievements and Goals (2024-2025)

Environmental

• Climate change response and low -carbon transition

- Established the environmental management system based on ISO 14001 (Environmental Management System)
- Reduced domestic business site Scope 1 and 2 emissions by 9,014 tCO₂eq
- Established the 2050 carbon neutral roadmap
- Reviewed the introduction of renewable energy

• Resource circulation

- Achieved 100% renewable copper raw materials at domestic business sites
- Established a goal to increase the use of renewable copper raw materials at overseas business sites
- Engaged in consignment sales for waste sludge recycling

• Green ecosystem

- Reduced water usage by 187 thousand tons
- Implemented activities to reduce air/water pollutants
- Obtained ZWTL (Zero Waste to Landfill) certification

Social

• Strengthening of safety and health and human resource management

- Established a safety management system based on ISO 45001 (Safety and Health Management System)
- Improved the safety and health management system
- Strengthened safety management at sites
- Strengthened human resource management including education, welfare, and diversity activities

• Quality and supply chain management

- Received the Presidential Award at the National Quality Management Convention
- Established a quality management system based on ISO 9001 and IATF 16949 (Quality Management System)
- Managed verification of product environmental claim validity (ECV certification)
- In process of acquiring supply chain management and Copper Mark certification

• Social contribution

- Performed environmental protection and biodiversity conservation activities
- Expanded support for socially vulnerable groups
- Strengthened cooperation with local communities

• Information protection

- Strengthened the information security management system
- Raised awareness of information security among employees and promoted accident prevention

Governance

• Ethics and compliance management

- Obtained ISO 37301 (Compliance Management System) and ISO 37001 (Anti-bribery Management System) certification
- Diagnosed and improved ethical management

• Board of Directors

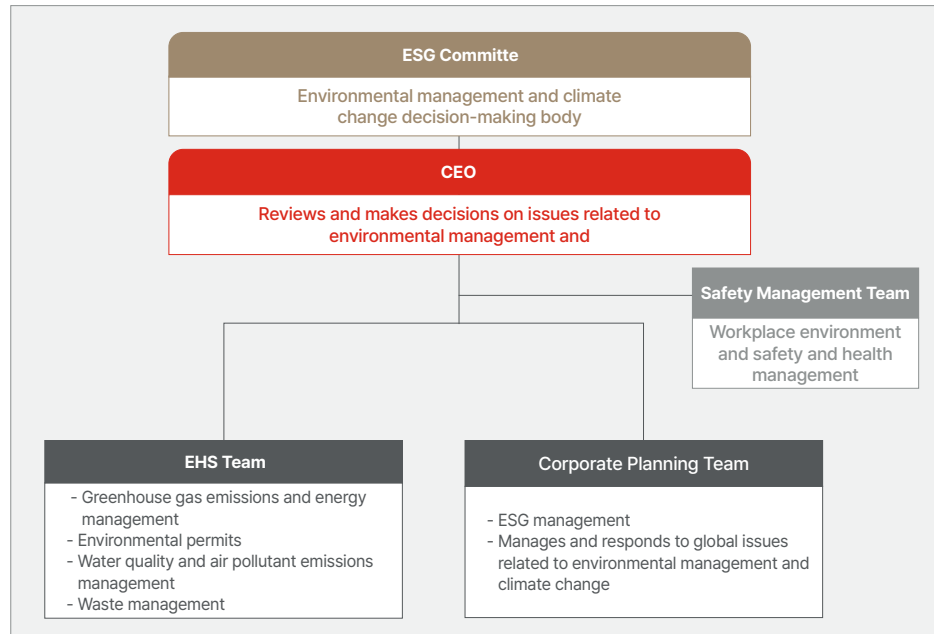
- 100% attendance rate of outside directors at board meetings
- 100% attendance rate of outside directors on the ESG Committee and holding meetings every quarter

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Eco-friendly management

Results of the materiality assessment

LOTTE ENERGY MATERIALS established and announced an environmental management policy that contains environmental management principles and behaviors and value judgment criteria that all employees must adhere to in the process of conducting management activities and business in order to realize a sustainable, eco-friendly economy. LOTTE ENERGY MATERIALS established a safety management team directly under the CEO in charge of managing the environment, safety, and health of the workplace for systematic decision-making and rapid work performance regarding the environment and safety. In addition, the EHS Team is carrying out eco-friendly activities related to greenhouse gas and energy management, environmental permits, and the reduction of water/air pollutant emissions and waste in the workplace. The Corporate Planning Team, which is in charge of ESG, manages and actively responds to global issues related to environmental management and climate change. Furthermore, it reports to the ESG Committee on important environmental issues that arise during the company's management processes, and the committee reviews, approves, and supervises the environmental activities.



Environmental management strategy

LOTTE ENERGY MATERIALS has derived strategic tasks for internalizing its environmental management system. In response to climate change, the company established the goal of achieving carbon neutrality by 2050, and will review and implement plans for renewable energy introduction, process and facility rationalization through energy audits, and the replacement of old facilities. In addition to activities to reduce carbon generated during the production stage, we will actively promote resource circulation activities to increase the use of recycled raw materials and make continued efforts to reduce and recycle waste generated during the production process. In addition, we plan to minimize environmental impacts by establishing and managing internal emission standards that are stricter than the emission standards for environmentally impactful substances.

Responding to climate change	Enhancing resource circulation	Minimizing environmental impacts
<ul style="list-style-type: none"> Managing greenhouse gas emissions to achieve carbon neutrality by 2050 Developing a plan to introduce renewable energy Reviewing greenhouse gas reduction activities such as the rationalization of processes and facilities through energy diagnosis and the replacement of old facilities Developing a plan to identify and manage supply chain emissions 	<ul style="list-style-type: none"> Improving the use of recycled raw materials and managing procurement risks Improving wastewater sludge recycling Conducting an additional review of waste recycling treatment methods and performance improvements Acquiring Zero Waste to Landfill and ZWTL certification (in progress) 	<ul style="list-style-type: none"> Managing internal emission standards that are stricter than the legal emission standards Monitoring and assessing compliance with environmental laws Achieving zero violations of environmental laws and environmental accidents Minimizing environmental factors of hazardous chemicals

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

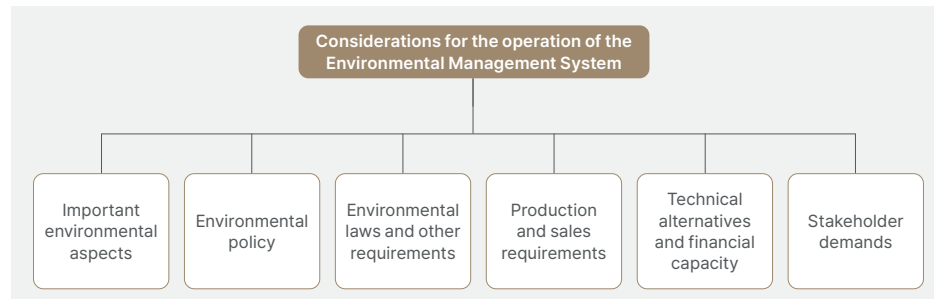
Advancement of the Environmental Management System

LOTTE ENERGY MATERIALS is currently implementing an integrated operating system for environment, safety and health, and quality management to create various synergies and is securing objective grounds through external certification and review related to active environmental impact in order to promote environmentally friendly management. LOTTE ENERGY MATERIALS has introduced an EHS system that enables company-wide management and systemization, and is striving to prevent illegal activities by supporting and performing various public inspections through continuous compliance with environmental regulations and thorough monitoring of environmental laws. LOTTE ENERGY MATERIALS has obtained ISO 14001 (Environmental Management System) certification for its domestic production sites, and conducts environmental impact assessments and environmental law compliance assessments in accordance with system standard requirements every year and reports the assessment results to management. Through this, the company is responding to expected environmental risks at its business sites and contributing to the spread of an environmental culture both internally and externally through system improvement. LOTTE ENERGY MATERIALS plans to continuously maintain and renew its certification in the future with the goal of zero environmental accidents or violations of laws.



ISO 14001 certificate

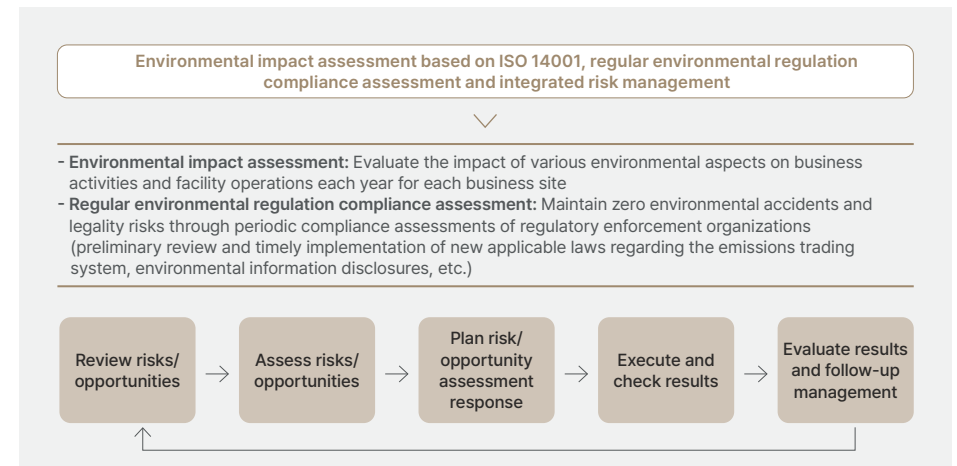
Operation of the Environmental Management System



Environmental risk management

LOTTE ENERGY MATERIALS focuses on identifying potential environmental risks in advance and preparing countermeasures. It conducts environmental compliance assessments twice a year for air, water quality, waste, noise/vibration, and odor. In 2024, a total of 317 items were evaluated, four non-conformities were found, and these were improved to ensure no environmental accidents or legal risk. These activities play an important role in reducing inevitable environmental risks, increasing corporate value, and building social trust.

Environmental risk management process



Environmental audits

LOTTE ENERGY MATERIALS inspected the safety and environmental accidents that may occur within its business sites through an environmental consulting firm in 2024 to ensure thorough management and diagnosis of environmental laws and permits. In addition, after completing environmental diagnosis training provided by the group, the company conducts an internal environmental diagnosis of its business sites once every six months and has added a process for monitoring and inspecting environmental risks that may occur, including a mandatory approval review by the Change Management Committee when construction is in progress at a business site.

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Environmental performance assessment

LOTTE ENERGY MATERIALS conducts environmental impact assessments and environmental risk assessments based on ISO 14001 for all employees. For managers and supervisors, an environmental performance assessment has been added to their KPIs and the results of prevention and improvement of environmental accidents at business sites are managed through a reward system.

Environmental education for employees

LOTTE ENERGY MATERIALS operates various educational programs to strengthen environmental management. In 2024, we shared environmental accident cases and provided one-hour education every month to prevent environmental risks for all employees in the workplace, including the plant manager. In addition, we conduct regular hazardous chemical worker education and related education once every two years, and we plan to conduct hazardous chemical education for all employees in the workplace in 2025. We provide support for environmental engineers and managers to complete various statutory education and environmental education courses within the group according to the statutory cycle to foster proper environmental awareness and cultivate the ability to manage overall environmental work. LOTTE ENERGY MATERIALS will continue to operate environmental education programs and strive to improve its environmental management capabilities.

Environmental education provided in 2024

Course name	No of trainees	No of hours	Course content	
Regular environmental education	398	12 hours (1 hour/month)	Air	- Examples of prohibited acts when operating emission and prevention facilities (air dilution, neglect of corrosion and wear, exceeding emission standards, etc.) - Best practices in the workplace
			Wastewater	- Prohibited acts when operating emission and prevention facilities (e.g., pollutant discharge, dilution treatment, and exceeding emission standards)
			Waste	- Prohibited acts when classifying and disposing of waste - Cases of repeated mistakes at sites
			Environmental trends and Issues	- Trend: Expanding chemical accident response material information - Issue: Voice phishing impersonating the Ministry of Environment, etc.
			Environmental accident cases	- Cases of illegal wastewater discharge in 2023 - Oil spills at US military bases
			Other	- Non-compliance with waste separation

Investments in environmentally friendly practices

LOTTE ENERGY MATERIALS establishes an environmental investment plan every year to minimize pollutant emissions and protect the natural environment during business processes. In 2024, we invested KRW 3.06 billion to maintain and improve air and water quality and chemical environmental facilities, and we will continue to make environmental investments in 2025. In addition, when reviewing and deliberating on new investment projects, we examine environmental risks and opportunities to ensure mid-to long-term environmental management competitiveness.

Environmental investment details (as of 2024)

Classification	Key contents	Investment cost (KWR 100 million)
Improvement of air quality	- Improvement of air pollution prevention facilities and emission facilities - Establishing an eco-friendly investment plan through demolition and improvement of old/unused facilities/pipes	11.6
Improvement of water quality	- Improvement of water pollution prevention facilities and water purification facilities - Improvement of wastewater recycling facilities	8.8
Chemical environmental improvements	- Reducing chemical emissions by improving chemical handling facilities	10.2

Eco-friendly business activities

LOTTE ENERGY MATERIALS is seeking to reorganize its business structure to enable sustainable growth by increasing the proportion of sustainable and eco-friendly future businesses. In order to actively respond to the strategic reformation of sustainable future businesses, in addition to High-End copper foil, we are conducting research and development into future businesses such as solid electrolyte, a next-generation battery material, and high-productivity LFP cathode active materials, and are planning to further advance into the battery and high value-added material business.

In October 2023, LOTTE ENERGY MATERIALS signed an MOU with KATECH (Korea Automotive Technology Institute) for joint research and development of LFP/LMFP cathode active materials, a next-generation battery material. Through this, we plan to take the lead in the next-generation battery material industry based on price-competitive, high-performance materials, and we expect synergies by linking with our copper foil business. In addition, we signed an MOU with Isu Specialty Chemical in February 2024 to supply Li2S (lithium sulfide), a key raw material for sulfide-based solid electrolytes, and are continuing development through our solid electrolyte pilot line with an annual capacity of up to 70 tons, which was completed in October 2024.

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Response to climate change

Governance for responding to climate change

LOTTE ENERGY MATERIALS has a comprehensive system for responding to climate change, which is closely linked to the company's environmental management strategy.

BOD oversight of climate risks

We discuss the direction of environmental management strategies and implementation plans centered on the ESG Committee under the board of directors, and systematically manage our response to climate change, energy saving goals, and performance determination process through this. We also manage the implementation of tasks across ESG management and deal with stakeholder risks as a key agenda.

Role of Management

In order to enhance actual performance and manage our goals for carbon neutrality, we have formed a carbon neutrality taskforce team with affiliates within the group, and this team discusses important issues through quarterly meetings. The CEO is the decision-maker for climate response strategy implementation, and the ESG Department directly under the CEO oversees the environment and climate crisis response strategy. This includes establishing greenhouse gas reduction strategies in response to climate change, managing energy use and greenhouse gas emissions by facility, and reviewing strategies to respond to carbon neutrality regulations and changes in the energy paradigm. All of these measures demonstrate that LOTTE ENERGY MATERIALS is effectively responding to climate change and building a sustainable future.

Risk management process

Risk identification

LOTTE ENERGY MATERIALS regularly identifies and evaluates major risks and opportunities that may arise across the entire management structure due to climate change. At the company level, we periodically monitor domestic and international climate change policies, regulatory trends, issues presented by major organizations such as the UN SDGs and the IEA (International Energy Agency), and issues related to customers and business, and derive related risks to manage the pool of issues.

Risk assessment

LOTTE ENERGY MATERIALS conducts a materiality assessment process for items identified as risks that have an impact. We use external analysis tools and internally developed tools to conduct financial/non-financial assessments of the potential impact of each risk, and collect opinions from internal and external stakeholders to ensure that more balanced assessment opinions are reflected. In addition, key risk items that are assessed as material are reported to management so that they can systematically manage, supervise, and respond to risks.

Risk response

LOTTE ENERGY MATERIALS is pursuing systematic risk management by establishing preemptive response measures for major risks caused by climate change. We are implementing improvement measures by preemptively analyzing risks such as asset damage and business interruption due to climate change, are establishing company-wide plans to respond to climate change centered on the ESG Committee, and are reviewing ways to mitigate identified risks and link them with company-wide business opportunities. Furthermore, we are considering operating an internal carbon pricing system from the second half of 2025 so that the financial impact of climate change can be taken into account in the investment decision-making process.

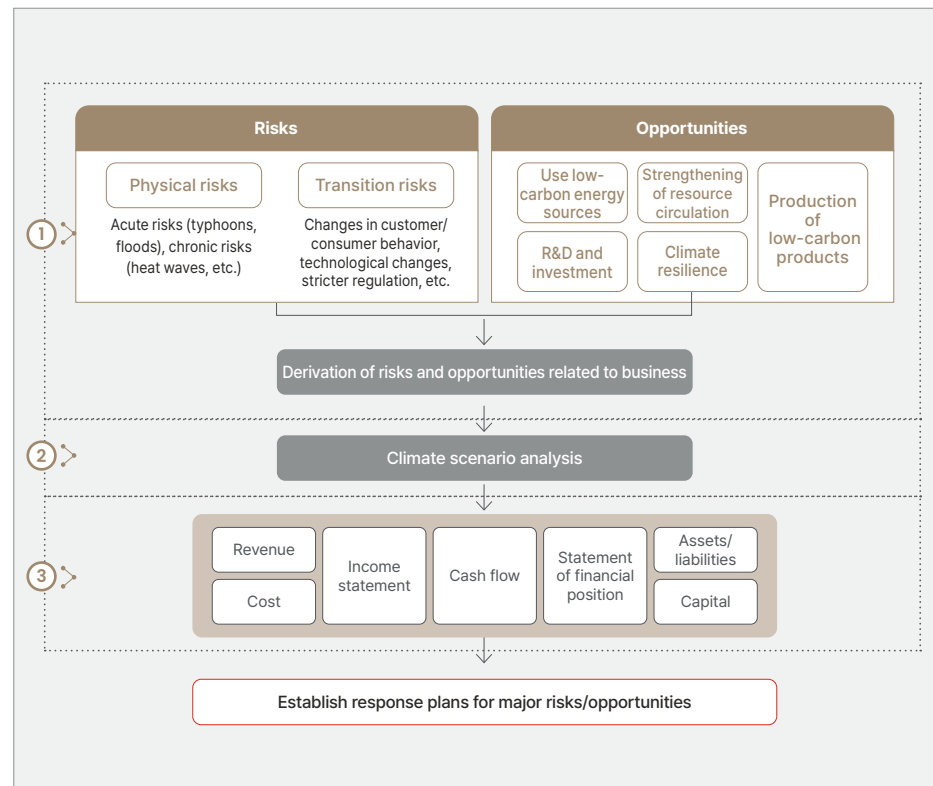
Risk monitoring

LOTTE ENERGY MATERIALS has established and is operating a policy to identify and prevent risks across the business, including climate change, in accordance with its ESG risk management policy established after becoming an affiliate of LOTTE Group in 2023. The risk management system is operated with the CEO at the center, and any inadequate are as of risk management regarding the environment, including climate change, are reported to the ESG Committee through annual due diligence.

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

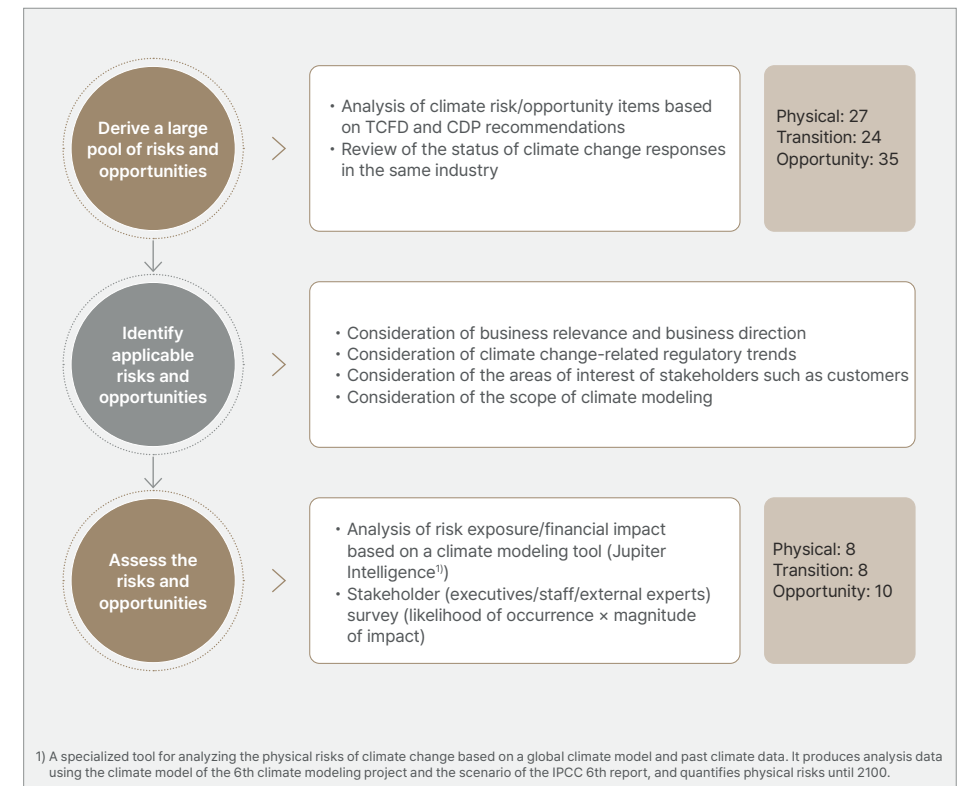
Climate risks/opportunities

LOTTE ENERGY MATERIALS continuously monitors the risks and opportunities that the company may face due to the climate crisis, and has quantitatively and qualitatively evaluated the potential financial impact of climate change on the company.



Identification of key risks and opportunities that must be managed ①➤

LOTTE ENERGY MATERIALS has derived a large pool of risks and opportunities that could have a major impact on the battery/copper foil industry through internal and external environmental analysis. The derived risks and opportunities are largely divided into physical risks (27), transition risks (24), and opportunities (35). Physical risks are divided into acute and chronic, transition risks are divided into policies, laws, technology, and market/reputation, and opportunities are divided into topics such as resource efficiency, energy sources, products/services, and resilience. After creating the pool, we comprehensively considered the relevance to business/strategy, customer requirements, areas of interest, and related regulations expected to affect the company, and came up with a short list of risks and opportunities applicable to us.



1) A specialized tool for analyzing the physical risks of climate change based on a global climate model and past climate data. It produces analysis data using the climate model of the 6th climate modeling project and the scenario of the IPCC 6th report, and quantifies physical risks until 2100.

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Identification of physical risks and analysis results

Physical risks refer to potential negative impacts on our assets, supply chain, employees, etc., caused by natural disasters that may occur due to climate change. Such physical phenomena are affected by various factors, and these factors interact to cause complex changes. Therefore, it is important to anticipate the future through various kinds of climate scenario modeling and large-scale data collection and analysis.

We analyze the physical risks that climate change may bring using Jupiter Intelligence™, a reliable climate-related physical risk analysis tool. Jupiter Intelligence™ analyzes eight types of physical disasters: floods, typhoons, droughts, heat waves, wildfires, heavy rain, hail and thunderstorms, and cold waves. We divided the physical risks subject to analysis into these eight types, and defined potential financial impact pathways. Among the eight types of disasters that could affect our domestic and overseas subsidiaries, the results identified floods, droughts, and typhoons, in that order, as the major physical risks that could directly or indirectly impact us.

Identification of transition risks and opportunities and analysis results

Transition risks and opportunities include risks that may occur due to changes in policies, technologies, and markets in the process of transitioning to a low-carbon economy, as well as the potential for new businesses, investments, and technologies that may be newly created. The analysis of transition risks and opportunities was conducted with a focus on domestic and foreign production subsidiaries, and strategic opportunities that can create new markets and business opportunities were considered. Through this process, we selected key transition risks and opportunities for the Company, such as policies and laws, technologies, and markets, and selected the core risks (4) and opportunities (2) that were deemed the most significant.



Results of identifying factors that are subject to analysis: physical risks, transition risks, and opportunities

Type	Classification	Factors to be analyzed	Financial impact pathways
Physical risks	Chronic	Heat waves	• Loss of sales due to decreased labor productivity and increased operating costs due to increased cooling costs to cope with heat waves
		Droughts	• Increased operating costs due to increased water prices
	Acute	Floods	• Damage to assets due to disasters such as floods, typhoons, and wildfires; loss of sales due to the suspension of business for disaster recovery
		Typhoons	
		Wildfires	
		Heavy rain	
		Cold waves	
Transition risks	Policies and laws	Regulatory changes affecting existing products/services	• If the carbon tax targets under the Clean Competition Act, etc., expanded to include finished products, additional tax costs will be incurred for exported items.
		Strengthening of greenhouse gas regulations	• Increase in emission rights purchase costs due to the expansion of paid allocation and increase in the prices of emission rights as a result of the strengthening of emissions trading system
	Markets	Changes in customer/consumer behavior	• Additional response costs incurred when the climate change-related requests of customers are not met
		Increasing energy costs, including low-carbon energy sources	• Increase in purchase costs due to fluctuations in the prices of non-renewable energy sources (electricity, natural gas, crude oil, etc.) and increase in costs of transitioning to renewable energy (PPA, REC purchase, etc.)
Opportunities	Resource efficiency	Strengthening of product/resource circulation	• Cost reductions through copper recycling (recyclates are expected to have a positive effect on our profitability)
	Products and services	Increasing demand for low-carbon products	• Increased demand for/sales of low-carbon products (secondary batteries, etc.)

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Analysis scenario ②➤

LOTTE ENERGY MATERIALS has analyzed the financial impact of risks and opportunities expected to affect business prospects based on various climate scenarios. For more sophisticated analysis, we have adopted climate scenarios presented by the IPCC and IEA, which have high international standings, based on the latest climate policies and recommendations of international organizations.

Time horizon

Considering the company-wide business plan and environmental target time frame, the climate analysis scenario time frame was divided into short-term (within one year)/mid-term (within one to five years)/long-term (more than five years), and the financial impact according to the time frame was analyzed.

Scope of coverage

A total of four domestic and overseas business sites (Malaysian Plant, Uiwang Research Center, Iksan Plant 1, and Iksan Plant 2)

Physical risk analysis scenario

The sixth IPCC report presents a climate change scenario that takes into account the intensity of radiative forcing according to the concentration of carbon dioxide on the surface of the Earth in 2100, as well as future social and economic changes. We selected three scenarios (SSP5-8.5, SSP2-4.5, and SSP1-2.6) and utilized Jupiter Intelligence, a climate modeling tool, to analyze eight risk factors and representative risk indices that measure these factors (floods, heavy rain, strong winds, heat waves, droughts, wildfires, hail, and cold waves) for five-year periods from 2020 to 2050, and conducted an exposure assessment.

Transition risk and opportunity analysis scenario

The IEA presents scenarios in consideration of each country's climate policy and the applicability of climate technology, and utilized the NZE scenario, which assumes achieving Net Zero in the energy sector by 2050, the APS scenario, which assumes full implementation of each country's NDC and carbon neutrality goals, and the STEPS scenario, which assumes that climate change-related policy measures are maintained at the current level. In particular, we evaluated the impacts of risks and opportunities that may occur when transitioning to a carbon neutral society using the projected regional carbon prices in 2050, which is one of the indicators predicted by the IEA scenario. Furthermore, considering that the proportion of carbon emissions due to electricity use is high, we conducted a financial impact analysis using prices for each energy source and the electricity price outlook as key variables according to the NGFS¹⁾ scenario, which presents price outlooks for energy sources and electricity by country.

1) NGFS (Network for Greening the Financial System)

Scenario analysis

Scenario	Temperature rise by 2100	Assumption	Representative indicator: e.g. Number of heat wave days in 2050 (annual >35°C)
IPCC SSP5-8.5	Above 4°C	Indiscriminate use of fossil fuels	38 days
IPCC SSP2-4.5	2 - 3°C	Moderate level of climate mitigation and socio-economic development	30 days
IPCC SSP1-2.6	Below 2°C	Minimization of fossil fuel use and achievement of sustainable economic growth through the development of renewable energy technology	27 days

	Scenario	Temperature rise by 2100	Assumption	Representative indicator: e.g. Carbon price in 2050 (Applying the average annual exchange rate of 2024)
IEA	Maintain current IEA STEPS policy	2.4°C - 2.7°C	Only already introduced climate policies are implemented (maintain current annual emissions level)	92USD/tCO ₂ eq (Korea)
	Achieve IEA APS national goals	2.1°C - 2.3°C	Each country has fully achieved the NDC and carbon neutrality goals it has already announced	206USD/tCO ₂ eq (OECD)
	IEA NZE (achieve Net Zero by 2050)	1.4°C or less	Net Zero greenhouse gas emissions achieved worldwide (energy sector) by 2050	258USD/tCO ₂ eq (OECD)

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Physical risks – Exposure and financial impact analysis ③➤

Overview of the financial impact analysis of physical risks

We analyzed physical risks by setting a total of four domestic and overseas business sites including production subsidiaries as the scope. In addition, we performed a physical risk analysis using Jupiter IntelligenceTM and the SSP scenarios found in the IPCC's Sixth Assessment Report, including the net-zero pathway (SSP1-2.6) and the high emissions pathway (SSP5-8.5).

Scope of physical risk analysis

A total of four domestic and overseas business sites (Malaysian Plant, Uiwang Research Center, Iksan Plant 1, and Iksan Plant 2)

Disasters subject to physical risk analysis and key metrics

Classification	Key metrics
Flood	• Maximum inundation depth and area for return periods of 10, 20, 50, 100, 200, and 500 years
Typhoon	• Maximum wind speed for return periods of 10, 20, 50, 100, 200, and 500 years
Heavy rain	• Maximum daily precipitation for return periods of 10, 20, 50, 100, 200, and 500 years
Heat wave	• Annual number of days with a temperature exceeding 35°C, annual number of days with a heat index ¹⁾ exceeding 32°C, and annual average cooling degree days index ²⁾
Hail	• Number of days per year when hail larger than 5 cm (2 inches) in diameter is likely to occur, and number of days per year when severe thunderstorms are likely to occur
Drought	• Water stress index of the area
Wildfire	• Annual number of wildfires occurring within 1 km ² of a specific location (100%)
Cold wave	• Annual number of days with temperatures below 0°C and annual average heating degree days index ³⁾

1) Heat index: A thermal index that comprehensively considers not only temperature but also humidity and radiant heat that affect the human body
2) Cooling degree days index: An index that reflects the energy required to adjust the temperature to a comfortable level through air conditioning, calculated as the sum of the average temperatures on days with an average temperature higher than 18°C throughout the year.
3) Heating degree days index: An index that reflects the energy required to adjust the temperature to a comfortable level through heating, calculated as the sum of the average temperatures on days with an average temperature lower than 18°C throughout the year.

Results of analysis of exposure to physical risks

In order to evaluate the financial impact of LOTTE ENERGY MATERIALS' physical risks, based on the SSP5-8.5 scenario, we analyzed how much each business site is currently exposed to disasters (floods, heavy rain, typhoons, hail, wildfires, cold waves, droughts, heat waves) and how much that exposure will change in the future, and scored them. We derived a future exposure score by comprehensively considering the current exposure and change.

In the case of domestic business sites, risks such as heavy rain and cold waves are somewhat high, but the future exposure change is not large compared to the present or is expected to decrease and we are preparing for this by purchasing insurance against asset loss and establishing an emergency plan to respond to damage to production facilities.

The Malaysian Plant is highly exposed to heat waves, and the analysis showed that the exposure will increase somewhat in the future, but since each business site has a complete response plan for heat waves, the actual risk was assessed as low. In addition, since it is located near a river, the exposure to floods is somewhat high at present and is expected to increase in the future compared to the present, so we plan to continuously monitor and manage this.

Analysis of current and future exposure to disasters at business sites

	High		Somewhat high		Somewhat low		Low	
Site name	Iksan Plant 1		Iksan Plant 2		Uiwang Research Center		Malaysian Plant	
Disaster name	Current ¹⁾	Future ²⁾	Current	Future	Current	Future	Current	Future
Flood								
Heavy rain								
Typhoon								
Hail								
Wildfire								
Cold wave								
Drought								
Heat wave								

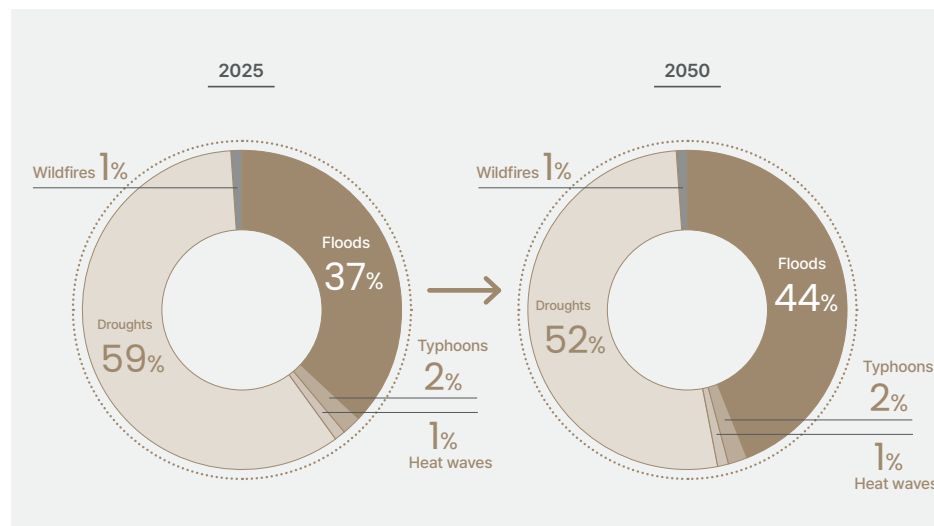
1) Current exposure: Disaster exposure level as of 2020 under the SSP5-8.5 scenario (4.4°C)
2) Future exposure: Expected disaster exposure level in 2050 under the SSP5-8.5 scenario (4.4°C)

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Results of analyzing the financial impacts of physical risks

After analyzing our exposure to each disaster, we performed a financial impact analysis on five disasters (floods, typhoons, wildfires, heat waves, and droughts) that are expected to have direct and indirect financial impacts on LOTTE ENERGY MATERIALS based on three climate scenarios (SSP1-2.6, SSP2-4.5, and SSP5-8.5). Jupiter Intelligence™ comprehensively considers the indicator values and loss coefficients evaluated through climate modeling tools based on data on the asset values, sales, location data, and building characteristics of the business site to calculate the direct damage to assets and facilities, indirect losses due to operational disruption during the recovery periods of facilities and equipment, and the average annual loss due to decreased labor productivity. The analysis results showed that floods and droughts will account for most of the expected loss in 2050.

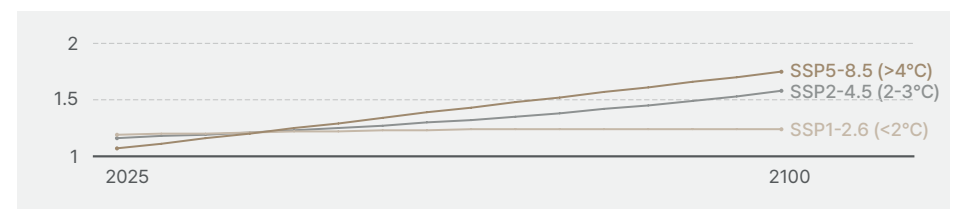
Expected loss ratio by disaster under the SSP5-8.5 scenario (%)



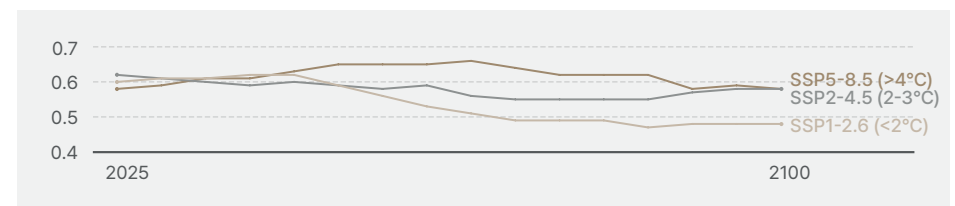
- Floods** Exposure to flood risks is calculated based on the maximum inundation depth and area of the business site. The financial impact of domestic and international floods applies to the Malaysian Plant, and the loss accounts for the majority of the total. The Malaysian Plant is located in an area adjacent to a river (within 500m), and the analysis showed that both the inundation depth and area due to river flooding are increasing as climate change worsens. As a countermeasure, the company is preparing for flood risks by establishing an emergency plan and system to respond to damage to production facilities, purchasing insurance for asset loss to minimize damage from natural disasters, and securing drainage capacity through periodic dredging of the rainwater drainage.
- Droughts** Among all the analysis targets, Iksan Plant 1 was confirmed to be at risk of large current and future financial impacts. If droughts worsen due to climate change, the unit price of water resources in the region will rise, which may directly lead to an increase in operating costs. However, the detailed analysis results show that the expected loss due to drought at Iksan Plant 1 is large because the amount of industrial water used is large, and the impact of the increase in the water unit price due to climate change was found to be minimal. In response, we are preparing countermeasures such as reducing water usage through wastewater recycling, minimizing water loss by improving cooling tower evaporation and overflow, considering ways of recovering and reusing air conditioner condensate, cleaning water, and rainwater, and improvements in chemical piping and gasket materials.

Inundation depth (m) by scenario and year for the Malaysian Plant

*For floods with a return period of 200 years



Water stress index by scenario and year for Iksan Plant 1



ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Transition risks – Financial impact analysis

Overview of the financial impact analysis of transition risks and opportunities

This year, for the first time, we set the financial impact pathways for the key transition risks and opportunities identified through stakeholder surveys and roundtables, determined the impacts that may occur in these pathways and derived formulas to estimate the financial impacts that may occur. For the future prices of variables required for the financial impact analysis (energy sources such as carbon and natural gas, and electricity prices), we utilized the data provided by the IEA and NGFS scenarios.

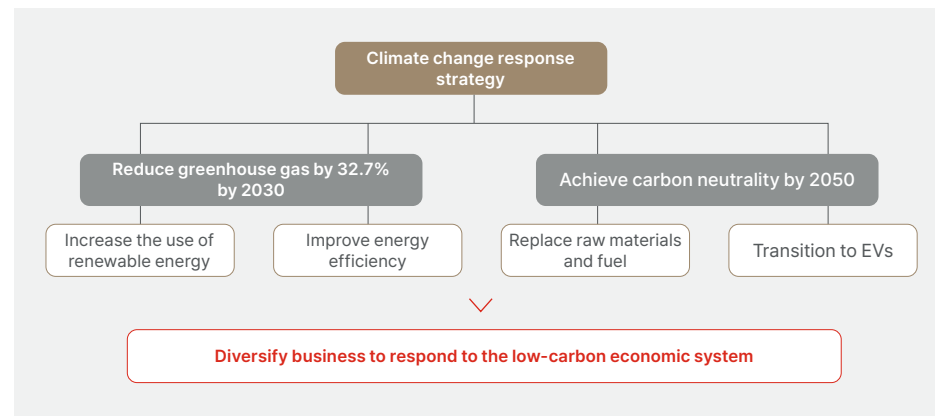
● Less than KRW 500 million ● KRW 500 million to KRW 1 billion ● Over KRW 1 billion

Type	Classification	Item	Basis for selecting key risks/opportunities	Financial impact	Scope of impact			Response efforts and strategies
					Short term	Mid-term	Long term	
Transition risk	Policies and laws	Regulatory changes affecting existing products/services	• The United States plans to impose a carbon tax (USD 55 per ton of greenhouse gases) on raw materials such as steel and cement starting in 2025 through the Clean Competition Act, and the tax is expected to be expanded to include imported finished products (batteries) starting in 2027. This is our main monitoring target.	• If the Clean Competition Act carbon tax is expanded to apply to finished products, additional tax costs will be incurred for exported items.		●	●	• Continuous monitoring of global ESG policies and regulations • Establishment of a carbon emissions calculation and due diligence process for essential responses for suppliers
		Strengthening of greenhouse gas regulations	• We have been designated as a target company for the greenhouse gas emissions trading system in accordance with the Korean government's greenhouse gas regulation policies, and we report our greenhouse gas emissions and energy usage to the government every year following third-party assurance. • The Korean government announced its national NDC to implement the Paris Agreement, and especially with the confirmation of the fourth emissions trading system (2026-2035), its greenhouse gas reduction policies are expected to be gradually strengthened starting in 2026 due to an increase in greenhouse gas emission prices and an expansion of the paid allocation ratio.	• The cost of purchasing emission permits for emissions exceeding the allocation received from the government is a risk factor. The impact on (domestic) sites subject to the emissions trading system is minimal in the short term, but the impact is expected to gradually increase due to strengthened regulations such as a reduction in the free allocation ratio.		●	●	• Establishment of a 2050 carbon neutrality goal and implementation of detailed reduction measures • Strengthening of carbon emissions measurements based on the LCA for each product
	Markets	Changes in customer/consumer behavior	• Since our greenhouse gas emissions correspond to Scope 3 emissions from our customers' perspective, our customers are likely to use our level of climate change response as a major criterion when selecting suppliers and directly or indirectly request the provision of regarding our response. If we fail to respond appropriately to these customer demands, there is a risk that we may miss the opportunity to maintain contracts or secure priority for contract conclusion, resulting in a decline in sales.	• It is a potential risk at present, and if our response is insufficient as the requests of top customers become more specific in the future, sales loss may occur.			●	• If customer requests regarding climate change are not met, costs will be incurred for additional responses.
		Increasing energy use costs, including low-carbon energy sources	• Among energy source, our largest requirement is electricity, and in the long term, as the demand/supply imbalance and the fourth emissions trading system are confirmed, if electricity prices rise due to increased costs in the power generation sector, it will cause an increase in energy costs. • Investments accompanying the renewable energy transition efforts of sites will cause an increase in the operating costs of the company.	• Electricity accounts for the largest proportion of all energy sources (96%), and it is expected that there will be costs associated with the transition to renewable energy (e.g., energy costs due to increased electricity prices, certificate purchases, and PPA conversion)	●	●	●	• Strengthening of site-specific energy usage management and monitoring
Opportunities	Resource efficiency	Strengthening of product/resource circulation	• Copper is the raw material that accounts for the largest portion of our product costs, and if cost savings are achieved through copper recycling, such as through recyclates, this is expected to have a positive impact on our profitability.	• For our domestic sites, we aim to use 100% recycled raw materials, and for our overseas sites (Malaysia), we aim to use over 95% recycled raw materials by 2030. We expect cost savings from the reuse of raw materials, such as the replacement of copper with cheaper recycled raw materials and increased use of copper scrap.	●	●	●	• Implementation of the mid- to long-term renewable raw material use target plan for domestic and overseas business sites
	Products and services	Increasing demand for low-carbon products	• As consumers prefer eco-friendly products, EV demand continues to increase, and sales profits for copper foil products for secondary batteries may increase in the future due to increased market share.	• The demand for copper foil for secondary batteries is expected to increase to up to 433 thousand tons by 2030, and considering LOTTE ENERGY MATERIALS' market share target, we can expect a mid- to long-term increase in sales.		●	●	• Development of copper foil and high value-added circuit foil products for next-generation batteries • Improvement of battery performance and lifespan and realization of high energy density through R&D investment (e.g., development of solid electrolyte and LFP cathode active materials)

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Climate change response strategy

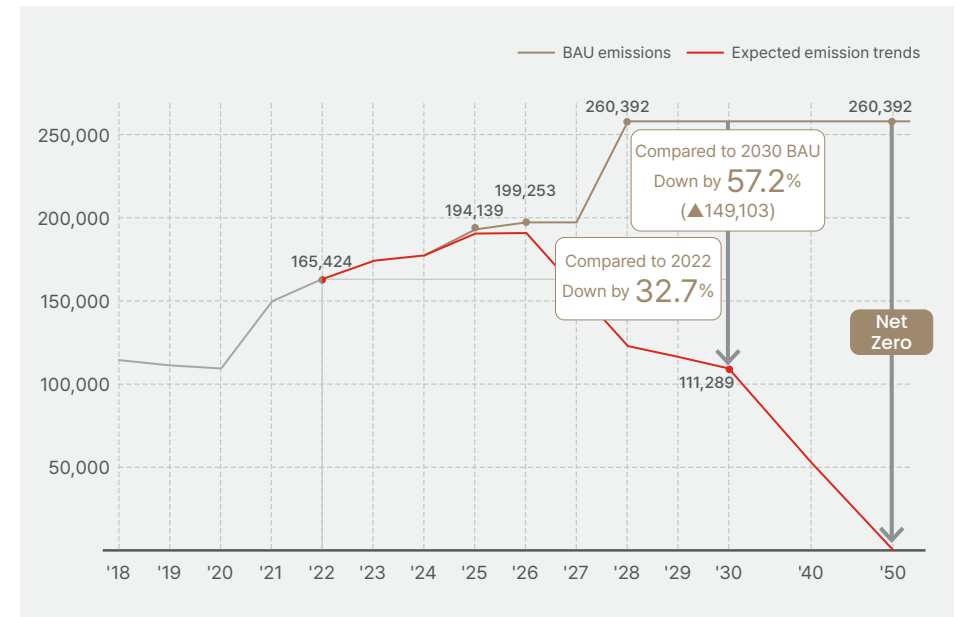
Many countries and companies around the world are considering the risks to ecosystems and humanity caused by climate change and are carrying out activities in line with the goal of the Paris Climate Agreement to limit the average annual temperature increase of the Earth to below 2°C compared to pre-industrial times and, if possible, to not exceed 1.5°C. In line with this trend, LOTTE ENERGY MATERIALS is taking the lead in responding to climate change on a global level and aims for sustainable economic, social and environmental development. To this end, we are managing our response to climate change by including it in the the KPIs (key performance indicators) of management and linking it to the performance and compensation system. LOTTE ENERGY MATERIALS has set the carbon reduction goal of reducing carbon emissions by 32.7% by 2030 compared to 2022.¹⁾ This is a 57.2% reduction in emissions compared to 260,000 tons (BAU) by 2030, and takes into account the acquisition of our Malaysian business site and future expansion of our business sites and production. Furthermore, we have set the long-term goal of achieving Net Zero by 2050 through a more active climate change response strategy, and we aim to join the global trend for a sustainable future. In order to achieve our 2030 carbon emission reduction goal, we established a roadmap including strategies such as expanding the use of renewable energy, improving energy efficiency, replacing raw materials and fuels, and transitioning to EVs, and are carrying out related business investments and reduction activities. Additionally, in order to proactively respond to changes in consumer demand due to climate change, we are pursuing diversification into new business areas such as secondary battery cathode materials, anode materials, and solid electrolyte businesses based on the essence of our existing businesses in response to the paradigm shift to a low-carbon economic system. Through these various efforts, LOTTE ENERGY MATERIALS is effectively responding to climate change and creating a better future.



¹⁾ We re-established our carbon neutrality target in consideration of our parent company, LOTTE Chemical, achieving its RE100 goal.

Carbon neutrality roadmap

Unit: tCO₂eq



Carbon reduction tasks and target reduction amount

Unit: tCO₂eq

Carbon reduction tasks	Details and related businesses	2030 reduction goal	2050 reduction goal
Increasing the use of renewable energy	REC purchase, PPA conclusion, etc.	140,611	240,293
Improving energy efficiency	Process improvement (optimization), replacement with high-efficiency equipment, etc.	8,416	8,440
Replacing raw materials and fuels	Low-carbon raw materials, transition to eco-friendly fuels, etc.	-	10,449
Other	EV transition, and KOC (Korean Offset Credit) purchase	76	1,210
Total		149,103	260,392

¹⁾ BAU (Business As Usual) will be updated periodically and announced according to the business

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Climate change response activities

Building business sites that take eco-friendly energy supply into account

LOTTE ENERGY MATERIALS actively considers ways to maximize the supply of eco-friendly energy when selecting business sites and constructing plants, and ultimately selected Malaysia and Spain, which have high rates of renewable energy supply. The Malaysian smart factory is operated with electricity supplied by hydroelectric power, and the Spanish smart factory under construction has a stable power grid based on eco-friendly renewable energy such as wind and solar power.

Increasing the use of renewable energy

LOTTE ENERGY MATERIALS aims to expand the use of renewable energy at all its business sites. The Malaysian Plant will pursue PPA and REC transactions with Sarawak Energy, a local power supplier. According to Sarawak Energy, Malaysia has a lower Scope 2 electricity emissions factor compared to domestic business sites. Accordingly, the company expects the Malaysian Plant to improve its low-carbon electricity emissions factor and expects synergy with the company's strategy through the expansion of the production base to Malaysia in the future.

Catalonia, where the Spanish business site is currently under construction, is a region where solar and wind power generation projects are actively underway, making it advantageous for securing renewable energy. Following the completion of the Spanish business site, the company expects to gradually reduce greenhouse gas emissions through the introduction of some of its own solar power generation and PPA contracts to supply new and renewable energy.

Improving energy efficiency

LOTTE ENERGY MATERIALS has been continuously deriving internal reduction tasks for improving energy efficiency, and its main goals are process improvement (optimization) and replacement with high-efficiency equipment. For process improvement, we are pursuing tasks such as reorganizing greenhouse gas emitting businesses, making our production machinery such as the EDM more efficient by reducing the gap between the electrodes, installing upgraded waste heat exchangers, and introducing waste heat recovery systems. In addition, for replacement with high-efficiency equipment, we plan to improve energy efficiency through measures such as replacing blowers and installing air compressor inverters.

Replacing raw materials and fuels

LOTTE ENERGY MATERIALS aims to reduce its Scope 1 emissions by replacing raw materials and fuels in the mid-to-long term to achieve carbon neutrality by 2050. We are pursuing research on the input of low-carbon raw materials and the transition to eco-friendly fuels, and are also considering reduction strategies in collaboration with group affiliates. Through this, we will achieve a complete reduction of approximately 30,000 tCO₂eq of remaining Scope 1 emissions based on BAU by 2050.

Transitioning to EVs

LOTTE ENERGY MATERIALS plans to change all corporate-owned business vehicles to EVs by 2030. In addition, we will work to build infrastructure for EV charging at our business sites.

Offset credit (KOC) purchase and external business

LOTTE ENERGY MATERIALS anticipates the activation of the offset external business market in the long term and is considering purchasing KOCs (Korean Offset Credits) as a carbon reduction task. The purchase of KOCs will be used as a strategy to reduce small-scale remaining emissions to achieve 2050 carbon neutrality within the offset system of the emissions trading system.

Meanwhile, we have devised a plan to directly participate in external projects to expand the greenhouse gas reduction effect on a global scale. We are currently reviewing a strategy to carry out external projects on an expanded scale through collaboration with group affiliates as long-term projects.



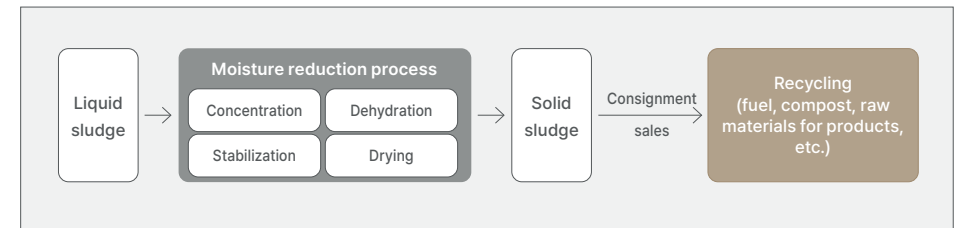
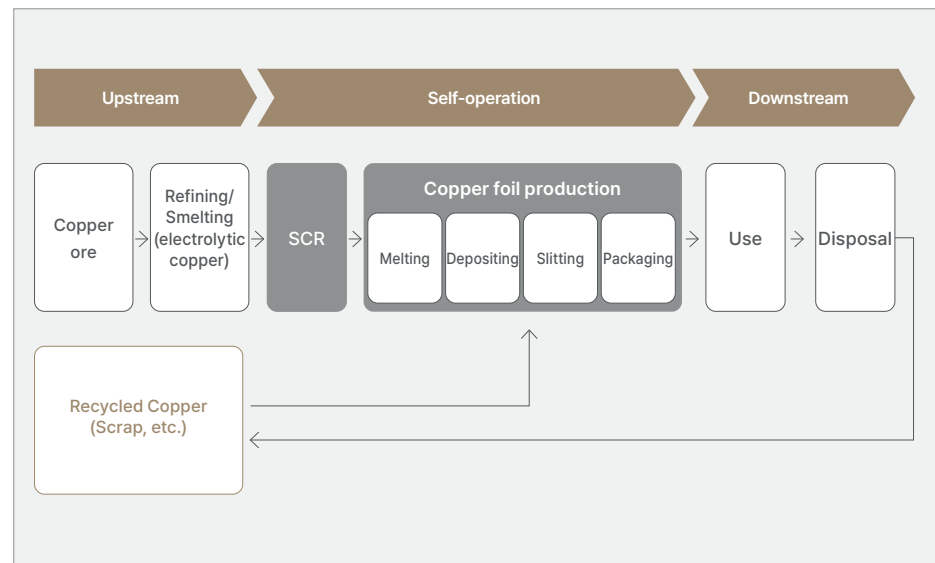
LOTTE ENERGY MATERIALS' Malaysian Plant

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Resource circulation

Resource circulation system

LOTTE ENERGY MATERIALS is strengthening resource circulation as part of its sustainable business strategy. Our goal is to increase the recovery rate of recyclable resources and reduce the amount of landfilled and incinerated waste. To this end, we are making efforts to ensure that all employees understand the importance of resource circulation and participate, and we are trying to systematically operate and improve our recycling process. LOTTE ENERGY MATERIALS procures and uses 100% recycled copper raw materials, the main raw material for its products. We procure copper scrap obtained from waste wires, and by using this, we are contributing to reducing dependence on primary copper mining, saving energy during the copper refining process, and reducing greenhouse gas emissions. In addition, we are focused on minimizing the landfill of wastewater sludge generated after wastewater treatment and increasing the recycling rate. By effectively recycling wastewater sludge, we aim to reduce our environmental impact and realize sustainable resource management.



Resource circulation activities

LOTTE ENERGY MATERIALS is doing its best to expand its use of recycled copper in order to reduce the use of natural resources and prevent environmental and human rights issues that occur in the process of mining and refining copper ore. Our domestic business sites are producing copper foil using 100% recycled copper, and we plan to continue to expand the use of recycled copper in our overseas business sites as well. Instead of landfilling or incinerating wastewater sludge generated after wastewater treatment, LOTTE ENERGY MATERIALS sells it to a contracted company for recycling in an environmentally friendly manner. In addition to wastewater sludge, we plan to systematically manage waste by additionally reviewing recycling treatment methods to increase the recycling rate of waste generated from business activities and to continue and develop resource circulation activities.

LCA implementation

To manage the environmental impact of its products, LOTTE ENERGY MATERIALS selects products subject to LCAs (life cycle assessments)¹⁾ in consideration of internal supply chain relationships and internal/external utilization methods, and plans to conduct LCA analyses based on ISO 14040 (an international standard that defines the principles and basic structure of life cycle assessment) and ISO 14044 (a standard containing life cycle assessment requirements and guidelines). In 2021, we conducted LCAs on L2S Elecfoil products. We comprehensively analyzed various environmental impacts that occur in the process of producing and using the products, including the acquisition and production of fuel materials, energy production, the L2S Elecfoil production process, transportation, and waste disposal. LOTTE ENERGY MATERIALS will continue to conduct LCAs on its representative products in the future to expand research and development and the production of products with reduced environmental impacts. We plan to utilize the results of the environmental impact assessments obtained through this in various decision-making processes for environmental management, such as our response to climate change.

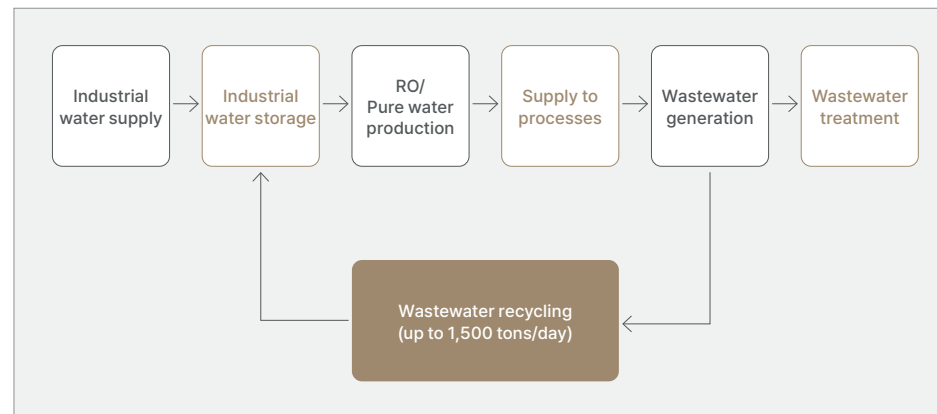
1) LCA (Life Cycle Assessment): Quantifying resource usage and emissions throughout the entire process from raw material acquisition to product use and disposal, and aggregating and evaluating potential impacts on the environment

ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Management of water resources

Management of the water resources system

LOTTE ENERGY MATERIALS plans to improve its management of water to save water resources used in its business sites in response to water shortages caused by climate change. The company plans to reduce water usage by expanding the operation of wastewater recovery facilities and reusing water in its business sites, and has established scrubber cleaning water management standards and is additionally reviewing monitoring measures for water flow management.



Water resource management activities

LOTTE ENERGY MATERIALS is improving its equipment and processes to more efficiently manage water resources, reducing water usage, and improving its wastewater treatment technology to minimize pollutant generation. The TDS¹⁾ of Cr (chromium) in wastewater generated during processes is measured, and if it exceeds the internal standard, hexavalent chromium is converted to trivalent chromium and wastewater treatment is performed. In addition, if the TDS is below the internal standard, hexavalent chromium wastewater is recycled as process water through an ion exchange resin. To reduce water usage, LOTTE ENERGY MATERIALS is increasing the amount of wastewater recycled and using up to 1,500 tons of recycled wastewater per day, and the company plans to set and achieve the goal of reducing water usage and wastewater generation by 20% by 2030 compared to 2019 through these process improvements. In addition, we plan to reduce water usage by installing scrubber flow meters and establishing pH management standards. LOTTE ENERGY MATERIALS will continue to actively introduce technologies and facilities that can save water resources and respond to water resource issues.

Water usage and water recycling volume

Classification	Unit	2022	2023	2024
Total water usage	1,000 tons	2,034	1,975	1,788
Water recycling volume	1,000 tons	411	208	56

Wastewater Reuse at the Spanish business site

LOTTE ENERGY MATERIALS' Spanish business site is located in Catalonia, a water-stressed region. Considering this, we plan to use commercial water from the Ebro River, which is not water-stressed, to minimize damage to nearby residents. In addition, we aim to recycle 50% of process water to reduce overall water usage.

1) TDS: Total dissolved solids



ENVIRONMENTAL : MANUFACTURING IN A GREEN WAY

Reduction of pollutant emissions

Pollutant management system

LOTTE ENERGY MATERIALS has identified major pollutants and established detailed plans to manage them in order to reduce air and water pollutants and waste generation. We are fully aware of the importance of environmental protection, and for that reason we apply eco-friendly technologies in our business operations and continuously monitor environmental pollution prevention. We have established and are operating an environmental management system for compliance with environmental laws and regulations related to air, water, and waste, as well as sustainability. In addition, we have introduced an EHS system that enables company-wide management and systemization, and established a continuous monitoring system to enhance customer trust and strengthen ESG management.

LOTTE ENERGY MATERIALS manages pollutants by setting internal standards that are stricter than the legal standards. In the short term, we plan to reduce pollutant emissions by more than 5% compared to 2023, and in the mid- to long term, we plan to reduce pollutants by establishing internal management standards that are stricter than the legal standards.

Pollutant reduction activities

Reduction of air pollutants

LOTTE ENERGY MATERIALS conducts periodic pollution tests to ensure compliance with the emission standards for air pollutants in the production process. The internal emission standard for air pollutants is 80% of or less than the legal standard, and the amount of air pollutants is monitored through the periodic emission concentration measurements of our air pollutant prevention facilities. In 2025, in addition to existing permitted substances, we plan to measure all air pollutants and continuously review air pollutants that may be additionally detected.

Major air pollutant emissions

Type	Unit	2022	2023	2024
NOx (nitrogen oxide)	ton	0.123	0.675	0.044
SOx (sulfur oxide)	ton	1.030	0.415	0.001
HAPs (hazardous air pollutants)	ton	0.062	0.053	0.130
PM (particulate matter)	ton	3.056	2.154	3.182
CO (carbon monoxide)	ton	0.124	0.057	0.396

*Data of Iksan Plant 1 and 2

Reduction of water pollutants

LOTTE ENERGY MATERIALS entrusts wastewater to a wastewater treatment plants within industrial complexes for treatment, and in order to prevent hazardous substances from being discharged into rivers, it has established internal standards that are stricter than the legal discharge standards and complies with them, treating wastewater at 20-30% of the discharge standards before discharging it to a wastewater treatment plant. In addition, we plan to reduce the amount of water pollutants discharged by more than 5% compared to 2023, and in the long term, to advance the management of water resources through wastewater reuse and the utilization of cooling tower blowdown water¹⁾.

Major water pollutant emissions

Type	Unit	2022	2023	2024
TOCs (total organic carbons)	ton	24.400	45.491	16.660
SS (suspended solid)	ton	6.430	8.464	17.624
BOD (biological oxygen demand)	ton	22.216	33.543	12.939

*Data of Iksan Plant 1 and 2

Waste reduction

LOTTE ENERGY MATERIALS focuses on source management for waste reduction and is actively implementing a green management policy to improve waste classification and recycling efficiency. We are continuously striving to improve resource circulation and achieved a final disposal rate of 15.5% and a circulation rate of 76.8% in 2024. Based on this, LOTTE ENERGY MATERIALS plans to obtain the ZWTL (zero waste to landfill)²⁾ certification from UL, a safety standard development and certification company in the United States. For certification, the rating is given according to the proportion of waste recycled rather than incinerated or landfilled at the business site, and we plan to obtain the Silver grade in 2026 and the Platinum grade by 2030. LOTTE ENERGY MATERIALS will continue to review recycling treatment methods for landfill waste, add waste recycling processes, interconnect stakeholders, and provide necessary resources, such as systems and education, to systematically build a sustainable resource circulation chain.

Soil pollution management

LOTTE ENERGY MATERIALS uses impermeable concrete to pave the floors of facilities subject to management that have the potential for soil contamination. In some facilities, we are making efforts to thoroughly prevent soil contamination caused by chemicals during the production process and transportation, such as by issuing additional environmental work permits before and after work. We also conduct periodic soil contamination tests to identify the impact of our business sites on surrounding areas.

1) Blow Down: Managing the concentration of impurities by removing water from a boiler or cooling system in a controlled manner

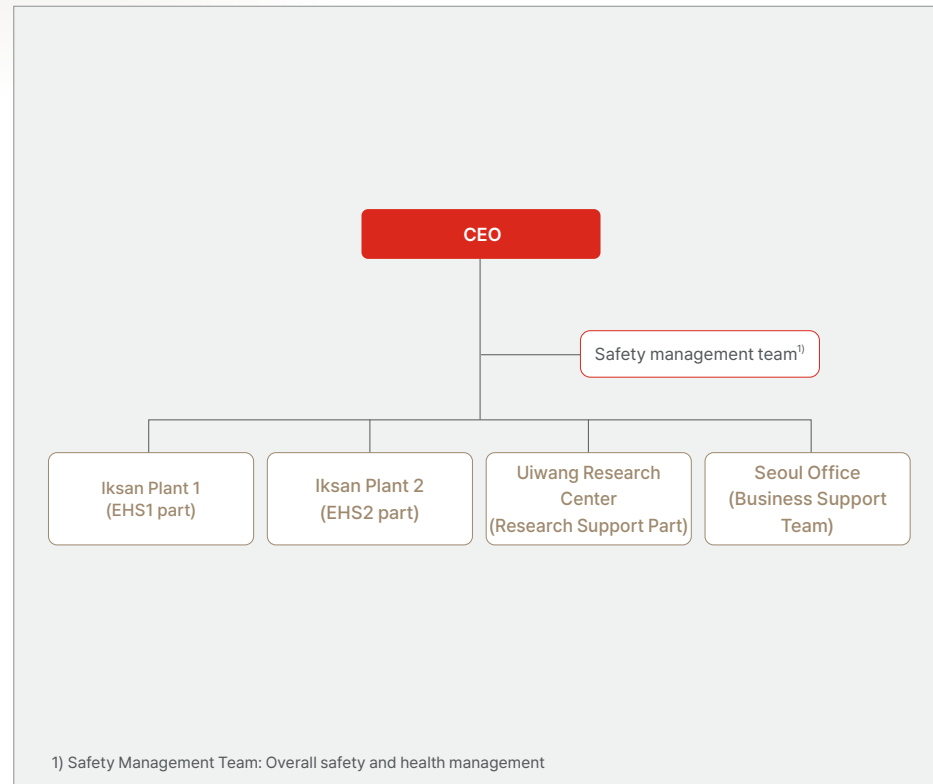
2) According to the proportion of waste recycled rather than incinerated or landfilled, certification is granted in three grades: Platinum (99.5%-100%), Gold (95%-99.5% or less), and Silver (90%-95% or less).

SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Safety and health

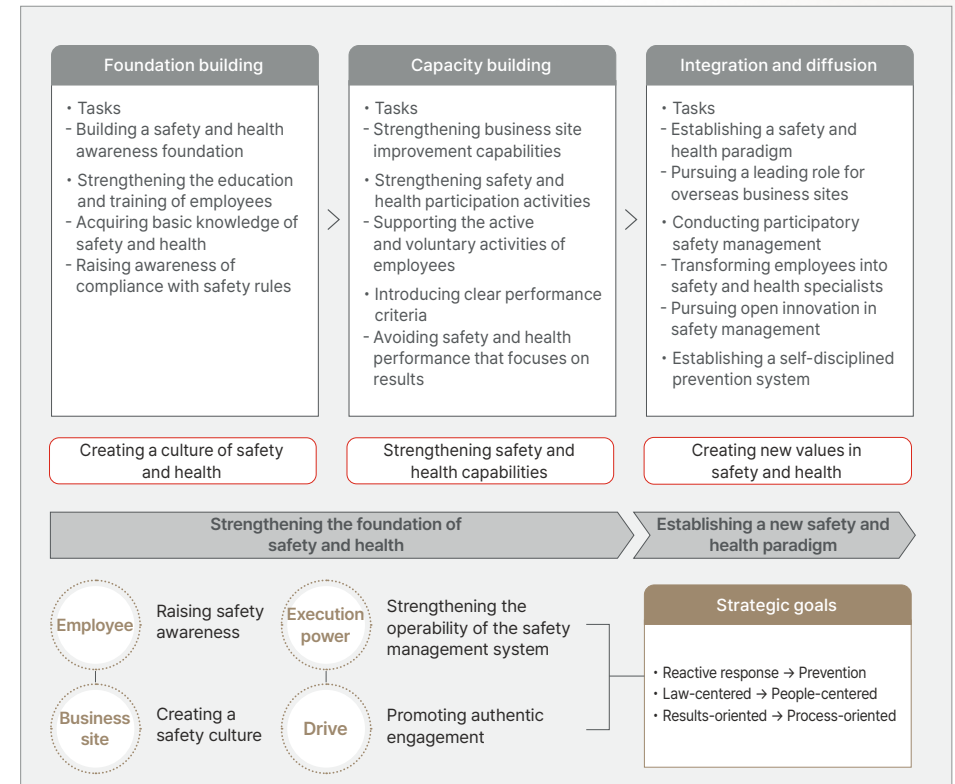
Safety and health policy and system

LOTTE ENERGY MATERIALS recognizes safety and health as core values in its management activities, and establishes and announces safety and health policies every year as a declaration of its will to create a safety-first work environment. In order to systematically implement these safety and health policies, a safety and health department is operated at each business site, and this department constantly inspects the safety and health management system of the business site and conducts safety and health activities to minimize management risks.



Safety and health management promotion strategy

LOTTE ENERGY MATERIALS has established a three-stage roadmap to strengthen the driving force behind safety and health management. In order to achieve the tasks of each stage, all employees must participate sincerely in safety and health activities, and through this, we plan to conduct safety and health management.



SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Advancement of the safety and health management system

Since obtaining ISO 45001 (Safety and Health Management System) certification for Iksan Plant 1 in 2022, we have been improving the system through annual follow-up and renewal audits. ISO 45001 is an international standard for management systems for the safety and health of workers, and aims to protect the physical and mental health of workers and prevent occupational diseases and injuries. LOTTE ENERGY MATERIALS published a safety and health-related manual and shared it with all employees, and is making efforts to create a safe working environment that meets global standards through periodic monitoring.

Safety and health management

Establishment of absolute safety rules

LOTTE ENERGY MATERIALS has established 12 absolute safety rules to prevent major disasters in the workplace and is utilizing them for safety work guidelines. The absolute safety rules were established by selecting cases where there is a high possibility of major disasters occurring in the event of a violation of safety rules. These safety work guidelines suggest actions to prevent major disasters for specific workers, and are based on each work unit and the characteristics of our business. LOTTE ENERGY MATERIALS continuously educates its employees and its partners' employees on safety rules for all work, including the absolute safety rules, and imposes strong sanctions regardless of position when safety rules are violated.

Implementation of safety compliance and subsidiary contract procedures

To prevent industrial disasters during contracted work with potential hazards and risk factors such as hot work within the workplace, LOTTE ENERGY MATERIALS has implemented procedures for the inclusion of compliance with safety rules in subsidiary contracts. In order to continuously maintain the safety awareness of contractors during contracted work, contractors must sign a contract stipulating the obligation to comply with safety rules after passing the selection process. This way, contractors can always maintain safety awareness.



ISO 45001 (Safety and Health Management System)



LOTTE ENERGY MATERIALS 12 absolute safety rules

Safety and health reward and penalty point system

LOTTE ENERGY MATERIALS has implemented a reward and penalty point system for each individual in order to make compliance with safety rules a part of daily life and to create a safety culture within the workplace. If safety rules or safety procedures are violated within the workplace, penalty points are imposed in proportion to the number and severity of violations, thereby encouraging employees to act safely. Conversely, if excellent safety and health measures are implemented, points are given to continuously increase employees' interest in safety and health. LOTTE ENERGY MATERIALS is creating a safety culture within the workplace by presenting clear safety behavior standards to employees and ensuring compliance through the safety and health reward and penalty point system.

Establishment of an EHS system

LOTTE ENERGY MATERIALS manages all safety and health activities through an EHS system. The process of discovering and evaluating hazards and risks and the process of implementing appropriate improvements are regularly monitored by utilizing the system, and by efficiently managing safety and health-related data, work efficiency is increased, thereby reducing safety and health risks and contributing to sustainable safety management. LOTTE ENERGY MATERIALS conducts annual risk assessments to improve discovered hazards and risks. In particular, in order to increase the effectiveness of the risk assessments, the method was changed from the existing KRAS¹⁾ to JSA²⁾, and the results of risk assessments are reflected in the actual work procedures. In addition, safe work procedures and standards for hazardous and risky work have been clearly established to prevent industrial disasters.

2024 risk assessment monitoring

Classification	Unit	1st half	2nd half	Total
Risk assessment conducted	cases	304	505	809
Harmful and risk factors that need to be improved	cases	47	102	149
Improvement rate	%	100	85*	90

* Improvement of remaining factors is in progress (as of May 2025)

1) KRAS (Korea Risk Assessment System): A method of analyzing hazard/risk factors divided into 7 categories: mechanical, electrical, chemical, biological, work environment, work characteristics, and management factors
 2) JSA (Job Safety Analysis): A method of studying a task by dividing it into major steps, identifying the hazards and risks and potential accidents at each step, and developing measures to eliminate, minimize, or prevent them

SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Safety and health activities

Emergency response training

LOTTE ENERGY MATERIALS conducts emergency response training at least twice a year to establish a rapid response system in the event of an emergency, such as a chemical leak or a fire. Emergency response training is conducted assuming an unexpected emergency situation, and all employees participate in the training. Through repeated training every year, employees are reminded of their duties in the event of an emergency, and the training results are evaluated to supplement any shortcomings. Through this, all employees are striving to prevent secondary accidents and minimize casualties by conducting a rapid initial response in the event of an actual emergency.

Safety reporting system

LOTTE ENERGY MATERIALS operates a safety reporting system to listen to the various opinions of its employees regarding safety and health. Any stakeholder of LOTTE ENERGY MATERIALS can easily and conveniently give their opinion regarding safety and health through the safety reporting system, and the reported opinions are promptly investigated and appropriate measures are taken. In addition, the reporter is notified of the complaint handling process, including reception, investigation, action, and confirmation, to ensure transparency. LOTTE ENERGY MATERIALS is aware that the interest and participation of all stakeholders, including employees, are key elements in establishing a safety and health management system, and plans to create a culture in which opinions can be freely expressed.

Publishing a safety and health newsletter

LOTTE ENERGY MATERIALS publishes a safety and health newsletter every quarter to provide all employees with safety and health-related information quickly and easily. The safety and health newsletter includes a variety of contents, such as safety and health regulations, accident cases, best practices, and safety and health event information, and is posted in key locations within the workplace.



Emergency response training

Internalizing safety and health

Introduction of KPIs for supervisors

LOTTE ENERGY MATERIALS introduced KPIs for managers to clarify their roles and responsibilities and evaluate their performance. To this end, we established criteria to exclude subjective evaluations from safety accidents and improvement activities and to enable evaluations based on objective results in order to increase the objectivity of the evaluation criteria. Through the introduction of KPIs for managers, we plan to contribute to the establishment of a safety culture throughout the workplace by inducing managers to perform their duties in a way that reinforces their responsibility for safety and health.

Comprehensive health checkups for employees

LOTTE ENERGY MATERIALS conducts comprehensive health checkups for employees in addition to the various checkups (general health checkups, special health checkups, etc.) stipulated in the Occupational Safety and Health Act, and manages not only occupational diseases but also personal diseases. For comprehensive health checkups, the company has signed agreements with hospitals located near its business sites, such as Wonkwang University Hospital and Jeonbuk National University Hospital, and added various examination items such as MRI, CT, gastroscopy and colonoscopy in addition to basic examinations so that all employees can receive health checkups according to their individual health conditions.

CPR training

LOTTE ENERGY MATERIALS invites professional medical institutions to conduct CPR training every year so that anyone can quickly administer first aid in the event of a cardiac arrest within the workplace. In order to help employees learn important first aid techniques to secure the golden time in the event of a cardiac arrest and increase the survival rate, we ensure that all employees participate in and become familiar with CPR training, including proper CPR methods, how to use an AED (automated external defibrillator), and general first aid methods.



CPR training

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Human rights management

Human rights management policy

LOTTE ENERGY MATERIALS has established and declared a human rights management charter that presents the standards for proper behavior and value judgment that all employees must adhere to. The charter is based on international human rights principles and norms, including the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct, and the UN Convention on the Rights of the Child. The company established a human rights management charter that all employees must adhere to and disclosed it on its website so that all employees can view it in order to internalize a human rights management culture. In accordance with the human-centered management philosophy and the fundamental rights to dignity and value as a human being specified in the constitution, the company is implementing human rights management that respects each and every employee.

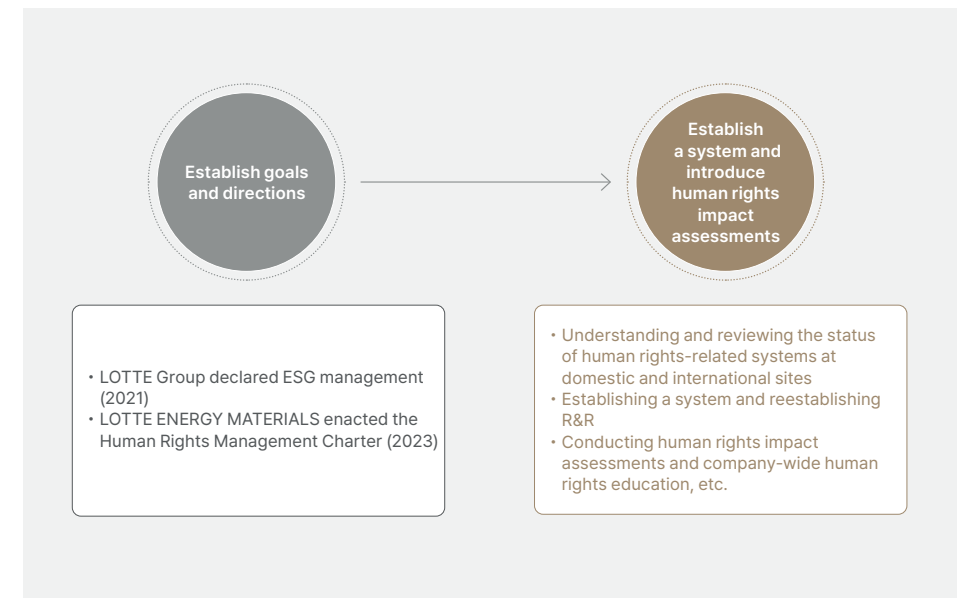
Mid-to long-term roadmap for human rights management

LOTTE ENERGY MATERIALS has established goals and directions for human rights management by enacting its human rights management charter, and plans to conduct a human rights impact assessment by identifying the human rights-related systems and status of each domestic and international business site, establishing a management system, and conducting a human rights impact assessment. Through this, we plan to identify and manage actual and potential human rights risks that may arise during the course of our business operations.

Human rights management policy

Detailed policy on human rights management Aim to protect the human rights of local residents and consumer rights	Respect for human rights Respect all people affected by corporate activities as human beings and sanction human rights violations	Labor of children and minors Comply with the employment standards of the national laws governing the workplace
Working hours and wages Comply with the working hours regulations of the country that governs the workplace	Prohibition of discrimination Prohibit discrimination in employment and the working conditions of workers on any grounds such as race, gender, education, or age	Prohibition of forced labor Eradicate work against the free will of members due to mental and physical restraints
Workplace safety Create a pleasant working environment and take necessary measures to prevent safety accidents	Freedom of association and the right to collective bargaining Guarantee freedom of association and the right to collective bargaining in accordance with the national labor laws governing the workplace	Detailed policy on human rights management Do not use conflict minerals illegally mined in conflict zones and high-risk areas

Mid-to long-term roadmap for human rights management



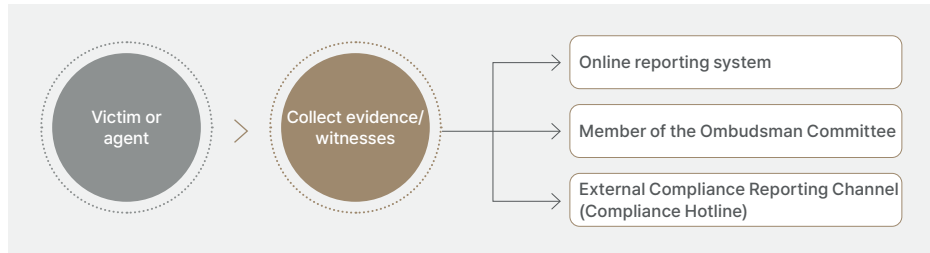
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Human rights protection activities

Operation of a human rights complaint handling channel

LOTTE ENERGY MATERIALS places the highest priority on protecting the identity of victims, and operates a reporting channel where complaints can be filed freely. Reported cases are thoroughly investigated and resolved, and procedures for restoring victims' rights are thoroughly carried out. A total of two complaints were received in 2024, and the Ombudsman Committee investigated and took appropriate measures for both. The company will more actively implement activities to prevent such incidents, and will continue to conduct objective and fair investigations and take measures for received cases.

LOTTE ENERGY MATERIALS' human rights violations reporting channel



Internalization of human rights management

LOTTE ENERGY MATERIALS regards respect for human rights as the core of its corporate culture and is carrying out the following activities to internalize it. Based on this, we are pursuing a strategy of active respect for human rights.



Diagnosis of the value-creation culture

LOTTE Group's value-creation culture diagnosis, L-VCS (LOTTE-Value Culture Survey), is an organizational culture diagnosis conducted annually for all regular employees of the company. This diagnosis measures the status and level of understanding and internalization in three areas: employee happiness creation, corporate value creation, and social value creation. In 2024, 211 out of 249 regular employees (84.7%) participated in the L-VCS. By analyzing the diagnosis results, we are continuously striving to derive areas requiring improvement and bring about real improvements.

Fundamentals



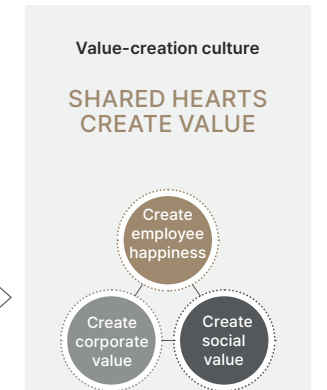
Core Beliefs
Measure employees' level of understanding and internalization of corporate culture fundamentals and promote actions for fundamental value creation through the internalization of core values and beliefs

Actions



Social Value
Measure awareness of practices for each element of the value-creation culture (task execution, capabilities, systems, leadership, etc.) and aim for SHARED HEARTS CREATE VALUE through fundamental value actions

Outcomes

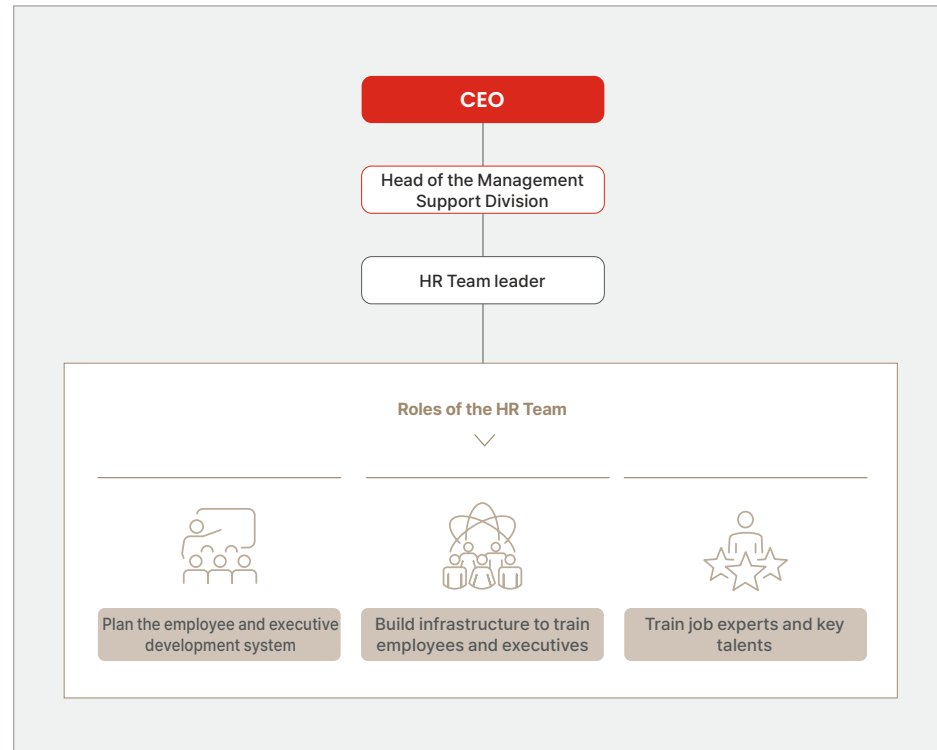


Measure employee awareness of the state and level of implementation of the value-creation culture

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Management of human resources

LOTTE ENERGY MATERIALS is continuously promoting systematic infrastructure construction/ management and system planning/implementation for effective personnel management of employees and human resource development. The company pursues the happiness of its employees and executives, and has established a human resource development system that can strengthen their capabilities and support them in maintaining a balance between work and life. In addition, it is creating an environment where each person can demonstrate their capabilities and focus on their work by providing appropriate compensation through fair performance evaluations. LOTTE ENERGY MATERIALS plans to increase employee satisfaction and continuously build a performance-focused environment based on systematic management of human resources.



Human resource development policy

LOTTE ENERGY MATERIALS is actively supporting the development of training programs that allows employees and executives to grow together with the company toward the future. In particular, we are striving to improve the capabilities of employees by providing training programs centered on leadership and jobs to strengthen their execution ability in order to achieve the company's strategy.

Key topics of 2024	Target	Content	Note
Leadership	Executives, team leaders (part leaders)	• Leadership capacity improvement course: Group leadership diagnosis debriefing → Vulnerability improvement	
Job	New hires, factory workers	• Understanding the copper foil business: Lecture and factory tour → Within 2 months of joining the company • Field leader capacity improvement course: Labor issues, company strategy (labor duties)	
Global (scheduled)	Resident employees (candidates)	• Essential competency course for resident employees: Cross-cultural understanding and global mindset development • SoG-landing course: Onboarding program for organizational readjustment (for returning resident employees)	Planned in 2024, and scheduled for 2025
Ethics reinforcement	All employees	• Dignified life at work: Labor attorney lecture on eradicating unethical behavior - After training, a pledge to practice is required.	
Issue education	All employees	• Theme education: Expanding insights through Life/Work Theme Lectures - [2nd quarter of 2024] Understanding generative AI and its application to work - [3rd quarter of 2024] Understanding wines	

Employee diversity policy

LOTTE ENERGY MATERIALS respects the diversity of its employees and is doing its best to provide equal opportunities to everyone. In our drive for sustainable growth, we are promoting a diversity policy of prohibiting discrimination, nurturing female employees, and holding communication meetings among various classes to create an environment where all employees are respected and can enjoy equal opportunities.

Prohibition of discrimination	Strengthening the female workforce	Multi-level communication meetings
Discrimination based on gender, nationality, race, religion, cultural background, etc., is strictly prohibited in the hiring, evaluation, promotion, and compensation processes. This ensures that all employees have fair opportunities.	We actively support the growth of female workers by managing various indicators including the ratio of female managers.	In order to minimize conflicts between different levels and maximize organizational synergy, we hold communication meetings throughout the year with employees of various types, from different workplaces, with different ranks, positions, genders, and jobs.

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Recruiting

LOTTE ENERGY MATERIALS is implementing various recruitment strategies to secure excellent talent. This multifaceted approach is helping to strengthen our talent base so that we can continue to lead the industry.

Various recruitment paths	Flexibility in the recruitment process	Participation in job fairs and information sessions	Event and networking to secure talent
Through the LOTTE Group job change system (in-career), excellent talent is utilized within the group. We also recruit talent through various recruitment channels, including new hires, experienced employees, and disabled persons.	We abolished our public recruitment system and expanded continuous recruitment to create an environment in which excellent talent can be recruited in a timely manner by flexibly adjusting the recruitment period and frequency.	We promote the company and communicating directly with potential talent by attending various job fairs and holding recruitment information sessions and consultation sessions at major universities.	We conduct personnel exchanges in conjunction with graduate schools specializing in batteries, and are building a network to proactively secure master's/doctoral R&D personnel through chemical R&D conferences.

Human resource management

HR Session

LOTTE ENERGY MATERIALS is striving to strengthen the competitiveness of the organization and achieve sustainable growth through key talent management. In 2024, we introduced the HR Session for the first time to select key talent and identify the needs for development.

Key talent

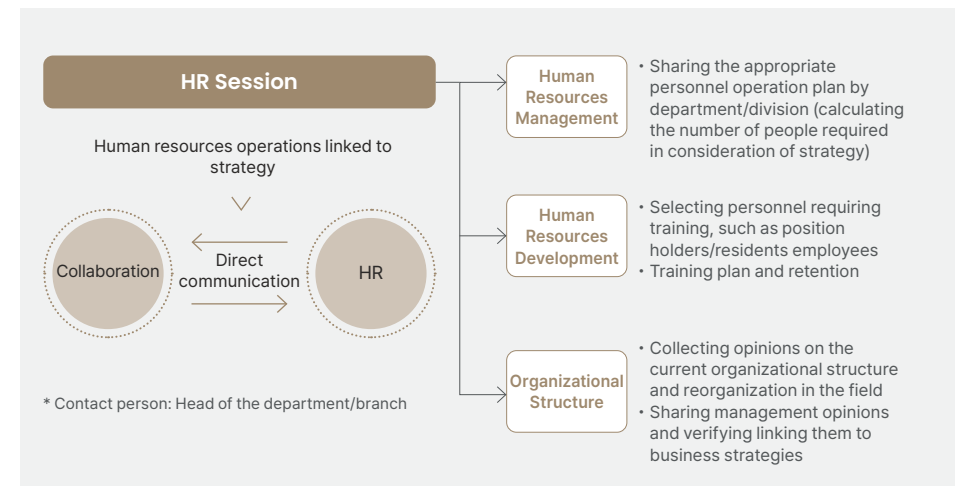
Successors for key position holders

Working on a plan to select and foster successors to key positions such as executives, team leaders, and resident staff

Excellent performers

Introduction of a committee system (retention of irreplaceable talent among researchers and engineers)

HR Session process



Rewards for excellent talent

LOTTE ENERGY MATERIALS holds the LEM Awards ceremony to commemorate its founding. The Awards Review Committee selects employees who have had an outstanding performance at work and made significant contributions to increasing the company's corporate value. Through this, we recognize and reward the performance and contributions of employees, thereby increasing motivation, creating a positive competitive culture within the organization, and promoting the retention and continuous development of excellent talent.



LEM Awards ceremony









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Employee welfare

Employee welfare program

LOTTE ENERGY MATERIALS operates welfare programs that support the mutual growth of employees and the company to increase the pride that employees feel for the company and improve their work engagement. This is based on the belief that the happiness of employees and their families leads to the growth of the Company. LOTTE ENERGY MATERIALS operates various such welfare programs to ensure that employees can enjoy a healthy and comfortable life at home and work. They focus on creating a virtuous cycle where employees can work in a flexible and enjoyable workplace and their happiness leads to the happiness of the company.

Key welfare programs

<p>Group accident insurance for employees</p> 	<p>Provision of educational expenses for children</p> 	<p>Housing finance support</p> 	<p>Condominiums</p> 
<p>Provision of welfare points</p> 	<p>Comprehensive health checkup support (including special checkups for factory workers)</p> 	<p>Support for family events</p> 	<p>Healthcare centers (factories)</p> 

LEM DAY, an employee organizational culture event

LOTTE ENERGY MATERIALS launched High-Five, a junior board organization, in 2024 to contribute to building a positive and flexible communication culture. LEM DAY, an employee participation event for organizational culture, has improved to employee communication through activities with various themes every month.

Date	Subject	Description of activities
April 11- April 17, 2024	LEM High-Five DAY	<ul style="list-style-type: none"> • Introduction of the Junior Board • The CEO, executives and junior board, and all employees exchanged high-fives with one another to cheer up on their way to work.
April 26- April 30, 2024	LEM Movie DAY	<ul style="list-style-type: none"> • Employees watched movies together. • Employees shared memories and communicated through the common theme of movies.
June 14, 2024	LEM Baseball DAY	<ul style="list-style-type: none"> • Employees and their families were invited to watch the LOTTE Giants baseball game. • Group loyalty, employees sharing memories, and communication
June 12- June 14, 2024	LEM Ice-cream DAY	<ul style="list-style-type: none"> • Ice cream was provided to all Iksan factory workers during lunch. • Encouragement for working in the heat
July 8- July 31, 2024	LEM Let's Meet Now DAY	<ul style="list-style-type: none"> • Departments were randomly selected to go to lunch together. • Introduction of the department's work and personnel, and eating lunch together
August 6, 2024	LEM Give DAY	<ul style="list-style-type: none"> • Carried out donation activities with LOTTE Chemical Group (donation of odd money/regular donation, LEM Green Step Challenge/Reset with Hope 143)
October 16, 2024	LEM Oh! Sweet DAY	<ul style="list-style-type: none"> • Coffee and donuts were provided along with a space for communication between employees

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Employee diversity activities

LOTTE Diversity Forum

LOTTE Group holds the LOTTE Diversity Forum every year to create an inclusive organizational culture where people with diverse backgrounds in terms of generation, gender, disability, and nationality can work together. This forum aims to spread an organizational culture where diversity that overcomes prejudice becomes the driving force for future growth, renews today, and benefits tomorrow. Through this, we are continuously striving to create a culture that respects and embraces diversity.

Message of the LOTTE Diversity Forum

LOTTE Group has secured demographic diversity through the recruitment and training of women, diverse generations, disabled persons, and global locals. Now we must achieve qualitative growth by connecting diverse members beyond quantitative growth.

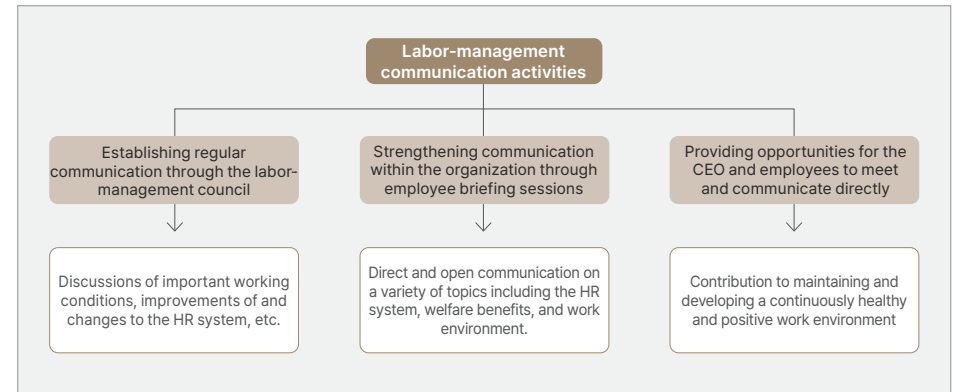
In order to achieve qualitative growth, it is important to not only embrace diversity but also increase the sense of belonging and connection among employees and executives. The sense of belonging created by connecting diverse members will become a source of future growth momentum.

Efforts to increase diversity

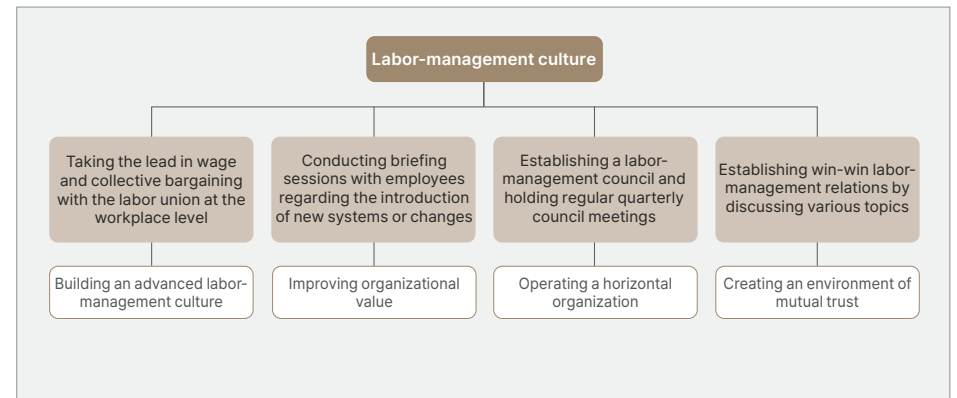
To continuously improve the ratio of male to female employees, LOTTE ENERGY MATERIALS included clauses prohibiting discrimination against women in its human rights management charter and employment regulations, is promoting fair evaluation and hiring, and is hiring more female employees. In addition, it employs disabled persons in compliance with the statutory employment rate, and actively strives for non-discriminatory hiring. Furthermore, in order to proactively secure global talent in line with the strengthening of global management, it has provided opportunities for international students to gain work experience in the field and has conducted internships linked to the hiring of international students twice a year, once in the first half and once in the second half, which enable it to hire suitable personnel. Through these efforts, we are ensuring that talents from diverse backgrounds have fair opportunities.

Operation of a labor-management communication body

LOTTE ENERGY MATERIALS is striving to build cooperative relationships by promoting mutual understanding and trust between labor and management through the operation of a labor-management communication system, and thereby prevent and resolve conflicts and create a stable and productive work environment.



Based on this, we are enhancing two-way labor-management communication based on respect and trust between the two thereby increasing corporate value and strengthening organizational integration.



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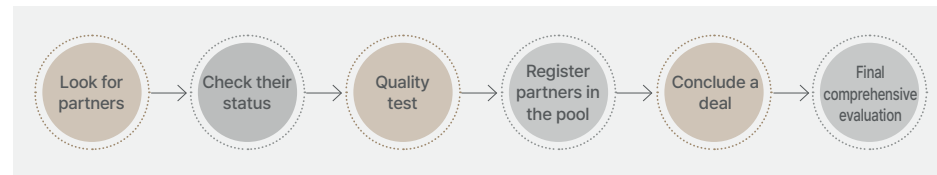
Supply chain management and supplier partnerships

Supply chain management policy

Partner selection process

LOTTE ENERGY MATERIALS operates a process for selecting partners. It identifies the financial, production, and environmental safety structures of partners, conducts a quality verification process through tests, and then signs a transaction contract after the final selection evaluation and registers the new partner in the partner pool. This prevents risks that may arise during the selection process in advance. In addition, in the process of selecting partners and signing a contract, approval is obtained from the head of the department to prevent arbitrary changes to the contract. This process contributes to establishing a fair trade order and prevents legal risks such as violations of the Fair Transactions in Subcontracting Act in advance.

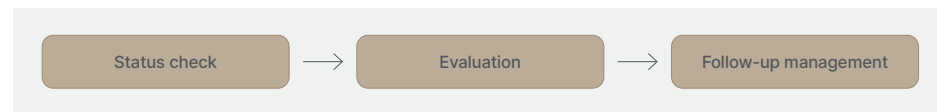
Partner selection process



Partner evaluations

LOTTE ENERGY MATERIALS conducts on-site investigations and evaluations of the suppliers of raw and auxiliary materials necessary for its production activities, and is striving to improve the level of suppliers, ensure compliance with legal processing procedures, and secure stability in the supply and quality of all items required by the company. In addition, we are striving for continuous management through follow-up management by setting a cycle according to the grade after evaluating partners.

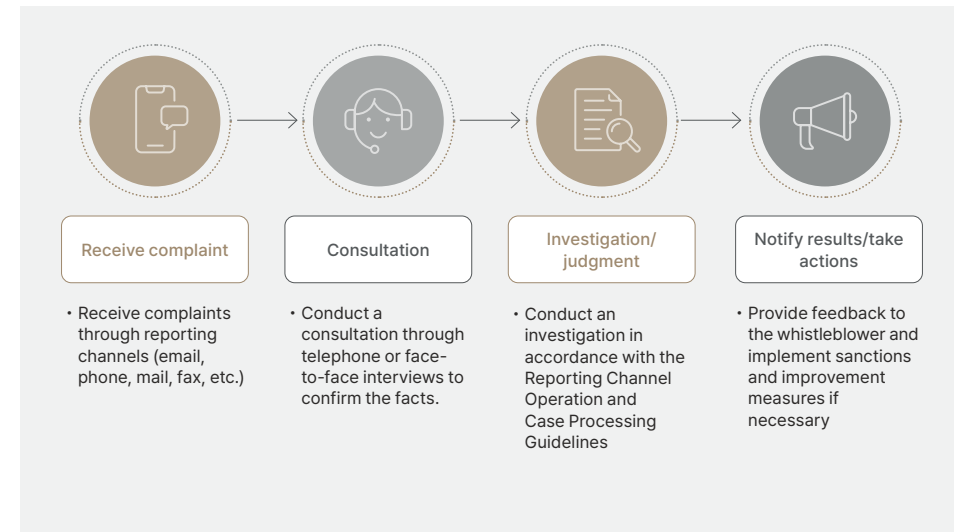
Partner evaluation process



Establishment of a code of conduct for partners and a complaint handling process

LOTTE ENERGY MATERIALS is working to bring the sustainable management of its partners up to the global level to to meet more active and extensive social responsibility requirements in the areas of labor, the Environment, human rights, safety, and ethics. We have established a code of conduct for our partners and attach a fair trade compliance agreement form to contracts starting from the bidding competition. In addition, we receive complaints from our partners through a reporting channel. In the event of a significant partner issue, it is reported to the CEO, the issue is confirmed through consultation with the Global Purchasing Team, and if necessary, an investigation and interview are conducted.

Partner complaint handling process



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Sustainable sourcing of raw materials

Procurement of recycled raw materials

LOTTE ENERGY MATERIALS uses 100% recycled copper as the main raw material for its products. Through a number of domestic traders, it obtains copper scrap from waste wires, and by using this, it reduces dependence on primary copper mining, thereby saving energy in the copper refining process and reducing greenhouse gas emissions.

Raw material procurement risk management

LOTTE ENERGY MATERIALS' raw materials are procured from traders who buy and sell scrap. In order to manage procurement risks, it is important to build a stable supply chain by identifying a number of traders and maintaining continuous relationships. We continuously collaborate with traders who supply various types of scrap to secure more stable raw material procurement in preparation for future demand. In addition, for stable SCM (supply chain management), we are continuously pursuing dualization for auxiliary materials such as chemicals and additives, which are frequently supplied by sole suppliers. Through this, we are contributing to cost reductions by continuously reducing what we purchase from sole suppliers. LOTTE ENERGY MATERIALS plans to continuously strive for stable raw/auxiliary material supply and risk management.

Stable supply of raw materials through MOUs

LOTTE ENERGY MATERIALS signed an MOU with POSCO International in November 2023, and concluded a contract for the supply of 600,000 tons of copper scrap, including millberry and granule, which are raw materials for copper foil, for 10 years from 2024. A stable supply of raw materials is essential for copper foil to maintain consistent quality. All the raw materials supplied through this agreement are copper scrap collected through recycling, which should appeal to global customers who emphasize eco-friendliness. In addition, LOTTE ENERGY MATERIALS and POSCO International agreed to form a joint consultative body consisting of key executives and working-level staff to strengthen cooperation. This consultative body will carry out major tasks such as selecting and inspecting cooperation projects, developing them, and working together to gradually secure a base for overseas local production and develop processes for using copper foil raw materials. We are striving to take the lead in the relevant industry through MOUs and to achieve the goals of sustainable management and eco-friendliness.

Responsible supply chain management

Copper Mark¹⁾ certification

LOTTE ENERGY MATERIALS is in the process of working to obtain Copper Mark certification, a responsible purchasing certification of the ICA (International Copper Association), for its Malaysian Plant since February 2025. The Copper Mark, established in 2019, is the copper industry's only global ESG certification. It is granted to companies that protect the environment and human rights and comply with local coexistence and ethical management requirement throughout the entire supply chain from ore mining to product production and sales. Through these efforts and obtaining certification, we plan to secure reliability as a battery materials company, build a responsible supply chain with global customers, and respond to global supply chain standards and regulations.

Management of conflict minerals²⁾

LOTTE ENERGY MATERIALS does not use minerals illegally mined in conflict areas. In order to procure raw materials responsibly, we check whether our suppliers are compliant with conflict mineral and responsible mineral regulations, and we plan to expand management so that our partners can increase the purchase of non-conflict and socially responsible minerals.

1) Copper Mark : A representative ESG certification in the copper industry, given to companies that protect the environment and human rights in all processes from copper mining to sales, and comply with standards such as local coexistence and ethical management

2) Conflict mineral: Minerals (tin, tantalum, tungsten, gold, etc.) mined and distributed unethically in conflict areas (areas where there is a war or crimes are committed, such as in countries like Congo and Uganda) in ways that violate human rights and destroy the environment

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Product quality

Quality management policy and strategy

LOTTE ENERGY MATERIALS has established a vision to secure global quality leadership based on innovation and trust by 2025 in order to strengthen its quality management system, with top priority placed on customer satisfaction. Based on our quality vision, we are focusing on customer-centered quality innovation, strengthening internal quality competitiveness, providing continuous quality education, and conducting data quality management. This strategic approach includes setting goals to reduce customer complaints to zero, reinforcing strict quality management standards, actively reflecting customer requirements, and setting the industry's best product life warranty period. We achieved this by internalizing a customer-centered mindset into the corporate culture and providing products and services with a focus on customer satisfaction. LOTTE ENERGY MATERIALS is maximizing customer satisfaction, strengthening competitiveness in the market, and pursuing sustainable growth through this approach, and all employees are dedicated to achieving these goals.

Operation of the Quality Management System

LOTTE ENERGY MATERIALS operates a systematic Quality Management System based on ISO 9001, an internationally recognized standard for Quality Management System throughout the entire process from process design to production, shipment, and customer satisfaction. Through this, we are able to maintain a consistent quality level at our business sites around the world and secure customer trust. In addition, we have obtained IATF16949 certification, a standard for automotive industry quality management systems, from an external professional organization, proving that we meet the strict quality management standards required by the automotive industry. After obtaining certification, we undergo periodic post-management audits to ensure continuous maintenance and improvement of our Quality Management System in accordance with the certification criteria.

2025 Quality Policy



ISO 9001 (Quality Management System)



IATF 16949 (Automotive Quality Management System)

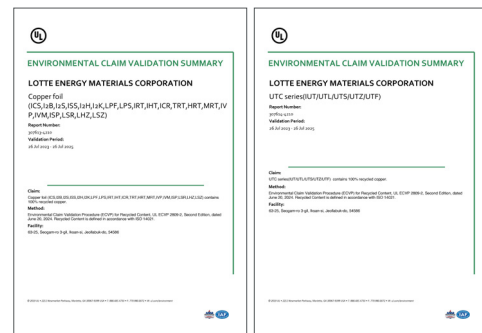
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Quality management activities

ECV (Environmental Claim Validation) certification

LOTTE ENERGY MATERIALS is taking the lead in developing environmentally friendly products to realize sustainable management. As part of these efforts, we obtained ECV (Environmental Claim Validation) certification for our copper foil product, which contains 100% recycled copper. ECV certification is an environmental mark granted after the verification of the validity of a product's environmental claims, such as the percentage of recyclable materials used. Through this, we have been officially recognized for the environmental responsibility of our products.

ECV certification management is an important achievement that proves LOTTE ENERGY MATERIALS is constantly striving for environmental protection and a sustainable future. Copper foil products using 100% recycled copper contribute to environmental protection by promoting resource circulation, while also playing a major role in reducing waste. In addition, by verifying the validity of our products' recyclability through ECV certification, we garner trust from our customers by guaranteeing the environmental safety of our products. Through this, we will strengthen our competitiveness in the global market and establish ourselves as an exemplary company that achieves both environmental protection and economic growth.



ECV certificate

Construction of a quality and safety system

LOTTE ENERGY MATERIALS provides transparency of product information through close cooperation with partners and customers. In order to maintain excellent product quality, we set quality goals and manage monthly performance. We value sustainable product production, and we share this value through communication with partners and customers to strengthen cooperation.

Activities to respond to chemical substance regulations

LOTTE ENERGY MATERIALS thoroughly complies with the legal requirements for the registration and evaluation of chemical substances, which are expanding worldwide. We have faithfully completed registration of all chemical substances used in our business sites in accordance with domestic and international government guidelines, including K-REACH. We carried out registration quickly through close cooperation with domestic and overseas agents, and we are actively responding to various requirements of our customers. LOTTE ENERGY MATERIALS places the highest priority on environmental protection and customer satisfaction, and aims to play a leading role in chemical substance management.

Customer satisfaction management

LOTTE ENERGY MATERIALS has established a process to identify and manage customer needs in order to meet them. For VoC (voice of customer) feedback, we continuously receive and respond accordingly through reception channels. In addition, we comply with the customer's CoC (code of conduct), and management periodically reviews this in the management review process. We also analyze and improve VoC causes through continuous improvement procedures.

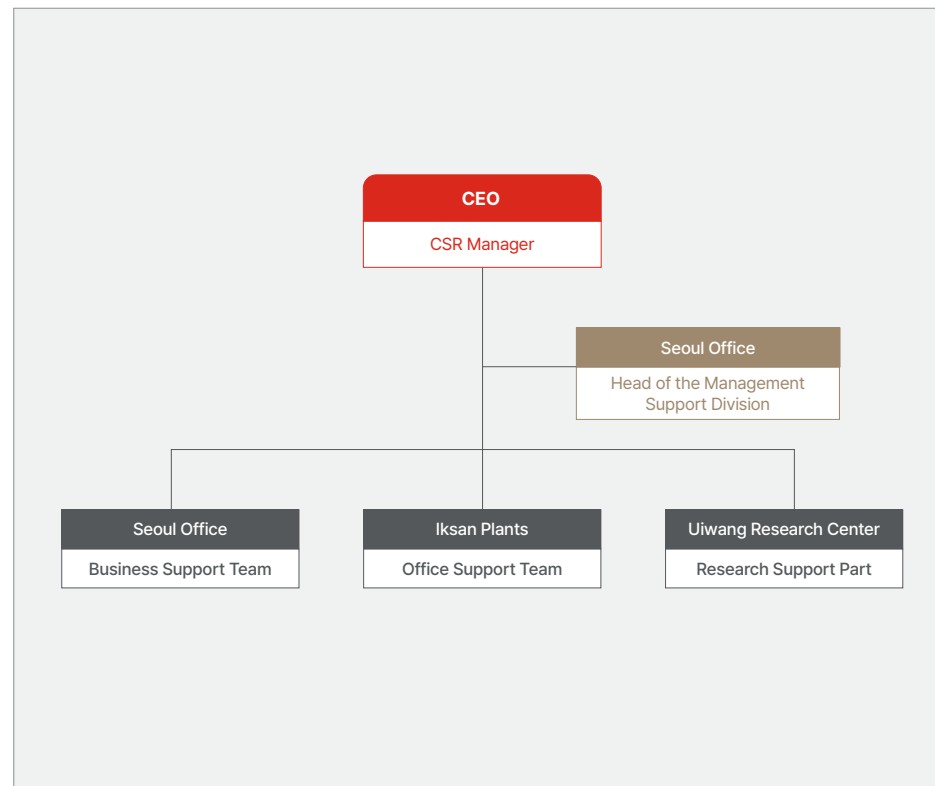
In particular, in order to proactively respond to the recently increased demands for ESG management activities from customers, we collect environmental and safety data of the company and deliver it to customers, and we strive to actively identify related requirements. Based on these activities, we are establishing an internal product strategy, and we will do our best to improve customer satisfaction through High-End products and value creation.

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Social contributions

Social contribution system

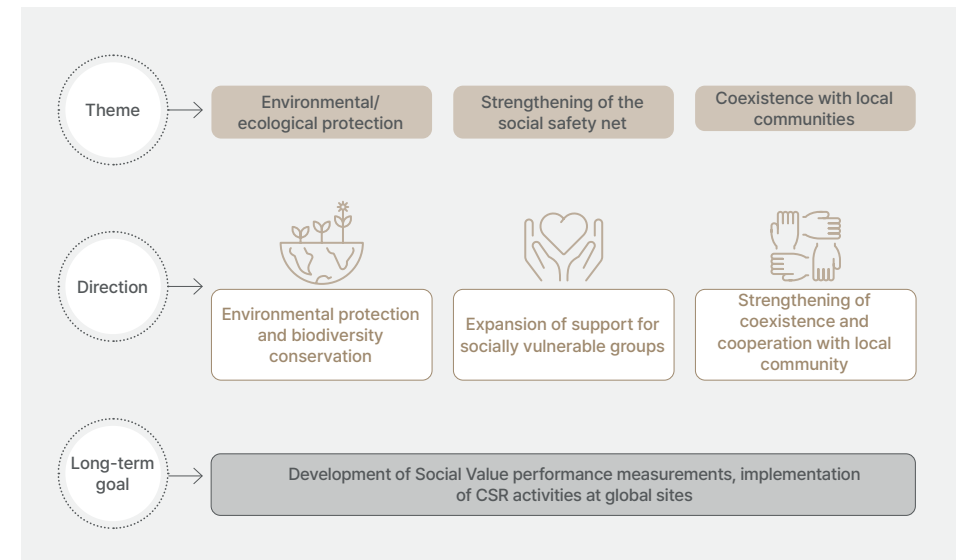
To carry out social contribution activities, LOTTE ENERGY MATERIALS organizes its operations by business site activities, with the Seoul Office's Business Support Team and the Iksan Plants' Office Support Team are playing the central role. The Seoul Office's Business Support Team is in charge of planning and operating the company's overall social contribution activities, while the Iksan Plants' Office Support Team carries out various social contribution activities for the local community within Iksan and encourages and supports the voluntary participation of employees.



Strategy for social contribution activities

LOTTE ENERGY MATERIALS carries out systematic social contribution activities centered on three themes: environmental/ecological protection, strengthening of the social safety net, and coexistence with local communities. For environmental/ecological protection, we plan to conduct activities to raise social awareness of biodiversity conservation and environmental protection. To strengthen the social safety net, we plan to carry out practical sponsorship activities by providing customized support programs to vulnerable groups. Finally, to reinforce coexistence with local communities, we plan to carry out activities to sponsor cultural events and support joint growth with partners. Furthermore, LOTTE ENERGY MATERIALS plans to develop a system for measuring social value performance to objectively evaluate the performance of social economic entities and more effectively support efforts to create social value. We are also planning to expand our social contribution activities to global business sites so that we can contribute to improving the quality of life of local residents and developing local communities at overseas business sites.

Social contribution activity system



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Social contribution activities

Environmental/ecological protection

- **Green Step Challenge with domestic employees and tree planting programs at major business sites**

LOTTE ENERGY MATERIALS employees participated in the LEM Green Step Challenge for approximately three months, achieving 100 million cumulative steps by all employees. This campaign went beyond simple exercise by providing an opportunity for employees to practice environmental protection in their daily lives. As the employees achieved the Green Step Challenge goal, the company donated 10 million won to Green City Iksan. LOTTE ENERGY MATERIALS created a forest in the Sudosan Park in Geumgang-dong, Iksan, and planted 90 eight-year-old Cornelian cherry trees. Our Malaysian subsidiary, participated in the Joint Tree Planting Program hosted by Sarawak Energy and became a member of the local community by jointly planting 650 trees in the Kuching Samajaya Industrial Complex.

- **Plogging to protect yellow-bellied tree frogs (*Dryophytes flaviventris*) and practice ecological conservation**

Seventy employees of LOTTE ENERGY MATERIALS' Iksan plants plogged to create a green ecosystem and protect yellow-bellied tree frogs (*Dryophytes flaviventris*), a new species under observation, discovered near the Tapcheon River in Iksan City. Through ecological protection activities like this, we will continue to contribute to local sustainable initiatives and nurture a warm organizational culture that enhances the sense of community among employees.



Making Green Iksan tree planting activity



Joint tree planting program



Plogging for the conservation of yellow-bellied tree frogs

Strengthening of the social safety net

- **Replacement of air-conditioners at a welfare facility and Christmas event support**

LOTTE ENERGY MATERIALS is carrying out various activities to strengthen the social safety net. Our employees donated to replace an old air conditioner that was worsening the indoor air quality in the Green Dream Auditorium of the Seoul Dream Tree Village, which is used by local children. Thanks to these donations, a new air conditioner was installed in the facility, and an environment was created where the children can grow healthily and safely without being affected by the season. In addition, we delivered warm interest and encouragement along with a snack set to children from single-parent and grandparent families staying at the Busong Social Welfare Center in Iksan City to give them a warm and happy Christmas.

- **Provision of firefighting equipment and fire prevention education for vulnerable groups**

LOTTE ENERGY MATERIALS provided simple fire extinguishing equipment and conducted fire prevention education to ensure that vulnerable residents in the Iksan area have a safe living environment. Through this, we supported community safety and prevention by creating a safe living environment free from risks such as fire and enabling a quick response in the event of an emergency.



Replacement of air conditioners at a welfare facility



Support for the LOTTE Santa Operation event



Provision of fire extinguishing equipment to vulnerable groups

SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Coexistence with local communities

• Malaysian subsidiary participates in 2024 SECA Blood Drive

LOTTE ENERGY MATERIALS Malaysia, the company's Malaysian subsidiary, participated in the 2024 SECA¹⁾ blood donation campaign held by Sarawak Skills, a technical school in Kuching, Sarawak, with 90 workers from local industrial complexes, including 20 of its employees. By donating much-needed blood to the local community, we contributed to saving lives in emergency situations.

• Upcycling PCs donated to eliminate information gap in vulnerable communities

LOTTE ENERGY MATERIALS donated upcycling PCs to social welfare centers near its business sites to promote resource circulation and resolve the information gap for vulnerable groups. It delivered 18 usable PCs after reassembling usable parts from its business IT assets that had passed their useful life, thereby practicing recycling and resource circulation.

• Sharing with local community through donation of coal briquettes

LOTTE ENERGY MATERIALS' Iksan Plants recently visited energy-poor households in the region who are having difficulty purchasing briquettes due to the recent surge in energy costs and shared their warmth by delivering about 3,300 coal briquettes. We provide practical help to our neighbors who suffer from energy poverty during the cold winter and plan to continue practicing sharing management and activities in local communities in the future

1) SECA (Sarawak Electronics and Supporting Industries Companies Association): A council of major companies in Sarawak



Malaysian Plant employees participate in a blood donation campaign



Donating upcycling PCs



Delivering coal briquettes to the energy-poor

Social contribution achievements in 2024

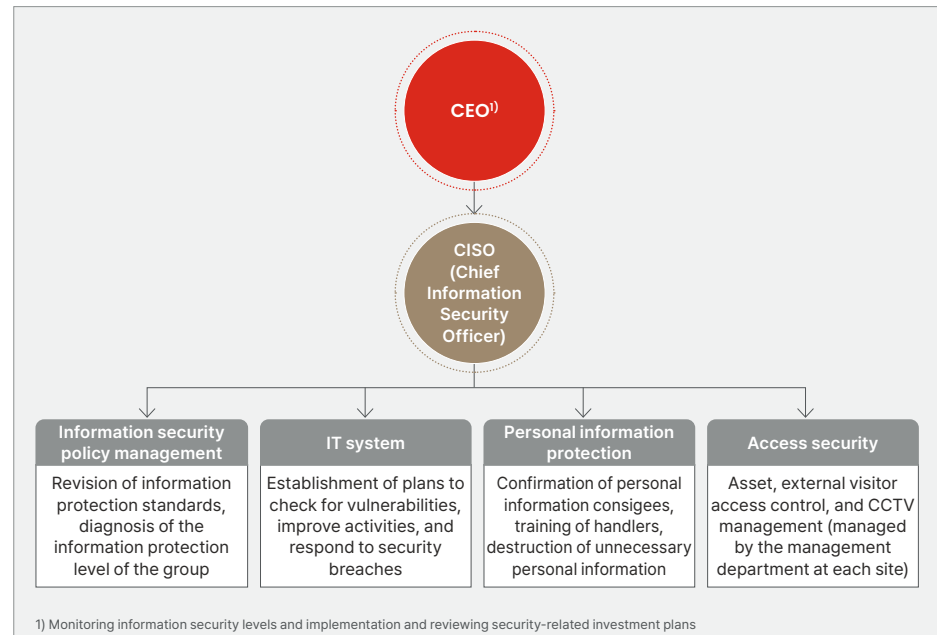
Theme	Program	Description	Achievements
Environmental/Ecological Protection 	Green Step Challenge	Employees walking 100 million steps for carbon neutrality	178 employees participated
	Iksan Tree Forest Creation	Creation of the LOTTE ENERGY MATERIALS Tree Forest for a Green Ecosystem in Iksan	Planted 90 eight-year-old Cornelian cherry trees
	Joint tree planting program	Participation in a joint tree planting program in the Kuching Samajaya Industrial Complex, hosted by Sarawak Energy	Participated in a joint event to plant 650 trees
Strengthening of the social safety net 	Protection of yellow-bellied tree frogs	Plogging to protect the 'yellow-bellied tree frog', a new species under observation discovered near Tapcheon, Iksan	70 employees participated
	A gentle breeze to young children	Support for the replacement of an old air conditioner at a community child center in Seoul	Provided an air conditioner
	LOTTE Santa Operation	Sponsorship of items for children from grandparent and single-parent families	About 100 children at community child centers
Coexistence with local communities 	Fire-extinguishing equipment of hope	Provision of fire extinguishing equipment for a safe living environment for the mobility-vulnerable	100 households in Iksan
	2024 SECA Blood Drive	Blood donation event for the health and safety of the local community	20 employees participated
	Reset with Hope 143	Recycling of business IT assets past their useful life and support for the information-deprived	18 PCs
	Coal briquette donation	Provision of items for the energy-poor	About 3,300 coal briquettes

SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Information security

Information protection management system

LOTTE ENERGY MATERIALS carries out information protection tasks directly under the CEO in order to proactively respond to potential information security risks such as intelligent hacking attacks, cyber terrorism, and personal information leaks targeting companies. Through this, the importance of information protection is recognized at the top management level and a company-wide information protection culture is being created. Our CISO (chief information security officer) is a qualified expert who oversees the establishment and implementation of information protection strategies and manages issues in the fields of personal information protection and security by presiding over the Information Protection Council. This council meets to make decisions on major information protection regulations, discuss security improvement measures, and debate response measures for potential issues. LOTTE ENERGY MATERIALS safely protects the valuable information of customers and employees through a comprehensive information protection management system and fulfills its responsibility as a trustworthy company.



Revision of information protection regulations

LOTTE ENERGY MATERIALS establishes/revises regulations related to information protection and personal information protection based on the Personal Information Protection Act and the Act on Promotion of Information and Communications Network Utilization and Information Protection, etc., to reflect the latest security requirements. The regulations are posted on the company groupware so that all employees can view and be aware of them.

Personal information management policy

LOTTE ENERGY MATERIALS has established a personal information internal management plan and a systematic management plan for personal information protection. When collecting the personal information of employees and stakeholders, we collect the minimum amount of personal information appropriate to the purpose. In addition, we have posted our personal information processing policy on the main website and internal groupware. We collect consent forms for the collection and use of personal information from employees once a year and reconfirm consent to the collection and use of personal information, thereby maintaining the up-to-dateness of personal information and protecting the rights of data subjects.

Information protection disclosure

LOTTE ENERGY MATERIALS discloses the status of information protection, including information protection investments, personnel, and main activities, on the electronic disclosure system of the Ministry of Science and ICT. Through this, we ensure user protection and the right to know. We strive to objectively understand the level of information protection and continuously promote information protection investments.

Response to information protection breaches

LOTTE ENERGY MATERIALS has established a security control system in cooperation with the Cyber Security Control Center of LOTTE Group to prevent malware infection and hacking and to respond immediately when incidents occur. If an employee's PC is infected with malware or attacked by an external hacker, damage can be minimized through measures such as blocking external hacking servers and countermeasures can be established to prevent recurrence. In addition, we have strengthened information protection through various internal security solutions.

Prevention of data leaks	Document security management	Network access control	Endpoint detection and response
<ul style="list-style-type: none"> - Monitoring emails - Blocking USB data 	<ul style="list-style-type: none"> - Applying screen watermarks - Setting document access privileges 	<ul style="list-style-type: none"> - Blocking unauthenticated devices - Verifying compliance with security policies 	<ul style="list-style-type: none"> - Detecting malware - Monitoring abnormal activities

SOCIAL : GROWING STRONGER WITH STAKEHOLDERS

Infringement incident response system

- Establishing procedures for rapid response, reporting and dissemination in the case of infringement incidents
- Maintaining the security and stability of the system and minimizing the impact of infringement incidents

Types of infringement incidents



System attack

Attempts to upload web shells, attacks against Web/WAS vulnerabilities by Apache, etc., DDoS attacks, attempts to steal administrator privileges, etc.



Malware

Installation and execution of malware (viruses, worms, ransomware, etc.) on PCs/servers through random paths, etc.



Harmful mail

Inducement of malware installation through malicious site URL links or attachments in text, etc.

Manualization of response procedures according to incident severity

Attention

Common Internet-based threats that do not affect system functionality or customer service

Caution

Situations involving system intrusion attempts and partial failures, but with no damage to customer service

Alert

Situations where some operations are restricted due to partial destruction of the system or individual servers are continuously attacked

Serious

Situations where the system is destroyed and cannot be recovered, which may affect business and customer service

- Rapid dissemination/reporting system in the case of an incident through the detection of infringement threats
- Management and prevention of potential security incidents (group security control, organization of the breach response organization, breach response activities, etc.)

Capacity-building activities for information protection

LOTTE ENERGY MATERIALS has established information protection regulations based on the standards of the group to strengthen its information protection management system, established an information protection foundation within the organization, and established the Information Protection Council, and operates the council regularly. In order to raise employee awareness of information protection, we conduct information protection group training that includes the latest security threats and response measures for employees at all our business sites, and are strengthening our real-world response capabilities through mock virus training using email.

In order to prevent information protection incidents and strengthen response capabilities, we regularly diagnose vulnerabilities and identify security vulnerabilities in the system in advance, and quickly supplement them to continuously improve the security level. This diagnosis focuses on strengthening response capabilities to the latest security threats in cooperation with external professional organizations. In addition, when establishing our new business system, we implemented 100% of the 62 group security review items that are based on the contents specified in the group policy and related laws, and it was evaluated for appropriateness in terms of group information protection and personal information protection. In addition, we have established an internal personal information management plan and operate it systematically, and we inspect consignees to manage the information protection level of external partners. We provide mandatory training once a year to those who handle personal information to improve their expertise.

Item	Strengthening the management system	Raising employee awareness	Preventing incidents	Protecting personal information
Detailed activities and achievements	<ul style="list-style-type: none"> • Enactment of information protection regulations once a year • Group information protection level diagnosis once a year • Establishment/operation of an information protection council - Committee twice (semi-annually) - Working committee four times (quarterly) 	<ul style="list-style-type: none"> • Information protection training completion rate of 100% (once a year) • Email mock virus training eight times (annually) • Employee security notice (quarterly) 	<ul style="list-style-type: none"> • Breach incident response training session once a year • Web mock hacking, IT infrastructure (server and DB) vulnerability diagnosis once a year • New construction work system security review compliance rate of 100% (annually) • Retiree security checks (ongoing) 	<ul style="list-style-type: none"> • Personal information Internal management plan established once a year • Personal information consignee check once a year • Personal information handler training completion rate of 100% (once a year)

LOTTE ENERGY MATERIALS' personal information leakage status

Item	2022	2023	2024
Number of leaks	0	0	0

GOVERNANCE : BECOMING A TRUSTED PARTNER

Compliance

Compliance management system

LOTTE ENERGY MATERIALS has established and operates the Compliance Team directly under the CEO to manage compliance risks across all business activities. We have also established a mid- to long-term vision for compliance and are striving to meet global standards with the goal of establishing a compliance management culture trusted by stakeholders. In addition, we are overhauling internal regulations, such as compliance management, anti-corruption and fair trade, and trade secret regulations, and we provide periodic online and offline education. Based on a comparative analysis with global standards and the size of each subsidiary, we are promoting the expansion of our compliance system to ensure a minimum level of internal control for domestic subsidiaries and overseas business sites.

Compliance strategies

Mid- to long-term vision



Management of the internal control system

LOTTE ENERGY MATERIALS has established an organization and process to support the systematic identification of various economic, social and environmental risks that it may face in the rapidly changing internal and external management environment and to proactively manage and inspect such risks. In addition, based on the management's interest and will regarding risk management, LOTTE ENERGY MATERIALS has designed an efficient response system for identifying and appropriately responding to economic as well as social and environmental risk factors.

LOTTE ENERGY MATERIALS is upgrading its compliance management system in consideration of the increasing degree of compliance risk exposure resulting from the growth of the corporate management environment and company size. These risks include the spread of global regulations related to compliance management and ESG management and the strengthening of stakeholder monitoring. We are promoting a transition from the temporary and post-hoc responses of the past to preemptive management activities based on manuals and monitoring for specific risk areas. In addition, we have appointed a compliance officer to continuously improve and supplement compliance risk management through internal risk inspections and consulting. The company has established internal accounting management regulations, designed and is operating an internal accounting management system, and reports the status operation of this system to the general shareholders' meeting, board of directors, and Audit Committee every fiscal year in accordance with Paragraph 4 of Article 8 of the External Audit Act for Stock Companies (hereinafter referred to as the "External Audit Act"). Additionally, in accordance with Paragraph 5 of Article 8 of the External Audit Act, the company's audit committee evaluates the status of operation of the internal accounting management system and reports it to the board of directors every fiscal year, and in accordance with Paragraph 7 of Article 8 of the External Audit Act, the external auditor conducts an audit of the company's internal accounting management system and expresses the audit opinion in the audit report.





LOTTE ENERGY MATERIALS is currently in the process of introducing consolidated internal accounting by dividing 16 subsidiaries into tiers and establishing a more transparent internal control system. We aim to achieve the goals and improve the performance of LOTTE ENERGY MATERIALS as a whole through comprehensive and systematic internal control that includes subsidiaries.

Operation of an anti-corruption monitoring system

LOTTE ENERGY MATERIALS aims to achieve zero corruption, and conducts business in accordance with its anti-corruption policy of complying with domestic and international laws and internal regulations related to corruption prevention and not engaging in any corrupt acts. In addition, the company constantly manages whether there are risks related to corruption in its business performance through a pre-reporting process. In addition to regular monitoring, the company submits pre- and post-contact reports when contact occurs with public officials, etc., and submits applications for prior approval for the provision of money or other valuables restricted under the Prohibition of Solicitation and Bribery Act. The company has established an internal system to prevent related corruption risks from occurring by executing only cases that have been reviewed and approved.

GOVERNANCE : BECOMING A TRUSTED PARTNER

Compliance program

<p>Donation & sponsorship review</p> 	<p>LOTTE ENERGY MATERIALS has established and is operating internal standards (Donation and Sponsorship Procedure Operation Guidelines) that specify the procedures to be followed when making donations and entering into sponsorships, and requires all sites to undergo a Compliance Team review in advance for donations and sponsorships. In addition, we review the legitimacy of the purpose of the donation or sponsorship, the eligibility of the organization paying the donation or sponsorship money, whether the Anti-Bribery Act applies, and the appropriateness of the counter-reward, thereby preemptively blocking corruption risks that may arise in donations and sponsorships. We are also striving to establish a proper donation and sponsorship culture by legally making donations to and entering into sponsorships with organizations whose eligibility has been confirmed.</p>
<p>Compliance education</p> 	<p>LOTTE ENERGY MATERIALS' compliance education to enhance compliance awareness among its employees is conducted not only through group training by job/topic/site, but also through online education for all employees. In addition, compliance information is regularly distributed through various media such as compliance newsletters and compliance management webtoons so that employees can easily utilize it in their daily lives.</p>
<p>Other compliance risk mitigation activities</p> 	<p>LOTTE ENERGY MATERIALS is working to reduce related risks by expanding legal advice on fair trade and anti-corruption, introducing standard contracts, and mandating the inclusion of standard anti-corruption clauses in order to quickly respond to the strengthening of internal and external compliance-related regulations and laws. In addition, with regard to trade secrets, which are becoming increasingly important, we have enacted internal regulations on trade secrets, and are conducting trade secret protection monitoring to prevent the infringement of trade secrets not only of the company but also of our customers and partners.</p>
<p>Strengthening of supply chain compliance</p> 	<p>LOTTE ENERGY MATERIALS is striving to build a sustainable business and fulfill its social responsibilities by proactively identifying and monitoring domestic and international supply chain risks and preventing risks that may arise from third parties. We deliver anti-corruption messages to our partners for transparent and fair transactions, mandate the signing of a fair trade voluntary compliance pledge, and continuously strengthen supply chain compliance, such as through the mandatory use of standard contracts and the expanded application of electronic purchasing systems.</p>

Internalization of a fair trade culture

CEO's compliance management messages and compliance management letters

In order to declare our strong will to practice compliance management and compliance internally and externally, we regularly send compliance management messages and compliance management letters from the CEO to internal employees and partners. Through these, we ask for fair and transparent transactions between employees and partners, and instruct them not to request, provide, or receive money, gifts, or entertainment. In this way, LOTTE ENERGY MATERIALS is making continuous efforts to ensure that its will to practice compliance management and compliance extends not only to its employees, but also to all stakeholders, including shareholders, customers, partners, competitors, and local communities, so that a fair and transparent trading culture can be established.

Operation of a voluntary fair trade compliance program

LOTTE ENERGY MATERIALS has published and distributed the Fair Trade Voluntary Compliance Handbook to its employees to ensure voluntary compliance with fair trade practices. It also periodically updates the enactment and revision of relevant laws and regulations and applies them to its work and constantly monitors whether there are any fair trade risks in the performance of work. In addition, we share internal fair trade standards (internal regulations, checklists, Dos & Don'ts, guidelines, etc.) for various situations, providing clear standards of conduct so that employees can comply with laws and regulations when performing their work. We are making multifaceted efforts to further strengthen voluntary compliance with fair trade practices, such as using the standard contract for subcontracting transactions in the electronics industry recommended by the Fair Trade Commission.

Management of unfair trade

LOTTE ENERGY MATERIALS prevents unfair trade by complying with fair trade principles. Through the establishment of company regulations (fair trade conduct rules) and various training programs, we prevent acts that violate fair trade-related laws and regulations in the course of performing work. Accordingly, employees are aware of details such as the prohibition of unfair joint acts, prohibition of unfair trade practices, prohibition of unfair support practices, and compliance with the Subcontracting Act, and perform their work by complying with the guide on essential compliance items to prevent violations of the law.

Management of internal trading

The appropriateness of selection of the transaction parties, the validity of detailed transaction conditions, and the reason for entering into a private contract are key factors in determining whether internal transactions violate fair trade laws. To prevent such violations, LOTTE ENERGY MATERIALS has established internal standards (Internal Transaction Management Guidelines) that specify matters to be observed when conducting internal transactions, and the Compliance Team, a dedicated fair trade organization, conducts preliminary reviews of whether internal transactions may violate fair trade laws or company regulations.

GOVERNANCE : BECOMING A TRUSTED PARTNER

Management of fair trade among partners

Every year, we conduct compliance education and investigate unfair trade cases to help our partners manage fair trade and achieve mutually beneficial cooperation. LOTTE ENERGY MATERIALS continuously provides education on subcontracting law and standardized contract forms to the departments within the company that work most closely with partners.

Compliance with the Subcontracting Act and the Act on the Promotion of Mutually Beneficial Cooperation Between Large Enterprises and Small and Medium Enterprises

LOTTE ENERGY MATERIALS requires the Compliance Team to review subcontracting transactions in advance at all business sites, and reviews the appropriateness of subcontracting payment decisions, whether there are any unfair special provisions, whether a standard contract is used, etc., to prevent risks that may arise in subcontracting transactions in advance as we strive for win-win and balanced growth with subsidiaries through monitoring. In addition, in order to comply with the Act on the Promotion of Mutually Beneficial Cooperation Between Large Enterprises and Small and Medium Enterprises, the Compliance Team provides constant advice and monitoring on consignment transactions, and by complying with the law, the company pursues mutual cooperation and mutual growth with small and medium-sized enterprises.

Establishment and operation of the Subcontracting Payment Dispute Mediation Committee

In order to ensure reasonable and transparent adjustments of subcontracting payments, we established the Subcontracting Payment Dispute Mediation Committee in June 2023 and have been operating it since. Establishing this committee within the company was recommended for the purpose of mediating disputes over subcontracting payments in accordance with Paragraph 1 of Article 13-3 of the Fair Transactions in Subcontracting Act and Article 8-2 of the Enforcement Decree of the same act. In order to ensure fair and transparent mediation of disputes over subcontracting fees, we preemptively established the system and have been operating it since its introduction.

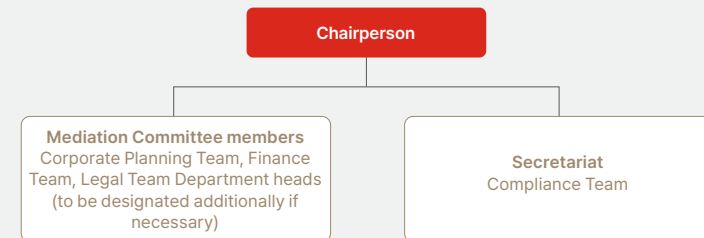
Fair trade education

LOTTE ENERGY MATERIALS conducts fair trade education led by the Compliance Team to remind all employees of the necessity and importance of fair trade compliance. This education is conducted periodically on fair trade-related laws, the latest precedents and rulings, and internal standards, and includes customized education for various levels such as executives, position holders, new employees, and experienced employees, as well as various job-specific courses for different types of employees, such as resident employees, persons in charge of subcontracting transactions, and salespeople.

Establishment and operation of the Subcontracting Payment Dispute Mediation Committee

LOTTE ENERGY MATERIALS established and operates the Subcontracting Payment Dispute Mediation Committee to ensure reasonable and transparent adjustments of subcontracting payments to its partners.

- **Nature of the organization**
 - An organization within the company that handles disputes raised by subcontractors regarding subcontracting payments
 - Handling of payment disputes (decisions, reductions, etc.) regarding subcontracts under the Subcontracting Act
- **Composition of the committee**
 - Installed on June 30, 2023



• Mediation process



GOVERNANCE : BECOMING A TRUSTED PARTNER

Ethical management

Ethical management system

LOTTE ENERGY MATERIALS is building a system in line with the ethical management direction of LOTTE Group. Through the Compliance Team directly under the CEO, we are establishing a transparent ethical culture throughout the company, and are continuously carrying out various activities to raise ethical awareness among employees. The compliance management departments that manage legal risk and compliance issues, internal control, etc., collaborate with each other to provide detailed support so that all employees can internalize an ethical management mindset and perform their work fairly and reasonably based on the ethical management system.

Ethical management strategy

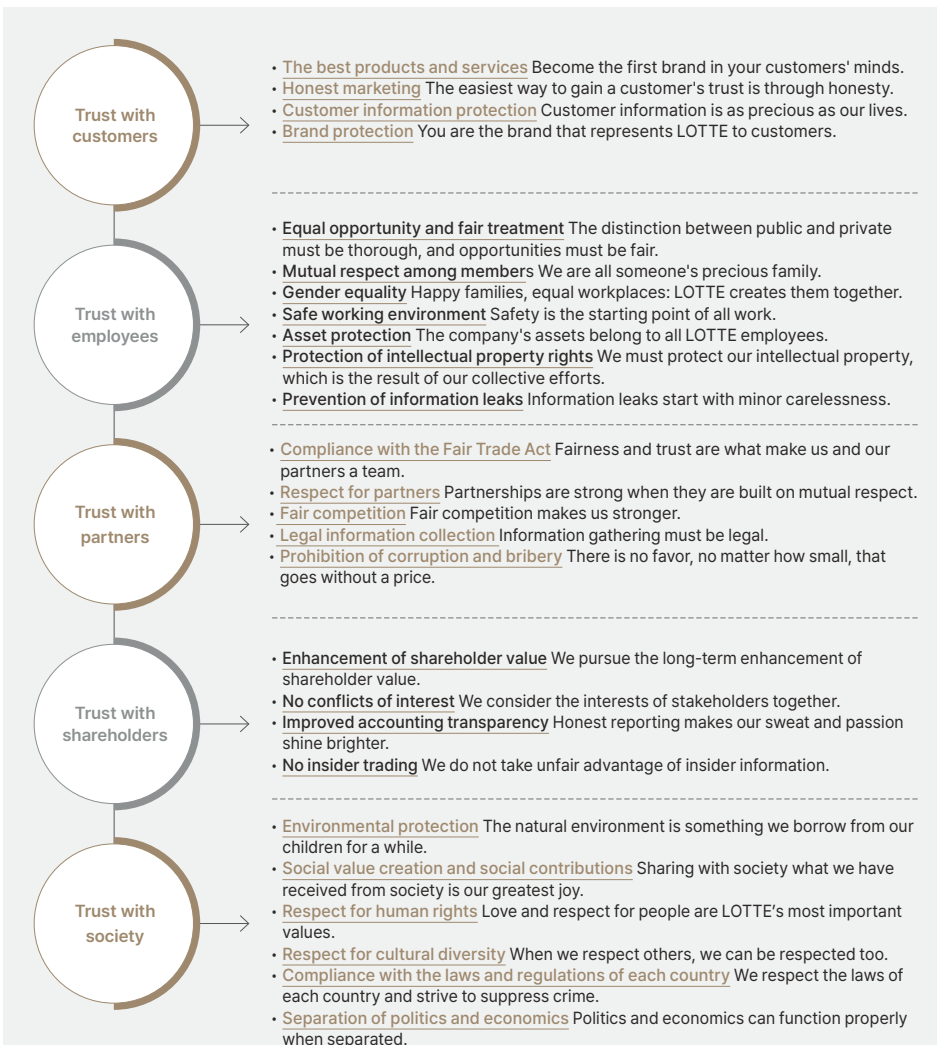
LOTTE ENERGY MATERIALS aims to raise ethical awareness throughout the company and establish a proper corporate culture. We will establish a roadmap for ethical management, introduce an anti-corruption management system, and advance and expand it. Through this, we plan to establish a transparent ethical culture and implement fair and reasonable ethical management.

	2025	2026-	2030-
Goal	- Introduction of the anti-corruption management system	- Advancement of the anti-corruption management system	- Expansion of the anti-corruption management system
Operation plan	- Acquisition of ISO 37001 certification - 100% response rate for stakeholder reports	- Expansion of the anti-corruption management system to subsidiaries - Strengthening of the risk management system	- Acquisition of ISO internal auditor qualification - Anti-corruption management system consulting

Code of Conduct

The Code of Conduct applies to all regular and contract employees working at LOTTE ENERGY MATERIALS and subsidiaries controlled by LOTTE ENERGY MATERIALS. It is comprised of five areas, customers, employees, partners, shareholders, and society, and each area specifically states LOTTE's principles and practices.

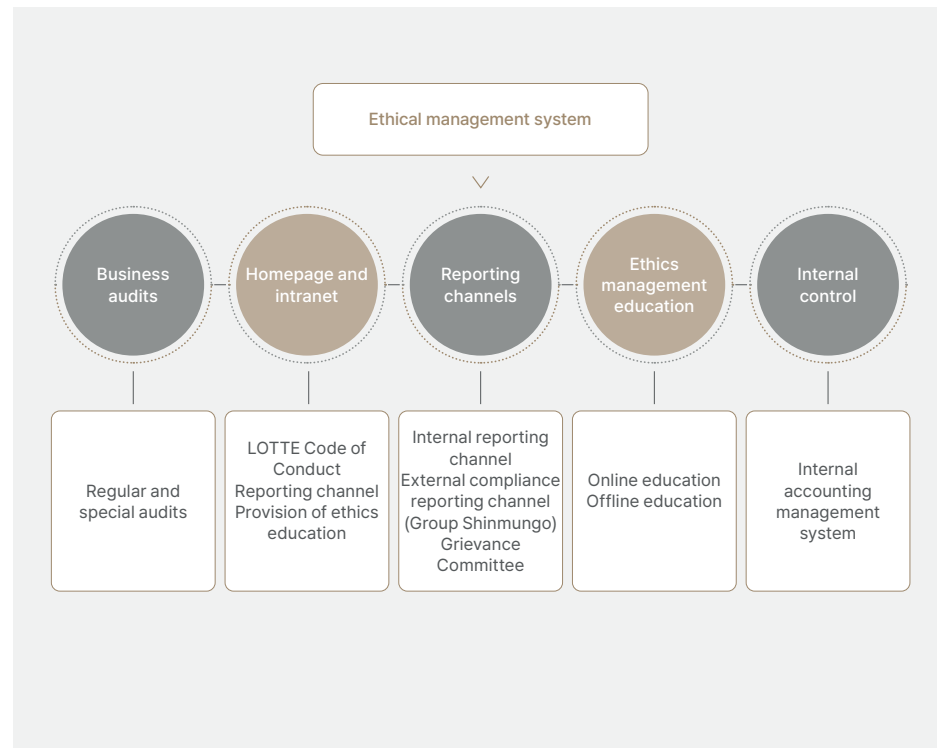
Code of Conduct



GOVERNANCE : BECOMING A TRUSTED PARTNER

Ethical management system

LOTTE ENERGY MATERIALS is striving to enable its employees to share its ethical management culture by establishing and operating a systematic ethical management system. By sharing the LOTTE Code of Conduct through our website, we are continuously raising the ethical awareness of our employees. In addition, we operate various reporting channels so that internal and external stakeholders can report unethical activities of our employees, and we are striving to internalize ethical management through periodic online education and irregular offline education for employees. We regularly conduct procedures to check and inspect accounting and business processes through the internal accounting management system.



Internal audits

LOTTE ENERGY MATERIALS conducts audits by dividing them into regular audits conducted regularly according to the annual audit plan and special audits conducted as needed in response to external complaints, accusations, or specific issues. The standards and procedures for conducting audits are clearly stated in internal regulations such as the Internal Audit Regulations to ensure that standardized work is carried out clearly. In addition, when necessary based on the audit results, appropriate measures related to rewards and disciplinary actions are suggested and disseminated through special education and company-wide notices to prevent the recurrence of the similar cases. LOTTE ENERGY MATERIALS strives to build solid trust among all stakeholders, including customers, partners, and shareholders, and achieve mutual growth and development.

Diagnosis and improvement of ethical management

LOTTE Group established its CoC (Code of Conduct) to clearly present the direction of ethical management, and the company presents ethical management guidelines through each compliance management-related regulation. The Compliance Management Department constantly monitors whether all members are performing their work fairly and reasonably based on this, and continuously improves work processes through diagnostic activities in various work areas such as sales, purchasing, and production. In addition, through the compliance diagnosis conducted for the entire LOTTE Group once a year, the ethical awareness of employees is checked, the current status of ethical management of the entire company is identified, and improvement directions are derived.



GOVERNANCE : BECOMING A TRUSTED PARTNER

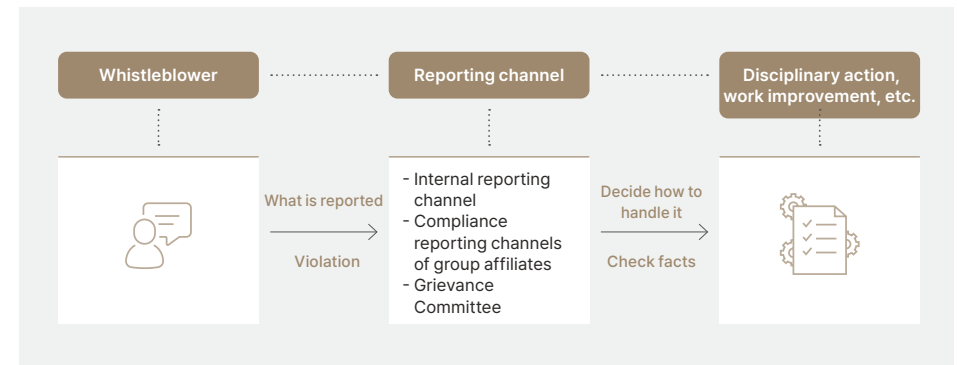
Activities to strengthen ethical management

Internal and external reporting channels and whistleblower protection

LOTTE ENERGY MATERIALS operates various reporting channels such as online business sites, email, mail, and phone so that stakeholders can easily consult and report on ethical management. In addition, we have strengthened the fairness and anonymity of reporting and by promoting reports, have strengthened our culture of ethical management. We also operate an in-house grievance handling committee to investigate and consult on sexual harassment, workplace bullying, and other grievances at work. Whistleblowers can report anonymously or under their real names.

All reports received are transparently processed in accordance with the procedures stipulated in the Compliance Business Operation Rules and Reporting Channel Operation and Case Handling Guidelines, and if unethical behavior is confirmed as a result of the investigation, disciplinary action is taken. The identity of the whistleblower is thoroughly protected during the investigation process, and provisions such as confidentiality, protection of the whistleblower, and prohibition of retaliation are established. In the case of a violation of the above, the protection of the whistleblower is strictly implemented through disciplinary action.

Procedure for handling reports



Status of ethical management reports/investigations and actions taken

Year	No. of reports/ investigations	No. of cases solved	No. of actions and disciplinary actions against unethical behavior
2022	12	12	0
2023	9	9	4
2024	12	12	3

Ethical management education

LOTTE ENERGY MATERIALS provides various forms of ethical management education, including group and online education, to internalize ethical management for all employees, including contract workers and partners. We provided employee education 12 times in 2024 and are securing the effectiveness of education through various topics, including ethical management at the individual/organizational level, compliance education regarding the Prohibition of Bribery Act, and information/global ethics.

Operation of reporting channels

These channels are available to LOTTE ENERGY MATERIALS employees, customers, shareholders, and partners, and receive opinions on ethical management and management improvement.

• Whistleblower protection principles

- The whistleblower's identity is absolutely protected and he or she will not suffer any disadvantage.
- If the report is related to the whistleblower him/herself, his/her responsibility may be reduced in consideration of the extenuating circumstances.

• What is reported

- Violations of ethical management by employees (receiving money, entertainment, conveniences, etc.)
- Unfair trade-related misconduct such as bullying, collusion, and unfair support of partners
- Personnel-related matters such as workplace bullying and sexual harassment
- Leakage of trade secrets by employees and other cases requiring improvement

• How to report

- E-mail: LEM_HOTLINE@LOTTE.net
- Postal mail: (06619) LOTTE ENERGY MATERIALS Compliance Team, 17F, Gangnam Building, 396 Seocho-daero, Seocho-gu, Seoul

GOVERNANCE : BECOMING A TRUSTED PARTNER

BOD operations

Composition of the board of directors

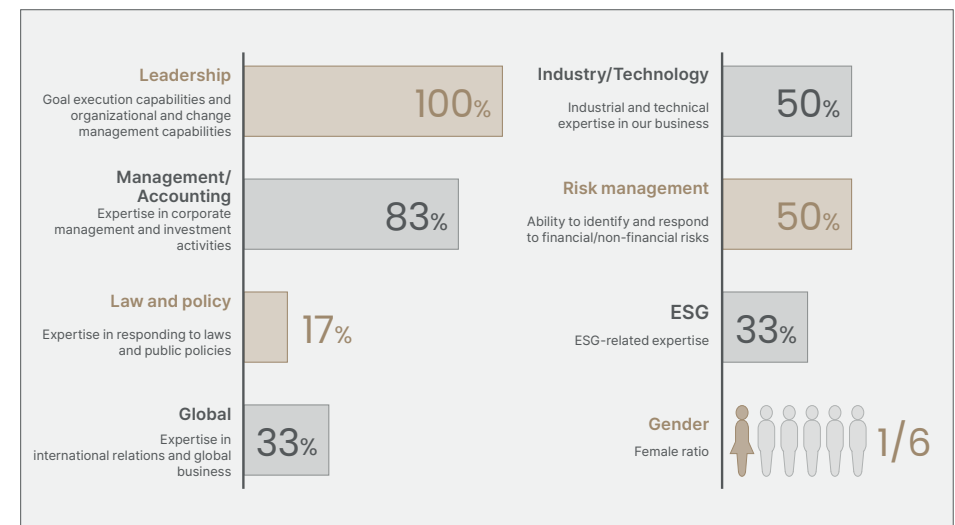
As of the 38th regular shareholders' meeting on March 24, 2025, LOTTE ENERGY MATERIALS had a total of six board members, including two outside directors, three inside directors, and one non-executive director. In March 2024, a female ESG expert with 30 years of expertise in the environment field was appointed as an outside director. She had previously served as the president of the Ministry of Environment and the Korea LPG Association. In 2025, the head of the finance and accounting division was additionally appointed as an inside director and a finance expert as a non-executive director, further strengthening the expertise of the board. Currently, the board is composed of experts in various fields such as the secondary battery industry, ESG, finance and accounting, and investment, enabling in-depth deliberation on major agenda items and practical checks and balances on the management. In particular, the ratio of outside directors is maintained at 33% to strengthen checks and balances on management.

Classification	Name	Gender	Background	Term of office
Inside director	Yeon-seop Kim	Male	<ul style="list-style-type: none"> CSO (Chief Strategy Officer) of the ESG Management Headquarters of LOTTE Group Chemical Group HQ Head of the Management Planning Division of LOTTE Advanced Materials Current) CEO/vice-president of LOTTE ENERGY MATERIALS 	Mar. 2025 – Mar. 2027
Inside director	In-goo Park	Male	<ul style="list-style-type: none"> Head of the Battery Materials Division of the LOTTE Chemical Battery Materials Business Group CTO, Director of the Innovation Center at LOTTE Chemical Basic Materials Current) Head of LOTTE ENERGY MATERIALS Sales and Purchasing Division 	Mar. 2025 – Mar. 2027
Inside director	Seong-yoon Jeong	Male	<ul style="list-style-type: none"> LOTTE Holdings Finance Team 3 Team Leader at LOTTE Shopping Finance Current) Head of the Financial Accounting Division at LOTTE ENERGY MATERIALS 	Mar. 2025 – Mar. 2027
Outside director	Se-min Oh	Male	<ul style="list-style-type: none"> Executive (Managing Director) at POSCO Chemical Manager (Managing Director) at POSCO Chemical Cathode Materials Business Unit 	Mar. 2025 – Mar. 2027
Outside director	Pil-jae Lee	Female	<ul style="list-style-type: none"> President of the Korea LPG Association Chairman of the Central Environmental Dispute Mediation Committee 	Mar. 2024 – Mar. 2026
Non-executive director	Jin-ho Chae	Male	<ul style="list-style-type: none"> CEO of Goldenpole Co., Ltd. Current) Head of the PE Division at STIC Investments Investments 	Mar. 2025 – Mar. 2027

In addition, we introduced a BSM (board skill matrix) to objectively evaluate the necessary capabilities and expertise of the board of directors, and systematically manage the expertise and diversity of the board of directors.

Board skill matrix

Experience and Expertise	Yeon-seop Kim (CEO)	In-goo Park (inside director)	Seong-yoon Jeong (inside director)	Se-min Oh (outside director)	Pil-jae Lee (outside director)	Jin-ho Chae (non-executive director)
Leadership	○	○	○	○	○	○
Management/ accounting	○	○	○	○		○
Law/policy					○	
Global	○	○				
Industry/ technology	○	○		○		
Risk management	○		○			○
ESG	○				○	
Gender (Female ratio : 16.7%)	Male	Male	Male	Male	Female	Male

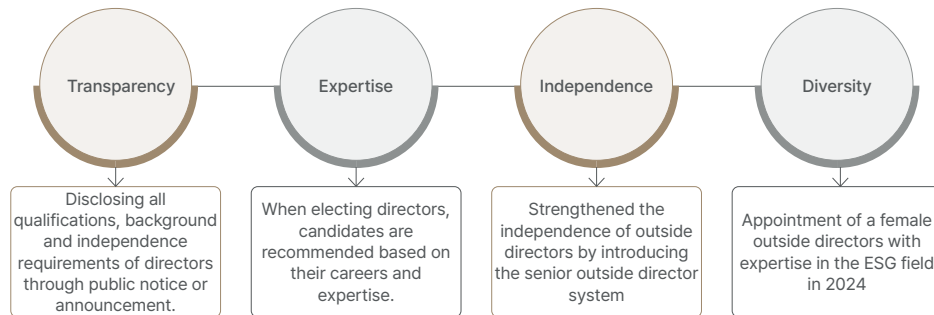


GOVERNANCE : BECOMING A TRUSTED PARTNER

BOD operations

LOTTE ENERGY MATERIALS is striving to realize a responsible management system centered on the board of directors and to achieve sustainable growth and increase corporate value. In accordance with Article 9 of the Board of Directors Regulations, the Company holds regular board meetings once every quarter in principle, and convenes temporary board meetings when necessary. In order to enhance the expertise of the board of directors, we actively provide outside directors with information related to management decision-making, and support optimal decision-making by holding preliminary briefing sessions on major agenda items before the board of directors meeting.

In 2024, a total of 15 board meetings were held, and after the meetings, major agenda items and reports were disclosed in accordance with relevant regulations and transparently disclosed on the corporate website to enhance the trust of shareholders and stakeholders. In addition, in order to enhance our outside directors' understanding of the industry, we continuously provide information and education on the secondary battery materials business through on-site visits and current issues reports, and support them in fully demonstrating their capabilities as experts. In order to strengthen the diversity and independence of governance, we introduced a senior director system to further enhance the transparency of BOD operations and the independence of outside director activities.



Committees within the board of directors

ESG Committee

The ESG Committee was established under the board of directors and is the management and supervisory body related to sustainability and ESG. It is responsible for making decisions on major issues such as the climate response, human rights, and the supply chain based on agenda items proposed by the ESG department. In accordance with Article 6 of our ESG Committee Regulations, the committee holds regular meetings every quarter in principle and convenes temporary meetings when necessary.



ESG Committee composition

Classification	Name	Gender
Inside director (chair)	Yeon-seop Kim	Male
Outside director	Se-min Oh	Male
Outside director	Pil-jae Lee	Female

ESG Committee activities

Year	Date	No	Main agenda	Approved Y/N
2024	Feb. 7	1	(Resolution 1) Approval of the appointment of the ESG Committee chairperson (Draft) (Resolution 2) Approval of the selection of a consulting firm for establishing an ESG management system	Yes
	Aug. 23	2	(Resolution 1) Approval of the LETS contract for ESG data disclosure (Report item 1) Status of publication of the sustainable management report and response to the ESG evaluation (Report item 2) Status of compliance with GRI Standards when publishing the sustainability management report	Yes
	Sept. 30	3	(Resolution 1) Approval of goal-setting for hazardous substance discharge management and status of waste management (Resolution 2) Approval of the establishment of a carbon neutral roadmap (Report item1) Report on the target of LCA data production	Yes
	Dec. 27	4	(Resolution 1) Approval of the 2025 ESG implementation strategy and CEO ESG KPI items *Including the 2024 report (Resolution 2) Approval of the 2025 LETS contract in preparation for ESG data disclosure	Yes
2025	Feb. 17	1	(Resolution 1) Approval of the direction of social contributions and the annual business plan (Resolution 2) Establishment of goals for the use of recycled raw materials in overseas sites	Yes
	Apr. 24	2	(Resolution 1) Approval of the plan for publishing the sustainable management report *Including the report on the results of selecting a consulting firm (Report item1) Report on the results of the double materiality assessment	Yes

FACT & FIGURES

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FINANCIAL DATA

Summary of Consolidated Financial Information¹⁾

Category	2022	2023	2024
Total assets	2,430,280	2,392,247	2,282,023
Current assets	1,436,348	1,262,000	1,031,452
Cash and cash equivalents	200,612	551,987	418,623
Short-term financial instruments	22,808	20,034	76,437
Trade receivables and other receivables	170,394	202,540	170,653
Progress billing due from customers	7,094	9,296	11,969
Other current financial assets	711,203	104,592	-
Income tax receivable	483	1,193	2,486
Other current non-financial assets	18,681	27,324	14,193
Inventories	305,073	345,033	333,180
Assets held for sale ²⁾	-	-	3,911
Non-current assets	993,932	1,130,247	1,250,571
Long-term deposits at financial institutions	15	71,344	4,978
Long-term trade receivables and other receivables	3,774	2,784	2,036
Other non-current financial assets	49,874	24,449	18,515
Deferred tax assets	13,940	18,093	66,762
Investments in associates	40,829	-	-
Tangible assets	873,976	1,000,401	1,127,894
Investment properties	938	915	891
Intangible assets	10,544	12,208	29,485
Other non-current assets	42	54	10
Total Liabilities	440,193	426,414	380,067
Current liabilities	176,544	332,800	117,641
Non-current liabilities	263,649	93,614	262,426
Total Equity	1,990,087	1,965,833	1,901,956
Equity attributable to owners of the parent company	1,459,906	1,433,495	1,333,628
Capital stock	23,055	23,055	23,055
Paid-in capital	1,140,278	1,137,696	929,178
Retained earnings	293,741	243,419	237,456
Other components of equity	2,832	29,325	143,939
Non-controlling interests	530,181	532,337	568,328
Total Equity and Liabilities	2,430,280	2,392,247	2,282,023

Summary of the Consolidated Comprehensive Income Statement³⁾

Category	2022	2023	2024
Sales	729,363	809,006	902,252
Cost of goods sold	599,780	739,598	890,793
Gross profit	129,583	69,408	11,459
SG&A	44,810	57,602	75,904
Operating profit	84,773	11,805	(64,445)
Financial profit	51,911	52,466	83,294
Financial expenses	84,559	106,241	38,337
Non-operating income	26,915	21,497	24,271
Non-operating expenses	19,404	17,352	20,926
Equity method income	889	446	-
Profit before tax	60,525	(37,378)	(16,143)
Income tax expense	11,538	7,742	(44,941)
Net income	48,987	(45,120)	28,798
Other comprehensive income	(2,487)	34,620	158,399
Comprehensive Income	46,500	(10,501)	187,198

ESG Common⁴⁾

Category	2022	2023	2024
Overseas sales ratio (%)	72	76	71
R&D investments (in KRW million)	10,949	11,252	16,857
R&D investment ratio to sales (%) ⁵⁾	1.50	1.39	1.87

1) Major Consolidated Subsidiaries: LOTTE EcoWall, LOTTE IM Global, LOTTE EM EUROPE S.A R.L., LOTTE EM Malaysia Sdn. Bhd., LOTTE ENERGY MATERIALS SPAIN S.L.

2) New in 2024

3) Major Consolidated Subsidiaries: LOTTE EcoWall, LOTTE IM Global, LOTTE EM EUROPE S.A R.L., LOTTE EM Malaysia Sdn. Bhd., LOTTE ENERGY MATERIALS SPAIN S.L.

4) All domestic and overseas business sites of LOTTE ENERGY MATERIALS

5) Including government subsidies

ESG DATA

ENVIRONMENTAL

Indicator classification	Indicator name	Unit	Location	2022	2023	2024	Note
Response to climate change	Zero-emission vehicle ratio	%	Domestic total	-	10.0	9.1	Calculation standards re-established (2022,2023 data)
	No. of zero-emission vehicles	ea	Domestic total	-	2	2	
	Total No. of vehicles	ea	Domestic total	-	20	22	
Greenhouse gases	Total investment required to reduce greenhouse gas emissions ¹⁾	KRW million	Domestic total	-	-	822.4	
Air pollution	Business sites subject to collection of air pollutant emissions	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Air pollutant emissions: NOx (nitrogen oxides)	M/T	Iksan Plant 1	0	0	0	
			Iksan Plant 2	0.123	0.675	0.044	
	Air pollutant emissions: SOx (sulfur oxides)	M/T	Iksan Plant 1	1.006	0.195	0	
			Iksan Plant 2	0.024	0.220	0.001	
	Air pollutant emissions: VOCs (volatile organic compounds)	M/T	Iksan Plant 2	0.062	0.053	0.131	
	Air pollutant emissions: HAPs (hazardous air pollutants)	M/T	Iksan Plant 2	0.062	0.053	0.131	
	Air pollutant emissions: PM (particulate matter)	M/T	Iksan Plant 1	2.908	2.014	3.177	
			Iksan Plant 2	0.149	0.140	0.006	
	Air pollutant emissions: CO (carbon monoxide)	M/T	Iksan Plant 2	0.124	0.057	0.396	
	NOx emissions intensity	ton/KRW billion	Domestic total	0.000394	0.002057	0.000154	Iksan 1, Iksan 2
	SOx emissions intensity	ton/KRW billion	Domestic total	0.003296	0.001264	0.000004	Iksan 1, Iksan 2
Water risk ²⁾	Business sites located in water-stressed areas	ea	Domestic total	2	2	2	
	Cost of sales ratio of business sites located in water-stressed areas	%	Domestic total	100	100	100	
	Total water withdrawn in water-stressed areas	ton	Iksan Plant 1	2,033,802	1,974,789	1,788,034	
			Iksan Plant 2	3,777	3,769	3,474	
	Water withdrawal rate in water-stressed areas	%	Domestic total	100	100	100	
	Total wastewater discharged in water-stressed areas	ton	Iksan Plant 1	1,566,714	1,678,273	1,720,256	
			Iksan Plant 2	387	307	332	
	Total water consumption in water-stressed areas	ton	Iksan Plant 1	2,033,802	1,974,789	1,788,034	
			Iksan Plant 2	3,390	3,462	3,142	
	Percentage of total water consumption in water-stressed areas	%	Domestic total	100	100	100	

1) New in 2024

2) Water risk areas were selected based on climate scenario analysis results for Iksan Plant 1 and Iksan Plant 2.

ESG DATA

ENVIRONMENTAL

Indicator classification	Indicator name	Unit	Location	2022	2023	2024	Note
Water	Total water withdrawn	ton	Iksan Plant 1	2,033,802	1,974,789	1,788,034	
			Iksan Plant 2	3,777	3,769	3,474	
	Business sites that regularly measure water intake	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Business sites that regularly measure water intake by water source	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Water withdrawal unit	ton/KRW billion	Domestic total	6,521.9	6,030.9	6,265.4	Iksan 1, Iksan 2
	Wastewater discharged	ton	Iksan Plant 1	1,566,714	1,678,273	1,720,256	
			Iksan Plant 2	387	307	332	
	Total water pollutant emissions	ton	Iksan Plant 1	53.032	87.491	47.217	
			Iksan Plant 2	0.014	0.006	0.006	
	Total water usage	ton	Iksan Plant 1	2,033,802	1,974,789	1,788,034	
			Iksan Plant 2	3,777	3,769	3,474	Calculation standards re-established (2022, 2023 data)
	Water usage unit	ton/KRW billion	Domestic total	6,521.9	6,030.9	6,265.4	
	Business sites that regularly measure water usage	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Water reused	ton	Iksan Plant 1	411,361	208,354	55,592	
	Business sites that regularly measure water reused	ea	Domestic total	1	1	1	Iksan 1
	Business sites that evaluate WASH for employees ¹⁾	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Water pollutant emissions: TOC (total organic carbon)	ton	Iksan Plant 1	24.386	45.486	16.655	
			Iksan Plant 2	0.014	0.005	0.005	
	Total water pollutant emissions: SSs (suspended solids)	ton	Iksan Plant 1	6.430	8.463	17.623	
			Iksan Plant 2	-	0.001	0.001	
	Total water pollutant emissions: BOD (biochemical oxygen demand)	ton	Iksan Plant 1	22.216	33.543	12.939	

¹⁾ Business sites that that regularly (at least once a year) evaluate and monitor all sanitary water (cleaning, washing face, etc.) and drinking water

ESG DATA

ENVIRONMENTAL

Indicator classification	Indicator name	Unit	Location	2022	2023	2024	Note
Energy	Energy savings within the organization	TJ	Domestic total	14	83	184	
	Total energy usage within the organization	TJ	Domestic total	2,420	2,335	2,153	
	Total amount of renewable energy used within the organization ¹⁾	TJ	Domestic total	89	89	93	
	Renewable energy usage ratio	%	Domestic total	3.7	3.8	4.3	
	Total non-renewable energy usage within the organization	TJ	Domestic total	2,331	2,246	2,060	
	Grid power usage ratio	%	Domestic total	100	100	100	
	Energy intensity within the organization	TJ/KRW billion	Domestic total	7.75	7.12	7.53	
	Energy cost as a percentage of total operating expenses	%	Domestic total	-	-	10.53	
	Energy cost	KRW million	Domestic total	-	-	35,506	
	Total energy usage (internal/external) of the organization	TJ	Domestic total	2,420	2,335	2,153	Internal energy
Greenhouse gas	Annual GHG targets	tCO ₂ eq	Domestic total	122,416	122,416	121,269	
	Performance against annual GHG targets	%	Domestic total	91	88	82	
	Conversion cost amount for Scope 1 and 2 emissions ^{2) 3)}	KRW million	Domestic total	2,257	1,217	935	
	Conversion cost amount for greenhouse gas emissions	KRW million	Domestic total	2,257	1,217	935	Scope 1, Scope 2
	Business sites subject to direct greenhouse gas (Scope 1) collection	ea	Domestic total	2	2	2	Iksan 1, Iksan 2
	Direct greenhouse gas (Scope 1) emissions	tCO ₂ eq	Domestic total	481	566	191	
	Proportion of direct greenhouse gas (Scope 1) emissions subject to emission restrictions	%	Domestic total	100	100	100	
	Business sites subject to indirect greenhouse gas (Scope 2) collection	ea	Domestic total	4	4	4	
	Indirect greenhouse gas (Scope 2) emissions	tCO ₂ eq	Domestic total	111,478	107,411	98,770	
	Indirect greenhouse gas (Scope 2) emissions related to electricity purchased in bundles with instruments such as country of origin guarantees or renewable energy certificates ²⁾	tCO ₂ eq	Domestic total	0	0	0	
	Scope 1 and 2 greenhouse gas emissions intensity	tCO ₂ eq/ KRW billion	Domestic total	358.355	329.120	346.092	
	Scope 1 and 2 emissions	tCO ₂ eq	Domestic total	111,958	107,974	98,960	

1) This is the usage for purchased steam, and the raw materials for steam are composed of biomass (90%) and others such as LNG (10%).

2) New in 2024

3) Calculated based on KAU annual average price

ESG DATA

ENVIRONMENTAL

Indicator classification	Indicator name	Unit	Location	2022	2023	2024	Note
Raw materials	Amount of recyclable/non-recyclable raw materials used in product production/packaging	KRW 100 million	Iksan Plant 1	1,756	1,556	1,434	
	Total weight of reused/recycled raw materials used in the production of the products (including packaging materials)	ton	Iksan Plant 1	15,366	14,094	11,697	
	Percentage of reused/recycled raw materials used in the production of the product (including packaging materials)	%	Iksan Plant 1	100	100	100	
	Proportion of recovered products and packaging materials ^{1) 2)}	%	Iksan Plant 1	-	-	174	
Hazardous chemicals	Amount of hazardous chemicals used	ton	Iksan Plant 1	2549.386	2165.772	2125.330	
			Iksan Plant 2	3.547	2.17	4.347	
	Hazardous chemical emissions	ton	Iksan Plant 1	0	0.195	0.126	
			Iksan Plant 2	0	0	0	
Waste	Waste generation targets	ton	Iksan Plant 1	-	-	4,710	
	Performance against waste generation targets	%	Iksan Plant 1	-	-	103	
	Business sites subject to waste calculation	ton	Domestic total	2	2	2	Iksan 1, Iksan 2
	Total waste discharged	ton	Iksan Plant 1	5,348	5,233	4,551	
			Iksan Plant 2	23	82	147	
	Designated waste discharged	ton	Iksan Plant 1	466	595	637	
			Iksan Plant 2	5	2	13	
	General waste discharged	ton	Iksan Plant 1	4,882	4,638	3,915	
			Iksan Plant 2	18	80	134	
	Percentage of recycled waste	%	Iksan Plant 1	72	87	86	
			Iksan Plant 2	-	98	91	
	Waste discharge intensity	ton/KRW billion	Domestic total	17.192	16.201	16.431	Iksan 1, Iksan 2
	Total amount of waste recovered	ton	Iksan Plant 1	167	246	714	
Eco-friendly products/services	Percentage of reused products	%	Domestic total	2.91	5.70	3.88	
Environmental management	Business sites targeted for eco-friendly investment	ea	Domestic/overseas business site	3	3	3	Iksan 1, Iksan 2, Malaysia
	Green investment spending	KRW million	Domestic total	-	-	3,058	
	Expenses incurred for major pollutant (air/soil/water) spill/leakage accidents	KRW million	Domestic total	0	0	0	

1) New in 2024

2) The ratio exceeds 100% due to the difference between the time of sale and the time of recovery.

ESG DATA

SOCIAL

Indicator	Indica	Unit	Location	2022	2023	2024	Note
Products/services	Total No. of products (based on MSDS) ¹⁾	ea	Domestic total	-	-	3	
	Business sites with quality management system certification (ISO 9001, etc.)	ea		2	2	2	Iksan 1, Iksan 2
Occupational safety and health	Lost time incident rate (LTIR) - partners	case/200,000 working hours	Domestic total	-	2.11	2.45	
	Lost time incident frequency - partners	case		-	2	2	
	Lost time incident days - partners	day		-	167	24	
	Lost time incident frequency rate (LTIFR) - partners	case/1 million working hours		-	10.55	12.25	
	Compilation of safety and health indicators such as lost time incident rate (LTIR) and partner ratio (for resident partners)	%		100	100	100	
	Lost time incident severity rate - employees	%		0.81	0.33	0.34	
	Lost time incident days - employees	day		1,112	442	529	
	Lost time incident rate (LTIR) - employees	case/200,000 working hours		3.49	3.69	2.60	
	Lost time incident frequency rate (LTIFR) - employees	case/1 million working hours		17.45	18.47	12.98	
	Lost time incident frequency - employees	case		24	25	20	
	No. of deaths due to injury - employees	case		0	0	0	
	No. of deaths due to disease - employees	case		0	0	0	
	Death rate due to injury and disease - employees	%		0	0	0	
	No. of serious injuries - employees	case		0	0	0	
	Percentage of serious injuries - employees	%		0	0	0	
	No. of industrial accidents - employees	case		4	1	4	Calculation standards re-established (2022 data)
	No. of recordable diseases - employees	case		13	14	11	Calculation standards re-established (2023 data)
	No. of recordable injuries - employees	case		33	31	33	
	Total recordable incident rate (TRIR) - employees	case/200,000 working hours		6.69	6.65	5.71	Calculation standards re-established (2022,2023 data)
	No. of near misses - employees	case		-	-	3	
	Near miss frequency rate (NMFR) - employees	case/200,000 working hours		-	-	0.39	
	Total work hours - employees	hour		1,375,200	1,353,600	1,540,800	
	Total work hours - partners	hour		158,400	189,600	163,200	Calculation standards re-established (2022,2023 data)
	No. of deaths due to injury - partners	case		0	0	0	
	No. of deaths due to disease - partners	case		0	0	0	
	Death rate due to injury and disease - partners	%		0	0	0	
	No. of serious injuries - partners	case		0	0	0	

1) New in 2024

ESG DATA

SOCIAL

Indicator	Indicator	Unit	Location	2022	2023	2024	Note
Occupational safety and health	Percentage of serious injuries - partners	%	Domestic total	0	0	0	
	No. of recordable injuries - partners	case		-	5	5	
	No. of recordable diseases - partners	case		-	0	0	
	Total recordable incident rate (TRIR) - partners	case/200,000 working hours		-	5.27	6.13	Calculation standards re-established (2022,2023 data)
	Percentage of total employees represented through the Industrial Safety and Health Committee	%		2.73	2.94	2.89	Iksan 1
	No. of employees represented through the Industrial Safety and Health Committee	person		12	12	12	Iksan 1
	No. of workers subject to an industrial safety and health management system - partners	person		0	0	0	
	Percentage of workers applying to an industrial safety and health management system - partners	%		0	0	0	
	No. of workers applying to an industrial safety and health management system that has undergone an internal audit - partners	person		66	79	68	
	Percentage of workers applying an industrial safety and health management system that has undergone internal audit - partners	%		100	100	100	
	No. of workers subject to an industrial safety and health management system - employees	person		440	408	415	Iksan 1
	Percentage of workers applying to an industrial safety and health management system - employees	%		77	72	65	Iksan 1
	No. of workers applying to an industrial safety and health management system that has undergone an internal audit - employees	person		573	564	642	
	Percentage of workers applying to an industrial safety and health management system that has undergone an internal audit - employees	%		100	100	100	
	No. of workers applying to an industrial safety and health management system audited/certified by an external agency - partners	person		0	0	0	
	Workers applying to an industrial safety and health management system that has been audited/certified by an external agency - partners	%		0	0	0	
	No. of workers applying to an externally audited/certified industrial safety and health management system - employees	person		440	408	415	Iksan 1
	Percentage of workers applying to an industrial safety and health management system audited/certified by an external agency - employees	%		77	72	65	Iksan 1
	No. of times an industrial safety and health management process (risk assessment) has been implemented	time		2	2	2	
	Business sites implementing an industrial safety and health management process (risk assessment)	ea		4	4	4	
	Business sites that have obtained industrial safety and health management system (ISO 45001) certification	ea		1	1	1	Iksan 1
Customer	No. of consumer opinions or complaints handled	case	Domestic total	37	13	10	
Human rights	No. of complaints addressed through formal mechanisms/procedures - by channel	case	Domestic total	0	1	2	

ESG DATA

SOCIAL

Indicator	Indicator	Unit	Location	2022	2023	2024	Note
Employees and diversity	Total No. of employees	person	Domestic total	573	564	642	
	Total No. of employees - male	person		538	525	585	
	Total No. of employees - female	person		35	39	57	
	Total No. of regular employees - male	person		496	509	541	
	Total No. of regular employees - female	person		25	31	43	
	Total No. of contract employees - male ¹⁾	person		42	16	44	
	Total No. of contract employees - female ¹⁾	person		10	8	14	
	Full-time (part-time) employee - male	person		37	12	40	Calculation standards re-established (2022,2023 data)
	Full-time (part-time) employee - female	person		1	0	4	Calculation standards re-established (2022,2023 data)
	Total No. of part-time employees - male	person		5	4	4	
	Total No. of part-time employees - female	person		9	8	10	
	Total No. of non-affiliated workers	person		66	79	68	Workers belonging to a resident partner of a business site
	Total No. of employees who changed jobs	person		50	66	45	
	No. of employees on parental leave	person		6	4	8	Calculation standards re-established (2022,2023 data)
	Average training hours per employee (total)	hour		32	30	38	
	No. of employees performing MBO evaluations	person		152	170	222	
	Percentage of females in overall management	%		0	5.3	5.7	
	Ratio of male executives (board members)	%		100	100	100	
	Ratio of female executives (board members)	%		0	0	0	
	Ratio of junior female managers	%		15.2	19.4	21.2	
	No. of minority group (person with a disability) employees	person		14	12	14	
Information security (protection)	Frequency of audits on information security policies and systems	time	Domestic total	2	2	3	Calculation standards re-established (2022 data)

¹⁾ Contract worker: Calculated as full-time + part-time

ESG DATA

GOVERNANCE

Indicator	Indicator	Unit	Location	2022	2023	2024	Note
Corporate ownership	Total shareholding ratio of controlling shareholders and their relatives	%	Domestic total	-	0	0	
	Total No. of shares held by controlling shareholders and their relatives	share	Domestic total	-	0	0	
	Total shareholding ratio of registered directors excluding controlling shareholders and their relatives	%	Domestic total	-	0.01	0.01	
	Total No. of shares held by registered directors excluding controlling shareholders and their relatives	share	Domestic total	-	2,500	6,600	
	Total shareholding ratio of affiliates in the company	%	Domestic total	0	0	0	
	Total No. of shares held by affiliates in the company	share	Domestic total	0	0	0	
	Shareholding ratio of shareholders with 5% or more excluding major shareholders and their related parties	%	Domestic total	5.89	5.89	5.69	
	Total No. of shares held by shareholders with 5% or more excluding major shareholders and their related parties	share	Domestic total	2,718,220	2,718,220	2,621,762	
	Total investment in affiliates compared to equity capital	KRW million	Domestic total	166,756	149,517	136,217	
Responsible management	Total No. of legal/regulatory non-compliance cases	case	Domestic total	0	0	0	
	Ratio of anti-corruption education - employees	%	Domestic total	100	100	100	
BOD ¹⁾	Ratio of non-audit services provided by external auditors	%	Domestic total	0	0	0	2023 data corrected
	No. of ESG Committee meetings held	session	Domestic total	-	-	4	
	No. of board meetings held	session	Domestic total	16	13	15	
	No. of female executives who are not controlling shareholders or their relatives	person	Domestic total	0	0	1	
	Ratio of female directors on the board	%	Domestic total	0	0	25	
	Ratio of outside directors on the board	%	Domestic total	25	25	50	
	Total No. of directors	person	Domestic total	4	4	4	
	No. of outside directors exceeding the legal minimum	person	Domestic total	0	0	0	
	Average remuneration per inside director	KRW million	Domestic total	303	443	465	
	Average remuneration per outside director	KRW million	Domestic total	36	56	53	
	Total remuneration per non-executive director	KRW million	Domestic total	0	0	0	
	Date of prior notification regarding place, agenda, etc., for annual general meetings	day	Domestic total	Mar. 16, 2023	Mar. 7, 2024	Mar. 7, 2025	
Taxes	Effective tax rate	%	Domestic total	19	N/A	N/A	2022,2023 data corrected
Corporate ownership	Cash dividend per share	KRW	Domestic total	300	200	-	

1) Based on the 2024 business report

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ESG POLICY BOOK

Environmental management

Environmental management charter

We place environmental values at the center of management in order to pursue sustainable development prosperous lives for humanity. To this end, we have established an environmental management charter that all employees must comply with. This charter is based on domestic and international laws such as the Constitution of the Republic of Korea, the Framework Act on Environmental Policy, the Framework Act on Carbon Neutrality and Green Growth for responding to the climate crisis, the UN Climate Change Convention, and the Convention on Biological Diversity. We promise to faithfully implement and practice this charter.

1. We will respect people's right to live in a healthy and pleasant environment, and strive to preserve the environment during management and business processes.
2. We will comply with domestic and international environmental laws and regulations, and establish and apply internal environmental standards that exceed legal requirements to prevent environmental pollution in advance.
3. We will promote environmental management that fulfills our social responsibilities by conserving and efficiently using resources and energy to minimize greenhouse gas emissions and environmental pollution.
4. We will reduce pollutant emissions and minimize the negative impact of product use and disposal on the environment through the use of environmentally friendly raw materials and process improvements throughout our business activities.
5. We will recognize the climate crisis as a global issue, cooperate with the international community to suppress the rise in global average temperatures, and strive to transition to a carbon-neutral society.
6. We will recognize the importance of biodiversity conservation, and prevent biodiversity from decreasing through business activities and minimize their impact.
7. We will periodically and transparently disclose environmental management information such as greenhouse gas emissions, reduction performance, and sustainable development performance to increase information accessibility for stakeholders.
8. We will strengthen win-win cooperation and promote mutual growth by cooperating with our partners to share environmental management systems and performance and promote the introduction of environmental management systems.

We pledge to do our best to establish and spread environmental management.

Environmental management policy

LOTTE ENERGY MATERIALS recognizes the environment as a core value in its management activities and declares the following environmental policy to build a sustainable, eco-friendly economy.

1. All employees accurately recognize and comply with environmental laws and regulations, and establish stricter internal management standards than required and faithfully implement them.
2. We will establish a systematic environmental management system based on ISO 14001 (environmental management system) and establish an eco-friendly production system to promote continuous environmental improvement.
3. We will set goals for reducing environmental pollutants and greenhouse gas emissions and strengthen our execution power to achieve them.
4. We will communicate faithfully and reinforce the trust of various stakeholders such as employees, partners, customers, shareholders, and local residents through the transparent disclosure of environmental information.

ESG POLICY BOOK

Environmental management policy

Establishment and operation of an environmental management system	LOTTE ENERGY MATERIALS Corporation (hereinafter referred to as “LOTTE ENERGY MATERIALS” or the “Company”) is committed to the establishment and implementation of an environmental management system, including setting goals and implementation plans and organizing related organizations, to implement management (“environmental management”) that fulfills social and ethical responsibilities while conserving and efficiently using resources and energy and minimizing greenhouse gas emissions and environmental pollution.
Prevention of environmental pollution	LOTTE ENERGY MATERIALS is using less environmentally polluting raw materials in all business processes, improving processes, and reducing pollutant emissions at the sources by promoting resource conservation and recycling, and has implemented the following policy to minimize harmful impacts on the environment due to product use and disposal.
Reduction of greenhouse gas emissions and prevention of air pollution	LOTTE ENERGY MATERIALS is doing its best to minimize greenhouse gas emissions from business activities and prevent air pollution in advance by setting and enforcing internal environmental standards that are stricter than legal emission standards to respond to the climate crisis and reduce fine dust.
Management of water resources and prevention of water pollution	LOTTE ENERGY MATERIALS does its best to prevent water pollution in advance by efficiently managing and using water resources through saving and recycling water resources, setting and enforcing internal environmental standards that are stricter than legal discharge standards when operating wastewater treatment plants at business sites, etc.
Prevention of soil pollution	LOTTE ENERGY MATERIALS does its best to prevent soil pollution in advance by not only complying with legal obligations but also conducting regular inspections of facilities that may cause soil pollution in accordance with internal guidelines for preventing soil pollution.
Resource circulation	LOTTE ENERGY MATERIALS strives to reduce waste by efficiently using resources and energy, improving the materials and structures of processes and products, and preventing the products, raw materials, materials, and containers needed for business activities from becoming waste as much as possible. It does its best to facilitate recycling by recycling generated waste on its own or separating and disposing of waste by type and purpose.
Chemical safety management	Recognizing that the impact of chemicals on human health or the environment at the stage of use can affect the competitiveness of products and the company, LOTTE ENERGY MATERIALS (i) reduces the use of hazardous or dangerous chemicals to prevent or minimize harm to public health or the environment caused by chemicals, (ii) takes innovative approaches such as developing materials or new technologies that can replace such chemicals, and (iii) faithfully implements necessary measures such as maintaining appropriate facilities and equipment, training employees, developing technologies, and exchanging information to prevent harm to public health or the environment caused by chemicals.
Environmental audit	When reviewing new business and investments, LOTTE ENERGY MATERIALS conducts a preliminary environmental audit if necessary to identify the impact of the business on the values pursued by the environmental management charter, which includes the climate crisis, biodiversity, and water resources, and strives to reduce any negative impacts.

Biodiversity policy

LOTTE ENERGY MATERIALS is doing its best to protect biodiversity in all aspects of its business operations, including purchasing and procuring raw and auxiliary materials, operating business sites, and distributing and selling products. To this end, we declare the following goals, including preventing damage to and loss of biodiversity due to business operations and complying with legal requirements in biodiversity protection areas.

We identify the threats to biodiversity that our business activities pose and strive to minimize the impact on biodiversity.

We monitor biodiversity impact areas, protect endangered species, and continuously monitor biodiversity risks.

We invest and conduct activities to preserve and restore biodiversity near our business sites.

We abide by international biodiversity and land protection agreements, comply with relevant legal requirements at our local business sites, and actively work with external expert organizations when necessary.

We actively review participation in international biodiversity protection initiatives and continue activities for providing relevant information to employees and stakeholders to increase their understanding of biodiversity.

ESG POLICY BOOK

Human rights management

Human rights management charter

We aim to achieve 'human rights management' that can positively change not only the lives of our customers but also our society, and contribute to the enrichment of human life. Accordingly, in order to transform into a company that adds value to human life, we established the 'LOTTE ENERGY MATERIALS Human Rights Management Charter' as the standard for proper behavior and value judgment that all employees must adhere to in the process of conducting management and business activities. This charter is based on international human rights principles and norms, including the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Convention on the Rights of the Child. We pledge to faithfully comply with and practice this charter.

1. We respect the dignity and value of all human beings in management, and we give top priority to human rights management.
2. We respect international standards and norms on human rights, including the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Convention on the Rights of the Child.
3. We establish and implement related systems and policies, including a human rights management system, so that human dignity and value can be embodied throughout our management activities and established as an organizational culture.
4. We strive to protect and promote the human rights of the socially disadvantaged, and respect the human rights of all stakeholders, including customers, related organizations, partners, and local communities, as well as our employees.
5. We do not discriminate in employment and work based on race, gender, academic background, age, disability, religion, place of birth, or political views, and we pursue an organizational culture of mutual respect and consideration.
6. We do not allow any form of forced labor or child labor, and we comply with the minimum working age set by the laws and international standards of the countries where we conduct business.
7. We comply with working hours and guarantee minimum wages in accordance with the laws and regulations of the countries in which we conduct business.
8. We create a work environment that gives top priority to the safety and health of our employees.
9. We guarantee the three labor rights, including freedom of association, as stipulated in the Constitution to protect and promote the labor rights of employees.
10. We prevent human rights violations such as bullying and sexual harassment in the workplace and actively try to provide relief for damages.
11. We pursue mutual growth as equal partners and support and cooperate in practicing human rights management.
12. We do not use raw materials produced through illegal or unethical methods or methods that may infringe on human rights.
13. We protect personal information acquired during the management and business process.
14. We comply with domestic and international environmental laws and strive to achieve carbon neutrality, environmental conservation, biodiversity, and resource circulation.
15. We prevent human rights violations from occurring during the management process and provide prompt and appropriate relief measures for human rights violations.

As mentioned above, we pledge to do our best to establish and spread human rights management.

All employees of LOTTE ENERGY MATERIALS

ESG POLICY BOOK

Human rights management policy

LOTTE ENERGY MATERIALS' top management must (i) respect the human rights of stakeholders affected by corporate activities, including employees, members of the supply chain, local residents, and consumers, (ii) not infringe on the human rights of stakeholders or engage in third-party infringement of the human rights of others through corporate activities at home and abroad, and (iii) make every effort to provide appropriate means of redress, such as establishing victim relief procedures in advance in preparation for human rights infringements caused by corporate activities. LOTTE ENERGY MATERIALS (i) conducts due diligence on human rights risks in accordance with the procedures set forth in international guidelines, such as the OECD Guidelines for Multinational Enterprises, to protect the human rights of stakeholders, (ii) prevents negative impacts on human rights in advance, and (iii) may provide prompt and appropriate relief measures for human rights infringements. To this end, we establish policies and directions related to human rights management, conduct consultations and deliberations, and may establish an organization in charge of relief procedures. LOTTE ENERGY MATERIALS recommends that its partners and other business operators in the supply chain introduce and operate a human rights management policy, and may provide necessary support, such as by providing the LOTTE ENERGY MATERIALS Partner Code of Conduct. We operate a reporting channel so that anyone, including stakeholders, can report when human rights violations occur or there are such concerns in connection with corporate activities of LOTTE ENERGY MATERIALS.

- **E-mail:** LEM_HOTLINE@lotte.net
- **Mail:** (06619) LOTTE ENERGY MATERIALS Compliance Team, 17F, Gangnam Building, 396 Seocho-daero, Seocho-gu, Seoul

Detailed human rights management policy	In addition to the human rights items stipulated in the Human Rights Management Charter, LOTTE ENERGY MATERIALS aims to protect the human rights of local residents (including the human rights of residents in areas where overseas subsidiaries and factories are located) and consumers' (various consumer rights, such as ensuring product safety). We will regularly review and supplement the contents of the detailed human rights management policy that must be protected and respected.
Respect for human rights	We respect all people affected by corporate activities, including members and partners, as human beings, and we will not allow any acts that constitute human rights violations to occur. Harsh or inhumane treatment, such as verbal abuse, assault, sexual abuse, and mental or physical coercion, is prohibited under any circumstances, and we clearly specify and implement measures to sanction such treatment.
Labor of children and minors	We do not employ children or adolescents who are under the minimum age for employment, under the age for completing compulsory education, or under the age of 15 as prescribed by the laws of the country in which the business site is located. When employing minors under the age of 18, we comply with the laws of the country in which the business site is located, and we do not engage them in risky or harmful work, including night work and overtime work.
Working hours and wages	We comply with the working hour standards set forth in the labor laws of the country that governs the business site. If workers work overtime, they are appropriately compensated for overtime work in accordance with the standards set forth in the labor laws. We pay wages that exceed the minimum level set forth in the labor laws of the country that governs the business site.
Prohibition of discrimination	We do not discriminate against workers in terms of employment and working conditions based on any reason, including race, skin color, gender, education, age, disability, religion, nationality, place of birth, or political views.
Prohibition of forced labor	We do not force our members to work against their free will, including slavery and human trafficking, through mental or physical restraint. We strive to eradicate all forms of forced labor, and take appropriate measures to prevent forced labor from occurring in our business operations.
Safety of business sites	By complying with international standards, related laws, and internal regulations on the work environment, we create a pleasant work environment and take necessary measures to prevent safety accidents. We provide workers with essential protective equipment for performing their jobs and provide sufficient education on industrial safety. We provide regular health checkups to protect and maintain the health of workers, and establish programs to support workers in the event of an accident at the business site.
Freedom of association and collective bargaining	We guarantee freedom of association and the right to collective bargaining in accordance with the labor laws of the country that governs the business site. We respect the right of workers to establish or join labor unions or organizations representing workers and to participate in negotiations regarding employment conditions through them. We do not treat workers unfavorably for reasons such as joining, participating in, or forming labor unions.
Compliance with regulations on conflict minerals	Recognizing that human rights violations and environmental destruction caused by mining in conflict and high-risk areas are serious problems, we do not use conflict minerals such as tin, tantalum, tungsten, or gold that are illegally mined in conflict and high-risk areas. To this end, if necessary, we may enforce due diligence and disclosure obligations on partners in the supply chain in accordance with relevant regulations.

ESG POLICY BOOK

Safety and health

Safety and health policy

LOTTE ENERGY MATERIALS recognizes safety and health as core values in its management activities and declares the following safety and health policy to create a safety-first work environment.

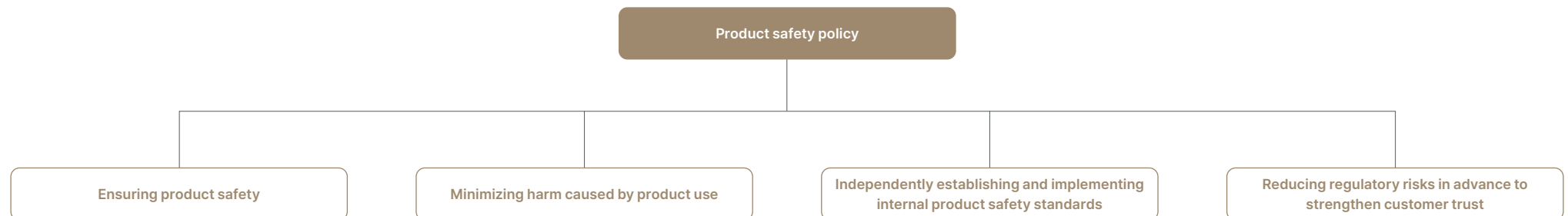
1. In addition to complying with safety and health-related laws and regulations, we actively comply with internal standards that are stricter than the standards set by law.
2. We actively pursue the improvement of employee safety awareness and the creation of a safety culture in the workplace through safety and health management that is faithful to the basics and principles.
3. In order to strengthen the execution power of the safety and health management system, employees clearly recognize their individual roles and responsibilities and actively participate in safety and health activities.
4. We communicate openly with various stakeholders such as all employees, partners, customers, shareholders, and local residents to strengthen our safety and health cooperation system.

January 1, 2025 CEO Yeon-seop Kim

Product safety

Product safety policy

LOTTE ENERGY MATERIALS strictly complies with product safety standards applied during the product manufacturing and distribution process to prioritize product safety. This is part of our efforts to ensure product safety and minimize damage in the event of a hazard resulting from product use. If LOTTE ENERGY MATERIALS determines that domestic and international product safety standards alone are not sufficient, it sets its own, more stringent in-house product safety standards and thoroughly implements them. We closely manage the potential impacts that products may have on humans and the environment from the raw material use stage and transparently disclose information about this. This approach aims to enhance product safety and reduce regulatory risks in advance to strengthen customer trust. LOTTE ENERGY MATERIALS is making continued efforts to secure product safety and enhance customer trust.



ESG POLICY BOOK

Green purchasing

Green purchasing policy

LOTTE ENERGY MATERIALS is actively implementing a green purchasing policy as part of its sustainable management strategy, with the goal of protecting the environment and strengthening resource circulation. This policy considers environmental impacts throughout the entire process of product production and business operations, and we plan to purchase eco-friendly certified products and services. We also plan to consider environmental impacts when establishing all purchasing plans, and actively support green product purchases in purchasing departments. Based on this policy, we are working to expand the use of sustainable resources, such as purchasing recycled copper and renewable energy.

Information protection

Information protection policy

Compliance with domestic and international laws related to information protection

LOTTE ENERGY MATERIALS complies with international information protection standards, domestic and international laws, and LOTTE Group' information protection policies, and has established and operates an information protection management system to effectively protect information assets. The information protection management system is comprehensively applied to all areas of security management, and is supplemented annually to reflect the enactment and revision of related laws and regulations. All information related to stakeholders, including the company's management information, trade secrets, intellectual property, and the personal information of employees, customers, and partners, is treated as important information assets and protected. As security risks such as security threats and information leaks have a serious impact on the company's growth and development, we are striving to minimize risks and manage security efficiently.

ESG POLICY BOOK

Governance

Governance charter

LOTTE ENERGY MATERIALS Corporation (hereinafter referred to as the Company) contributes to the enrichment of human life by providing products and services that are loved and trusted. As a company loved by the people, it aims for the continuous growth of its corporate value.

In order to establish sound governance that serves as the foundation for continuous growth, the Company has established the following governance charter and operates a governance system with mutual checks and balances by securing fairness, transparency, and independence in governance.

Chapter 1 Shareholders

Article 1 Shareholders' rights

- ① Shareholders have basic rights, such as the right to participate in profit distribution, the right to attend general shareholders' meetings, and the right to vote, as stipulated in the Commercial Act and related laws and regulations.
- ② Matters that bring about significant changes to the existence and shareholders' rights of the Company are decided in a way that protects shareholders' rights to the greatest extent possible.
- ③ The Company determines the date and location of the general shareholders' meeting to enable maximum participation by shareholders, and provides shareholders with information on the date, location and agenda of the general shareholders' meeting sufficiently in advance.
- ④ Shareholders may propose agenda items for the shareholders' meeting in accordance with the Commercial Act and other relevant laws and regulations, and may ask questions about agenda items and request explanations at the shareholders' meeting.

Article 2 Fair treatment of shareholders

- ① Shareholders have one vote per common share. However, voting rights for specific shareholders may be restricted as provided for by law.
- ② The Company provides shareholders with necessary information in a timely, fair and sufficient manner.
- ③ The Company protects shareholders from unfair insider trading, self-dealing, and management interference by other shareholders, including the controlling shareholder.

Article 3 Shareholders' responsibilities

- ① Shareholders must recognize that their voting rights can affect the Company's management and actively exercise their voting rights to contribute to the Company's development.
- ② A controlling shareholder who exerts influence over the management of the Company must act in the interests of the Company and all shareholders, and must not cause damage to the Company or other shareholders by acting in a manner contrary to this.

Chapter 2 Board of Directors

Article 4 Functions of the Board of Directors

- ① The Board of Directors has comprehensive authority over the management of the Company and performs the functions of decision-making and management supervision of the Company.
- ② The Board of Directors may delegate authority to the CEO or a committee of the Board of Directors, except for important matters provided for in laws, the Articles of Incorporation, or the Board of Directors Regulations.

ESG POLICY BOOK

Article 5 Composition of the Board of Directors and appointment of directors

- ① The Board of Directors must be of a size that allows for effective and prudent discussion and decision-making, and must be composed of a sufficient number of directors to enable the committees within the Board of Directors to be active.
- ② The Board of Directors must have outside directors who can perform their functions independently from management and controlling shareholders, and the number of outside directors must be at least one-quarter of the total number of directors to ensure that the Board of Directors maintains substantial independence.
- ③ The Board of Directors is comprised of competent individuals with expertise who can make a substantial contribution to corporate management, and the appointed directors are guaranteed a term of office unless there are separate reasons for disqualification.
- ④ The Company should not appoint as director any person who is responsible for damaging corporate value or infringing upon shareholder rights.
- ⑤ The Company promotes diversity in the composition of the Board of Directors to enable flexible responses to changes in the management environment based on diverse perspectives and experiences.
- ⑥ The Company ensures that shareholders have sufficient information and time to make decisions regarding director candidates and exercise their voting rights.

Article 6 Board of Directors operations

- ① The Board of Directors meets regularly at least once every three months, and extraordinary meetings of the Board of Directors are held as needed.
- ② In order to ensure smooth operation of the Board of Directors, the Board of Directors Regulations were established to specify the authorities, responsibilities, and operating procedures of the Board of Directors.
- ③ The Company prepares, maintains and stores the minutes of each meeting.
- ④ The Company discloses the attendance rate of individual directors at the Board of Directors and the activities of individual directors, including their votes for and against major public agenda items.
- ⑤ Directors may participate in the Board of Directors meetings by using remote communication means.

Article 7 Committees within the Board of Directors

- ① The Board of Directors may establish committees within the Board of Directors to perform specific functions and roles to facilitate prompt and efficient decision-making.
- ② The composition, operation and authority of committees will be governed by the separate regulations of each committee.
- ③ Committees will notify the Directors of the matters resolved, in which case each Director who has received the notification may request a meeting of the Board of Directors, and the Board of Directors may resolve again on the matters resolved by the Committee.

Article 8 Director's duties

- ① Directors must perform their duties in accordance with the duty of care and duty of loyalty as good managers.
- ② Directors should not exercise their authority for their own benefit or that of a third party, and must always seek results that are in the best interest of the Company and its shareholders.
- ③ Directors should not disclose to outside parties any corporate secrets they have learned in the course of performing their duties, or use them for their own or a third party's benefit.

Article 9 Director's responsibilities

- ① In the process of making management decisions, directors must collect substantial and reliable data and information, review them sufficiently, and perform their duties in a manner that is in the best interest of the Company based on honest and reasonable judgment.
- ② If a director violates laws or the Articles of Incorporation or neglects his/her duties and causes damage to the Company, the director will be liable for damages to the Company. If the director exhibits malice or gross negligence, he/she will also be liable for damages to third parties.
- ③ In order to ensure the effectiveness of holding directors accountable and to recruit directors who can contribute to the development of the Company, the Company may purchase liability insurance for directors at the Company's expense.

ESG POLICY BOOK

Article 10 Outside directors

- ① Outside directors participate in the Company's major decision-making through the activities of the Board of Directors and supervise and support management as members of the Board of Directors.
- ② Outside directors are recommended based on their expertise, independence, and diversity, and are appointed at the general shareholders' meeting.
- ③ Outside directors may request the provision of information necessary for performing their duties and, if necessary, may receive advice from external experts through appropriate procedures. The Company will support the costs required for such advice.
- ④ The Company regularly reports or provides management information, such as the status of the Company's business execution, to outside directors so that they can accurately and timely understand the Company's management status, and operates a continuous education or training program for outside directors.

Article 11 Evaluation and compensation

- ① The Board of Directors' management activities must be fairly evaluated, and the results must be appropriately reflected in compensation.
- ② To improve the effectiveness of the Board of Directors, regular evaluations are conducted on the Board of Directors and outside directors.
- ③ The Board of Directors determines whether and how much compensation or expenses necessary for the performance of duties of a director will be paid, within the payment limit set by the resolution of the general meeting of shareholders.
- ④ The compensation of directors will be determined at an appropriate level in proportion to their duties and in light of the financial status of the Company, but will be consistent with the long-term improvement of the interests of the Company and its shareholders.

Chapter 3 Audit organization

Article 12 Auditors

- ① In order to perform their duties professionally and independently, auditors must regularly come to the Company and perform their duties, establish an annual plan to perform their duties efficiently, and perform their duties accordingly.
- ② Audits are carried out to examine the legality of the business activities of directors and management, examine the soundness and validity of the Company's financial activities, review the accuracy of financial reports, approve the appointment and dismissal of external auditors, and make subsequent reports at the general shareholders' meeting.
- ③ Auditors may inspect or copy accounting records and documents at any time, request business reports from directors, and investigate the Company's business and financial status.
- ④ If necessary, auditors may request advice from external organizations and experts at the Company's expense.

Article 13 External auditors

- ① The Company ensures that external auditors maintain legal and substantive independence from the Company, its management and its controlling shareholders.
- ② External auditors attend general shareholders' meetings and explain any questions shareholders may have regarding the audit report.
- ③ External auditors check whether there is any information in the audited financial statements and periodic disclosure information that conflicts with the audit results.
- ④ During the audit, external auditors must verify whether the Company has engaged in any wrongdoing or illegal activity.
- ⑤ External auditors must also consider the Company's continuation in accordance with the requirements of relevant laws and regulations, including the Act on External Audit of Corporations.
- ⑥ External auditors report important matters identified during external audit activities to the auditors.

ESG POLICY BOOK

Chapter 4 Stakeholders

Article 14 Protection of stakeholders' rights

- ① The Company must contribute to growing together with various stakeholders such as customers, employees, and partners, by sharing greater value.
- ② The Company respects workers' rights and improves their quality of life.
- ③ The Company values cooperative relationships with its partners, promotes the establishment of a fair market order through compliance with fair trade laws, and seeks balanced development of the national economy.
- ④ The Company complies with creditor protection procedures for matters such as mergers, capital reductions, and divisions that have a significant impact on the status of creditors.
- ⑤ The Company protects the rights of both stakeholders and shareholders when stakeholders hold the status of shareholders concurrently.
- ⑥ The Company provides information necessary to protect stakeholder rights within the scope permitted by laws and contracts with third parties, and supports stakeholder access to related information.

Chapter 5 Management oversight by the market

Article 15 Disclosure

- ① The Company regularly prepares and discloses business reports, quarterly reports, and semi-annual reports, and discloses information related to the Company to shareholders and stakeholders in a sincere, prompt, and honest manner.
- ② In addition to the disclosures required by law, the Company discloses in a timely, detailed and accurate manner any matters that may have a significant impact on the decision-making of shareholders and stakeholders.
- ③ The Company strives to write public disclosures in an easy-to-understand manner and to make them easily accessible to stakeholders.
- ④ The Company must designate a disclosure officer and have an internal information transmission system that can quickly transmit important information about the Company to the disclosure officer.
- ⑤ The Company does not favor or discriminate against any specific person in the scope or timing of the disclosure of important corporate information, and discloses it so that all stakeholders can access it simultaneously.

Article 16 Corporate management rights market

- ① Any action that results in a change in the management rights of the Company, such as an acquisition, merger, division, or transfer of important business operations, must be carried out through transparent and fair procedures.
- ② The Company should not engage in any act intended to maintain the management rights of some shareholders or the management in a manner that sacrifices the interests of the Company and its shareholders.
- ③ The Company allows shareholders who oppose major structural changes, such as mergers or the transfer of important business operations, to exercise their right to purchase shares at a fair price reflecting the actual value of their shares in accordance with the provisions of law.

Supplementary provisions

Article 1 Effective date

This Charter will go into effect on August 23, 2024.

ESG POLICY BOOK

Compliance management

Compliance management policy

Compliance management regulations

Article 1 Purpose

The purpose of these Compliance Management Regulations (hereinafter referred to as the "Regulations") is to ensure the sustainable growth of LOTTE ENERGY MATERIALS Corporation (hereinafter referred to as the "Company") by delineating the management principles necessary for adherence to all applicable legal requirements in the Company's business operations and for the implementation of the philosophy embedded in the LOTTE Code of Conduct.

Article 2 Scope of application

- ① These Regulations are applicable to all employees of the Company and, as a matter of principle, to employees of overseas subsidiaries and affiliates.
- ② These Regulations govern all business activities of the Company.

Article 3 Relationship with other regulations

- ① These Regulations serve as the standards for decision-making and employee conduct in all management activities, and employees must comply with the contents of these Regulations and the rules of conduct for each field that embody the contents of these Regulations (hereinafter referred to as the "rules of conduct").
- ② The Rules of Conduct pursuant to these Regulations include:
 - 1. Rules of Conduct for Anti-Corruption and subordinate guidelines;
 - 2. Rules of Conduct for Fair Trade and subordinate guidelines;
 - 3. Trade Secret Management Rules and subordinate guidelines; and
 - 4. Compliance Management Operation Rules and subordinate guidelines.

Article 4 Definitions of terms

The definitions of terms used in these Regulations will be subject to those specified in the "Definitions of Terms Clause" within the Rules of Conduct.

Article 5 General principles: Company responsibilities

- ① The Company must make efforts to act in accordance with international standards for corporate management and fostering a culture of compliance management.
- ② The Company must establish and revise these Regulations and Rules of Conduct in accordance with the enactment and revision of relevant laws.
- ③ The Company must establish an internal system for self-auditing or inspecting compliance with these Regulations and oversee and manage it.
- ④ The Company must conduct regular compliance education.
- ⑤ If the Company becomes aware of a violation of these Regulations, it must initiate an audit and discipline employees based on the audit results.
- ⑥ The Company must take protective measures to ensure that whistleblowers do not suffer disadvantages for reporting violations of these Regulations.

ESG POLICY BOOK

Article 6 General principles: Employee obligations

- ① Employees must comply with these Regulations when conducting the Company's business to prevent risks of violating related laws and regulations in advance.
- ② Employees must faithfully participate in legal compliance training.
- ③ Employees must comply with these Regulations and the rules of conduct for each field when conducting the Company's business, use standard contracts, and refer to the relevant guidelines to ensure that they do not violate the law. In addition, if it is unclear whether there has been a violation of the regulations, they must consult with the Compliance Team in advance.
- ④ A superior cannot instruct a subordinate to perform unreasonable work that violates the law or the Company's regulations, and a subordinate may refuse to perform work if he or she is instructed by a superior to perform unreasonable work that violates the law or the Company's regulations.
- ⑤ Employees must check on their own compliance with laws and internal regulations when performing work, and send the results to the Compliance Team for certain tasks determined by the Company.
- ⑥ When employees receive requests from the Compliance Team regarding compliance with the law, they must confirm that their work processes do not violate the law and submit supporting documentation by the deadline.

Article 7 Anti-corruption management (or conduct) principles

- ① The Company's employees must not provide or express an intention to provide money or valuables to public officials or other stakeholders without the Company's permission.
- ② The Company's employees must not request or receive any form of economic benefit, money, etc., from stakeholders that may hinder fairness in the performance of their duties.
- ③ The Company's employees must not make improper requests to public officials or other stakeholders, and must not accept improper requests from others.
- ④ When the Company's employees wish to make a donation or engage in sponsorship or respond to a request for a donation or sponsorship from a third party, they must verify the other party in accordance with the relevant regulations established by the Company before doing so.

Article 8 Fair trade management (or conduct) principles

- ① The Company and its employees must not engage in any acts that unfairly restrict competition, in conjunction with competitors or other business operators.
- ② The Company and its employees must not engage in unfair trade practices in the course of performing their duties or allow affiliates or other business operators to do so.
- ③ The Company and its employees must not unfairly support affiliates or special related parties.
- ④ In the event that the Company or its employees entrust work in accordance with the Act on Fair Subcontracting, they must use the standard contract for subcontracting established by the Company and comply with the obligations stipulated in the Act on Fair Subcontracting and related regulations.
- ⑤ The Company and its employees must not engage in unfair practices by taking advantage of their superior trading position in transactions with partners such as customers, suppliers, and contractors.
- ⑥ Employees must consult with the Compliance Team in advance in accordance with the Company's relevant regulations when engaging in any transaction or act in violation of any of the provisions of this Article.

Article 9 Safety and environmental management principles

- ① The Company and its employees effectively operate an environmental management system to achieve environmental management goals, evaluate the impacts and risks of corporate activities on the environment, and systematically manage and analyze environmental management performance.
- ② The Company and its employees share issues related to environmental management with various stakeholders, including local communities and environmental protection groups, and carry out environmental protection activities together.
- ③ The Company and its employees strive to improve environmental impacts throughout the entire process of product development, production, and use, and minimize the emission of pollutants by introducing eco-friendly production processes and applying optimal technologies to prevent environmental pollution.
- ④ The Company and its employees must protect life, property and the environment from chemicals by preventing environmental hazards caused by chemicals, managing chemicals appropriately, and responding quickly to accidents caused by chemicals.
- ⑤ The Company and its employees must maintain and promote the safety and health of workers within its business sites by preventing industrial disasters and creating a pleasant working environment.

ESG POLICY BOOK

Article 10 Protection of intellectual property and trade secrets

- ① Employees must actively protect the Company's confidential information, intellectual property rights, information assets including business information and technology information in accordance with relevant regulations, and must not use them to obtain unfair profits for themselves or others.
- ② Employees must equally protect the intellectual property rights of others and convey important information to those who need it for work as soon as they become aware of it.
- ③ Employees must not provide the Company's information or trade secrets to outside parties without prior approval, or disclose or provide them to unauthorized persons, even if they are insiders.
- ④ Employees must not leak or disclose to third parties any stakeholder's bids, technology, trade secrets, personal information, etc.

Article 11 Operation of a whistleblowing system and confidentiality

- ① All employees must actively protect the Company and its employees from any violation of laws, regulations, or codes of conduct by reporting or informing the Compliance Team in the most expedient and convenient manner when they become aware of it so that the problem can be resolved.
- ② The Compliance Team Manager must, without delay after receiving a report, confirm and investigate the facts. However, in the following cases, the case may be closed without investigating the facts:
 - 1. If the report is not subject to investigation or the degree of violation is minor and thus there is no practical benefit in investigating the case;
 - 2. If the report is ambiguous and the evidence is insufficient to verify the facts;
 - 3. If a report is made again without a justifiable reason regarding a matter that has already been reported and the result of the processing has been notified; and
 - 4. If an investigation by a government agency or authority has already begun or been completed.
- ③ The reported content must be handled in a confidential manner, the whistleblower's identity and other related information must be kept strictly confidential, and the whistleblower must suffer no disadvantages in relation to the report, and if such an attempt is anticipated, the person responsible shall be punished.
- ④ Employees involved in receiving and processing reports must strictly protect the identity of whistleblowers.
- ⑤ If a whistleblower requests a transfer to another department or a change of position to avoid inconvenience or disadvantage due to whistleblowing, the Company must comply with this request to the greatest extent possible.
- ⑥ The head of the Compliance Team may request the Company, relevant executives and team leaders to restore the whistleblower to his or her original state if he or she has suffered any disadvantage.

Article 12 Inspection of compliance

- ① The Compliance Team must regularly inspect employees' compliance with these Regulations at least once a year.
- ② In addition to the regular inspections stipulated in Paragraph 1, the Compliance Team may conduct inspections on an ad hoc basis with the approval of the CEO.
- ③ The Compliance Team directly reports the results of inspections pursuant to the provisions of Paragraphs 1 and 2 to the CEO, and if an investigation is necessary as a result of an inspection, the team may request an investigation by the internal audit department, an external lawyer, an accountant, etc.

Article 13 Reporting of investigation results and disciplinary procedures

- ① The Compliance Team must report the results of investigations and inspections pursuant to Article 11 and Article 12 of these Regulations directly to the Compliance Officer and CEO and retain related materials.
- ② If the Compliance Team determines that employees have violated the law or these Regulations as a result of an investigation and inspection, it must request the HR Department to initiate disciplinary procedures. If the procedure is not initiated without a justifiable reason despite the Compliance Team's request for disciplinary procedures, the Compliance Team may report to the Compliance Officer and CEO and directly convene a Disciplinary Committee meeting to initiate disciplinary procedures.

ESG POLICY BOOK

Ethical management

Ethical management policy

Establishment and operation of an ethical management system

Ethical management system	LOTTE ENERGY MATERIALS has declared its commitment to ethical management internally and externally, and is making efforts to build a transparent ethical culture, and continuously promote ethical awareness among employees. Based on LOTTE Group's Code of Conduct, it has established and is operating an ethical management system by presenting guidelines for ethical issues and establishing related organizations through codes of ethics, rules of conduct, and implementation guidelines that take into account the nature of its work and individual circumstances. LOTTE ENERGY MATERIALS continuously monitors whether employees are performing their work fairly and reasonably based on ethical management standards, and improves work processes by reflecting the results. In order to strengthen monitoring and management of the status of ethical management, It operates various reporting channels, receives reports and consultations on unethical behavior, and handles reported content through investigations and transfer to relevant departments.
Ethical management education	LOTTE ENERGY MATERIALS conducts various types of education, including online and group education, on ethical management to internalize ethical management for all employees. In addition to compliance education related to domestic laws and regulations, ethical management education may include topics related to international norms and foreign laws, and the topics and targets of education are continuously updated.
Regular and special audits	LOTTE ENERGY MATERIALS conducts audits by dividing them into regular audits and special audits. It performs standardized work through internal regulations that clearly state the standards and procedures for conducting audits, and if necessary, takes measures based on internal regulations related to rewards and discipline according to audit results, and strives to prevent recurrences of similar cases.

Reporting of ethical management violations and protection of whistleblowers

Reporting of ethical management violations	If employees become aware of a violation of ethical management, they must report it to the organization's leader or the Ethical Management Department. The organization's leader who receives the report will immediately report it to the Ethical Management Department and consult with them to handle it. If Ethical Management Department becomes aware of information related to employees' illegal or improper performance of duties, including violations of relevant laws and/or internal regulations, it shall receive the report in accordance with the 5W1H principle, including the whistleblower's personal information, and conduct an investigation after an internal report. LOTTE ENERGY MATERIALS will take disciplinary action or other related measures based on the Company's internal regulations according to the results of the investigation, and will notify the whistleblower of the results in an appropriate way.
Protection of whistleblowers	LOTTE ENERGY MATERIALS guarantees that the whistleblower will not suffer any disadvantages due to legitimate reports based on facts, related statements, the submission of materials, etc., and maintains confidentiality so that the whistleblower's identity and report contents are not disclosed against the whistleblower's will during the investigation process and related procedures.

Detailed ethical management policy

Anti-corruption policy	Recognizing that ensuring fair performance of duties by public officials by prohibiting improper solicitation involving public officials and their acceptance of money or valuables is helpful to the Company's compliance management and ethical management, LOTTE ENERGY MATERIALS complies with international anti-corruption norms and domestic and international laws and regulations, including the UN Convention against Corruption, the OECD Convention against Bribery of Foreign Public Officials, the Korean Act on Combating Bribery of Foreign Public Officials in International Business Transactions, and the Act on Prohibition of Improper Solicitation and Acceptance of Money or Valuables. LOTTE ENERGY MATERIALS employees must never offer, receive, request, promise, or deliver a bribe (including financial benefits) or allow other employees to do so, must not make improper requests to public officials and must not offer, promise, or express an intention to offer money or valuables beyond the scope permitted by law in relation to their duties. We strictly prohibit donations and sponsorships that support projects unrelated to political, charitable or public interest purposes, and the Company may only engage in donations and sponsorships after obtaining approval in accordance with established procedures within the scope permitted by relevant laws and social norms. We review all circumstances, including the legitimacy of the donation purpose, the eligibility of the organization receiving the donation, and the appropriateness of the compensation in return for the sponsorship, preemptively block corruption risks that may accompany donations and sponsorships, and strive to ensure that donations and sponsorships are performed in a legitimate manner for organizations whose eligibility has been confirmed.
Anti-trust policy	LOTTE ENERGY MATERIALS strives to foster creative corporate activities, protect consumers, and achieve balanced development of the national economy by promoting fair and free competition. To this end, recognizing the need to prevent abuse of dominant market positions and excessive concentration of economic power by businesses and to regulate unfair joint practices and unfair trade practices, we comply with domestic and international anti-trust laws, including the Monopoly Regulation and Fair Trade Act. LOTTE ENERGY MATERIALS does not engage in acts prohibited by relevant laws, such as abuse of dominant market position, acts likely to harm fair trade by using its trading position, or acts of reaching agreements with other businesses on prices, supply volumes, trading areas, trading conditions, etc., of goods or services for the purpose of unfairly restricting competition. We do not engage in acts of contacting competitors or sharing information prohibited by relevant laws through intermediaries, and must collect public information or collect information through other legal means.

ESG POLICY BOOK

ESG risk management

ESG risk management policy

LOTTE ENERGY MATERIALS has established and operated policies to identify and prevent risks across the business in line with LOTTE Group's standards in order to minimize the negative impacts that may arise from risks since it was incorporated into LOTTE Group in 2023. These policies are based on international standards and norms on human rights, including the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Convention on the Rights of the Child. In addition, we plan to check our level of sustainable management through annual company-wide audits and report any deficiencies to the ESG Committee and then implement what is needed to improve them. We manage our ESG risk management policy by updating the management standards flexibly according to changes in the internal and external environment, and ensure that it takes root in the company's overall organizational culture through employee education.

Identification of negative impacts

LOTTE ENERGY MATERIALS also checks and recognizes potential risks and issues arising from environmental and corporate social responsibility and human rights impacts. In addition to potential risks or actual risks reported through internal and external reporting channels, we check for problems based on the results derived through regular company-wide due diligence.

Actions on negative impacts

When actual negative impacts or potential possibilities are identified, LOTTE ENERGY MATERIALS reports the status to the ESG Committee in accordance with the risk policy process, and establishes and implements measures for improvement. For improved risks, we give top priority to company-wide employee education to prevent their recurrence.

ESG POLICY BOOK

Other

Partner Code of Conduct

LOTTE Group recognizes that responding to climate change and building a sustainable ecosystem are common challenges for all of humanity, and seeks to achieve its vision of sustainable management by fulfilling the company's social and environmental responsibilities. Accordingly, LOTTE Group seeks to transform itself into a company that adds value to the lives of humanity through ESG (environmental, social, and governance) management. LOTTE Group expects its partners to join it on its journey toward a sustainable future for humanity. This code was created under the banner of LOTTE Group's ESG management for sustainable growth and social value creation. This code presents what LOTTE Group requests of its partners in terms of environmental protection, respect for human rights, safety management, quality management, legal compliance, ethical management, and management systems, and it is hoped that all LOTTE Group partners will comply with this code and participate in ESG management with LOTTE Group. This code has been prepared based on the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, the UN Convention on the Rights of the Child, the ILO (International Labor Organization) Core Conventions, and the RBA (Responsible Business Alliance) Code of Conduct. In the event of a conflict between this code and the laws and regulations of the country in which we conduct business, the more stringent standard will apply.

1. Environmental protection

LOTTE Group's partners must strive to implement the environmental management policy established by LOTTE Group. Partners must participate in improvement measures based on LOTTE Group's environmental management inspection and actively cooperate to establish a data-based environmental management system.

A. Compliance with laws and regulations

- (1) Partners must obtain and maintain the necessary environmental permits and licenses for business operations and be familiar with and comply with the environmental laws and regulations of the countries in which they conduct business.
- (2) Partners must periodically monitor changes in environmental regulations and strive to comply with them.
- (3) Partners must provide continuous education to their employees on environmental laws, changes and trends.

B. Regulatory compliance

If there are regulations related to substances in the laws of the country where the partner conducts business, such as prohibiting the use of certain substances, limiting the amount of substances used, or requiring the display of information about substances, partners must comply with such regulations.

C. Environmental impact review

- (1) Partners must pay sufficient attention to the environmental impacts that may occur during the process of producing and distributing products and providing services, and make efforts to reduce them.
- (2) Partners must periodically review their environmental impacts and develop plans to mitigate them.
- (3) Partners must strive to use eco-friendly products that reduce environmental impacts in the process of producing and distributing products and providing services.

D. Climate crisis response

- (1) Partners must join LOTTE Group in its efforts to achieve carbon neutrality.
- (2) Partners must record their greenhouse gas emissions and develop plans to reduce them.
- (3) Partners must develop a plan to reduce their energy usage.
- (4) Partners must strive to develop and apply innovative technologies to reduce greenhouse gas emissions and energy usage.

E. Resource circulation

- (1) Partners must systematically identify and manage waste generation and establish plans to reduce it.
- (2) Partners must strive to reduce the amount of plastics they use and find ways to recycle waste plastics during the process of producing and distributing products and providing services.

ESG POLICY BOOK

F. Management of water resources

Partners must systematically identify and manage water usage and establish a plan to reduce it.

G. Pollutant management

- (1) Partners must identify the sources of pollutants and regularly monitor and manage the amount of pollutants emitted.
- (2) Partners must identify the characteristics of pollutants and establish management measures based on those characteristics. They must establish measures to safely handle, store, use, and dispose of substances that are harmful to people or the environment, such as by marking them to identify them.
- (3) Partners must take steps to eliminate pollutants or minimize emissions.

2. Respect for human rights

LOTTE Group's partners must support and respect the internationally proclaimed UN Guiding Principles on Business and Human Rights and guarantee human rights in all places where they conduct business. They must do their best to create an organizational culture where members can realize their potential and respect each other without any prejudice or illegal discrimination.

A. Prohibition of discrimination

- (1) Partners should not discriminate against employees in hiring, wages, promotion, education, etc., on the basis of race, gender, education, age, disability, religion, place of birth, political views, etc.
- (2) Partners must not require employees to meet conditions that are not necessary for the performance of their jobs.
- (3) Partners must respect the diversity of their employees and have policies in place to accommodate it.

B. Compliance with labor laws

- (1) Partners must be familiar and comply with the labor laws of the countries in which they do business.
- (2) Partners must pay their employees wages, including minimum wages, overtime pay, and welfare benefits, as prescribed by the laws of the countries in which they do business.
- (3) Partners must ensure that their employees' working hours do not exceed the maximum working hours set by the laws of the country in which they do business. Overtime work must be done with the voluntary consent of employees.
- (4) Partners are required to pay wages on a set date.
- (5) Partners must provide employees with pay slips or other documents that record salary payments in a language that their employees can understand.
- (6) When partner hire foreign workers, they must ensure that the workers keep all relevant original documents (passports, work permits, etc.).
- (7) Partners must provide their employees with mandatory training as prescribed by the laws of the countries in which they do business.

C. Humane treatment

- (1) Partners must make efforts to prevent inhumane treatment of workers, including sexual harassment, sexual abuse, corporal punishment, mental or physical coercion, and verbal abuse.
- (2) Partners must strive to prevent acts that cause physical or mental suffering to other workers or worsen the working environment by taking advantage of their superior position or relationship at work beyond the appropriate scope of work.
- (3) Partners must establish a policy to ensure humane treatment of employees and provide sufficient education to employees regarding this.
- (4) In the event of inhumane treatment or workplace harassment of employees, partners must take appropriate measures after fully considering the requests and circumstances of the affected employees.

D. Freedom of association

- (1) Partners must guarantee their employees the right to organize, join, and engage in labor union activities in accordance with the laws and regulations of the country in which they conduct business, and guarantee employees the right to collective bargaining through labor unions.
- (2) Partners must ensure that their employees do not suffer any form of disadvantage, including discrimination, retaliation, or harassment, due to organizing, joining, or engaging in labor union activities.
- (3) Partners must strive to create an atmosphere in which employees can freely communicate about working conditions, management policies, etc.

ESG POLICY BOOK

E. Protection of minor workers

- (1) Child labor is prohibited in any form or shape. Partners must comply with the minimum age for employment established by the laws of the countries in which they conduct business and international conventions on child labor.
- (2) If partners require the employment of employees under the age of 18, they should consult with the compliance management officer and check the minimum age requirements under applicable laws.
- (3) Partners may hire employees under the age of 18, provided that they do not violate the minimum age for employment under relevant laws and regulations. However, in this case, they must not assign them to high-risk work and must take necessary measures to ensure that their educational opportunities are not limited due to labor.
- (4) Partners should not receive goods or services from businesses that engage in child labor or violate relevant laws.

F. Prohibition of forced labor

- (1) Any form of forced labor, such as coercion, confinement, or other forms of forced labor is prohibited. Partners should not use violence, threats, confinement, or other acts for the purpose of forcing labor, or apply mental pressure based on economic conditions, debt relationships, etc.
- (2) Partners should not receive goods or services from businesses that force workers to work through acts such as assault, threats, confinement, or mental pressure.

3. Safety management

LOTTE Group's partners must strive to ensure the safety of employees in all processes of producing and distributing products and providing services. They must establish a management system to prevent safety accidents and cooperate with the safety management evaluation of business sites conducted by LOTTE Group.

A. Compliance with laws

Partners must obtain and maintain the necessary safety-related licenses and permits for business operations and be familiar and comply with the safety-related laws and regulations of the country in which they conduct business.

B. Safety diagnosis

- (1) Partners must regularly conduct safety assessments of their business sites, recognize risk factors according to the characteristics of the business sites, and reflect these in the safety assessment.
- (2) Partners must evaluate the safety of machinery, equipment, and facilities that pose risks to people within their business site and inspect them regularly.
- (3) Partners must install and regularly inspect necessary equipment, such as safety devices and protective walls, to prevent safety accidents from occurring within the business site.

C. Establishment of a safety management system

- (1) Partners must establish an autonomous safety management system by placing a dedicated safety management department directly under the head of the business site and ensuring independence in its work.
- (2) Partners must prepare a safety accident response manual that includes immediate actions, evacuation procedures, reporting systems, and follow-up actions.
- (3) Partners must provide their employees with sufficient training on the safety accident response manual and conduct regular training in accordance with the laws of the country where they do business.
- (4) When a safety accident occurs, partners must investigate the cause and make efforts to develop improvement measures.

D. Safety education

- (1) Partners must provide regular safety education to their employees. The safety education must include contents designed to enhance the safety awareness and foster the safety management capabilities of employees.
- (2) Partners must post key information regarding safety management in a prominent location in their business sites.

E. Cafeteria and accommodation management

- (1) If partners operate a cafeteria, they must periodically check and manage the hygiene of the cafeteria to ensure that hygienic food is provided to workers.
- (2) When providing accommodations, partners must periodically check and manage the accommodations to ensure that they are safe and clean, and must properly install and manage emergency exits and fire-fighting equipment in the accommodations.

ESG POLICY BOOK

4. Quality management

LOTTE Group's partners must strive to ensure the safety and excellent quality of products and services in all processes of producing and distributing products and providing services. Partners must establish goals for improving the quality of products and services and establish a system to achieve these goals.

A. Compliance with laws and regulations

Partners must comply with the regulations on product quality, safety and hygiene set forth in the laws of the countries in which they conduct business.

B. Establishment of a quality management system

- (1) Partners must establish specific goals to improve the quality of their products and services.
- (2) Partners must establish a specific policy on quality management in all processes of producing and distributing products and providing services, and provide sufficient education to ensure that their employees are fully aware of the policy.
- (3) Partners must post key information on quality management in a prominent location in their business sites.

C. Evaluation of quality

- (1) Partners must regularly evaluate the quality of their products and services.
- (2) Partners must establish procedures to receive evaluations of the quality of their products and services from customers to whom the products and services were provided.
- (3) If the quality of a product or service does not reach the target standard or if the product or service receives a negative evaluation from the customer, partners must prepare a plan to improve it.
- (4) If a quality incident occurs, partners must investigate the cause and prepare a plan to improve it.

D. Quality education

- (1) Partners must provide regular quality education to their employees. Quality education must include contents designed to raise the awareness and foster the quality management capabilities of employees.
- (2) Partners must post key information on quality management in a prominent location in their business sites.

5. Compliance and ethical management

LOTTE Group's partners must practice compliance and ethical management and strive to manage their companies properly. They must increase management transparency, comply with the laws and regulations of the countries in which they conduct business, and maintain the highest level of ethical standards.

A. Prohibition of illegal profits

- (1) Partners' employees must not provide or promise to provide monetary or non-monetary benefits to third parties, including government officials and public institution employees, for illegal or improper purposes.
- (2) Partners' employees must not receive or promise to receive any monetary or non-monetary benefits from third parties for illegal or improper purposes.
- (3) Partners must continuously monitor employees with regard to providing or receiving illegal or inappropriate benefits, and take necessary measures if they discover that such benefits have been provided or received.

B. Improvement of management transparency

- (1) All business activities of partners must be conducted transparently, and all transactions of partners must be accurately recorded in internal documents such as accounting books.
- (2) Information regarding partners' business activities, financial status, safety management status, environmental conservation status, and performance must be disclosed in accordance with the laws and practices of the countries in which they do business.

ESG POLICY BOOK

C. Prevention of unfair trade

- (1) Partners must comply with the fair trade laws and monopoly regulation laws of the countries in which they conduct business.
- (2) Partners should not abuse their dominant market position or engage in any conduct that may undermine fair trade by taking advantage of their trading position.
- (3) Partners must not enter into agreements with other businesses regarding the prices, supply volumes, transaction areas, transaction conditions, etc., of goods or services for the purpose of unfairly restricting competition.

D. Responsible supply chain management

- (1) Partners must not receive raw materials produced in a way that raises concerns about human rights violations or environmental destruction, and must not receive products or services from companies that produce products or provide services in an illegal or unethical manner.
- (2) Partners must periodically check whether there are concerns about human rights violations or environmental destruction in the production process of the raw materials supplied, and whether the supplier is producing products or providing services in an illegal or unethical manner.
- (3) Partners must develop specific policies for responsible supply chain management.

E. Personal information protection

- (1) Partners must comply with the laws and regulations regarding personal information protection of the countries in which they conduct business with regard to the collection and processing of personal information.
- (2) Partners must make reasonable and sufficient efforts to protect personal information acquired in connection with business.
- (3) Partners must make sufficient efforts not to leak trade secrets or security-sensitive information acquired from business partners in connection with business.

F. Protection of intellectual property rights

- (1) Partners must make sufficient efforts to avoid infringing upon the intellectual property rights of others when conducting business.
- (2) Partners must not engage in any acts that unfairly infringe upon the trade secrets of competitors while conducting business.

6. Management system

LOTTE Group's partners must recognize the importance of sustainable management and establish a management system for this. They must set long-term goals to fulfill their social responsibilities, regularly evaluate their performance, and make improvements.

A. Sustainable management

- (1) Partners must establish goals for sustainable management and document and disclose their implementation plans.
- (2) Partners must regularly educate their employees about the goals for sustainable management and their implementation plans, and periodically check and evaluate whether the goals have been achieved.

B. Risk management

- (1) Partners must strive to identify risks related to the environment, human rights and labor, safety, compliance and ethics that have arisen or may arise in the course of conducting business.
- (2) Partners must take appropriate measures to prevent potential risks related to the environment, human rights and labor, safety, compliance and ethics.
- (3) Partners must take appropriate measures to eliminate and mitigate risks related to the environment, human rights and labor, safety, compliance and ethics.

APPENDIX

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3RD PARTY ASSURANCE STATEMENT	99

GRI INDEX

Statement of use	LOTTE ENERGY MATERIALS has reported information in accordance with the GRI Standards 2021 compliance reporting principles when reporting on sustainable management contents for the period from January 1, 2024, to December 31, 2024.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standards	As of the date of publication of the report, no specific sector standard was applied.

GRI Standards General

A. Not applicable, B. Legal prohibition, C. Confidential, D. Incomplete information

GRI Standard	Disclosure No.	Disclosure Indicators	Page	Note
GRI 2: General disclosure	2-1	Organizational details	6-11	
	2-2	Entities included in the organization's sustainability reporting	2	
	2-3	Reporting period, frequency, and contact point	2	
	2-4	Restatements of information	62-70	Footnote for each restatement
	2-5	External assurance	2, 99	
	2-6	Activities, value chain, and other business relationships	6, 8-10, 16	
	2-7	Employees	6, 69	
	2-8	Workers who are not employees	69	
	2-9	Governance structure and composition	13, 59-60, 70	
	2-10	Nomination and election of the highest governance body	59	
	2-11	Chair of the highest governance body	59	
	2-12	Role of the highest governance body in overseeing the management of impacts	59	
	2-13	Delegation of responsibility for managing impacts	13	
	2-14	Role of the highest governance body in sustainability reporting	13, 60	
	2-15	Conflicts of interest	59	
	2-16	Communication of critical concerns	13	
	2-17	Collective knowledge of the highest governance body	59	
	2-18	Evaluation of the performance of the highest governance body	59	

GRI Standard	Disclosure No.	Disclosure Indicators	Page	Note
GRI 2: General disclosure	2-19	Remuneration policies	-	A
	2-20	Process to determine remuneration	-	A
	2-21	Annual total compensation ratio	-	C
	2-22	Statement on sustainability development strategy	5	
	2-23	Policy commitments	30, 38, 40, 44, 46, 51, 73, 75-77, 82-86	
	2-24	Embedding policy commitments	-	A
	2-25	Processes to remediate negative impacts	53-55	
	2-26	Mechanisms for seeking advice and raising concerns	56-58, 82-85	
	2-27	Compliance with laws and legislation	53-58	
	2-28	Membership associations	18	
	2-29	Approach to stakeholder engagement	16	
	2-30	Collective bargaining agreements	18	
GRI 3: Material topics	3-1	Process to determine material topics	14	
	3-2	List of material topics	15	
	3-3	Management of material topics	15	

GRI Standards Economic

A. Not applicable, B. Legal prohibition, C. Confidential, D. Incomplete information

GRI Standard	Disclosure No.	Disclosure Indicators	Page	Note
GRI 201: Economic performance	201-2	Financial implications and other risks and opportunities due to climate change	24-29	
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	53-58	
	205-2	Communication and training about anti-corruption policies and procedure	54-55, 58	
	205-3	Confirmed incidents of corruption and actions taken	58	
GRI 206: Anti-competitive behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	A

GRI INDEX

GRI Standards Environmental

A. Not applicable, B. Legal prohibition, C. Confidential, D. Incomplete information

GRI Standard	Disclosure No.	Disclosure Indicators	Page	Note
GRI 301: Materials	301-1	Weight or volume of materials used	66	
	301-2	Percentage of recycled input materials	32, 45, 66	
	301-3	Reclaimed products and their packaging materials	66	
GRI 302: Energy	302-1	Energy consumption within the organization	65	
	302-2	Energy consumption outside of the organization	-	D
	302-3	Energy intensity	65	
	302-4	Reduction of energy consumption	65	
	302-5	Reductions in energy requirements of products and services	-	D
GRI 303: Water and effluents	303-1	Water management	33, 64	
	303-2	Management of water discharge-related impacts	33	
	303-3	Total volume and percentage of water reused and recycled	33, 64	
	303-4	Wastewater discharge	33, 64	
	303-5	Water consumption	33, 64	
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	65	
	305-2	Energy indirect (Scope 2) GHG emissions	65	
	305-3	Other indirect (Scope 3) GHG emissions	-	D
	305-4	GHG emissions intensity	65	
	305-5	Reduction of GHG emissions	30-31, 65	
	305-6	Emissions of ozone-depleting substances (ODS)	-	A
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	34, 63	
GRI 306: Waste	306-1	Waste generation and significant waste-related impacts	32, 34	
	306-2	Management of significant waste-related impacts	32, 34	
	306-3	Waste generated	32, 34, 66	
	306-4	Waste diverted from disposal	32, 66	
	306-5	Waste directed to disposal	-	D
GRI 308: Supplier environmental assessment	308-1	New suppliers that were screened using environmental criteria	-	D, Developing a management plan
	308-2	Negative environmental impacts in the supply chain and actions taken	-	D, Developing a management plan

GRI Standards Social

A. Not applicable, B. Legal prohibition, C. Confidential, D. Incomplete information

GRI Standard	Disclosure No.	Disclosure Indicators	Page	Note
GRI 401: Employment	401-1	New employee hires and employee turnover	69	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part time employees	40-43	
	401-3	Parental leave	69	
GRI 403: Occupational health and safety	403-1	Occupational health and safety management system	35-37	
	403-2	Hazard identification, risk assessment, and incident investigation	35-37	
	403-3	Occupational safety programs	35-37	
	403-4	Worker participation, consultation, and communication on occupational health and safety	-	D
	403-5	Worker training on occupational health and safety	35-37	
	403-6	Worker health	35-37	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	35-37	
	403-8	Workers covered by an occupational health and safety management system	67-68	
	403-9	Work-related injuries	67-68	
	403-10	Work-related ill health	67-68	
GRI 404: Training and education	404-1	Average hours of training per year per employee	69	
	404-2	Programs for upgrading employee skills and transition assistance programs	40	
GRI 405: Diversity and equal opportunity	405-1	Diversity of governance bodies and employees	69	
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	40, 69	
GRI 413: Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	48-50	
GRI 414: Supply social assessment	414-1	New suppliers that were screened using social criteria	-	D, Developing a management plan
	414-2	Negative social impacts in the supply chain and actions taken	-	D, Developing a management plan
GRI 416: Customer health and safety	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	67	
GRI 418: Customer privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	52	

SASB INDEX

Industrial Category: Resource Transformation (Chemicals)

Topic	Code	Description	Unit	Report page	Note
Greenhouse gas emissions	RT-CH-110a.1	Gross global Scope 1 emissions	tCO ₂ e	65	
	RT-CH-110a.2	Long term and short term strategy or plan to manage Scope 1 emissions, emissions reduction targets	-	30-31	
Air quality	RT-CH-120a.1	NOx emissions	ton	63	
		SOx emissions	ton	63	
		VOCs emissions	ton	63	
		HAPs emissions	ton	63	
Energy management	RT-CH-130a.1	Total energy consumed	GJ	65	
		Grid power ratio	%	65	
		Percentage renewable	%	65	
		Total self-generated energy	GJ	-	A
Water management	RT-CH-140a.1	Total water withdrawn	m ³	64	
		Total water consumption	m ³	64	
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	case	-	0 case
		Water management risks and strategies and practices to mitigate those risks	-	33	
Hazardous waste management	RT-CH-150a.1	Amount of hazardous waste generated	ton	66	
		Percentage recycled	%	66	
Community relations	RT-CH-210a.1	Engagement processes to manage risks and opportunities associated with community interests	-	48-50	

A. Not applicable, B. Legal prohibition, C. Confidential, D. Incomplete information

Topic	Code	Description	Unit	Report page	Note
Workforce Health and Safety	RT-CH-320a.1	Total recordable incident rate (TRIR)	%	67	
		Fatality rate for direct employees	%	67	
		Total recordable incident rate (TRIR)	%	68	
		Fatality rate for contract employees	%	68	
	RT-CH-320a.2	Efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	-	35-37	
Product design for efficiency in use phase	RT-CH-410a.1	Revenue from products designed for resource efficiency in the use phase	KRW million	-	A
Safety and environmental stewardship of chemicals	RT-CH-410b.1	Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances	%	-	A
		Percentage of products that have undergone a hazard assessment	%	-	A
	RT-CH-410b.2	Discussion of strategy to manage chemicals of concern	-	-	A
		Discussion of strategy to develop alternatives with reduced human and/or environmental impact	-	-	A
Genetically Modified Organisms (GMO)	RT-CH-410c.1	Revenue from products labeled as containing genetically modified organisms (GMO)	%	-	A
Management of the legal and regulatory environment	RT-CH-530a.1	Corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-	72-91	
Operational safety, emergency preparedness and response	RT-CH-540a.1	Process Safety Incidents Count (PSIC)	case	67	
		Process Safety Total Incident Rate (PSTIR)	%	67	
		Process Safety Incident Severity Rate (PSISR)	%	67	
	RT-CH-540a.2	Number of transportation incidents	case	-	0 case
Production volume	RT-CH-000.A	Production by reportable segment	ton	6	

UN SDGs

UN SDGs (Sustainable Development Goals) Commitment

UN SDGs		Our key activities	Related contents	Page
	End poverty in all its forms everywhere	We are improving the living conditions of our underprivileged neighbors by providing financial support to families in difficult economic situations.	Social contributions	48-50
	Ensure healthy lives and promote well-being for all at all ages	We are working to reduce the environmental impact of our production processes so that all members of society can lead healthy lives. We are also strengthening our business site safety and health management so that our employees can work in a safe and healthy environment.	Environmentally friendly management, response to climate change, safety and health	20-31, 35-37
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	We provide various HR development training programs for our employees to help them enhance their capabilities and expertise.	Management of human resources	40-43
	Achieve gender equality and empower all women and girls	We are promoting an environment where all employees are respected and enjoy equal opportunities by prohibiting discrimination within the organization, strengthening the female workforce, and holding communication meetings among diverse groups, and are striving for sustainable growth.	Employees diversity policy	40
	Ensure availability and sustainable management of water and sanitation for all	We have established and monitor prevention facilities to reduce water pollutants, and are working to minimize our impact on the water ecosystem by establishing internal management standards that are stricter than the legal allowable standards for pollutant discharge.	Management of water resources, reduction of pollutant emissions	33-34
	Ensure access to affordable, reliable, sustainable and modern energy for all	We plan to reduce greenhouse gas emissions by increasing the use of renewable energy across all our business sites.	Climate change response activities	31
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	We are striving to create a happy corporate culture and increase employee satisfaction through various in-house systems.	Employee welfare	42
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	We are focusing on expanding our overseas production bases related to the secondary battery business and strengthening our R&D capabilities to increase future value through the development of next-generation high value-added materials to proactively respond to market demands.	Company overview, introduction to business	6, 8-11

UN SDGs

UN SDGs		Our key activities	Related contents	Page
	Reduce inequality within and among countries	We have a recruitment process that takes diversity into account, and we respect the value of diversity and are creating a culture of equality.	Employee diversity policy, and employee diversity activities	40, 43
	Ensure sustainable consumption and production patterns	We systematically operate a recycling process with the goal of increasing the recovery rate of recyclable resources and reducing the amount of landfilled and incinerated waste.	Resource circulation	32
	Take urgent action to combat climate change and its impacts	We have established a carbon neutrality target for 2050 and a carbon neutrality roadmap including implementation strategies such as expanding the use of renewable energy, improving energy efficiency, and replacing raw materials/fuels to achieve this goal.	Climate change response strategy	30-31
	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	To manage water resources efficiently, we are improving equipment and processes to reduce water usage and improving wastewater treatment technologies to minimize the amount of pollutants generated.	Management of water resources, reduction of pollutant emissions	33-34
	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation, and halt biodiversity loss	We are contributing to ecosystem conservation by thoroughly managing pollutant emissions and minimizing waste generation.	Reduction of pollutant emissions	34
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	We have declared a human rights management charter that contains our will to promote the human rights of all stakeholders, and we operate a human rights grievance handling channel to provide a remedy process in the event of a human rights violation.	Human rights management	38-39, 74
	Strengthen the means of implementation and revitalize the global partnership for sustainable development	We are working with various stakeholders to respond to climate change and build a sustainable future society.	Stakeholder participation and communication, and sustainability status	16, 18

GHG EMISSIONS ASSURANCE REPORT

Introduction

DNV Business Assurance Korea Ltd. (“DNV”) was commissioned by LOTTE ENERGY MATERIALS Corporation (“LOTTE ENERGY MATERIALS”) to verify the LOTTE ENERGY MATERIALS’ Greenhouse Gas Inventory Report for the calendar year 2024 (“the report”) based upon a reasonable level of assurance. LOTTE ENERGY MATERIALS is responsible for the preparation of the GHG emissions data on the basis set out within the guidelines on the operation of GHG emission trading scheme (“ETS”) (Notification No. 2024-155 of Ministry of Environment)’. Our responsibility in performing this work is to the management of LOTTE ENERGY MATERIALS only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this verification opinion.

Objectives and Scope of verification

The GHG emissions data covered by our examination is set for 100% of LOTTE ENERGY MATERIALS’ non-consolidated revenues under the GHG ETS and comprise Direct emissions (Scope 1 emissions) and Energy indirect emissions (Scope 2 emissions) from LOTTE ENERGY MATERIALS boundary ;

- Organizational boundary for reporting: Domestic business sites of LOTTE ENERGY MATERIALS

Verification Approach

The verification has been performed in accordance with the verification principles and tasks outlined in the guidelines on the operation of GHG ETS (Notification No.2024-155, Korean Ministry of Environment) and the verification guideline for GHG ETS (Notification No. 2024-169, Korean Ministry of Environment). We planned and performed our work to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a reasonable verification opinion concerning the completeness of the emission inventory. As part of the verification process;

- We have reviewed the GHG emissions and energy consumption report for the calendar year 2024
- We have reviewed and verified the process to generate, aggregate and report the emissions data

Conclusions

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

LOTTE ENERGY MATERIALS	GHG emissions (tCO ₂ eq)			Energy consumption (TJ)		
	Scope 1	Scope 2	Total	Scope 1	Scope 2	총량
2024	191.227	98,770.253	98,960	3.291	2,151.492	2,153

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

* Total emissions = Direct emissions (Scope 1) + Indirect emissions (Scope 2)

April 2025
CEO Jang-Sub Lee
Country Representative DNV Business Assurance Korea Ltd.

THIRD-PARTY ASSURANCE STATEMENT

To readers of 2024 LOTTE ENERGY MATERIALS SUSTAINABILITY REPORT

Introduction

Korea Management Registrar (KMR) was engaged to conduct an independent assurance of 2024 LOTTE ENERGY MATERIALS SUSTAINABILITY REPORT for the year ending December 31, 2024. The preparation, information and internal control of the report are the sole responsibility of LOTTE ENERGY MATERIALS' the management. KMR's responsibility is to comply with the agreed engagement and express an opinion to LOTTE ENERGY MATERIALS' management.

Subject Matter

The reporting boundaries included the performance and activities of sustainability-related organizations as described in LOTTE ENERGY MATERIALS' report:

- 2024 LOTTE ENERGY MATERIALS SUSTAINABILITY REPORT

Reference Standard

- GRI Standards 2021 : 2023 (GRI)

Assurance criteria

KMR conducted the verification in accordance with the globally recognized standard AA1000AS v3 and KMR's assurance standard SRV1000 based on requirements of ISO 17029 and KMR EDV 01, and set the levels of assurance and materiality as below. 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 the GRI index specified in the report. 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, limited/ not set

Scope of assurance

The scope of our assurance included the verification of compliance with the reporting requirements of the GRI Standards 2021. We confirmed that the following indicators of material topics were identified through the materiality assessment process.

- GRI Standards 2021 reporting principles
- Universal Standards
- Topic Specific Standards
 - GRI 205: Anti-corruption
 - GRI 206: Anti-competitive Behavior
 - GRI 301: Materials
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 306: Waste
 - GRI 308: Supplier Environmental Assessment
 - GRI 403: Occupational Health and Safety
 - GRI 414: Supplier Social Assessment

As for the reporting boundary, the engagement excludes the data and information of LOTTE ENERGY MATERIALS' partners, suppliers and any third parties.

THIRD-PARTY ASSURANCE STATEMENT

KMR's Approach

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

- 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. The scope of this assurance included the confirmation of the truthfulness of claims regarding results that have already been obtained as stipulated by ISO 17029. However, the plausibility of intended claims of forecasts or hypotheses was not validated even if the related content was contained in the report.

A limited assurance evaluates the appropriateness of the criteria used by LOTTE ENERGY MATERIALS for preparing sustainability information on subject matters, the risk of material misstatement in the sustainability information, whether due to fraud or error, responses to risks, and disclosure of the sustainability information on subject matters. However, the scope of the

risk assessment process and the subsequent procedures performed in response to assessed risks, including an understanding of internal controls, is more limited than that of a reasonable assurance.

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 LOTTE ENERGY MATERIALS 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).

Conclusion and Opinion

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

Inclusivity

LOTTE ENERGY MATERIALS 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

LOTTE ENERGY MATERIALS 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

LOTTE ENERGY MATERIALS 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 LOTTE ENERGY MATERIALS' actions.

THIRD-PARTY ASSURANCE STATEMENT

Impact

LOTTE ENERGY MATERIALS 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 data related sustainability performance, including greenhouse gas emissions, energy consumption, waste generation, and health and safety 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 greenhouse gas emissions trading scheme, accredited by the Korea Laboratory Accreditation Scheme (KOLAS) under the National Institute of Technology and Standards of Korea for ISO/IEC 17029:2019 (Conformity Assessment - General principles and requirements for validation and verification bodies), ISO 14067, and additional accreditation criteria, ISO 14065. It is also recognized by the Korea Accreditation Board (KAB) for ISO/IEC 17021:2015 (Requirements for bodies providing audit and certification of management systems), and the National Institute of Environmental Research under the Ministry of Environment of Korea. 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 LOTTE ENERGY MATERIALS and did not provide any services to LOTTE ENERGY MATERIALS that could compromise the independence of our work.

Limitations of Use

This assurance statement is made solely for the management of LOTTE ENERGY MATERIALS 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 LOTTE ENERGY MATERIALS. The statement is valid as of the assurance date below. Certain events that may occur between the assurance date and the time of reading this report could have a material impact on the report, which may lead to revisions to this assurance statement. Therefore, we recommend visiting the LOTTE ENERGY MATERIALS website and verifying whether this is the latest version.

June, 2025

E. J. Hwang



