LG CHEM
SUSTAINABILITY REPORT

2022

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ABOUT THIS REPORT

LG Chem is publishing the 17th Sustainability Report in 2023 to communicate sustainability activities and performances transparently with various stakeholders. This report covers LG Chem's sustainability strategy and major achievements in the areas of environmental, social, and governance, as well as its future plans. LG Chem will continue to actively communicate with stakeholders and become a world-class science-oriented corporation creating new values for our customers.

Reporting scope
This report covers information and performance data collected from LG Chem's headquarters, sales offices, 32 domestic and global production sites, and R&D campuses, excluding data from LG Energy Solution and FarmHannong. Some financial information has been prepared in accordance with the consolidated financial statements of K-IFRS. Any statement with a different scope of reporting is explicitly noted.

Reporting period
This report presents data collected from January 1 to December 31, 2022, with some information up to June 2023 included in relevant sections. Performance data from the last three years, from 2020 to 2022, is presented to enhance the comparability of year-to-year trends.

Reporting cycle
Annual (latest report published in July 2022)

Report assurance
LRQA was commissioned to provide independent assurance against LG Chem's data management procedure and the accuracy and reliability of ESG performance data, using ISAE 3000 and ISAE 3410.

For more information
LG Chem
www.lgchem.com
LG Chem Sustainability Report 2022
www.lgchem.com/sustainability/react-to-zero

LG CHEM SUSTAINABILITY REPORT

2022

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BUSINESS AND STRATEGY

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A MESSAGE FROM OUR CEO

A MESSAGE FROM OUR CEO

Dear Respected Stakeholders,
2022 marked a peak in stakeholder demands for sustainable business practices amidst volatile external circumstances, such as the US-China trade dispute and the protracted Russia-Ukraine conflict. With the proposal of the European Critical Raw Materials Act (CRMA) and the Carbon Border Adjustment Mechanism (CBAM), and the announcement of the United States Inflation Reduction Act (IRA), competition for climate leadership is fierce. Global companies now request Product Carbon Footprints (PCF) from suppliers. In the midst of the challenges, LG Chem has been discovering new growth opportunities, innovating our business processes with the belief that customers and markets lead us to the best answers.

Hak-cheol Shin,
CEO of LG Chem

Driving towards sustainability with new growth engines

LG Chem has achieved continuous growth based on a strong portfolio focused on petrochemicals, advanced materials, and life sciences. The Financial Times recently listed us as one of the "Prospering in the pandemic: the top 100 companies," and Brand Finance, a UK-based consultancy, ranked us the third in brand value among global chemical companies. Now we are restructuring our organization to focus on the three next growth engines: eco-friendly sustainable materials, battery materials, and global innovative drugs. We are also actively pursuing R&D projects that support these new growth engines, covering topics like bioplastics, conversion technology for carbon capture and utilization (CCU), and lithium recycling. Over the last year, we signed a contract with Archer Daniels Midland (ADM) to build a polylactic acid (PLA) plant with an annual capacity of 75,000 tons in Illinois, USA, and also announced plans to build the US' largest cathode materials plant in Tennessee, USA. We recently acquired AVEO Pharmaceuticals, laying the groundwork for the next stage of our growth into a global pharmaceutical company. We further plan to invest approximately KRW 10 trillion in the three growth engines to increase related sales to KRW 40 trillion by 2030.

Building a climate change response system for 2050 Net-Zero

LG Chem is continuously refining its three-pronged strategy to mitigate carbon emissions. We plan to reduce direct emissions through the introduction of innovative processes and the conversion to eco-friendly fuels and raw materials, avoid further emissions through the expansion of renewable energy use, and compensate for unavoidable emissions through carbon offsets. In 2022, we introduced an Internal Carbon Pricing (ICP) system, which allows us to reflect carbon costs projected at a higher level than the market price onto our investment plans such as the construction or the expansion of factories. Recognizing emissions as a business expense can help reduce the emissions profile of our business portfolio by promoting carbon reduction activities and investments. We are also the first Korean company in our industry to establish an integrated carbon management system. Our Net-Zero Management System (NZMS) helps with the prioritization of investments by comparing and reviewing the economic feasibility of different carbon reduction tasks. Equipped with simulation tools that factor in changes in the external environment such as the price of carbon credits, NZMS allows us to make more informed decisions towards our 2050 Net-Zero goal. To strengthen corporate governance and develop board-centered management practices that allow for a robust response to climate change, we report these matters to our independent board of directors on a regular basis.

Setting a new standard for supply chain decarbonization

LG Chem is the first Korean company to complete environmental Life Cycle Assessments (LCA) for all domestically-produced products. According to a study by the World Economic Forum (WEF), approximately 61% of carbon emissions from chemical companies fall in the category of scope 3. We recognize the crucial role played by our raw materials suppliers in scope 3 upstream to respond to global environmental regulations and secure a competitive advantage around product sustainability. As such, we have instituted a “Scope 3 LCA task force” that reports directly to the CEO to assist suppliers in measuring and managing their product carbon emissions and engaging in voluntary carbon reduction activities. We prioritize collecting LCA data of high-carbon raw materials such as naphtha and benzene, as well as battery materials like cathode materials and separators subject to environmental regulations such as the EU’s Battery Passport. We are committed to improving the accuracy and completeness of our LCA with the data acquired from suppliers. This will enhance our low-carbon competitiveness at the product level and contribute to our customers’ emissions reduction efforts. We will also strive to make our own LCA methodology, which reflects relevant global standards, an industry benchmark.

The chemical industry is widely viewed as one of the largest carbon emitters. As a major player in the industry, LG Chem is facing a number of financial and managerial risks and uncertainties that come with carbon emission regulations. Nevertheless, with a conviction that reducing emissions will eventually become the basis for our business competitiveness and new growth engines, we will continue to strengthen low-carbon businesses and make proactive investments. We are also committed to establishing ourselves as a pioneer in science and leading the global community’s efforts to reduce carbon emissions. We look forward to the continued interest and support of our stakeholders. Thank you.

COMPANY PROFILE

COMPANY PROFILE

History

75 years

A leading Korean chemical company with a 75-year history of continuous innovation

Employees

19,627

KRW

Revenue

51.9 trillion

15 countries around the world

KRW

R&D Investment

1.8 trillion

Global Network

32 production sites

Intellectual Property Rights

17,876 domestic patents and trademarks

59 global sites

production sites, sales offices and R&D centers around the world

43 regions

Global HQ in Korea and representative offices in Asia, Europe and Americas

32,100 foreign patents and trademarks

The quantitative data for revenue and R&D investment have been rounded to the nearest hundred billion (KRW 100 billion).

KEY BUSINESS AREAS

Business Sustainability

LG Chem aspires to be a sustainable science-oriented corporation that creates new values for customers and society. We proactively respond to changes and strive to enhance our competitiveness with the vision "We Connect Science to Life for a Better Future."

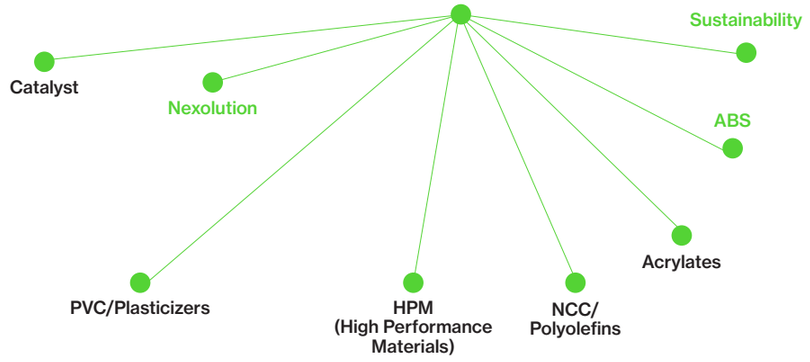
Over the past few years, we have carefully analyzed the trends and future of the industry, devising long-term strategies. We diversified our portfolio and expanded into advanced materials business including battery materials, as well as life sciences business. As a result, the proportion of our petrochemicals business decreased from 71.4% in 2010 to 40.7% in 2022, while the share of other business sectors expanded. In July 2021, we announced plans to invest a total of KRW 10 trillion in ESG-based businesses by 2025. We recognize that sustainability is essential to long-term business competitiveness, extending beyond sales and profits. Therefore, we are committed to embedding sustainability-focused strategies and investments throughout our business processes.

To this end, we have identified three next growth engines by evaluating the growth potential and sustainability alignment of our current businesses. They are eco-friendly sustainable materials, battery materials, and global innovative drugs. Through our efforts to drive these new growth engines, we achieved our highest-ever performance in 2022 since our foundation, with sales reaching KRW 51.9 trillion, representing a 22% increase compared to the previous year. We will continue to foster sustainability-focused investments as our new growth driver. Through investments until 2025, we aim to increase the revenue of our new growth engines to around KRW 40 trillion by 2030. By 2026, we will raise the revenue share to 40%, and by 2030, we will further increase it to 57%. We will strive to enhance our business competitiveness and achieve sustainable growth through business strategies and investments centered on new growth engines.

Business Areas as of June 2023

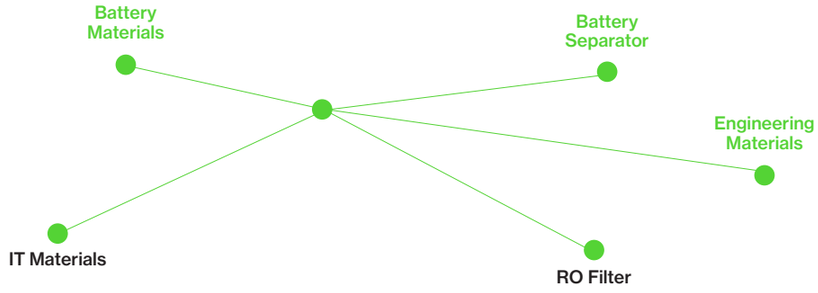
Petrochemicals

We contribute to industrial development with world-class petrochemical products.



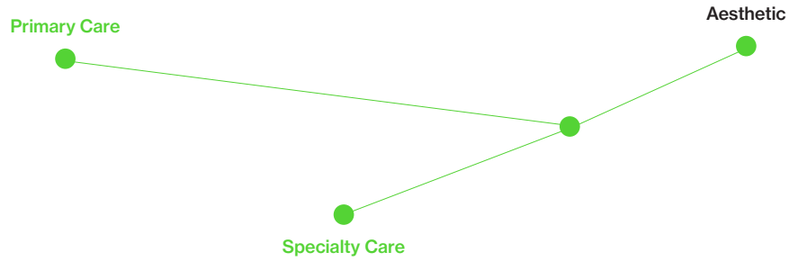
Advanced Materials

We advance toward the future lifestyle with high-tech specialty materials.



Life Sciences

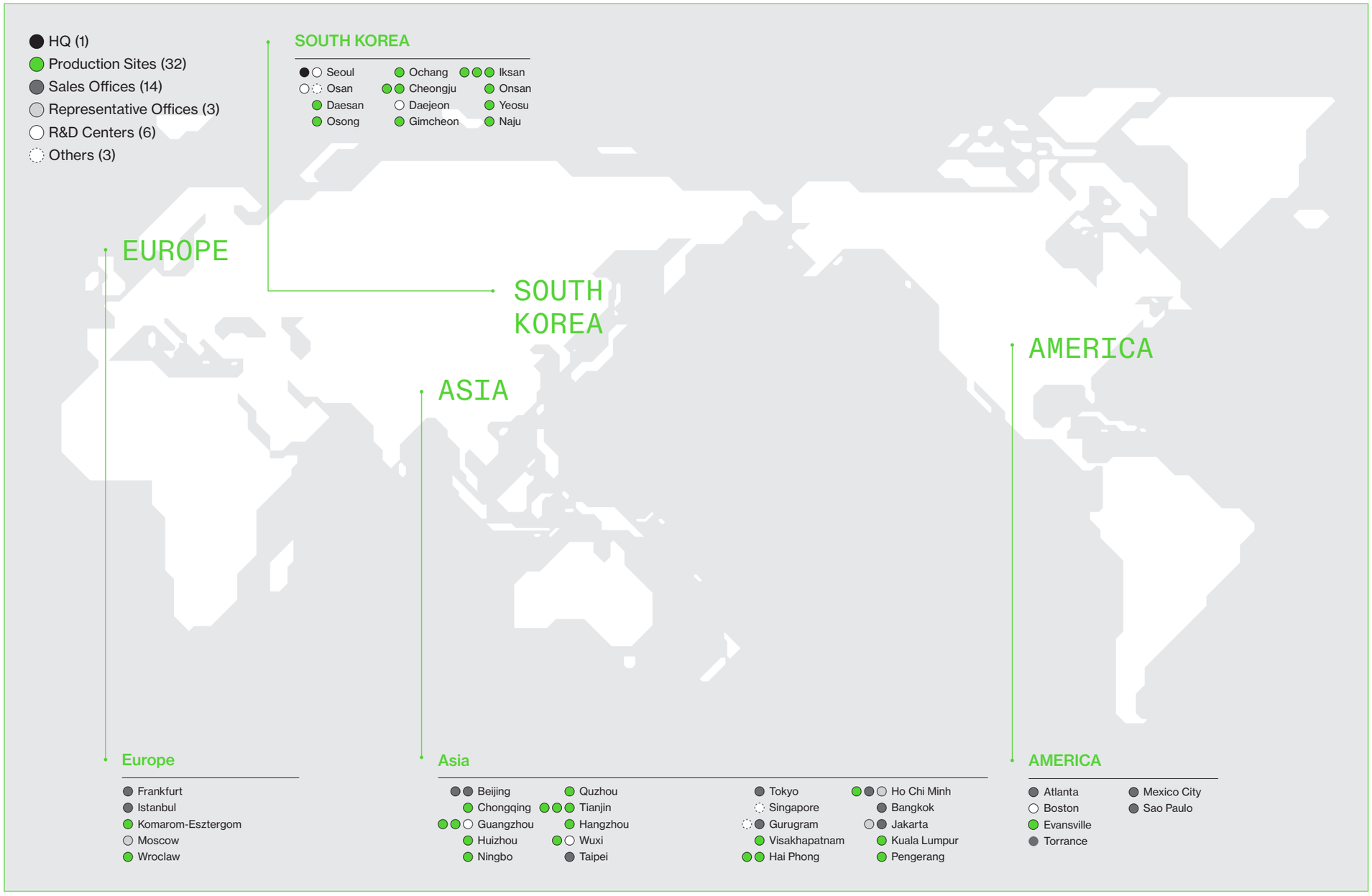
We improve the quality of life through unparalleled R&D.



GLOBAL PRESENCE

GLOBAL PRESENCE

As of the end of June 2023, LG Chem has a global business network comprised of 59 production sites, sales offices, and R&D centers in 43 regions around the world. Our global HQ is located in Seoul, Korea, and we have representative offices across Asia, Europe, and Americas.



SUSTAINABILITY STRATEGY

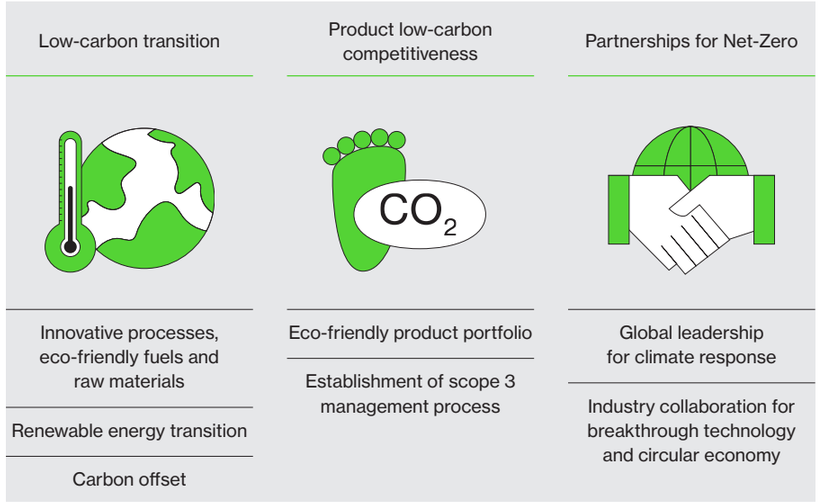
SUSTAINABILITY STRATEGY

LG Chem has selected five priority actions: climate action, renewable energy transition, circular economy, environmental protection, and responsible supply chain. We are committed to providing innovative and differentiated sustainable solutions for the environment and society.

LG Chem's 5 Sustainability Priorities

Towards 2050 Net-Zero

LG Chem is a global chemical company that operates in the petrochemicals business, as well as the advanced materials business including engineering materials and battery materials, and the life sciences business. As we anticipate our greenhouse gas (GHG) emissions to rise in line with the growth of our businesses and the expansion of our production, we have agonized over our survival and sustainable growth. We have identified new business opportunities in the evolving market dynamics of sustainability and ESG. We are actively embracing the transformation from the perspective of our customers and the market, rather than remaining passive to new trends and order. In 2020, we made a preemptive move by announcing our sustainability strategy and declaring the "2050 Carbon-neutral Growth" goal, making us the first in the domestic chemical industry to make such a commitment. We aim to provide innovative and differentiated sustainable solutions for our customers, society, and the environment.
Over the past two years, we have implemented various activities to reduce our carbon footprints at both internal and external levels, bringing us closer to our goals. During this process, we have also observed favorable changes in business circumstances that gave us confidence in our ability to accelerate our actions. To keep pace with sustainable growth as a Top Global Science Company, in 2022, we advanced our existing target of achieving Carbon-neutral Growth by 20 years and declared a new target of reaching "2050 Net-Zero". We are actively promoting the adoption of innovative processes, the use of eco-friendly materials and fuels, and the expansion of renewable energy use to achieve this new target.
Furthermore, we are establishing a management system for the voluntary areas (scope 3) that go beyond regulatory requirements (scope 1 and 2) to enhance the competitiveness of our low-carbon products. Recognizing that achieving global carbon neutrality requires collective efforts greater than those of individual companies, we are expanding the sustainability ecosystem through collaborative initiatives with various partners.



MEGATRENDS

MEGATRENDS

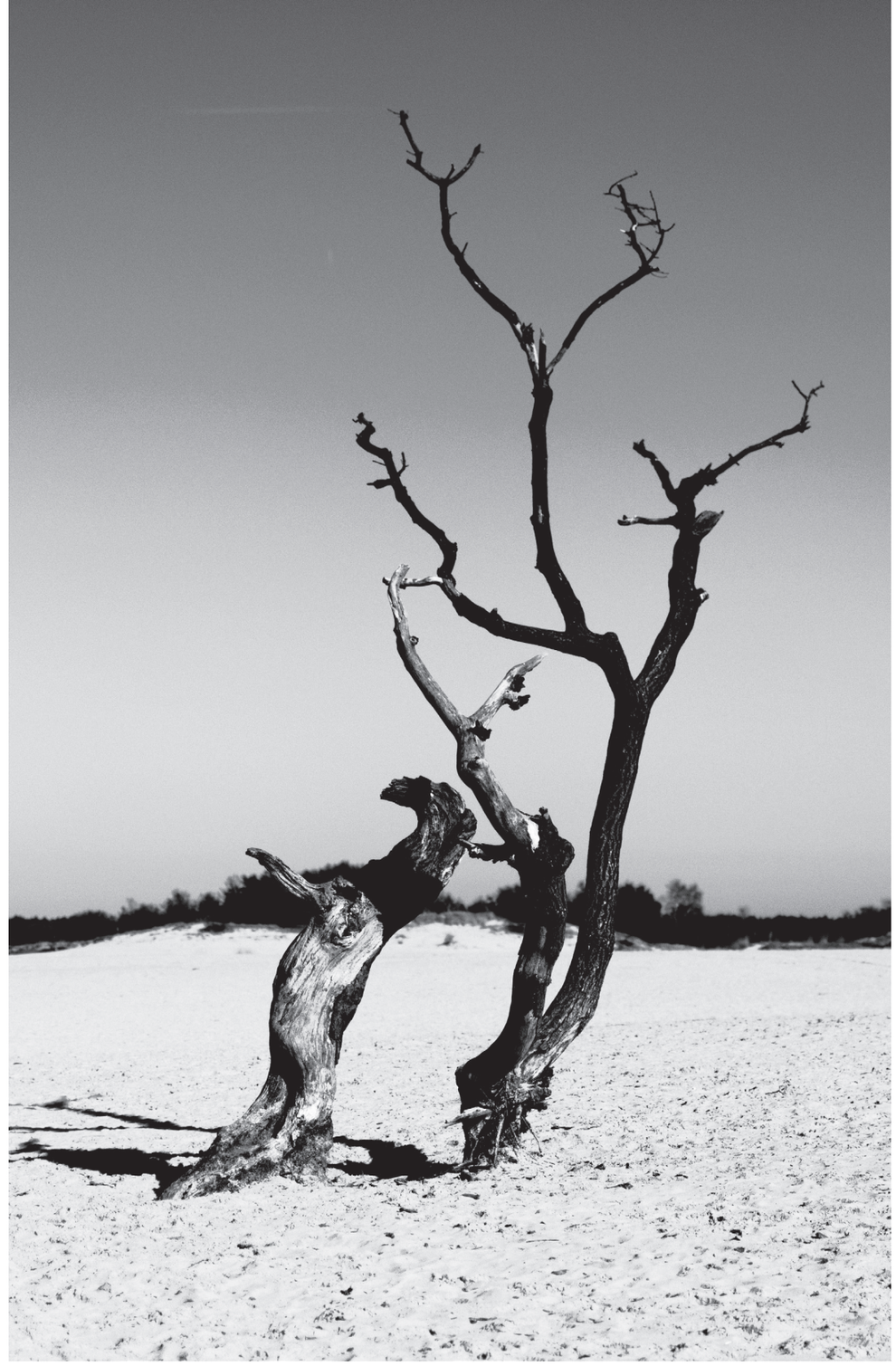
LG Chem is constantly assessing sustainability risks and opportunities across the entire value chain of the petrochemicals, advanced materials, and life sciences industries to stay ahead of the curve and ensure a sustainable future.

Megatrends Impacting Our Industry

Climate crisis and climate adaptation	Geopolitical and geoeconomic uncertainty
Climate change is causing more frequent and severe weather events, such as hurricanes, floods, and droughts. The number of these events is expected to continue to increase in the future, and the social and economic costs of these events will also increase.	The global economy is currently grappling with unparalleled economic challenges due to the profound impacts of the US-China trade war and the Russian-Ukrainian war. These interstate disputes are intensifying geopolitical tensions and fueling the escalation of deglobalization and trade protectionism. Consequently, the global economy is confronted with a range of issues such as rising inflation, supply chain disruptions, diminishing global trade, and reduced business investments.
Climate change is a major threat to biodiversity conservation. Rising global temperatures, changing precipitation patterns, and rising sea levels are destroying habitats, limiting migration, and threatening the survival of species.	

Risks and Opportunities Facing Our Industry and Value Chain

Risks	Opportunities
Increase in purchasing costs of carbon credits	Reduction in compliance costs through carbon emission reduction
Increase in procurement costs of renewable energy	Reduction in compliance costs through stable procurement of renewable energy
Increase in compliance costs to respond to domestic and global carbon regulations	Reduction in operating costs through proactive expansion of low-carbon facilities
Infrastructure damage due to natural disasters	Establishment of a stable supply chain through proactive sourcing of recyclable materials
Production disruptions due to supply chain and logistics delays caused by extreme weather events	Increase in customers and revenue through the expansion of sustainability-aligned product portfolios
Decline in brand value due to inadequate responses to climate change	Enhanced capital availability due to an increase in investors who prefer low-carbon businesses



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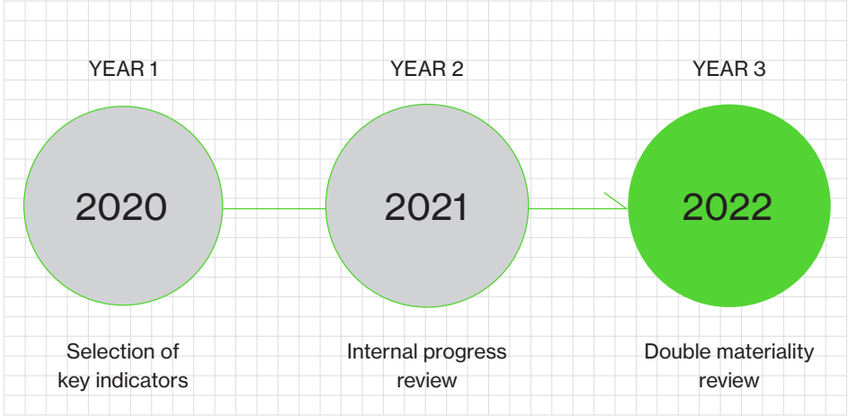
MATERIALITY AND STAKEHOLDER ENGAGEMENT

MATERIALITY AND STAKEHOLDER ENGAGEMENT

Materiality Assessment Overview

LG Chem established its sustainability vision and strategy in 2019 based on nine focus areas, and declared mid- to long-term goals including “Carbon-neutral Growth” in 2020. In 2021, seeking to invigorate communications with stakeholders and strengthen business competitiveness, we selected key indicators in the areas of environmental, social, governance, and growth, based on the concept of stakeholder capitalism proposed by the World Economic Forum (WEF). We are constantly assessing sustainability risks and opportunities and conducting a comprehensive review on the potential short-, mid- to long-term business impacts across the entire value chain of the petrochemicals, advanced materials, and life sciences industries. By doing so, we are staying abreast of global megatrends and stakeholder demands as they evolve year to year.

Materiality Assessment Process



Materiality Assessment Process

Through the analysis of indicators from global disclosure standards, ESG rating agencies and industry peers, global megatrends, and the interests of our key stakeholders – customers, employees, suppliers, communities, governments, shareholders and investors – against our sustainability strategies, we selected 20 key indicators across four categories: environmental, social, governance, and growth. We are actively introducing ESG key indicators into corporate management.

Year 1	**Selection of key indicators**
	1. Identification of 120 indicators based on the analysis of indicators from global reporting frameworks, ESG rating agencies and industry peers, and investor and customer interests
	2. Integration into 30 indicators based on analysis of major benchmarks and media issues
	3. Selection of 20 key indicators across four categories, environmental, social, governance, and growth based on the materiality assessment against our sustainability strategy
Year 2	**Internal progress review**
	1. Analysis of global megatrends and key stakeholder interests regarding the key indicators
	2. Identification of potential material issues and addition of detailed metrics
	3. Review on internal progress based on TCFD’s GSRM framework
Year 3	**Double materiality review**
	1. Analysis of global megatrends and key stakeholder interests regarding the key indicators
	2. Review on internal progress and identification of potential material issues
	3. Review of ESG key indicators using a double materiality approach Financial materiality: assessment of the potential impact of current ESG policies and regulations, ratings metrics, and investor demands on our response costs, capital-raising activities, and overall financial performance Impact materiality: assessment of the potential impact to the environment and the society by analyzing the concerns of our customers, employees and communities, and the reporting metrics of our industry peers

Analysis of Key Stakeholder Interests

LG Chem listens to the needs and concerns of key stakeholders through various communication channels, and develops solutions and initiatives to address them. We want to continue communicating with stakeholders to identify issues of interest and improve sustainability performance to create differentiated value for stakeholders.

Key stakeholders	Communication channels	Key interests
Customers	— Customer satisfaction surveys — Customer engagement activities	— ESG disclosure — Carbon reduction targets & policies — Renewable energy consumption — Occupational health & safety policies — Supply chain sustainability
Employees	— Labor-management council — Employee roundtables (town hall meetings, speak-up tables, etc.) — Employee satisfaction surveys — Grievance procedures (Jeong-do Management cyber hotline, harassment reporting system) — Work-related trainings	— Employee training and professional development — Workplace health and safety — Employment, benefits & welfare — Organizational culture — Labor relations
Suppliers	— National Commission for Corporate Partnership — Integrated procurement portal — Supplier roundtables — Supplier evaluation and analysis discussion meetings	— Fair trade culture — Funding & business support — ESG capacity-building — Information sharing — Enhanced communications
Communities	— Community meetings — Community outreach programs — Local residents committees — Local welfare organizations committees	— Community environment, health & safety management — Social partnerships — Local employment and economic development
Governments	— Policy roundtables — Industry associations	— Indirect economic impacts — Compliance and fair trade — Occupational health & safety — Responses to environmental policies & regulations
Shareholders & Investors	— Shareholder meetings — Quarterly earnings calls — NDRs & conferences — Conference calls — Financial & ESG performance disclosures	— Economic performance — Risk management — Board management and oversight — ESG disclosure

LG Chem ESG Key Indicators Impacts and Targets

● High Impact ○ Medium Impact ○ Low Impact

Environmental

ESG Key Indicator	Financial Materiality	Impact Materiality	Targets
Greenhouse gas emissions	●	●	We seek to reduce and manage our scope 1, 2, and 3 GHG emissions by setting reduction targets and proactively identifying the risks and opportunities arising from our emissions.
Energy consumption	●	●	We aim to reduce energy consumption and achieve 100% renewable energy use across our operations by improving energy efficiency and actively sourcing renewable energy.
Water withdrawal, consumption and discharge	○	○	As water scarcity intensifies around the world, the need for water management becomes increasingly important. We are closely managing water usage at our sites every step of the way, from withdrawal through the manufacturing stage, which includes raw material processing and cooling, to the discharge of properly treated wastewater. In particular, we aim to identify and minimize water withdrawal and consumption in water-stressed areas.
Water pollutants discharge	○	○	To return the water used during the manufacturing process back into the aquatic ecosystem, we track the sources and impacts of water pollutants and conduct regular inspections on wastewater discharge facilities.
Air pollutant emissions	○	○	We strictly comply with the emission standards for air pollutants emitted during the manufacturing process, and we aim to minimize emissions through regular inspections of emission facilities.
Waste disposal and recycling	○	○	We catalogue and manage the disposal of general waste and hazardous waste, and consider ways to minimize waste generation and maximize recycling by analyzing incineration and landfill wastes.
Product responsibility and chemical stewardship	○	●	We evaluate risks that may arise during the use, storage, and transportation of hazardous chemical substances, and continue our efforts to reduce the use of hazardous substances in our products. We also conduct Life Cycle Assessment (LCA) to analyze the environmental impact of our products and identify areas for improvement.
Material reuse and recycle	○	●	We are developing various plastic recycling technologies, both mechanical and chemical, and plan to expand the production of recycled plastics.

Social

ESG Key Indicator	Financial Materiality	Impact Materiality	Targets
Employee and process EH&S	●	●	As chemical manufacturing is exposed to heavy equipment, hazardous substances, and high temperatures and pressures, employee and process safety is of paramount importance. We have expanded the scope of our EH&S management to include not only our employees, but also in-house subcontractors, and have established an accident prevention system that goes above and beyond legal standards.
Employee diversity, equity, and inclusion	○	○	We identify the diversity of our employees by gender, age, and region in each job groups and career levels, and monitor the equity of remuneration. We also operate various training and mentoring programs designed to develop a culture that embraces gender, generational, cultural, and cognitive diversity.
Talent attraction, training, and employee engagement	○	○	We recruit talented individuals from diverse backgrounds, based on their abilities and competencies. We provide everyone with a variety of growth opportunities to help them enhance their global competencies and leadership capabilities.
Labor and human rights	○	○	In accordance with our global human rights labor policy, we conduct self-assessments and on-site inspections into the human rights risks in our workplaces. We plan to revise our human rights policy, improve business processes, and expand training to reduce potential and actual human rights risks and impacts.
Supply chain sustainability	○	○	We conduct periodic risk assessments and provide capacity building opportunities for our suppliers, to establish a sustainable supply chain that grows with our suppliers. We assess potential risk factors such as human rights, EH&S, and ethics through supplier self-assessments and on-site audits, and offer programs to suppliers to help them improve ESG competencies.
Community engagement	○	○	We strive to develop strong relationships with our communities by taking care of the environment and safety around our operations, providing employment and local development opportunities to our communities, and running partnership programs.

Governance

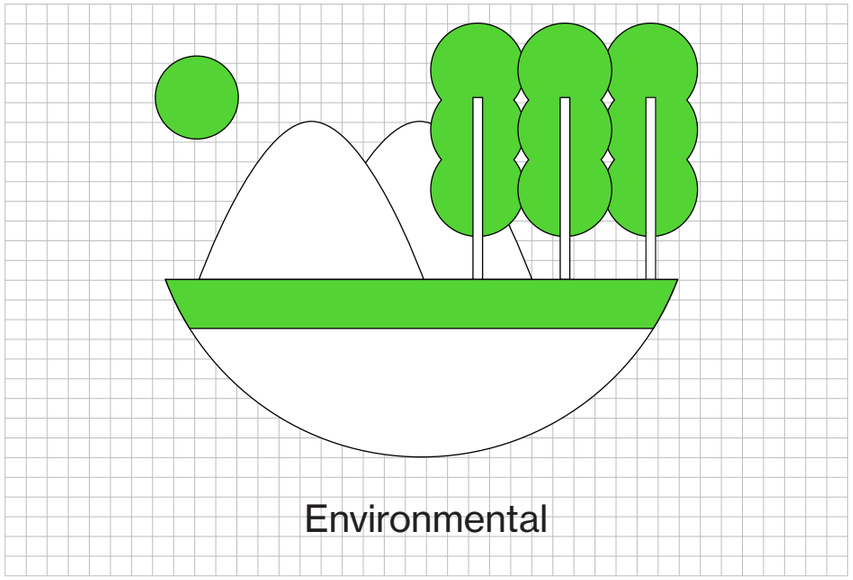
ESG Key Indicator	Financial Materiality	Impact Materiality	Targets
Corporate governance	○	○	To ensure efficient and proactive governance, we are establishing a global-level governance structure and strengthening the actual authority and role of the board of directors to internalize board-centered management practices.
Corporate behavior and ethics	○	○	We conduct regular inspections on corruption and bribery, and handle identified cases through internal disciplinary or legal procedures. We also provide training on ethics and fair trade practices to raise employee awareness and proactively manage risks.
Information security and cybersecurity	○	○	To ensure the safe collection, use, and management of all information related to corporate operations, we continue to assess information security risks based on our enterprise risk management system. We also provide trainings to raise employee awareness on information security and cybersecurity.
Public policy and regulation	○	○	We are proactively seeking out public-private partnerships by identifying policy issues and regulations that may affect our businesses. We pursue government proposals, and participate in policy-making through our local and overseas public affairs networks.

Growth

ESG Key Indicator	Financial Materiality	Impact Materiality	Targets
Sustainable solutions	○	●	With an aim to provide superior social and environmental value in terms of sustainability, we have established the Sustainable Solution as an internal standard to check the sustainability contributions of our products and technologies based on six values: climate change, circular economy, water resources, product toxicity, biodiversity, and social value. By collating this information with stakeholder demands, we identify priority areas, and increase investment to secure sustainability competitiveness at the product level.
Customer satisfaction	○	○	By integrating customer grievance management within our internal operations and enhancing customer contact, we aim to prioritize customer-centric thinking across all our processes and deliver exceptional values to our customers.

PERFORMANCE HIGHLIGHTS 2022

PERFORMANCE HIGHLIGHTS 2022



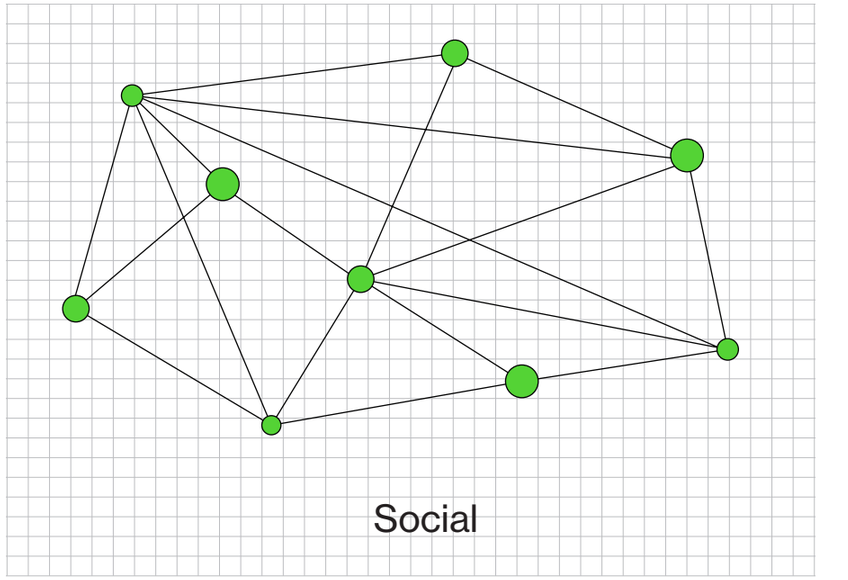
Environmental

2050 Net-Zero roadmap
- Developed a concrete roadmap to reduce, avoid and compensate GHG emissions
- Introduced GHG management systems, including internal carbon pricing and Net-Zero Management System
- Aligned our business portfolios with our sustainability goals

Transition to eco-friendly fuels
- Signed a contract to establish a biomass power plant that produces industrial steam and electricity from waste wood that can reduce GHG by about 99% compared to coal, at the Hwachi Plant in Yeosu

Renewable energy procurement
- Signed long-term procurement contracts for renewable energy in domestic facilities
- Achieved 11.6% renewable energy conversion rate globally, including 100% conversion at 7 overseas sites

Zero landfill at production sites
- Obtained “Zero Waste to Landfill” (ZWTL) certification from UL Solutions, a global safety and environmental certification organization, at three sites: Iksan and Naju in Korea, Quzhou in China



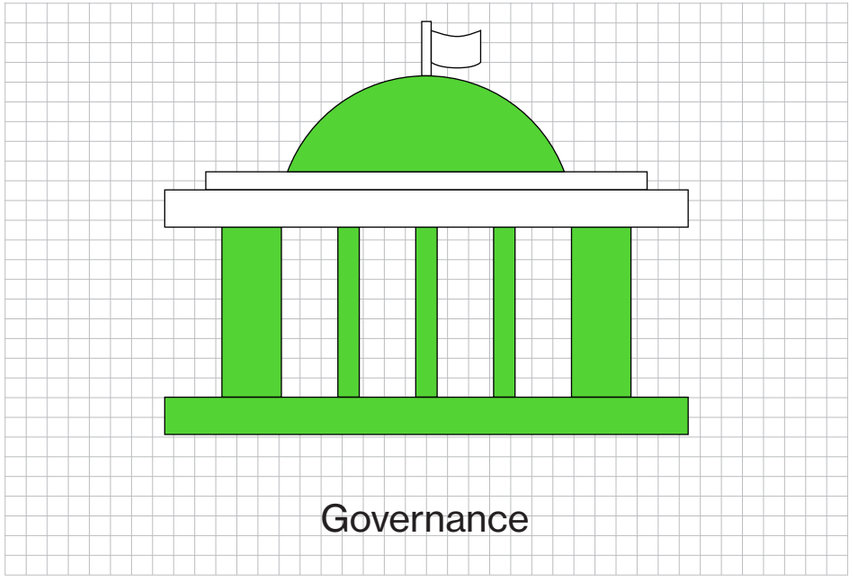
Social

Environmental safety measures at production sites
- Inaugurated the position of Chief Safety & Environment Officer (CSEO) as the control tower to oversee corporate environmental, health and safety (EH&S) initiatives
- Instilled EH&S-first culture by implementing “The Seven Safety Commandments”

Supply chain decarbonization
- Provided support to suppliers in measuring and managing their carbon footprints

Sustainable supply chain management
- Conducted ESG self-assessment for 762 suppliers, and on-site ESG audits for 17 high-risk suppliers
- Developed an integrated procurement portal for real-time supply chain risk analysis and efficient management of suppliers

Workplace diversity and inclusion
- Conducted 9 speak-up tables with over 70 participants
- Engaged 6,158 employees in transparent communication on corporate strategy and business performance through 3 CEO town hall meetings



Governance

ESG Committee under the Board of Directors (BOD)

— Reviewed sustainability agenda and progress towards achieving Net-Zero

Global climate partnership

— Hak-cheol Shin, the CEO elected as the first Korean entrepreneur to chair the “Chemical and Advanced Materials Industry Governors” at the WEF, to lead the discussion on major issues in the global chemical sector such as global supply chain disruptions and climate change responses

Enhanced BOD diversity and expertise

— Appointed 2 new female independent directors (29%) to improve board diversity

— Composed of experts from diverse backgrounds, including management, industrial technology, finance and accounting, and law

Enhanced compliance culture

— Launched a global IT system for a systematic and centralized operation of enterprise-wide compliance program

— Established a self-inspection approach to enhance employee engagement in compliance activities

Growth

Focus on sustainability business

— Accelerated transition to low-carbon portfolio with focus on recycled, biodegradable, bio-based, and renewable energy materials

— Signed contract to build a bioplastics plant with an estimated annual capacity of 75,000 ton in Decatur, Illinois, USA

Towards global top 30 oncological pharmaceuticals company

— Acquired Aveo, a leading US-based pharma company centered on cancer drugs

World-leading comprehensive battery material company

— Began construction of lithium-ion battery cathode material plant with an annual production capacity of approximately 60,000 tons in Gumi, Korea

— Signed equity investment agreement with battery recycling company

— Established a joint venture for recycling and precursors business

Trusted partner and supporter for the customer

— Established a customer complaint management system and laid the foundation for ensuring quality from customer’s perspective

— Discovered new business opportunities and built trust-based relationships with strategic partners

OUR COMMITMENTS

OUR COMMITMENTS

2050 NET-ZERO

We are committed to achieving Carbon-neutral Growth by 2030, and Net-Zero by 2050.

Our Commitment	Our Progress
Carbon emissions reduction	**Developed a roadmap for 2050 Net-Zero**
We will reduce our Scope 1 and 2 emissions to nearly zero by 2050 by introducing innovative processes, switching to eco-friendly fuels and raw materials, and expanding our use of renewable energy.	We developed a detailed plan to reduce, avoid and compensate GHG emissions, and introduced internal GHG management systems to track and manage our emissions. We are also realigning business portfolio with our sustainability goals.
100% renewable energy transition	**Secured long-term renewable energy supply**
We will achieve 100% renewable energy at our overseas sites by 2030, and 100% renewable energy at all of our global sites by 2050.	We secured a stable supply of renewable energy for our domestic plants by signing long-term contracts with domestic power producers. We are also actively sourcing renewable energy for our overseas plants, and achieved 100% conversion to renewable energy at 7 of our overseas plants. Overall, our global conversion rate for renewable energy in 2022 is 11.6%.
Life Cycle Assessments (LCA) for all our products	**Established a PCF management system**
We have completed LCA for all products produced in Korea by 2022 and provided the results to customers. We aim to complete LCA for all products produced overseas by 2023.	We established a standardized LCA methodology and PCF management system to ensure efficiency and accuracy of our LCA performance. The new system improves the challenges of traditional LCA approaches, improves data accuracy and reliability, reduces input of man hour, and helps keep data up to date.
Building a responsible supply chain	**Enhanced supply chain sustainability**
We will build a sustainable supply chain that allows for mutual growth with our suppliers.	We conduct annual supplier ESG self-assessment to reinforce supplier ESG competencies. In 2022, 762 suppliers conducted ESG self-assessment, and 17 suppliers identified as high-risks were inspected by 3rd party auditors. We also developed an integrated procurement portal to standardize the procurement process at all of our domestic and overseas sites, and enhanced our response to supplier ESG management.
Zero landfill waste	**4 sites certified with ZWTL**
We will strive to achieve zero landfill waste at our production sites by reducing waste generation and converting landfill and incineration waste to recycling.	Our domestic sites in Iksan, Naju, and Gimcheon, and global site in Quzhou, China were certified as ZWTL awarded by UL solutions, a global safety and environmental certification organization.

Contributions to the SDGs

LG Chem is committed to sustainability and has embedded it in its corporate strategy. The company aims to provide innovative and differentiated solutions for a sustainable environment and society, and combine them with a global approach and a complete value chain. In particular, LG Chem is focusing on the following five SDGs:

LG Chem's SDGs of focus

UN Global Compact

LG Chem joined the UN Global Compact (UNGC) in 2014 and actively upholds the Ten Principles of the UNGC concerning human rights, labor, environment, and anti-corruption for businesses. LG Chem is committed to integrating these principles into its strategy, culture, and business management, while also fostering collaborations with global stakeholders. LG Chem will create a better future for all by practicing sustainability.

The Ten Principles of the United Nations Global Compact

01 Businesses should support and respect the protection of internationally proclaimed human rights; and	02 make sure that they are not complicit in human rights abuses.
03 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	04 the elimination of all forms of forced and compulsory labour;
05 the effective abolition of child labour; and	06 the elimination of discrimination in respect of employment and occupation.
07 Businesses should support a precautionary approach to environmental challenges;	08 undertake initiatives to promote greater environmental responsibility; and
09 encourage the development and diffusion of environmentally friendly technologies.	10 Businesses should work against corruption in all its forms, including extortion and bribery.

CEO Statement of Support

To our stakeholders,

I am please to confirm that LG Chem, Ltd. reaffirms its support of the 10 Principles of the UN Global Compact in the areas of Human Rights, Labor, Environment, and Anti-Corruption. In this annual Communication on Progress, we disclose our continuous efforts to integrate the 10 Principles into our business strategy, culture, and daily operations, and contribute to UN goals, particularly the Sustainable Development Goals.

Sincerely yours,

Hak-cheol Shin, CEO of LG Chem

PARTNERSHIPS

PARTNERSHIPS

INITIATIVE FOR SUSTAINABILITY

In 2022, significant progress was made in terms of sustainability-related regulations as the European Union, United States, and China implemented various policies addressing climate change and sustainable development. LG Chem actively contributes to shaping sustainability rules by participating in global sustainability initiatives. We closely monitor policy trends related to carbon and recycling, and voice our concerns to ensure our perspectives are heard and considered. We believe that our efforts play a crucial role in enhancing the sustainability of our industry and creating a better world for future generations.

Furthermore, through partnerships within our value chain, we are establishing a closed-loop circular economy that promotes recycling, minimizes waste, and reduces environmental impact. Through these endeavors, we are advancing the sustainability of the plastic and battery industry ecosystems and generating new business opportunities.

First Korean Entrepreneur to Chair the "Chemical and Advanced Materials Industry Governors" at the WEF

"We will strengthen global cooperation in a new economic system that began with geoeconomic conflicts, and create opportunities for sustainable growth centered on eco-friendly materials, battery materials, and global innovative drugs"

Hak-cheol Shin, CEO of LG Chem, was elected as the first Korean entrepreneur to chair the "Chemical and Advanced Materials Industry Governors" under the WEF in January 2023. Shin pledged to work hard to ensure that the Korean chemical and advanced materials industry maintains its global position. He believes that the industry can promote sustainable development through collaboration and consultation among global chemical and advanced materials companies. This election serves as an opportunity to elevate the international recognition of the Korean chemical and advanced materials industry, while also leading technology development and enhancing competitiveness through collaboration with global companies.

Global Memberships

WORLD ECONOMIC FORUM
UN GLOBAL COMPACT
wbcsd
GLOBAL BATTERY ALLIANCE
ELLEN MACARTHUR FOUNDATION
Responsible Business Alliance Affiliate Member
SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Recognitions

MSCI	2022 MSCI Korea ESG Leaders Index
S&P Dow Jones Indices A Division of S&P Global	2022 S&P DJSI Asia-Pacific & Korea Index
CDP DISCLOSURE INSIGHT ACTION	2022 CDP Climate Change A-, Water Security B
KCGS Korea Corporate Governance Service	2022 KCGS ESG Integrated Rating B (Environmental Rating C, Social Rating A, Governance Rating B+)
SUSTAINALYTICS	2022 Sustainalytics Medium Risk


WORLD ECONOMIC FORUM

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PROGRESS ON ESG

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GOVERNANCE

RESPONSIBLE GOVERNANCE

COMPLIANCE AND ETHICS

RESPONSIBLE GOVERNANCE

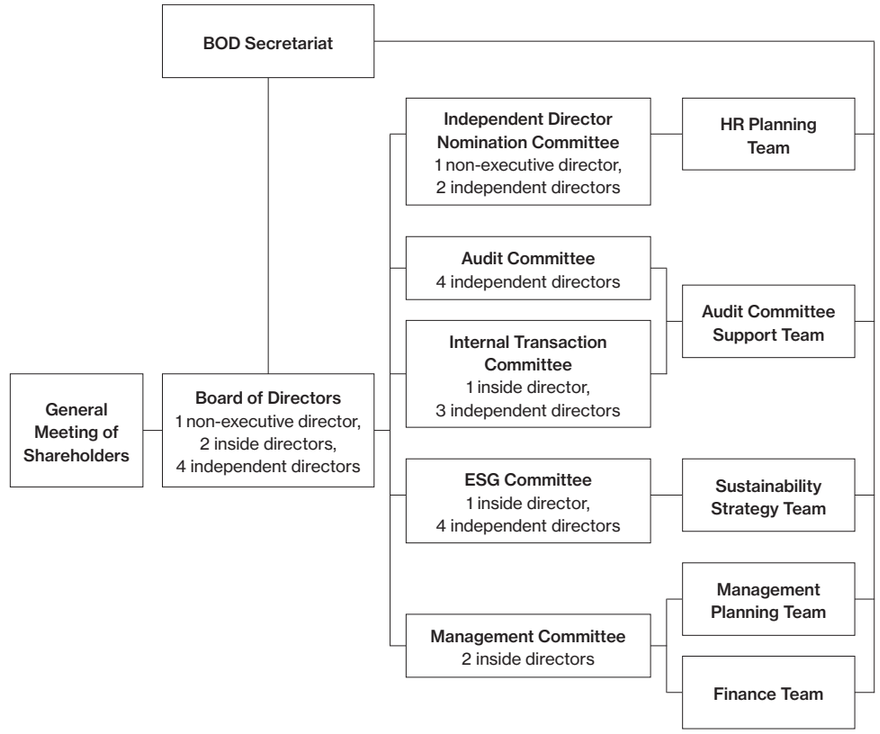
BOARD OF DIRECTORS

LG Chem endeavors to establish a global-level governance system and strengthen the authority and role of the board of directors (BOD), to practice board-centered responsible management and drive for sustainability. The BOD assumes the responsibility of managing and overseeing the climate crisis and the related opportunities, while also fulfilling its function of checks and balances through strict compliance with regulations. The board's activities and responsibilities encompass corporate policies and the overall performance of the company.

We uphold the fundamental values of expertise, independence, and transparency in the operations of the board, through committees operating under the board and the director appointment process. Furthermore, to establish a transparent governance structure, we disclose the Articles of Incorporation, Board Regulations, Audit Committee Regulations, and Management Committee Regulations, as well as all relevant rules and regulations, on our website. The composition and operation of the BOD and its committees are conducted in accordance with the principles and procedures outlined in the disclosed rules and regulations.

The BOD consists of a total of seven members, including two inside directors, one non-executive director, and four independent directors. Under the BOD, we operate Audit Committee, Independent Director Nomination Committee, Management Committee, Internal Transaction Committee, and ESG Committee.

Board Organization Chart



❶ The chart above shows the number of board members, committees under the BOD, and supporting departments as of June 30, 2023.
❷ The Independent Director Nomination Committee is a standing organization consisting of one non-executive director and two independent directors.
❸ The ESG Committee was established on April 28, 2021, with one inside director and four independent directors.
❹ The Internal Transaction Committee was established on July 1, 2021, with one inside director and three independent directors as its members.

Composition of the BOD

Board centered on independent directors

A majority of the board members are independent directors, bringing expertise and diverse perspectives to strengthen the board's oversight function over management. Notably, the Audit Committee, which is responsible for internal control related to business execution, is comprised entirely of independent directors.

Board composition

As of June 30, 2023, the board members are Bong-seok Kwon, Hak-cheol Shin, Dong-seok Cha, Mun-su Kim, Wha-sun Jho, Hyun-joo Lee, and Kyung-hoon Chun, and the details are as follows.

Type	Name	Gender (Age)	Position	Date appointed[1]	Expected expiry date of the term	Area of expertise	Career background
Non-executive director	Bong-seok Kwon	Male (59)	Independent Director Nomination Committee	March 23, 2022	Until the AGM in March 2025	Business administration in general	CEO, LG Electronics
CEO	Hak-cheol Shin	Male (65)	BOD (Chair), Management Committee (Chair), ESG Committee	March 15, 2019	Until the AGM in March 2025	Business administration in general	Vice Chair and Executive Vice President, 3M
Inside director	Dong-seok Cha	Male (60)	Management Committee, Internal Transaction Committee	March 20, 2020	Until the AGM in March 2024	Business administration in general	CFO, Serveone
Independent Director	Mun-su Kim	Male (68)	Audit Committee (Chair), Internal Transaction Committee, ESG Committee	March 23, 2018	Until the AGM in March 2024	Accounting/ taxation	Vice Commissioner, National Tax Service
Independent Director	Wha-sun Jho	Female (57)	Audit Committee, Internal Transaction Committee, Independent Director Nomination Committee, ESG Committee	March 23, 2022	Until the AGM in March 2025	Politics/ economy/ society	Professor, Department of Political Science and International Studies, Yonsei University
Independent Director	Hyun-joo Lee	Female (46)	Audit Committee, ESG Committee (Chair)	March 23, 2022	Until the AGM in March 2025	Chemistry	Professor, Department of Chemical and Biomolecular Engineering, KAIST
Independent Director	Kyung-hoon Chun[2]	Male (50)	Audit Committee, Internal Transaction Committee (Chair), Independent Director Nomination Committee, ESG Committee	March 28, 2023	Until the AGM in March 2026	Legal affairs	Professor, School of Law, Seoul National University

❶ The table above shows the initial appointment dates for the reappointed directors.
❷ Kyung-hoon Chun was newly appointed as an independent director at the General Meeting of Shareholders on March 28, 2023.

Separation of the role of CEO and board chair

The roles of CEO of LG Chem and chair of the BOD were separated at the end of 2020; however, as of June 30, 2023, the roles are combined. Our BOD is structured to facilitate efficient business discussions and decision-making, and the majority of our board members are independent directors, to allow them to operate independently from the management and controlling shareholders.

Changes in board composition

	2022	2023
Appointments	Bong-seok Kwon, Wha-sun Jho, Hyun-joo Lee	Kyung-hoon Chun
Resignations	Young-ho Ahn, Kook-heon Char	Dong-min Jung

*As of June 2023

Board Independence, Diversity and Expertise

LG Chem elects BOD in compliance with the Commercial Act and other relevant laws. The board is composed of inside directors with expertise in business management, and independent directors with specialized knowledge in diverse fields such as finance, law, accounting and taxation, and administration. Our BOD is comprised of a total seven members, with four independent directors, and two of the independent directors are female. The majority of independent directors bring expertise and diverse perspectives to strengthen the board's oversight function over management.

New independent directors are appointed through a rigorous screening by the Independent Director Nomination Committee before being finally approved at the shareholder's meeting. We select a group of candidates with abundant experience and knowledge, to bring diversity of perspectives to the board. As a result, our BOD is comprised of experts from various fields, including management professionals, industry and technical experts, finance and accounting specialists, and legal professionals. These professionals provide their expertise and insights and contribute to business decision-making processes.

Bong-seok Kwon served as the CEO of LG Electronics, following his positions as Head of Overseas Subsidiary, Head of Product Planning Group, Head of Business Unit, and Head of Business Division. As the CEO of LG Electronics, he played a critical role in optimizing the business portfolio and improving the business structure of LG Electronics. His expertise is based on years of experience in the field of business management.

Hak-cheol Shin is an industry leader who has served in various executive positions. He began his career at 3M Korea in 1984 and served as the Vice Chair at 3M headquarters in the United States until 2018. With his extensive experience and professional expertise, he is expected to play a pivotal role in the strategic growth and development of LG Chem. He is an expert with exceptional insight in the company's emerging business domains such as energy, water, and biotechnology.

Dong-seok Cha has been serving as the CFO of LG Chem, after holding the positions of CFO at Serveone in 2016 and CFO at S&I in 2018. With a profound understanding of LG Chem's business strategy and a wealth of experience in finance, he has made significant contributions to enhancing financial integrity and optimizing internal processes. As a seasoned professional, he plays a pivotal role in strategic performance and risk management within the company.

Mun-su Kim is an accounting and taxation expert with a long and distinguished career. He passed the civil service examination in 1983 and has held a number of senior positions in the Ministry of Finance and Economy, the Jungbu Regional Tax Office, and the National Tax Service. He is currently an adjunct professor in accounting and taxation at the Graduate School of Science in Taxation at the University of Seoul.

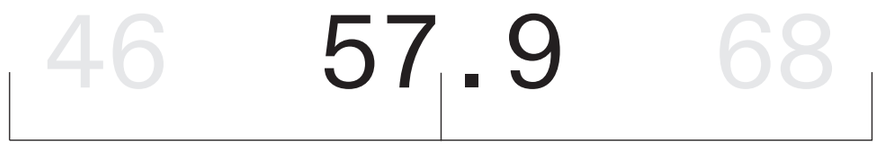
Wha-sun Jho is a professor at Yonsei University's Department of Political Science and International Studies. Her research focuses on the political and societal changes driven by political-economic factors and technological development. She has a wealth of experience and expertise in science and technology policy and research on future governance.

Hyun-joo Lee is a professor in the Department of Chemical and Biomolecular Engineering at KAIST. She is a young scholar with a strong track record of research and industry collaboration. Her expertise in petroleum chemical processes and sustainability business areas, as well as her extensive research in diverse fields such as biomass, carbon neutrality, and eco-friendly technology, give her a deep understanding of LG Chem's business domain.

Kyung-hoon Chun passed the 35th National Judicial Examination and completed the 26th class of Judicial Research and Training Institute. He worked as an attorney at a law firm specializing in corporate governance, fair trade, and M&A for a decade before joining Seoul National University School of Law as a professor in 2010. In particular, he is a legal expert who has a track record of active research and industry-academic collaborations. He has published over 50 research papers in the fields of corporate and securities law, and has received multiple scholarly awards for his work.

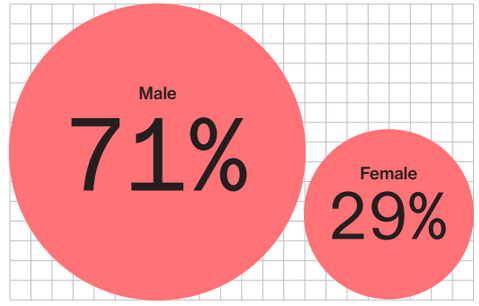
To reinforce board-centered responsible management, we offer training for newly appointed directors on the importance of the role and responsibility of the BOD.

Average Age



Board Diversity

Gender



Tenure (Years)

Board Expertise

	Bong-seok Kwon	Hak-cheol Shin	Dong-seok Cha	Mun-su Kim	Wha-sun Jho	Hyun-joo Lee	Kyung-hoon Chun
Business Management	O	O	O				
Law							O
Accounting and Taxation				O			
Political, Economic, and Social					O		
Chemistry						O	

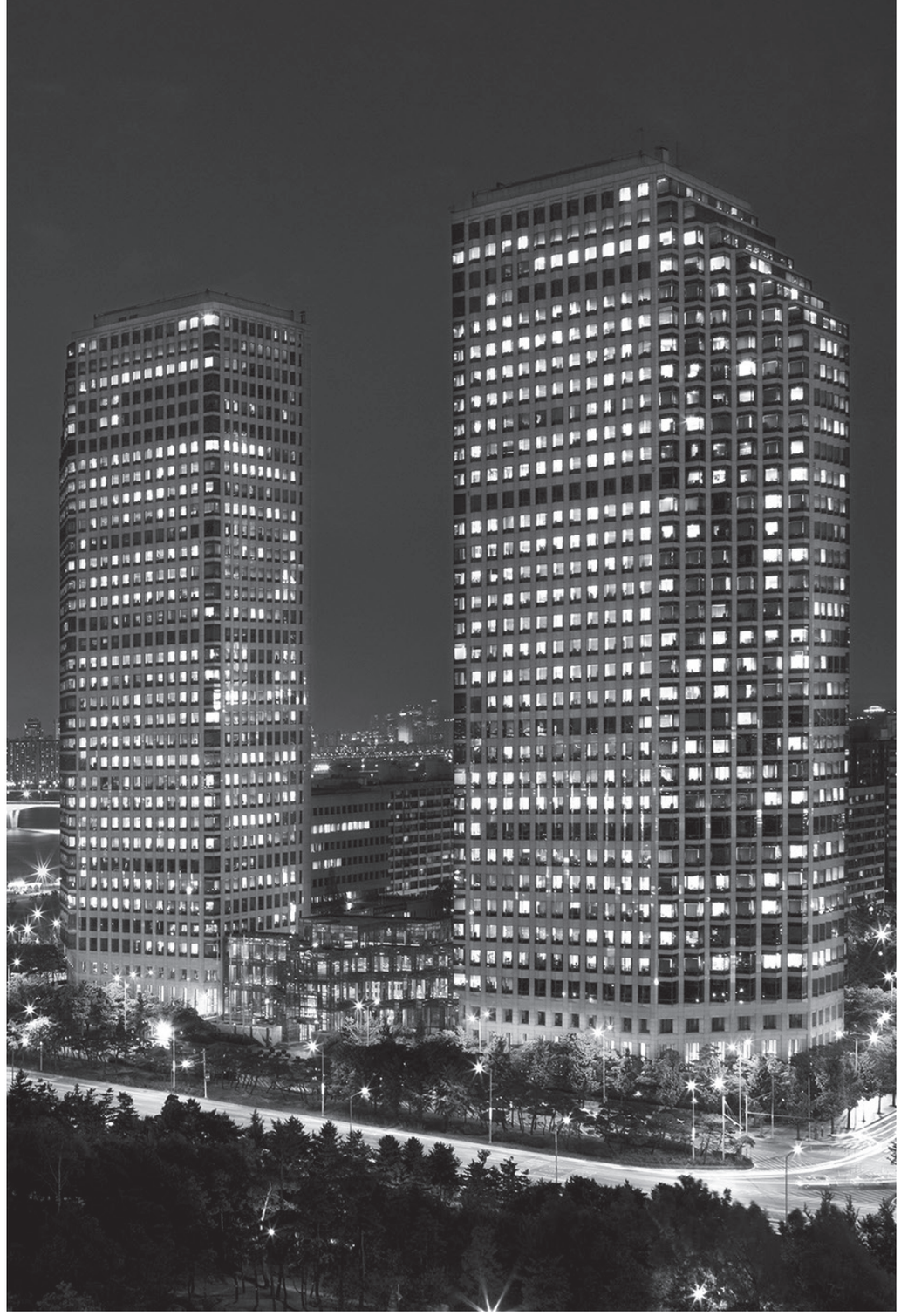
Appointment process of independent directors

1	**Resolution by the Independent Director Nomination Committee** Vote on the nomination of independent directors Propose to the Board of Directors
2	**Resolution by the BOD** Approve nomination Propose the plan to the shareholders' meeting
3	**Resolution by the Shareholders' Meeting** Appoint independent directors

Conflict of interest between independent directors and LG Chem

To ensure fairness and transparency for the appointment process of independent directors, LG Chem conducts comprehensive evaluations of potential candidates, assessing their qualifications and eligibility through interviews and reference checks conducted by relevant departments, including legal and human resources. These assessments encompass the requirements specified in relevant laws, such as the Commercial Code and the Public Official Ethics Act, as well as criteria related to expertise, impartiality, ethical responsibility, and loyalty. As per the criteria for executives, the current LG Chem independent directors fulfill all the requirements mandated by applicable laws and regulations.

To avoid conflicts of interest with LG Chem, the company employs a rigorous interview and verification procedure while appointing independent directors. Regular checks are also conducted to identify any significant conflicts of interest between the independent directors and the company. As of the end of 2022, there are no independent directors who have served for more than 6 years (9 years, including affiliates). This commitment ensures the independence and integrity of LG Chem's board and fosters a climate of accountability and transparency within the company.



Operation of the BOD

The BOD convenes quarterly as a general rule, with pre-meetings and Q&A sessions held 1 to 7 days before each board meeting to address the agenda items. Ad hoc meetings are conducted as needed when scheduling regular board meetings becomes difficult. In 2022, LG Chem held a total of 11 board meetings, there have been 4 meetings in 2023 as of June 30, 2023. During this period, 74 agenda items were processed (46 approved, 28 reported). The average attendance rate of directors during this period was 98.7% in 2022 and 96.4% as of June 30, 2023.

BOD meetings in 2022

	Meetings Held	Agenda Items
BOD	11	50 (Approved 31, Reported 19)

Committees under the BOD

The BOD is composed of five committees, each with specific roles and functions. The Audit Committee oversees legal and internal control, the Internal Transaction Committee strengthens control over internal transactions to promote fair transactions and ensure transparency, and the ESG Committee focuses on achieving sustainable growth. The Management Committee is responsible for decision-making on urgent management issues, and the Independent Director Nomination Committee is responsible for the recommendation and screening of independent directors. Each committee operates under its own regulations, enhancing the independence, expertise, and efficiency of the BOD.

Roles of the committees under the BOD

Independent Director Nomination Committee	Management Committee	ESG Committee	Internal Transaction Committee	Audit Committee
Recommends and screens candidates for independent director positions, following the guidelines of the Commercial Act and other relevant laws.	Enhances the efficiency of the board by taking over matters related to general management and financial affairs.	Reinforces environmental, social, and governance management to achieve long-term, sustainable growth.	Enhances fairness in transactions and promotes management transparency by strengthening internal transaction controls.	Oversees the executive management, reviews the accuracy of the financial statements and ensures the adequacy of the internal control system.

Committee meetings in 2022

Committee	Number of meetings	Agenda items
Independent Director Nomination Committee	3	4 (Approved 3, Reported 1)
Management Committee	1	1 (Approved 1, Reported 0)
ESG Committee	2	3 (Approved 1, Reported 2)
Internal Transaction Committee	3	12 (Approved 9, Reported 3)
Audit Committee	7	23 (Approved 8, Reported 15)

ESG Committee

LG Chem acknowledges that the perspectives of stakeholders go beyond mere economic value creation and encompass the pursuit of social value. In alignment with this recognition, we established the ESG Committee in April 2021 to internalize the concept of sustainability, which embraces both financial and non-financial values, as a fundamental principle for growth. The committee is dedicated to diversity, with at least two-thirds of its members representing diverse backgrounds or specific interests. In addition, to enhance sustainability competitiveness and promote diversity among our members, we appointed two female independent directors.

To ensure the sustainable growth of LG Chem, the ESG Committee deliberates on key management agendas related to the environmental, social, and governance based on changes in the external business environment and the interests of key stakeholders. As ESG moves from a voluntary to a regulatory domain globally, we recognize the growing importance of compliance in corporate sustainability. Hence, we decided to restructure the role of BOD in the compliance management system and actively promote the top management's commitment to ethical and lawful practices. Specifically, the ESG Committee will regularly deliberate on compliance issues at least twice a year and report significant findings to the BOD. We revised the operational regulations of the ESG Committee in April 2023 to reflect these decisions, and plan to address compliance-related issues at the ESG Committee in the second half of the year.

Attendance rate in the last 3 fiscal years

Type	Name	Attendance Rate (%)			
		Average of Last 3 Years	Last 3 Years[1]		
			2022	2021	2021
Independent Director	Young-ho Ahn	100	N/A	100	N/A
Independent Director	Kook-heon Char	100	N/A	100	N/A
Independent Director	Dong-min Jung	100	100	100	N/A
Independent Director	Mun-su Kim	100	100	100	N/A
Independent Director	Wha-sun Jho	100	100	N/A	N/A
Independent Director	Hyun-joo Lee	100	100	N/A	N/A
Inside Director	Hak-cheol Shin	100	100	100	N/A

[1] The ESG Committee was established on April 28, 2021, and consists of one inside director and four independent directors. As of June 30, 2023, the committee is composed of Hyun-joo Lee (Chair), Mun-su Kim, Wha-sun Jho, Kyung-hoon Chun, and Hak-cheol Shin.

Meeting minutes

No.	Meeting Date	Attendance/ Total	Agenda		Approval Status
			Category	Content	
1H 2022	2022. 4.25.	5/5	Items to be approved	**Approval of the appointment of ESG Committee Chair** Appointment of independent director Hyun-joo Lee as the new Chair of the ESG Committee	Approved
			Items to report	**Reporting on the progress of ESG management** — LG Chem's sustainability objectives and key milestones — Progress and plans on key sustainability tasks — Plans for Chief Sustainability Officer (CSO)[1] organization	Reported
2H 2022	2022. 11.18.	5/5	Items to report	**Reporting on the progress of ESG management** — Global trends in stakeholder interests and ESG ratings — Review on LG Chem's ESG ratings and improvement plans — Progress and plans on ESG management and strategy	Reported
1H 2023	2023. 4.26.	5/5	Items to report	**Reporting on the progress of ESG management** — Changes in the business environment and response strategies — Progress and plans on scope 1 and 2 management — Progress and plans on Net-Zero Management System — Progress and plans on developing low-carbon supply chain	Reported

[1] Chief Sustainability Officer (CSO) has been renamed the Chief Sustainability Strategy Officer (CSSO) since January 2023.

Audit Committee

The Audit Committee consists of three or more directors, of whom at least two-thirds are independent directors, and at least one is an accounting or finance expert as defined by relevant laws and regulations. The Audit Committee conducts audits of accounting and major business operations, evaluates the operational status of the internal accounting management system, and checks the operational status of the internal monitoring instrument. In addition, the Audit Committee supervises the performance of directors and management to ensure rational decision-making processes. To maintain objectivity from the executive body, the Audit Committee has established a separate Audit Committee Regulation, which can be found on the LG Chem website.

Internal risk management and control are primarily conducted to ensure objectivity and expertise at the Audit Committee level. The Audit Committee performs the following tasks:

First	The Audit Committee establishes, executes, and evaluates the internal audit plan. On a quarterly basis, the Audit Committee receives reports from external auditors on LG Chem's financial statements, the progress of external audits, and the identified financial risks and their status of resolution. The Audit Committee then provides its review and opinions to management.
Second	The Audit Committee complies with relevant laws such as the Act on External Audit of Stock Companies and the Capital Markets and Financial Investment Business Act. The Audit Committee also conducts thorough monitoring of management activities through evaluations and approvals of the internal accounting management system and internal monitoring devices.
Third	The Audit Committee supervises the operation status and effectiveness evaluation results of the compliance control system. This ensures the company's ethical and compliant management.
Fourth	In the event of significant non-financial incidents that may negatively impact the company's image and reputation, the Audit Committee convenes an ad hoc committee to receive detailed reports on the incidents and explore ways to minimize risks.

Through these processes, the Audit Committee conducts internal audits and supervises the duties of the directors and management to ensure a rational decision-making process and stable management of the company.

Evaluation and Compensation of Independent Directors

A comprehensive evaluation is conducted for independent directors whose terms are expiring. The BOD Secretariat and the HR department assess their performance in various aspects, including attendance rate, contributions to internal controls and financial risk monitoring, and whether their suggestions and advice for the board agenda were appropriate and effective. The Independent Director Nomination Committee recommends candidates to the BOD based on these evaluation results to inform reappointment decisions. Remuneration for independent directors is maintained at the industry average level.

MANAGEMENT

The management at LG Chem is in active pursuit of sustainability. Since 2021, we have integrated ESG-related indicators into our key metrics and the KPI of our management and incorporated sustainability performance into management evaluation and compensation to urge transition to a low-carbon economy and promote the expansion of eco-friendly businesses. Our Chief Sustainability Strategy Officer (CSSO) acts as the control for corporate sustainability initiatives, and actively engages in stakeholder communications and develops feasible solutions based on science and technology, to accelerate the drive for sustainability. Our management plans to strengthen employee participation and cooperation by sharing mid- to long-term sustainability goals with employees. In addition, we introduced Internal Carbon Pricing (ICP) system to accelerate our transition to a low-carbon business management system. ICP is mainly used for business planning and investment review. Regulatory costs of carbon emissions are reflected when establishing mid- to long-term business plans, and the cost of carbon credits projected at a higher level than the market price is applied when reviewing investment feasibility. These allow us to promote carbon reduction activities and investments, by proactively addressing potential mid- to long-term risks such as the uncertainty with allocations of domestic emission allowances, and the introduction and strengthening of global carbon-related regulations.

ESG Dedicated Organization

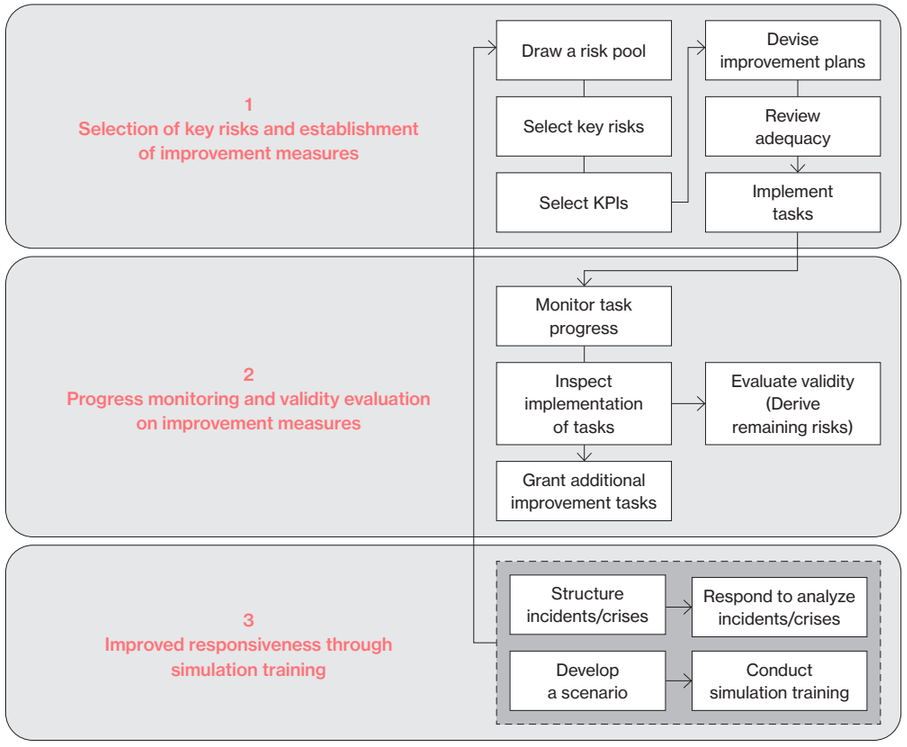
Recognizing sustainability as an important opportunity to ensure business growth, LG Chem has established a dedicated ESG organization under CSSO. The Sustainability Strategy Team analyzes changes in ESG-related policies and market trends, prepares roadmap to achieve the 2050 Net-Zero goal, and identifies and manages key sustainability tasks. The team also proposes sustainability agenda for the monthly executive meetings and bi-annual ESG Committee meetings to suggest to each relevant department sustainability opportunities that could lead to tangible business outcomes.

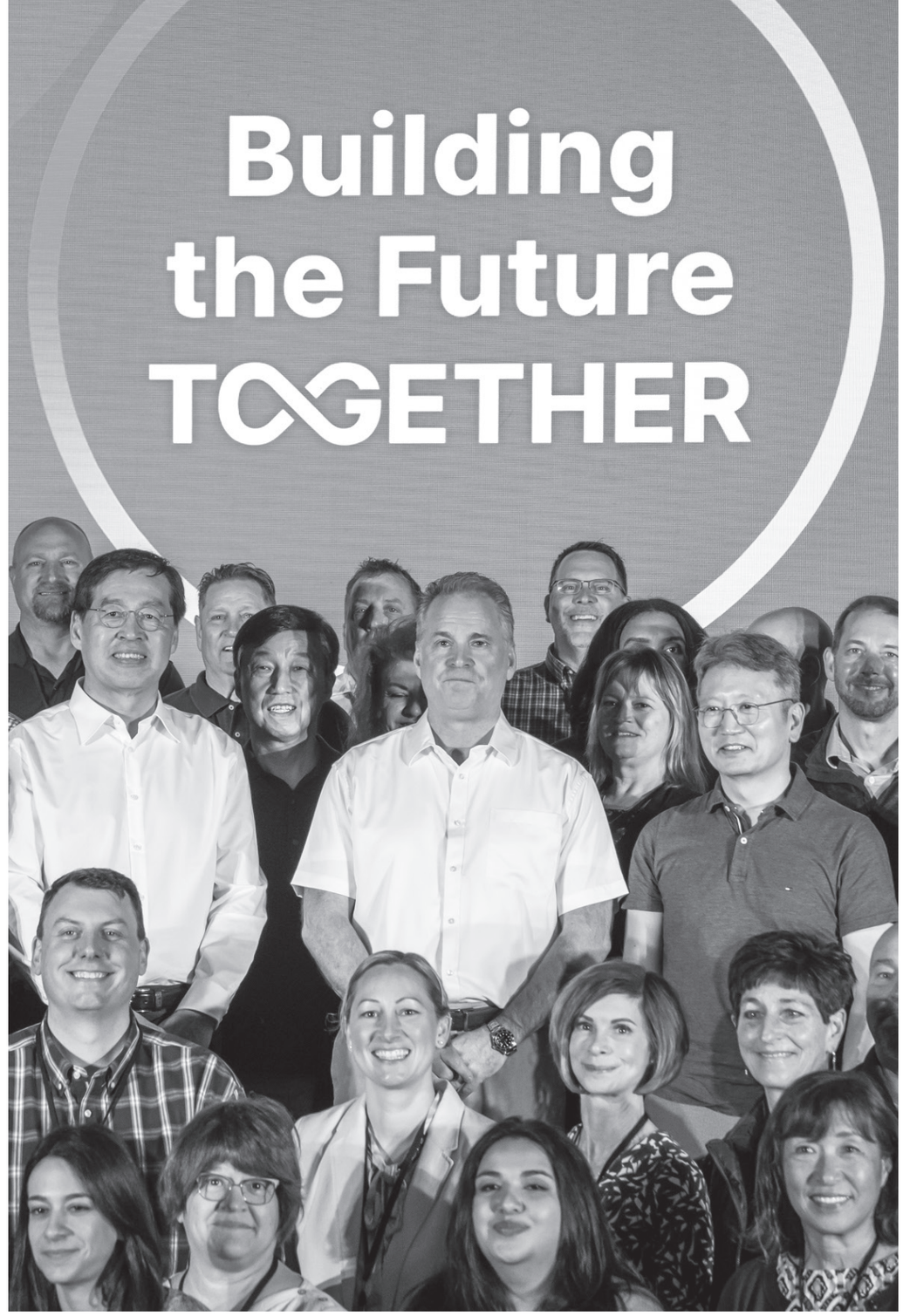
We aim to achieve sustainability via feasible solutions developed on science and technology. To reinforce the alignment of corporate R&D tasks with our sustainability vision and establish a system for preemptive investment in the research and development of carbon reduction technologies, we appointed the Chief Technology Officer (CTO) to also hold the position of CSSO.

Building a Sustainable Corporate Crisis Management System

In May 2021, LG Chem appointed a Chief Risk Officer (CRO) and formed a corporate crisis management organization to proactively identify potential risks and events that could impact corporate operations, and establish and implement thorough management and response measures. We divide crises into different categories in advance to carry out risk prevention and management activities, establish an efficient response system for swift communication and reporting in the event of a crisis, and verify our preparedness through mock drills. In addition, we established an integrated crisis management system through the activities of the CRO-led crisis management committee. The committee meets regularly to refine our crisis management policies and principles, responsibilities and authorities, and relevant processes. The committee also works to establish an effective risk identification system to ensure consistency in crisis management practices across the organization, while developing a comprehensive guidebook on the crisis response system to minimize damage in the event of a crisis. For risks and crisis pertaining to the environment and safety, the Chief Safety & Environment Officer (CSEO) is given final authority and responsibility to enable efficient and professional crisis response.

Risk Management Process





COMPLIANCE AND ETHICS

LG Chem is dedicated to practicing lawful and ethical management, safeguarding the rights and interests of stakeholders, including customers, shareholders, suppliers, and local communities, while pursuing the company's sustainable growth. We adhere to a management approach based on strong principles and enhance our compliance control systems and management processes, to foster transparent and trustworthy relationships with all of our stakeholders.

COMPLIANCE MANAGEMENT

Establishment of the Compliance System

Compliance system, compliance control framework, and compliance team

1. Compliance support system and compliance guideline

LG Chem introduced the Compliance System in April 2012, appointing a Compliance Officer who oversees all compliance-related tasks, and establishing the Compliance Control Standards. We strive to fulfill our social responsibility and minimize business risks by establishing and operating a Compliance Control Framework and embedding a culture of compliance. We are also making company-wide efforts to ensure effective compliance monitoring and an efficient internal control system. One notable initiative is the formulation of LG Chem's Compliance Guidelines, which provide essential compliance principles for all employees to strictly adhere to.

2. Compliance control framework and compliance team

LG Chem designates the Compliance Team as a dedicated team to support the independent, autonomous, and effective work of the Compliance Officer. The Compliance Team is responsible for operating the Compliance Control Framework. The Compliance Officer and Compliance Team work together to identify and assess compliance risks that may arise from our business activities and employees' work processes. They periodically review the status of risk management and report to the BOD independently. They also work on a series of compliance programs to improve identified risks. Through these efforts, they effectively manage the Compliance Control Framework.

Key Responsibilities

- Operation of the Compliance Control Standards
- Operation of compliance programs for the prevention and improvement of compliance risks
- Development and implementation of compliance training programs
- Inspection and evaluation of compliance activities, reporting to the BOD

Compliance Guideline

Compliance Program

As the importance of ESG management increases and global regulations become more diverse and sophisticated, there is a growing emphasis on promptly identifying and managing compliance risks and regulatory trends. To address this, LG Chem's Compliance Team has identified enterprise-wide compliance risks and selected 32 core risks. The team collaborates closely with dedicated compliance functional departments such as the Crisis Management Team, to specially manage these core risks. We established a compliance IT system in September 2022 to periodically and continuously monitor compliance risks.

Specifically, LG Chem's compliance program consists of three main areas: ❶ Risk identification, ❷ Risk inspection, and ❸ Risk assessment and management.

1 Risk Identification Process

The following series of steps are conducted regularly and continuously:

a. Risk identification is based on additional information obtained through the analysis of LG Chem's business areas and the related legal risk pool, domestic and international legal amendments, regulatory trends, contract reviews, and legal consultations.
b. 32 core risks requiring special management are selected, including fair trade, anti-corruption, corporate governance, safety and environment, quality, information security, trade regulations, human resources and labor, accounting and taxation, and intellectual property.
c. After identifying the core risks, the status of their management and control measures is reviewed. The effectiveness of these control measures is periodically assessed, and improvement plans (short-term and long-term) are formulated. The implementation of these improvement plans is regularly verified.

2 Risk Inspection Process

The risk inspection process consists of three inspection methods as follows:

a. Brief inspection: This method utilizes a simple question-and-answer format inspection tool that targets various departments within the organization, including conducting compliance awareness surveys.
b. In-depth inspection: This method involves using an inspection tool to thoroughly examine the management status of specific risks. It may include sampling or requesting questionnaires and supporting documents from selected departments.
c. Regular inspection: This method involves the continuous monitoring of the management status of core risks and updating the quarterly management status of these core risks.

3 Risk Assessment and Management Process

The risk assessment and management process consists of the following four processes:

a. Evaluation of the effectiveness of core risk management measures and improvement plan updates
b. Verification and assessment of the company-wide Compliance Control Framework
c. Identification of vulnerabilities through dashboards
d. Monitoring and dissemination of domestic and international legal amendments, key regulatory trends, and compliance issues.

Compliance IT System

LG Chem launched a global Compliance IT System in May 2023 to align with its position as a Top Global Science Company. We established a solid foundation for a systematic and centralized compliance program by incorporating the compliance framework into the Enterprise Risk Management (ERM) framework.

By establishing a self-inspection beyond the traditional audit approaches centered around diagnosis and discipline, we seek to enhance employee engagement in compliance activities and foster a culture of compliance throughout the organization.

Enhancing compliance capabilities

1. Anti-corruption risk management

LG Chem maintains a zero-tolerance approach to corruption and bribery. In order to uphold principles of integrity and trust, we have identified corruption risk as a fundamental concern and have assigned the Compliance Team to oversee and manage this risk as a pivotal compliance control activity.

In strict adherence to both domestic and international anti-corruption laws and policies, including the U.S. Foreign Corrupt Practices Act (FCPA), the Korean Act on the Prohibition of Improper Solicitation and Bribery (Anti-Corruption Act), the UK Bribery Act, and China's Anti-Unfair Competition Law, we developed and implemented ❶ an anti-corruption policy, regulations to prevent and deter corrupt practices, as well as practical guidelines and checklists for anti-corruption efforts. Moreover, all employees annually ❷ pledge their commitment to complying with anti-corruption laws and ❸ undergo mandatory anti-corruption training to ensure the effective management of corruption risks. In addition, we ❹ established an anti-corruption management system in 2021 to continually undertake measures for risk identification, assessment, and prevention. We also ❺ implemented pre- and post-control procedures, including an anti-corruption inspection IT system, to effectively manage corruption risks both within the organization and with our business partners. We ❻ actively encourage our business partners to participate in our ESG management and diligently manage corruption risks. When necessary, we provide business partners with an "Anti-Corruption Guide for Business Partners" available in Korean, English, and Chinese to further support their compliance efforts.

2. Preparing for ISO 37001 and ISO 37301 Certification Assessment

In order to verify that LG Chem has a global-level internal control system in place, the Compliance Team is gearing up for an integrated certification assessment of ISO 37001 (Anti-Bribery Management System) and ISO 37301 (Compliance Management System) starting in March 2023. The team will conduct a thorough examination of LG Chem's Anti-Bribery Management System and Compliance Management System to ensure they meet the international standards required for ISO certification. Any identified deficiencies will be promptly addressed and improved to secure ISO 37001 and ISO 37301 certifications by September 2023.

3. Improving compliance control system operations

LG Chem has been actively working on enhancing its compliance control system to ensure more effective implementation of ❶ compliance control standards and procedures required for listed companies under the Commercial Act and ❷ the reporting process for compliance officer's adherence to these standards to the BOD. Specifically, we devised comprehensive evaluation criteria for compliance control standards, taking inspiration from the Evaluation of Corporate Compliance Programs (ECCP) criteria utilized by the U.S. Department of Justice (DOJ). This has led to the development of a structured framework for quantitatively assessing the effectiveness of the compliance control system. Moreover, we have taken measures to diversify the departments responsible for conducting effectiveness assessments, involving the Compliance Team, Audit Committee Support Team, and external law firms. This approach ensures objectivity and impartiality throughout the evaluation process. The final verification of assessment results by compliance officer and their subsequent reporting to the BOD further fortify the integrity and efficacy of the evaluation and reporting procedures. In January 2023, one of the largest domestic law firms evaluated LG Chem's compliance control system as highly advanced and sophisticated. We will strive to continue our efforts to further enhance our compliance system.

4. Enhancing compliance management system

In light of the growing significance of ESG management and compliance at a global level, and recognizing the board's critical role in overseeing compliance, LG Chem has taken the initiative to strengthen the compliance review function of its BOD. The primary objective is to revitalize the compliance governance system, placing the BOD at its center, and actively fostering a corporate culture that upholds ethical and lawful business practices. As part of this initiative, the ESG Committee will conduct regular reviews of compliance matters at least twice a year and provide comprehensive reports to the BOD highlighting significant findings. To support this decision, we revised the ESG Committee's operating regulations in April 2023, and upcoming ESG Committee meeting in the second half of the year will focus on discussions related to compliance matters.

Strengthening compliance training and fostering a compliance culture

1. Strengthening compliance training

LG Chem is dedicated to enhancing employees' understanding and adeptness in handling potential work-related risks. To proactively engage employees in compliance management, we ❶ developed and disseminated the LG Chem Compliance Guidelines, as mentioned earlier.

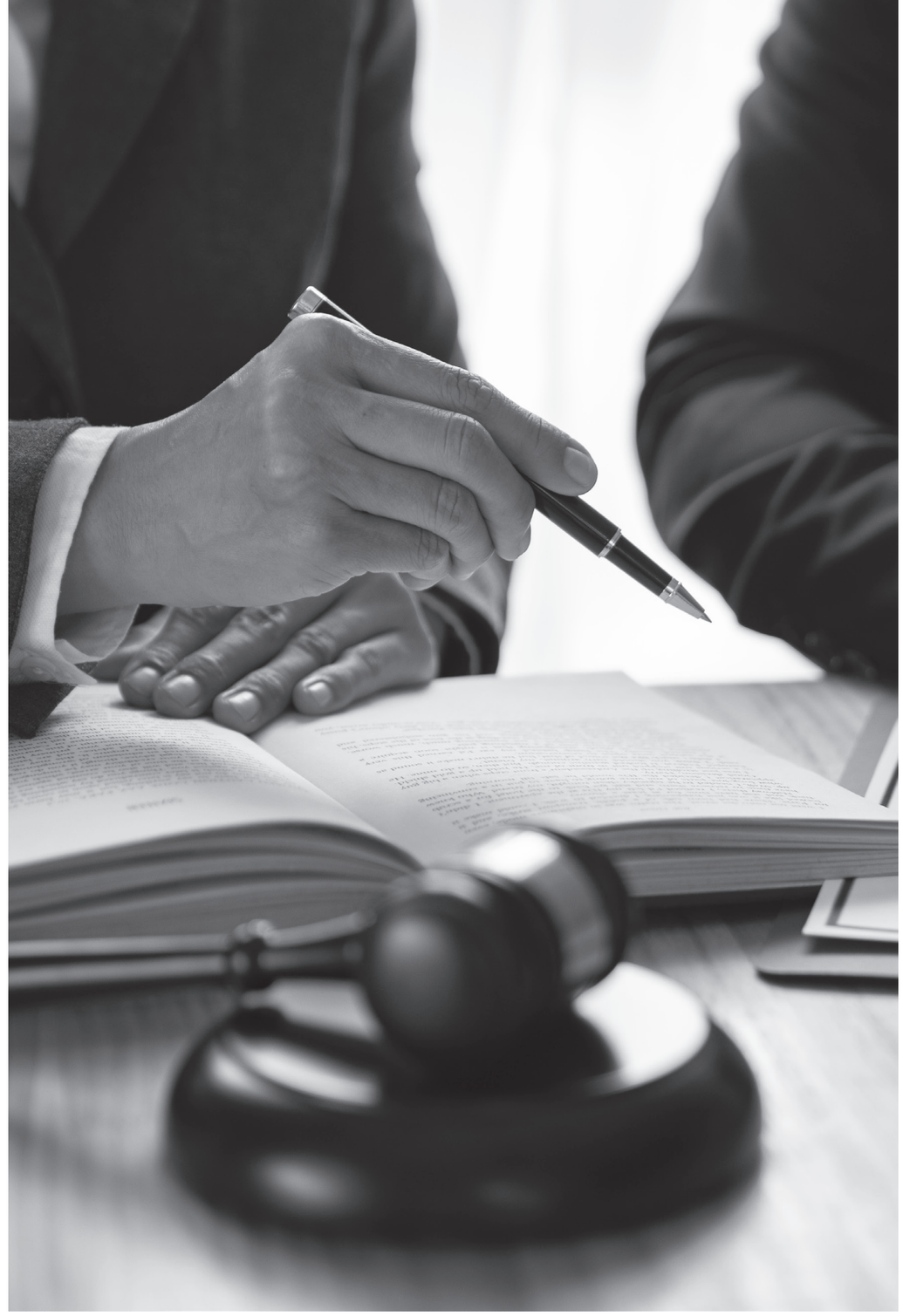
To foster compliance awareness among employees, we ❷ implemented a variety of compliance training programs. Firstly, we conduct online training sessions twice a year (once in the first half and once in the second half) for both domestic and overseas employees. These sessions cover critical compliance issues, including fair trade, anti-corruption, trade regulations, supply chain management, safety, environment, and information security. Moreover, tailored compliance training is provided based on job functions and positions. As part of these efforts, employees in the purchasing department receive annual training on compliance regulations related to procurement contracts, through the Purchase Academy.

For expatriates, we offer training on the significance of managing global compliance risks and the details of each risk factors. We increased the frequency of these training sessions and diversified the topics to further reinforce compliance training program. In addition, we provide focused training for newly hired employees on major compliance risks specific to their respective business divisions and responsibilities, to help instill our compliance culture.

Furthermore, we ❸ issue various compliance guidelines related to global regulatory trends and compliance management. We distribute these guidelines and incorporate their contents into training sessions to ensure that our employees are well-acquainted with and can effectively utilize the contents.

2. Fostering a compliance culture

LG Chem is committed to fostering a compliance culture, to proactively minimize operational risks and strengthen social responsibility. We ❶ prepare and disseminate checklists and training materials that reflect domestic and international regulations and trends, and ❷ operate a user-friendly legal portal that facilitates employees to align their tasks with our compliance culture. Moreover, we ❸ require prior consultation with the compliance officer and the relevant departments for tasks that are closely related to compliance risks.



ETHICS MANAGEMENT

Ethics Management System

Jeong-Do Management

1. LG Code of Ethics

The LG Code of Ethics, designed to prioritize ethical values as the primary criteria for all employees, serves as the foundational pillar of the Ethics Management. This code is distributed to our global employees to ensure that all members of the organization are well-versed in its principles.

2. Operation of Jeong-Do Management

LG Chem has implemented a systematic and centralized Ethics Management approach by establishing the Internal Audit Team and Ethics Office under the supervision of the CEO. The Internal Audit Team is responsible for conducting regular planning and assessments to ensure operational integrity, as well as investigating compliance-related activities and instances of unethical conduct. The Ethics Office focuses on organizing educational and promotional initiatives concerning Ethics Management to proactively address potential issues. Both teams collaborate effectively, providing regular updates and reports on their Ethics Management activities, strategies, and results to the CEO and the Audit Committee.

3. Portal for Jeong-do Management

LG Chem operates a portal for Jeong-Do Management that provides comprehensive information about the LG Code of Ethics, Code of Conduct, and Ethics Management Q&A. This portal enables employees to gain a clear understanding of the LG Code of Ethics, thereby preventing potential violations that could arise from misunderstandings. Moreover, the portal serves as a platform for resolving any uncertainties or questions related to Ethics Management, fostering a strong culture of compliance within the company.

4. Training and awareness raising on Jeong-Do Management

To prevent fraud, corruption, and inappropriate behavior, LG Chem provides tailored training to its employees based on their specific roles, such as purchasing, sales, production, R&D, as well as for new hires, managers, and executives. These instructional sessions are conducted at least once a year, and online training is also available to ensure regular and continuous Ethics Management education for all employees. Furthermore, we extend this training program to overseas employees and external partner companies. Alongside training, we actively promote Ethics Management activities and endeavor to establish a culture of compliance by sharing case studies of violations and raising organizational awareness.

5. Reporting procedures on bribery

LG Chem strictly adheres to a zero-tolerance policy regarding the acceptance of bribes or kickbacks from stakeholders, regardless of the circumstances. Specifically, the acceptance of condolence money, gifts, or any other personal favors is strictly prohibited. In situations where there may be unavoidable instances of receiving money, gifts, or condolence offerings, we implemented a gift-receiving reporting system. Employees are required to promptly report such occurrences and take appropriate actions, which include either returning the items or, if returning is not feasible, donating an equivalent value to social welfare organizations. We emphasize the importance of transparency and ethical conduct in handling such situations. In cases when direct donations are not feasible, we support social welfare organizations by donating the proceeds from internal auctions.

6. Pledge to practice Jeong-Do Management

LG Chem's employees commit to the "Pledge to Practice Jeong-Do Management" which specifies the LG Code of Ethics and Jeong-Do Management practices, annually through online platforms each year. This initiative also extends to external partner companies to showcase their dedication to ethical business conduct and alignment with our ethics principles.

Whistleblowing channel and whistleblower protection

LG Chem operates a robust whistleblowing system that enables employees and other stakeholders to report any violations of Ethics Management, fraud, or corruption. Reports can be submitted through multiple channels, including online platforms, postal mail, or fax. The primary goal of this reporting system is to address and rectify issues related to fraud, corruption, and inefficient processes. One of the key principles that we uphold is the protection of whistleblowers. We ensure that individuals who report misconduct are shielded from adverse consequences or discriminatory treatment in their work environment. The confidentiality of the whistleblower's identity and the content of the report is strictly maintained to safeguard their well-being. Upon verification of the reported information, we take appropriate disciplinary actions in accordance with internal regulations. The outcomes of the whistleblowing process are regularly communicated to the CEO and the Audit Committee to maintain transparency and accountability within the organization.

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LG Code of Ethics

Cyber Whistleblowing Channel

Whistleblower Protection Principle

ENVIRONMENT

GREENHOUSE GAS REDUCTION ROADMAP

TRANSITION TO CIRCULAR ECONOMY

GREENHOUSE GAS REDUCTION ROADMAP

Climate change is one of the biggest challenges of our time, one that requires the focused attention and collaborative efforts of various stakeholders. LG Chem is committed to achieving the 1.5°C goal of the Paris Agreement, as limiting global warming to 1.5°C above pre-industrial levels by 2100 will significantly reduce the risks posed to the society and business compared to a 2°C rise. While we identify actual and potential impacts of climate-related risks, we also relate to climate-related opportunities to create business value. As such, we are taking concrete steps to respond to climate crisis and create a sustainable future for our environment and society. These include stepping up carbon reduction roadmap and refining internal carbon management system, and aligning business portfolio with our sustainability goals. At the same time, addressing climate change requires the cooperation of key stakeholders including policymakers, the private sector, local communities, and civil society. Hence in 2022, we joined the Alliance of CEO Climate Leaders, a network of business leaders from diverse industry sectors and region. We are also taking part as the chair of Chemical and Advanced Materials Industry Governors since 2023. Engaging in these collaborative efforts led by the World Economic Forum (WEF), we are working to accelerate emissions reduction and expand partnerships across the global value chain.

To keep pace with sustainable growth as a Top Global Science Company, in February 2022, LG Chem advanced its carbon-neutral growth goal by 20 years and announced a new target of "2030 Carbon-neutral Growth" and "2050 Net-Zero" for scope 1 and 2 emissions. Moreover, LG Chem has committed to the Science-Based Targets initiative (SBTi) to set science-based emission reduction target based on the 1.5°C pathway and demonstrate leadership and commitment to pursue carbon neutrality.

Climate-related Risks and Opportunities

LG Chem proactively identifies and assesses the actual and potential impacts of climate-related risks across its entire value chain. Major transition risks include the tightening of emission standards and the rising costs of carbon credits. Regulations that had previously been stalled in the pledge stage have recently been enacted and expanded, and the cost of carbon credits is rising. We are working to address both of these risks as part of our mid- to long-term climate change mitigation goals. Failure to actively respond to legally binding carbon emission regulations may result in mid- to long-term financial impacts, such as the cost of purchasing carbon credits for the substantial amount of projected emissions.

We have set ambitious goals for "2030 Carbon-neutral Growth and 2050 Net-Zero" and has specified a series of emissions reduction roadmaps considering the scale, affordability, and feasibility of each process. We introduced Internal Carbon Pricing (ICP) to identify financial risks arising from future carbon emissions and accelerate our transition to low-carbon business management system. ICP is mainly used for mid- to long-term business planning and investment review. Regulatory costs of carbon emissions are reflected when establishing mid- to long-term business plans, and cost of carbon credits projected at a higher level than the market price is applied when reviewing investment feasibility. These allow us to promote carbon reduction activities and investments, by proactively responding to issues such as the uncertainty with allocations of domestic emission allowances, and the introduction and strengthening of global carbon regulations.

We have also reviewed the physical risks at hand, paying particular attention to the direct impact of the frequency and intensity of extreme weather events on raw material procurement and productions. Using our newly established integrated procurement portal, we not only manage financial impacts such as supply-and-demand risks, but also non-financial impacts arising from climate crisis and other geological risks. We will actively promote climate change response strategies to prevent supply chain disruptions, optimize raw material base and production, and create added value with innovative solutions.

Integrated Carbon Management System

LG Chem is taking steps to restructure into a low-carbon business model and ensure low-carbon competitiveness. Starting with the refining of our Business As Usual (BAU), we reevaluated our reduction roadmap and action plan in 2022. We are also the first Korean company in our industry to establish an integrated carbon management system. Our Net-Zero Management System (NZMS) helps us examine how investments to reduce carbon emissions shape our profits and losses.

NZMS help gauge a reliable BAU by linking basic data such as production volume and energy usage, to overall business plans such as mid- to long-term production plans and new investments. Equipped with a simulation instrument that takes into account the planning and the management of carbon reduction investments, as well as changes in the internal and external environments, NZMS is used as an important tool for business decision-making.

Greenhouse Gas Reduction Roadmap

LG Chem manages roadmaps for each type of carbon reduction activities via observing real-time progress of reduction investments and analyzing weak points through its integrated carbon management system.

Type	Activities
Direct	Reduce scope 1 emissions through improved process efficiency and transition to low-carbon fuels
Indirect	Avoid scope 2 emissions by expanding the use of renewable energy
Offset	Compensate through offsetting scope 1 emissions, leveraging reduction credits pursued outside the organizational boundary

Direct reductions

We promote direct reduction investments that consider the emission characteristics of each process. We will reduce upstream carbon emissions by introducing mid- to long-term innovative technologies such as CCUS (Carbon Capture Utilization and Storage) and electrolytic furnaces at our NCC (Naphtha Cracking Center) plants. We will reduce our downstream carbon emissions by managing energy demand, via switching to low-carbon fuel and high-efficiency equipment, and recovering and utilizing unused energy.

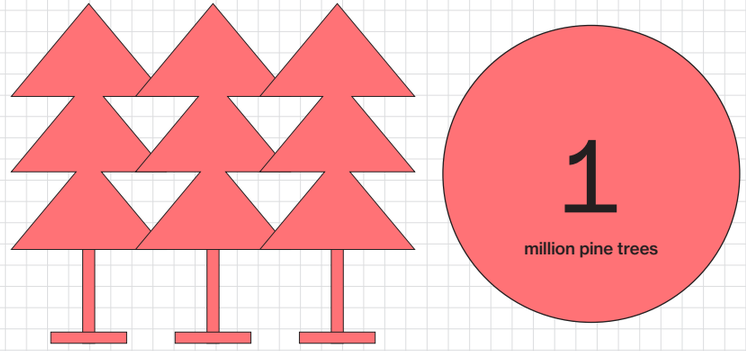
1. Transition to clean fuels

At the 26th Conference of the Parties (COP26) to the 2021 United Nations Framework Convention on Climate Change (UNFCCC) in Glasgow, UK, more than 40 countries agreed to phase out coal power generation. Correspondingly, global investment firms have recently incorporated coal phase-outs into their investment portfolios as part of their ESG management. As this global shift toward clean fuels becomes more prevalent, so do the risks associated with operating coal facilities, driving the need to transition to different types of fuel. Indeed, the market is also seeing an acceleration of the coal phase-out/decarbonization movement, with existing coal-burning facilities closing down or switching fuels. These changes are spreading across fossil fuel-based industry, leading to transition to low-carbon fuels to enhance eco-friendly/low-carbon product competitiveness.

In line with the needs of our stakeholders, we are reducing the use of fossil fuels in naphtha cracking furnace (a facility that produces petrochemical raw materials by cracking naphtha at high temperatures) which emit the largest portion of carbon, and converting coal boilers in Yeosu Hwachi Complex into biomass.

1	Biomass
	In December 2022, LG Chem signed a contract with GS EPS to establish a biomass power plant, TW Biomass Energy, capable of producing industrial steam and electricity from waste wood. We will invest a total of KRW 320 billion to establish the plant at LG Chem's Hwachi Plant in Yeosu. Expected to launch in the first half of 2026, the plant will be fueled by woodchips that have been converted from incinerated/landfilled waste wood collected from households and industrial sites. Biomass is a popular option as it is the only renewable source capable of producing thermal energy (steam) in large quantities, and can reduce GHG emissions by about 99% compared to when using coal. Once thermal energy and electricity produced by TW Biomass Energy supplant our petrochemicals complexes, annual carbon emissions are expected to drop by 400,000 tons.
2	Hydrogen
	To reduce carbon emissions from petrochemical processes, LG Chem is building the industry's first hydrogen production plant (expected to break ground in May 2023 and be completed in the second quarter of 2024). The new hydrogen production plant will utilize byproduct methane from the NCC process as the raw material, and hydrogen produced via NCC pyrolysis as the fuel to reduce carbon emissions. We are expanding the use of cleaner fuels in NCC process, exploring the use of hydrogen in the production of bio-based raw materials, and building a circular value chain by utilizing the carbon dioxide generated during hydrogen production as a resource. We are partnering with Korea's largest producer of carbonic acid gas, Taekyung Chemical, to supply them with carbon dioxide generated during hydrogen production to be utilized as a raw material for dry ice production.

Once the hydrogen production plant is fully operational, it is expected to reduce carbon emissions by about 140,000 tons per year, which would require the planting of 1 million pine trees to offset.



2. Transition to low-carbon raw materials

Reusing and recycling fossil fuel-based products and switching to bio-based raw materials are major carbon reduction methods, and also the key elements of our transformation to a sustainable business model. We are currently developing a low-carbon product line using recycled and bio-based raw materials.

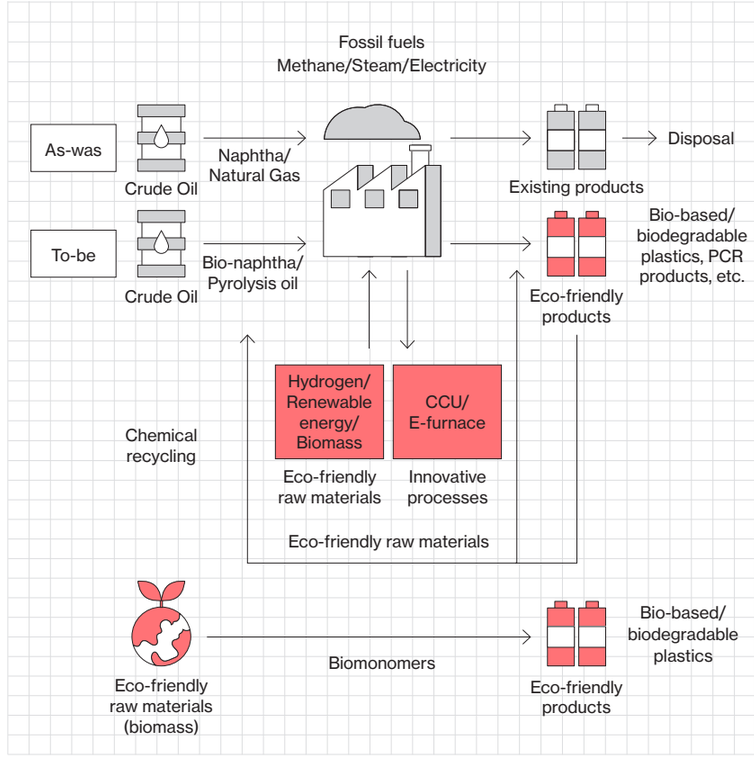
1	**Recycled Raw Materials**
	LG Chem is developing a wide range of plastic recycling technologies, such as mechanically recycling petrochemical products like ABS, PC, PE, and PP into PCR (Post-Consumer Recycled) materials; and chemical recycling which break down the molecular structure of plastics so that pure raw materials can be re-extracted. We plan to market these technologies in earnest, all while focusing on securing stable supply of recycled raw materials.
2	**Biomaterials**
	Bio-based raw materials are effective in reducing carbon as they can replace fossil fuel-based production. Biomaterials are recognized as carbon-neutral raw materials because they do not generate carbon during their life cycle before being processed into raw materials. LG Chem manufactures various products using bio-based raw materials derived from renewable sources, and is preparing for full-scale commercialization in cooperation with partners, to secure stable supply of bio raw materials. We aim to lead the fast-growing biodegradable plastics market grounded in bio-based raw materials, through continuous efforts in developing products and expanding our production capacity.

Building an eco-friendly bioplastics plant in Illinois with ADM

LG Chem has launched two joint ventures with US company Archer Daniels Midland (ADM) to fulfill the demand for plant-based products and bioplastics. GreenWise Lactic, a lactic acid producer, will leverage ADM's fermentation technology to produce 150,000 tons of corn-based, high-purity lactic acid annually. LG Chem Illinois Biochem, built on LG Chem's bioplastics technology, will produce 75,000 tons per year of bioplastics from GreenWise Lactic's lactic acid. The production facility will be built in Decatur, Illinois, USA, with a target completion date of 2026. As the first Korean company to build a PLA plant capable of integrated production from raw materials to products, the joint venture not only provides LG Chem with the high-purity lactic acid production capacity needed for commercial-scale PLA production, but also enables the company to utilize biomaterial for the development of a variety of high-value products.

Asia's first eco-friendly ABS based on plant-based materials

LG Chem has launched a highly functional plastic (bio-circular balanced ABS) product made from plant-based bio materials to target the eco-friendly market. ABS, a plastic with excellent heat and impact resistance, is LG Chem's No. 1 product in the global market and is used in products ranging from toys and home appliances, to automobiles and building materials, as it is easily processed into various shapes and produced in a variety of colors. The high performing eco-friendly plastics launched in December 2022, was ISCC PLUS (Global Environmentally Friendly Materials Certification)-certified for its use of renewable bio-based raw materials. LG Chem is the first Asian company to sell an eco-friendly product with ISCC PLUS certification in the field of ABS. The carbon reduction effects were verified by conducting a Life Cycle Assessment (LCA), which evaluates the environmental impact of a product from the production of raw materials to the shipment process. It was found that carbon emissions were significantly reduced compared to conventionally produced ABS. Bio-circular balanced ABS was recently supplied for the first time to Mattel, the largest toy manufacturer in North America, which focuses on developing eco-friendly products. LG Chem plans to actively expand and lead the market for eco-friendly, high-performance plastics.



3. Innovative technologies
We are developing promising technologies for mid- to long-term carbon reduction, which can be categorized into three types:

1	**Technology to convert generated carbon**
2	**Technology that does not generate carbon at the source**
3	**Technology using low-carbon raw materials**

We are conducting feasibility studies into various carbon utilization technologies for carbon conversion, electrification technologies to switch out fossil fuels used in chemical plants for electricity, and technologies to manufacture chemical materials using low-carbon fuels like biomass.

We are already performing on par with leading companies in the field of electrochemical conversion. In catalytic conversion, we have developed, using our own technology, excellent catalysts that perform equal to or better than those of leading companies. Additionally, we have formed a consortium to participate in public projects on electrification and bio-conversion, and completed an R&D plan.

Carbon reduction technologies are challenging and full of uncertainties. We aim to accelerate the technological development of our core competencies (e.g. electrochemical conversion materials, carbon dioxide conversion catalysts, and carbon emission assessment), while actively pursuing cooperation with third parties and national projects for competencies we do not yet possess. Through a joint research agreement with Korea Institute of Science and Technology (KIST), we have acquired two technologies related to electrochemical conversion and bioconversion, and are operating a joint laboratory to cooperate on technological advancement. For electrochemical and biological conversion, we plan to engage in mid- to long-term public policy projects to secure commercialization capabilities.

We will continue to seek out innovative technologies and concentrate on developing capabilities for carbon reduction.

Indirect reduction
We have analyzed different measures to reduce carbon emissions at business operations around the world, and come to the conclusion that replacing fossil fuel-based power with renewable energy is the most effective solution. In July 2020, we became the first company in the Korean chemical industry to declare a goal of achieving 100% renewable energy for overseas operations by 2030, and 100% renewable energy for global operations by 2050.

Despite the shortage of renewable energy souring options in Korea, we are working to secure a stable supply of sources through long-term contracts. In the first half of 2022, we signed a Memorandum of Understanding (MOU) with Korea Electric Power Corporation (KEPCO) to jointly respond to the goal of 100% renewable energy conversion, and secured 180 GWh of renewable energy through long-term contracts. In February and July, we participated in KEPCO's green premium and won a contract for 107 GWh per year. In December, we signed a long-term contract with a domestic power plant to secure 450 GWh of renewable energy (to be supplied from 2023 on). We also signed an agreement with a renewable energy supplier and secured 260 GWh of renewable energy to be supplied for 20 years, starting from 2023.

As renewable energy supply tends to be much more abundant abroad, we are initiating the transition to renewable energy at our overseas plants first. We are also constantly monitoring policy and market conditions to promptly respond to changes in renewable energy policies.

To achieve 100% transition to renewable energy, we are establishing an internal management system for renewable energy procurement. In the short-term, we are building a roadmap to expanding the procurement base of renewable energy, promoting pilot projects, and standardizing internal processes. In the mid- to long-term, we will establish renewable energy procurement standards that take into account customer needs and global standards, and work with power generation companies to secure stable supply of renewable energy. We also plan to establish a management platform for 100% renewable energy conversion and continuously expand our roster of business partners. Through active procurement of renewable energy, we will fulfill our responsibilities in responding to climate crisis and contribute to building a sustainable business model.

Progress towards renewable energy consumption

Unit: MWh

	2020	2021	2022
Total	1,760	306,316	761,967

Offset
We compensate through offsetting the unavoidable GHGs that are emitted in spite of our efforts in reducing direct and indirect emissions, by investing in projects that remove carbon dioxide from the atmosphere. In 2022, we offset 270,000 tons of emissions through cookstove distribution projects in Zambia and Uganda. Cookstove distribution projects in developing countries can reduce emissions of GHGs and air pollutants, and thus lower the risk of respiratory disease and fire-related accidents and improve indoor air quality. It also helps lower household fuel costs, and enhances women's quality of life. By securing high-quality offset credits and investing in projects that meet strict social/environmental impact criteria, we are responding to climate crisis, and contributing to making changes to the greater society.

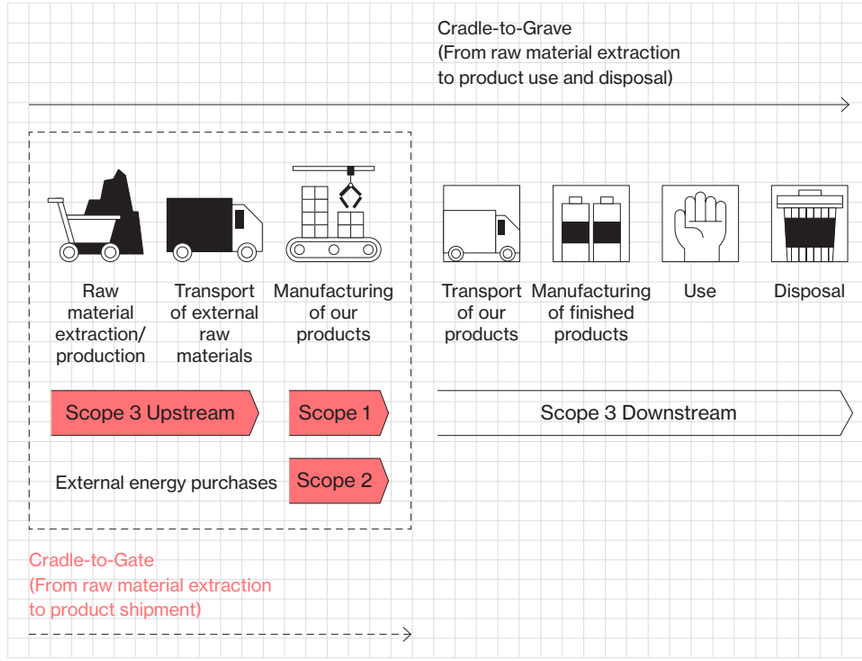
Life Cycle Assessment

LG Chem strives to enhance competitiveness in product sustainability through the evaluation of the potential environmental impact of its products. LCA is a methodology to quantify the potential environmental impacts of products or systems throughout their entire life cycle, from raw material extraction to final disposal. Recently, policies and regulations relating to LCA, such as EU carbon border taxes, supply chain due diligence laws, and obligations for climate disclosures including scope 3, have been actively discussed. We actively respond to product-related environmental regulations and make efforts to secure low-carbon competitiveness.

To establish LG Chem's methodology for LCA, we comprehensively analyzed and reviewed the international standards for LCA (ISO 14040, 14044, 14067) and guidelines published by institutions and initiatives in the chemical industry. In addition, we obtained a certificate for our Product Carbon Footprint (PCF) methodology granted by TÜV Rheinland, based on the standard ISO 14067: 2018. To successfully perform LCA and to ensure the reliability of results, we have established a collaborative framework for LCA and PCF management including company-wide participation. LCA is conducted in collaboration with LCA experts under the Chief Sustainability Strategy Officer (CSSO) and process experts under the Chief Technical Officer (CTO), as well as related experts across the company, including production/operation, purchasing, sales, EH&S, and business innovation teams. This improves our members' understanding of the environmental impact of the entire process while improving the quality of LCA performance, including precision, completeness, and consistency.

We have completed LCA for all domestic products in 2022 and have been communicating the results to our customers, and we aim to perform LCA for all overseas products by 2023. It will also contribute to reducing the environmental impact of customers by actively responding to requests for the disclosure of environmental information on all our products and will be used as a baseline to assess the effects of various PCF reduction activities. We will continue to make efforts to improve the reliability of our LCA and promote activities to build a decarbonized supply chain beyond our carbon reduction initiatives.

LG Chem's system boundaries



Building and operating a PCF management system (CAMP)

The PCF calculation is based on various data sources related to product manufacturing so the quality of the data collected is directly related to the quality of the PCF result. In particular, in recent years, there has been a growing need to use PCF for decision-making, such as purchasing and devising product low-carbon strategies. The requests from our customers are changing from simple PCF results to contribution analysis and carbon reduction scenario analysis.

Accordingly, ensuring the reliability and speed of the data collection for LCA is critical. Data collection undergoes an iterative process to ensure the reliability of the data and it requires the most time and effort. We recognized the need for a system-based PCF management to improve the global competitiveness of our products in the market, establish a response strategy, and secure sustainable competitiveness of our low-carbon products.

Based on our experience with LCA, we have built a Carbon footprint Analysis and Management Platform (CAMP) which automatically generates PCF results by connecting various data management systems, such as ERP systems. By establishing CAMP, we have overcome the limitations of data collection, repetition, and monitoring in the process of collecting, analyzing, and reviewing data, which were the main problems of the existing LCA process. At the same time, they have differentiated competitive advantages

such as improving data accuracy and reliability, reducing human resources, integrating up-to-date data, and providing data insights.

As of now, PCF of a limited number of products can be calculated through CAMP, but we plan to constantly expand the scope, covering all products produced in our domestic and overseas plants.

	As-Was (Manual LCA)	Y As-Is (CAMP)
1 Data accuracy	**Manual collection of data has a potential risk in collecting data with poor quality** — High dependence on the experience and engagement of supervisor — Lack of criteria and history management for data calculation — Potential use of different criteria for different organizations	**Necessary data (e.g. ERP) to calculate PCF is automatically connected by system** — Increased data accuracy/reliability — Standardized data calculation/allocation method — Reduced workload for personnel
2 Resources and time	**Repetitive tasks and long lead times** — 6 weeks or more to calculate the carbon footprint — Repetitive work required for LCA team and related teams to update residual footprint every year * It is difficult to reduce the time, as the process of data collection request/ verification must be executed repeatedly.	**Systematic calculation** — Automatic calculation of results when setting initial baseline information — Maintenance required for changes, such as added processes and new grades

Creating and executing a strategy to build a decarbonized supply chain

As a manufacturer of diverse intermediate products, our products are directly related to the environmental impact of our customer's products. Therefore, we aim to create a decarbonized supply chain by promoting carbon reduction activities in the upstream based on a clear understanding of the environmental impact of our products. We are improving the accuracy and completeness of the results by reflecting the primary data of raw material suppliers in calculating our PCF.

Starting with the data on raw materials with high carbon content, we will continue to acquire primary data from raw material suppliers to deal with carbon-related and product environmental regulations and satisfy customers' needs. To this end, we offer training programs to our suppliers to help build their own LCA foundation and cultivate capabilities for PCF management. We are supporting small and medium-sized businesses with shared growth funds and linking government supported-projects, and also plan to introduce purchase incentives for suppliers that perform and deliver LCA results, to induce voluntary engagement of suppliers in PCF measurement and carbon reduction activities.

Furthermore, we would like to build a decarbonized supply chain that includes our suppliers, partners, and customers, and establish a consistent communication system for PCF. To do so, we distribute LG Chem's PCF methodology and scope 3 data collection guidelines to our suppliers.

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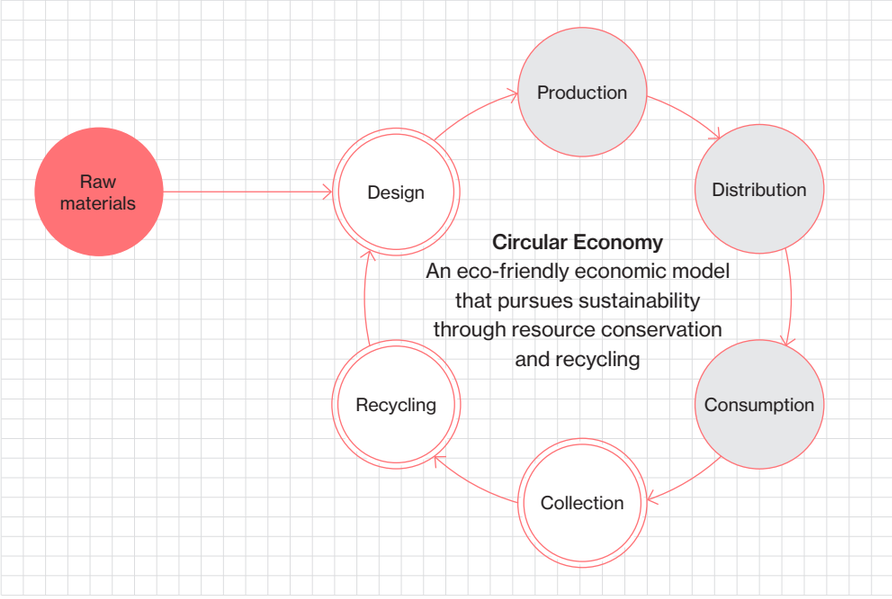
TRANSITION TO CIRCULAR ECONOMY

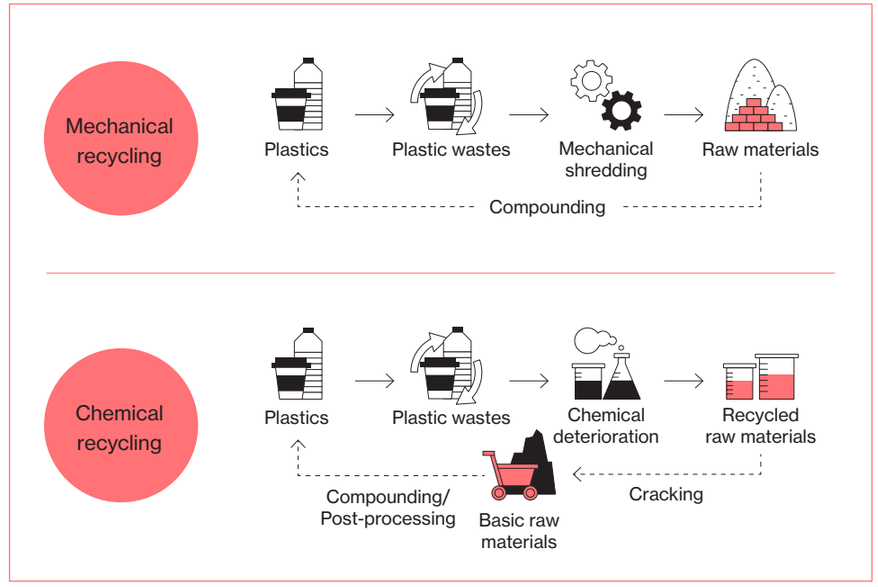
LG Chem recognizes the need for a circular economy model that improves environmental sustainability by reducing the natural resource consumption and waste disposal, and re-using resources as many times as possible. We are pursuing a transition from the linear economy of production – consumption – disposal, to a circular economy that minimizes natural resources inputs and waste disposals, and maximizes the amount of materials circulated within the system.



TACKLING PLASTIC WASTES

LG Chem is committed to reducing carbon emissions by manufacturing quality recycled plastics that does not deteriorate easily. We plan to build a supercritical pyrolysis plant with an annual capacity of 20,000 tons in Dangjin, Korea by 2024 to contribute to creating a circular economy for plastics. Dangjin Plant is equipped with chemical recycling technology that decomposes mixed plastic wastes using high-temperature and high-pressure supercritical vapor. The formation of black carbon (soot) is constrained during pyrolysis, allowing operation to continue without maintenance processes. Approximately 10 tons of plastic wastes can produce more than 8 tons of pyrolysis oil, which is the highest productivity in the industry, and the remaining 2 tons of by-product gases are reused as energy for operations, such as for producing supercritical steam. The pyrolysis oil produced can then contribute to reducing carbon emissions, as it can be utilized as a fuel to manufacture new plastics. Through pyrolysis, we can extract naphtha from polyethylene (PE) and polypropylene (PP) composite materials, such as snack bags, plastic lids, containers that have been difficult to recycle. The extracted naphtha, which is the earliest raw material in petrochemicals manufacturing, can be put back into manufacturing processes.

Recycling plastic waste



COLLECTIVE ACTION FOR A CHANGE

Open Innovation

Since 2022, LG Chem has made equity investments in Reventas Limited, Impact Recycling, and BluCon Biotech to enhance our competitiveness in the plastic recycling and bioplastics businesses. Through active open innovation, we continue to secure promising technologies that are critical in focusing LG Chem's unique strengths. Investing in startups that are seeking to commercialize their technology puts us at an advantage once the technology is fully developed. We closely evaluate and proactively invest in the development capabilities and success potential of startups in the early stages of tech development, establishing strong collaborative relationships at a lower investment cost than if we were to invest in later rounds, such as after the validation of results and growth in company value.

We are a strategic investor that actively secures licensing and negotiation rights. We recognize the importance of reserving capabilities in business areas that show potential, and are constantly expanding our portfolio of emerging technologies that have been developed or are under development. We are particularly focused on developing and acquiring emerging technologies in recycling, high-value-added products using microorganisms, and next-generation battery materials. Our presence can further increase the value of these investments by providing early-stage startups with the advantage of attracting larger-scale investors. If these investment cases are continuously exposed to the startup investment environment, promising startups with innovative technologies and ideas are more likely to approach us, creating a proactive startup discovery pipeline with relatively small equity investments.

Partnering with Competitive Companies

In addition to collaborating with startups to secure promising technologies, we continue to partner with competitive companies to build a circular ecosystem of waste resources. In January 2023, we established a system of recycling marine wastes by signing an MOU with NETSPA, a leading company in resource circulation. Marine wastes will be recycled as raw materials for the pyrolysis oil plant at the Seokmun National Industrial Complex in Dangjin, Korea, scheduled to be operational from 2024. By reducing marine debris and utilizing it as raw material for recycling plastics, LG Chem and NETSPA expect to reduce carbon use by three times compared to existing products based on fossil fuels. In April 2023, we signed a business agreement with CJ Logistics, Korea's largest logistics company, to recycle the bubble wrap used at its distribution centers. CJ Logistics collects discarded packaging from its distribution centers nationwide and delivers it to LG Chem, which will then recycle them through PCR (Post-Consumer Recycled) technology and supply them back to CJ Logistics.

Leading Customers with Superior Technology

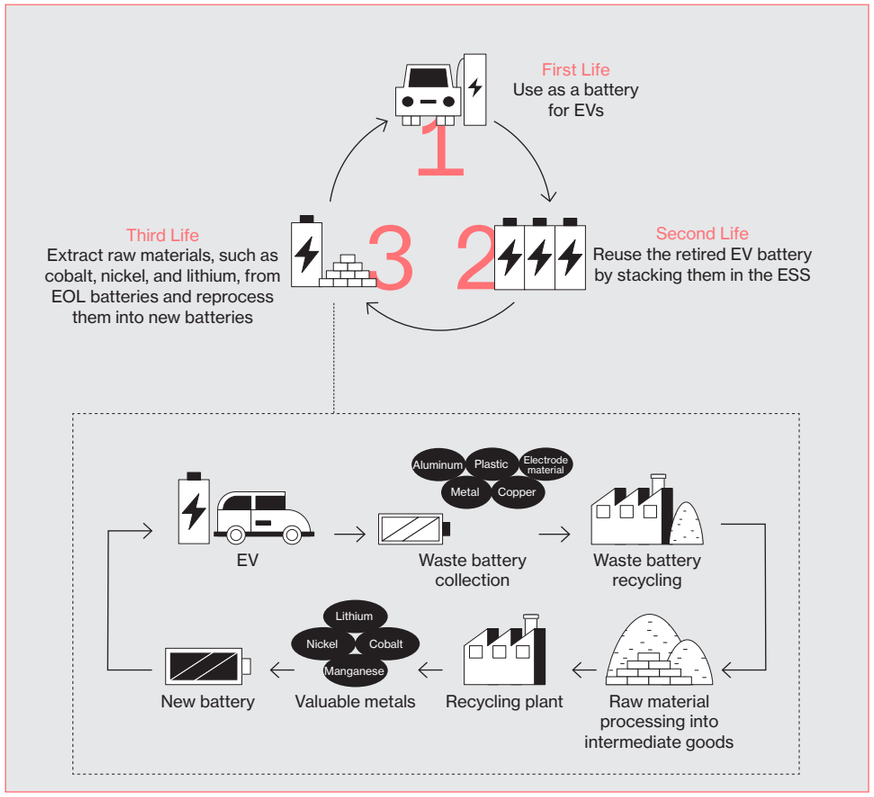
We not only focus on production and sales of eco-friendly products, but also engage in creating a circular value chain. We launched a taskforce team to support a home appliance rentals customer, who was struggling to comply with the recommendations on recycled content standards. As the world's No. 1 in terms of global market share of ABS, LG Chem developed the world's first white-colored PCR-ABS and offers a variety of color options compared to its peers. The key mission of the taskforce was to test if the PCR-ABS could reproduce the white color of customer's flagship products, such as water purifiers, bidets, and air purifiers. After successfully reproducing clean white color on the PCR-ABS processed with waste home appliances collected by the customer, we took a step further by proposing cooperation on establishing a closed-loop resource circulation system. As such, we are promoting eco-friendly products and suggesting partnerships to customers, based on the technology accumulated through research and development of eco-friendly resins that has been carried out before the regulatory measures were in place.

REDUCING, REUSING AND RECYCLING

With the rapid growth of worldwide demand for electric vehicles, the disposal of waste batteries at the end of their life cycle has become a critical issue in terms of resource circulation. LG Chem is also at the forefront of the battery recycling business. Waste batteries can be recycled in two ways: they can be reused as batteries for energy storage systems (ESS) if they still have life left in them, or they can be separated at the end of their lives to extract core raw materials such as cobalt, nickel, manganese, and lithium, which can then be reprocessed into cathode materials. As a producer of cathode materials which are the core material for batteries, we have identified and partnered with refining and smelting companies that can separate and extract core raw materials from waste batteries, to contribute to the creating a battery recycling ecosystem.

In June 2022, LG Chem established a recycling and precursor joint venture with KEMCO, an affiliate of Korea Zinc. The joint venture will produce precursors with recycled metals, which will be used in the production of LG Chem's cathode materials starting in 2024 Q2. The joint venture's recycling process combines dry and wet processes to maximize metal recovery rates and minimize harmful substance emissions. The venture will enable LG Chem to secure recycling capabilities and a stable supply of high-quality nickel sulfate.

In December 2022, LG Chem signed a KRW 24 billion equity investment agreement with Jae Young Tech, a company specializing in recycling waste batteries. The two companies are preparing to establish a battery recycling joint venture in North America in late 2023. Unlike conventional methods, Jae Young Tech uses heat to extract lithium from battery materials, while manganese, cobalt, and nickel are processed later. The manganese, cobalt, and nickel are of the same purity as those produced using the conventional process, and the lithium recovery rate is over 85%, the highest in the world. LG Chem will lead the business side of affairs, while Jae Young Tech will handle technology-related matters. The joint venture will secure competitiveness with unparalleled technology and take the lead in building a circular economy in the future.

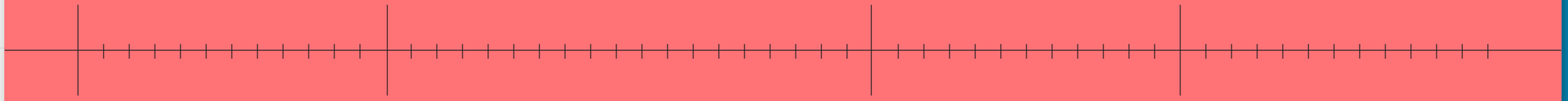


ZERO WASTE TO LANDFILL

LG Chem is committed to zero waste to landfill (ZWTL) at its business sites. We received ZWTL certification from UL Solutions for three plants in 2022 – Iksan (Korea), Naju (Korea), and Quzhou (China), and one plant in Gimcheon (Korea) in 2023. Quzhou plant received a platinum rating for recycling 100% of its total waste, Gimcheon plant achieved a gold rating with 97%, Iksan plant achieved a gold rating with 96%, and Naju plant achieved a silver rating with 94% recycling rate. ZWTL evaluates a company's recycling efforts and assigns silver (90-94% recycling rate), gold (95-99%), and platinum (100%) ratings based on the percentage of waste recycled instead of landfilled at each business site.

We also introduced an integrated environmental safety management system at out major business sites. By systematizing the waste treatment process, we have strengthened the system for accurate compiling and transparent monitoring of waste generation and disposal status. In the future, we will continue to pursue strategies to achieve zero waste to landfill at all business sites.

SOCIAL



ENVIRONMENT,
HEALTH AND SAFETY

SUPPLY CHAIN
SUSTAINABILITY

OUR EMPLOYEES

LOCAL COMMUNITIES

ENVIRONMENT, HEALTH AND SAFETY

The primary responsibilities of the Environment, Health and Safety (EH&S) department are divided into environmental and occupational safety management. Environmental management encompasses wastewater treatment, operation of air and water pollution control facilities, and compliance with regulations like the Water Environment Act, the Clean Air Conservation Act, and the Wastes Control Act. Occupational safety covers employee safety, identification and elimination of risk factors in process facilities, and compliance with regulations such as the Occupational Safety and Health Act and the Serious Accidents Punishment Act. In tandem with the growing interest in improving the environment and occupational safety, corporate commitment to EH&S is becoming increasingly important.

As a global manufacturer and supplier of materials and goods essential to the development of modern industry and the convenience of everyday life, we feel deeply responsible for the impact that our products have on the environment and human health. We are dedicated to reducing or eliminating harmful substances in our products and keeping the content of hazardous substances below domestic and international regulatory levels to minimize adverse environmental and health effects.

EH&S is a basic management system essential for every company. We strive to ensure that all of our employees and suppliers work in healthy and safe environments. A thorough management system and operational processes, and heightened employee awareness of EH&S concerns are necessary for us to respond appropriately when issues arise. We are dedicated to setting the highest global environmental and safety standards in the industry.

EH&S POLICY AND STRUCTURE

LG Chem has established and operates an EH&S management system based on ISO 14001 and ISO 45001 standards of the International Organization for Standardization (ISO). ISO 14001 is an international certification that evaluates a company's environmental management system, and ISO 45001 specifies the minimum requirements for an organization to identify and manage risk factors to prevent industrial accidents on an ongoing basis.

We consider EH&S among our top management priorities and core missions and have established corporate-wide environmental and safety regulations and guidelines. Leaders engage in field management activities, with each organization conducting in-house activities tailored to each site to prevent accidents. In the rare event of an accident, we strive to increase safety awareness and increase execution power by reflecting it in employee evaluations. We revised our corporate policies and regulations on safety and health in line with the enactment of the Serious Accidents Punishment Act that came into effect in 2021, and also archived the management status of each business site in our internal IT system. As a result, we have established a system that fulfills our obligation to ensure safety and health at all times.

EH&S Policy

- We will comply with all applicable EH&S legal requirements and establish leading corporate EH&S rules and best practices.
- We will drive continuous innovation throughout the entire life cycle of operation to supply environmentally friendly products and services.
- We will provide a safe and healthy work environment and ensure the principle adhering corporate culture.
- We will support business partners and local communities to improve their EH&S practices as our social responsibility.
- We will communicate our EH&S policies and programs with stakeholders.

Operating an integrated IT system for global EH&S management

LG Chem operates an integrated IT system based on global EH&S work standards. The system is in place for operations at all domestic sites, China, the United States, Poland, and Vietnam and raising the standards of EH&S management at each site. We are steadily enhancing the system to respond to compliance risks arising from new and revised laws and regulations, and to strengthen the execution capabilities of our EH&S work processes.

Strengthening EH&S organization and competencies

In January 2022, LG Chem inaugurated the position of Chief Safety & Environment Officer (CSEO), the top executive in charge of EH&S. The CSEO is given the autonomy and responsibility regarding strategic planning, investment, budget, human resources, and evaluation related to EH&S. The CSEO organization serves as a control tower that oversees the planning, management and diagnosis of corporate-wide EH&S activities. Planning and management functions cover establishing corporate-wide EH&S policies, complying with laws and regulations, performance evaluation and operation of EH&S IT systems, and diagnostic functions include providing technical support and reviewing progress on implementation. Furthermore, we appointed an EH&S manager for each business site to maintain policy consistency throughout and strengthen field response competences and action. We also run CSEO meetings to monitor how the policies are being implemented at each business site, discuss ways to improve corporate EH&S, and streamline decision-making processes.

CSEO Meetings in 2022

Meeting	Agenda	Frequency
Environment & Safety Committee	Y Decision-making on corporate-wide EH&S issues Y Review on the status of prevention & management of serious accidents	Bi-annual
CSEO Field Management	Y Inspection of major EH&S issues in the workplace Y Review of key EH&S management indicators' performance	Quarterly
Health & Safety Executive Meeting	Y Review and discussion of key EH&S priorities and issues	Bi-monthly
EH&S Department Meeting	Y Discussion of key EH&S policies and issues	Monthly
EH&S Leaders' Workshop	Y Review of key EH&S management indicators' performance	Annual
Business Divisions' EH&S Meeting	Y Review of each business division's EH&S activity Y Discussion of management meeting materials and miscellaneous agenda items	Weekly

To strengthen our organizational capacities, we continue to recruit talented EH&S experts and engineers, and foster an environment where employees feel fulfilled and motivated to strive for the growth of both individual and the company. To this end, we operate EH&S Academy which provides a range of curriculum customized for individual job function and competency to enhance employee EH&S expertise. One of the courses offered is safety leadership course for new executives and team leaders, which help cultivate the know-how needed to foster a safety culture. Furthermore, the Talent Development Committee chaired by the CSEO presents a vision for a systematic approach to cultivating leaders and professionals.

EH&S Academy

Starting from 2022, LG Chem has launched an EH&S Academy in addition to the mandatory and statutory training, to provide an opportunity for EH&S personnel to growth into EH&S experts. EH&S academy offers a variety of courses that take into account different job functions (EH&S common, environment, safety, and health) and competency levels of employees, from which employees can take training tailored to their work experience. In 2022, we delivered offline courses covering topics such as environmental pollutant management, chemical management, and internal auditor courses for environmental management systems, and we plan to continue developing both online and offline curriculum to reflect the needs of our members.

EH&S Academy in 2022

Participant	EH&S Engineers	EH&S Leaders[1]
No. of participants	254	246
Total training hours	5,544	1,968

[1] New executives and team leaders

EXECUTION AND PERFORMANCE MANAGEMENT

Standing behind our conviction that "there is no future if we fail to fix EH&S permanently and irreversibly," LG Chem ran Project Magnolia from June 2020 to 2021, through which an accident prevention system was established. Starting from 2022, we are continuing our efforts to upgrade our EH&S management system to reach global standards.

Upgrading the LGC Standards

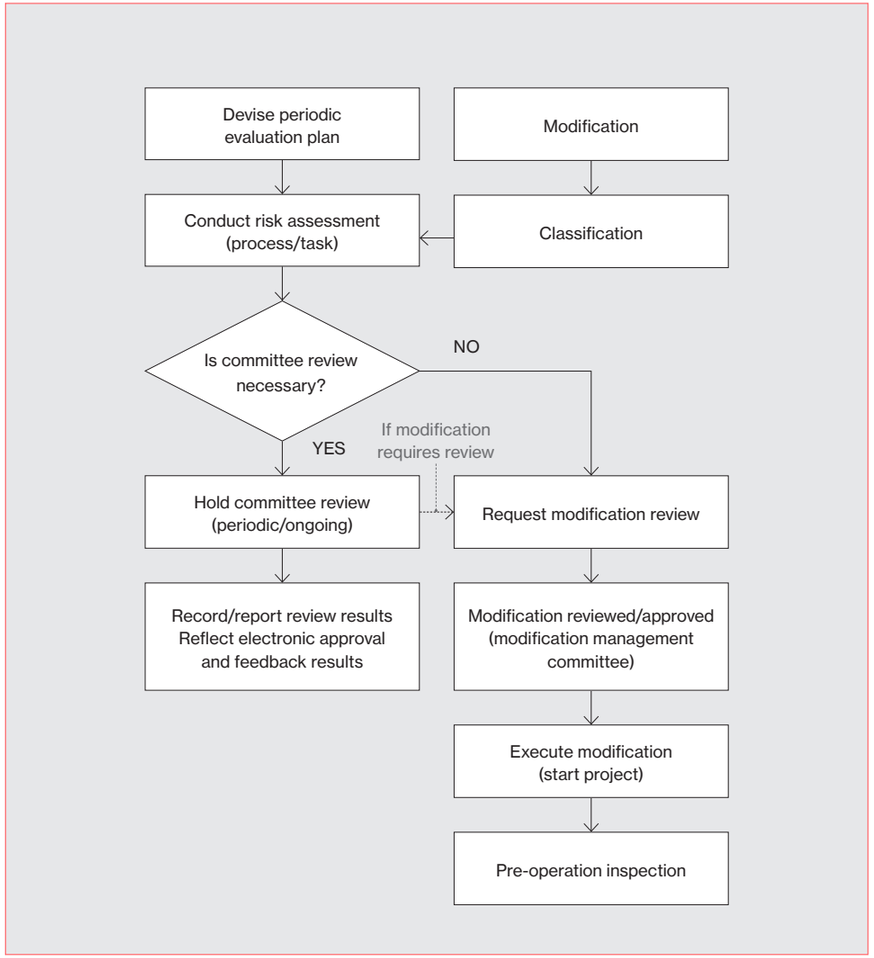
LG Chem has implemented schemes to address high-risk factors and prevent accidents by incorporating five key tasks of the LGC Standards into EH&S management system. We continuously upgrade the LGC Standard to strengthen systematic EH&S competencies within the system and ensure that it is easily deployed in the field.

Five key tasks		
❶ Technical Guidelines ❷ Mother Factory Policy ❸ Accident Prevention System ❹ Emergency Response System ❺ Digital Transformation (DX)		
1	**Addition and revision of technical guidelines**	Upgraded the EH&S technical competence throughout the plant life cycle by adding or revising a total of 99 environmental safety technical guidelines and distributing them in engineer guidebooks
2	**Upgraded operation of the Mother Factory Policy**	Reinforced the operations of the Mother Factory Policy, by installing a system for domestic factories to transfer their management strategies and knowledge to overseas factories, and perform reviews and approvals on changes in the operations of overseas factories. * The Mother Factory Policy prescribes factories with the highest technological performance to transfer their knowledge and capabilities to peer factories (18 groups participating)
3	**EH&S digitalization**	Validated and implemented core technologies to prevent safety incidents and critical accidents.
4	**Proactive management of hazardous work areas/ high-risk processes**	Introduced and implemented quadrupedal robots, intelligent CCTVs, digital twin virtual driving, and VR experiential training to provide training for employees performing high-risk processes in hazardous work areas.
5	**Automation of high-risk tasks**	Introduced robots for cleaning reactors, drones for the inspection of confined space/high-altitudes, auto-cleaning devices for heat exchangers, and the product/raw material warehouses automation systems.

We will strengthen our EH&S capabilities by improving our emergency response capabilities and continuously implementing and internalizing accident prevention systems through pre-operational safety checks and cross-checking of safety work permits.

Preemptively Identifying and Responding to Risks

All of LG Chem's business sites operate risk assessment committees that seek to prevent major accidents. The risk assessment committees periodically review the appropriateness of assessments and reassess potential risk factors. To ensure double and triple safety measures, plant managers pre-inspect the risks according to specialized protocols before approving high-risk tasks. We also circulate global workplace accident cases to all business sites in order to analyze the causes and consequences of major accidents at home and abroad and improve measures that can be implemented at all of our sites.

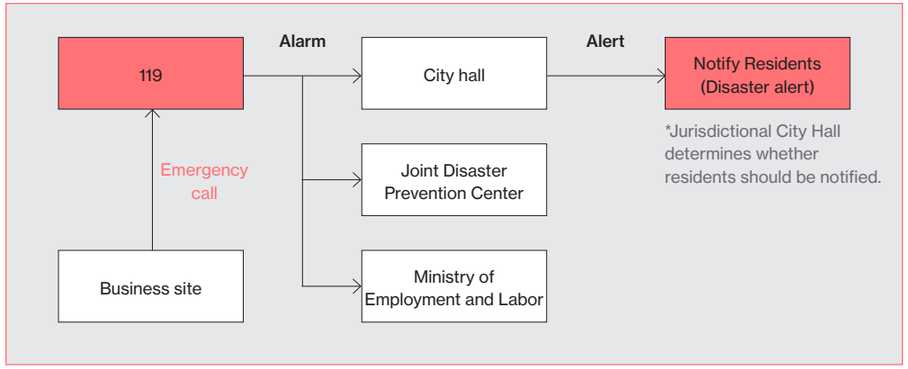


Operating an EH&S Risk Management System

LG Chem seeks to improve its crisis response capabilities at all business sites analyzing the root causes of its systematic problems and promoting company-wide improvement schemes. We proactively respond to potential risks by periodically monitoring the enactment and revision of EH&S-related laws and regulations, social issues and trends, and reviewing their impact on the company. Every year, all domestic and overseas worksites conduct voluntary inspections on environmental and safety compliance and implement improvements if necessary. The corporate office conducts regular diagnostics for all worksites to establish LGC standards and strengthen the collective mindset regarding EH&S to eliminate potential risks. Improvements discovered through this process are managed through a system to track progress and, when necessary, reflected in investment plans.

In addition, we have leveled up our emergency preparedness system by unifying emergency response guidelines for the entire company and business sites through case analysis. We are also strengthening our response capabilities by systematizing emergency drills, and scenario dissemination and management. In the event of an emergency, we immediately respond by sending out individual assignments via our alert message system.

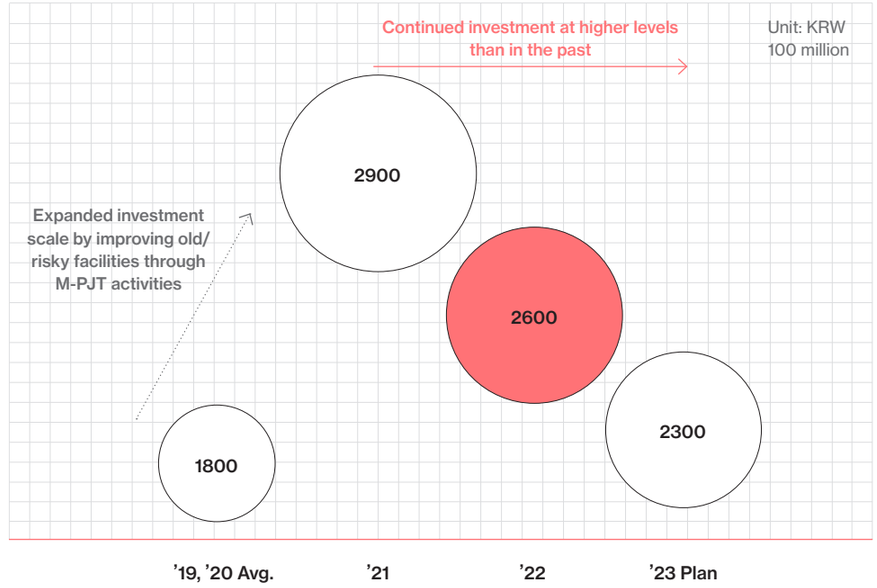
Establishing a coordination system with local governments



Strengthening Investments in Safety & Health

LG Chem mitigates risk by increasing investments in high-risk processes and facilities through the Magnolia Project. We will continue to focus investment into digitalization and automation of the operations to prevent human error.

EH&S investments



Major investments

2020	2021	2022	2023
Integration of company-wide environmental safety investment process and clarification of investment target criteria	Improvement of urgent and detailed safety diagnosis processes for high-risk processes and facilities	Improvement of EH&S risks, such as risk pre-detection and air pollutant reductions, from an ESG perspective	Investments in digitalization and automation to prevent human error
Identification and improvement of highest risks in each factory (June 2020-)		Strengthened response to regulatory requirements	Investments in upgrades to prevent accidents at old facilities

INJURY PREVENTION AND SAFETY ACTIVITIES

LG Chem has established an EH&S policy to raise the awareness of leaders on the importance of EH&S matters, and actively promote activities to establish a mindset prioritizing environment and safety.

We operate EH&S mindset training for all employees twice a year, conduct surveys to check levels of EH&S awareness, and prepare policies and improvement plans based on the Voice of Employees (VoE). We have been implementing the Seven Safety Commandments since 2022 to ensure a foundation of compliance culture among all employees. We also operate programs to motivate employees' voluntary participation in building an EH&S-first culture, such as the Zero Accident Incentive, Environment and Safety Hero, and slogan contests. By steadily promoting management activities that prioritize EH&S over general business activities and strengthening the mindset of our employees, we are creating an organizational culture where health and safety is the top priority of everything we do.

The Seven Safety Commandments

- Wear personal protective equipment appropriate to your working condition
- Measure the flammable gas concentration when working with fire and place a fire extinguisher at work sites
- Measure the concentrations of hazardous gases and oxygen when working in a confined space
- Take precautions against falls and wear a double-hook safety belt when operating in high places
- Obtain written permission before commencing work
- Do not release interlocks at your own discretion
- Follow Lock Our Tag Out (LOTO) procedures

Improving Suppliers Capacity for Safety

LG Chem has put in place supervisory personnel policy to improve the monitoring and supervision of suppliers' safety management capabilities. When selecting suppliers for construction or expansion projects, we first evaluate their basic safety management capabilities, then check specific accident prevention systems as per our safety bid evaluation (SBE) system. We also promote activities to upgrade the safety capabilities of our suppliers, by providing a library of best practices for risk assessment of each task to help our suppliers effectively identify risks in the work they perform and figure out solutions. Furthermore, we hold an annual meeting to share EH&S performance and use the results to receive nominations of high-performing suppliers from each production site. The most outstanding suppliers are rewarded after the deliberations by the corporate EH&S organization.

LG Chem's Management of Hazardous Substances

1	We conduct exacting inspections on all products from the raw material stage, according to the Regulation on Product Stewardship Management. Hazardous substances are categorized as one of three types depending on risk level. We have also established a business system that requires all purchases to be pre-approved by management.
2	We receive, review, research, and reply to customer requests for various product environmental regulations through an electronic approval system. We established a digital chemical inventory and a global chemical substance regulatory database for our products, allowing us to confirm our compliance with regulations online and issue warranty documents on the spot.
3	We consolidated product ingredient information into a Bill of Substance (BoS) management system, which enables us to continuously monitor the presence and amount of hazardous substances in the products we sell, and provide aggregated information to customers upon request.
4	We have Material Safety Data Sheets (MSDS) for all chemical substances purchased. Any exceptions are clearly recorded through the electronic approval process. All MSDSs can be collected, stored, and retrieved 24 hours a day online so that the hazards and risks of each material can be verified at any time.

Accident Prevention for High-Risk Substances

In 2022, LG Chem started a special management program for 50 high-risk substances with high levels of toxicity and/or physical risk, including substances with a history of being associated with fatal accidents at a global level. For facilities that store the 50 high-risk substances, which include benzene, styrene, hydrochloric acid, and sulfuric acid, we have reinforced the following accident prevention systems that go above and beyond legal and regulatory requirements:

1. Strengthened the spill/leak monitoring and alarm system by increasing the number of intelligent CCTVs and gas detectors.
2. Strengthened the safety measures of chemical unloading operations by installing a pump shutdown and alarm system based on the tank's liquid levels.

Toxicity Management System

To prevent toxicity issues at the source, we are building a toxicity management system as a mid- to long-term plan (2021-23). By improving the existing process which focuses on the legal registration of chemicals required for mass production, we aim to preemptively secure product safety and strengthen toxicity management.

1. We will conduct preliminary toxicity assessments of products and materials at the stage before confirming mass production, and use these to make business decisions. Preliminary toxicity assessments are conducted in-house and include toxicity prediction through QSAR (quantitative structure-activity relationship modeling) and in-vitro tests.
2. We plan to establish a toxicity database using data derived from legal chemical registrations and preliminary toxicity assessments. The information will be available through a separate database, and will be used to develop our own toxicity modeling program and create toxicity information for MSDS.
3. We aim to proactively respond to toxicity issues that may arise in the future by setting the parameters for defining and managing potential toxicity risks, and standardizing the roles and responsibilities for the response procedures.

Fostering a Safe Work Environment

LG Chem conducts various projects to protect the health of its employees and create a pleasant working environment. In order to minimize harmful factors that may occur in the workplace, the working environment is measured by third-party organizations in the first and second half of each year. In addition, we are making efforts to manage the working environment by establishing internal standards that are more stringent than legal requirements. To ensure that all employees work in a comfortable environment, we conduct activities to prevent musculoskeletal disorders and inspect our local exhaust systems. In addition, our in-house clinics and healthcare centers provide customized medical services and various wellness promotion programs to help employees manage their health.

SUPPLY CHAIN SUSTAINABILITY

LG Chem is committed to establishing a sustainable supply chain that allows for mutual growth with its suppliers. We review ESG risk factors in the supply chain and support programs aimed at enhancing the ESG capabilities of our suppliers. We also operate a responsible minerals policy to minimize the negative impacts of mineral extraction.

We recognize the importance of prevention and management of supplier ESG issues, including labor rights, resource depletion, and corruption. We address supply chain issues with a comprehensive approach considering the entire value chain. Specifically, we include key raw materials for cathode materials such as cobalt, nickel, manganese, and lithium, within the scope of our responsible supply chain management as they are known for high risks associated with human rights and the environment. We collaborate with external organizations to conduct inspections on suppliers dealing with these critical commodities.

In 2022, we significantly improved suppliers' capabilities by conducting ESG risk assessments for suppliers using an advanced internal management portal. We will continue to make efforts to create a healthy supply chain, enabling all companies to achieve sustainable growth.

Supply Chain Management Goals

Short-term	Enhance suppliers' capabilities by effectively managing the sustainability risks associated with the supply chain.
Mid-term	Lower greenhouse gas emissions throughout the supply chain by implementing emission reduction targets and increasing the adoption of eco-friendly raw materials in sourcing.
Long-term	Foster resilience to crises and adapt to changes while cultivating a green supply chain that fosters mutually beneficial relationships with suppliers.

Supply Chain Management Risks and Opportunities

LG Chem is aware of the risks and opportunities of sustainable supply chain management. We are committed to managing risks and seizing opportunities to strengthen our product competitiveness and enhance customer trust.

Risks	
1 Transition risks	Regulatory risk: Stricter global regulations on supply chain due diligence, such as the upcoming EU Supply Chain Due Diligence Directive, will require us to expand our pre-inspection and post-management/improvement activities to address human rights and environmental risks in the supply chain. Reputation risk: Inadequate supply chain management could tarnish the attractiveness of our products/investments, and the poor reputations of non-compliant ESG-related suppliers could have a negative effect on our corporate image.
2 Physical risks	Unforeseen risks caused by extreme weather or epidemics could lead to supply chain disruptions, depending on their severity. These disruptions could include logistics disruptions, supply and demand issues due to inventory shortages, and other related issues.

Risk management measures

We have developed a well-rounded approach to managing risk in the supply chain through our procurement portal. This system allows us to check financial risks (credit rating, cash flow, etc.), non-financial risks (disaster/catastrophe, reputation risk), and supply-and-demand risks (PO progress tracking/logistics tracking/product diversification status). Based on the information obtained, we take appropriate measures to mitigate these risks. We also have crisis response measures in place in case of supply chain emergencies (e.g., an issue with the supply of raw materials). These measures are implemented based on the crisis judgment ratings specified in our internal regulations.

In 2023, we will revise the Responsible Minerals Management Policy to establish specific standards for risk pre-identification and risk assessment processes for mineral management. We will also further refine our current supply chain grievance handling process, and actively resolve grievances in our direct and indirect supply chains.

Opportunities through risk management

We can improve customer trust by managing physical risks and securing a stable supply of raw materials to meet the product delivery dates.

We can increase the attractiveness of our businesses and products by actively responding to global regulatory trends and customer requirements in terms of supply chain management.

Supplier Management

LG Chem has established a dedicated organization for sustainable supply chain management and conducts its operations based on procurement regulations and guidelines, using an integrated purchasing system. Additionally, we ask our suppliers to comply with our Code of Conduct, which is aligned with global norms. We also strive to enhance the competitiveness of our supply chain through supplier evaluations and ESG assessments.

Supplier management measures

1	**Procurement regulations and guidelines**	All procurement personnel are required to fulfill their duties based on established processes in accordance with procurement regulations and guidelines. Beyond fair transactions, legal compliance, and meeting customer demands, they are expected to contribute to a sustainable future by considering the entire value chain, including environmental and human rights considerations.
2	**Integrated purchasing system**	We have launched an integrated purchasing system to register suppliers, enforce Code of Conduct, conduct evaluations, and manage supply chain risks. Additionally, we have an integrated procurement portal with which we can obtain disaster and hazard information, assess and analyze supply chain risks, using information collected from external media through the reputation management system. This enables us to detect and manage non-financial and procurement-related risk factors in real-time and utilize them for response and management.
3	**Dedicated organization**	To ensure sustainable supply chain management, we have established a dedicated organization that conducts inspections of suppliers from a human rights and environmental perspective. Based on the results, we operate various support programs such as equipment installation, education, and consulting for our suppliers.

Supplier Code of Conduct

Responsible Sourcing Policy

Supplier Evaluation and ESG Assessment

LG Chem conducts annual evaluations and ESG assessments of suppliers to enhance their capabilities in sustainability risk management.

Supplier Evaluation

1	**Regular evaluation**	LG Chem conducts annual regular evaluations of suppliers to manage supply chain risks. The key evaluation criteria include quality, delivery, cost, task responsiveness, environment, safety, and financial structure. Based on the results of the regular evaluation, we manage the vendor pool of suppliers. Starting from the 2023 evaluation, the results of suppliers' ESG assessments will also be considered to comprehensively assess their financial and non-financial risks. In 2022, a regular evaluation was conducted for 1,334 suppliers, which accounted for 70% of domestic purchasing expenditures, and 201 companies (15%) were selected as outstanding suppliers. Incentives, such as improvements in payment conditions (amounting to KRW 50 billion) and priority allocation of supply quantity, are provided to outstanding suppliers.
2	**New supplier evaluation**	When selecting new suppliers, LG Chem focuses on five key factors: environment and safety, technical and quality management, financial structure, management practices (including labor rights and labor-management relations), and delivery management. In 2023, additional sustainable management-related criteria such as human rights, environment, and ethics will be incorporated to strengthen verification during the entry process into the vendor pool.

ESG Assessment

1	**Supplier Code of Conduct**	LG Chem expects its suppliers to embrace the principles of human rights, environment, safety, health, and ethical management across their entire operations. They should adhere to relevant norms and actively establish and implement policies to fulfill their corporate social responsibilities. To achieve this, we developed and updated the Supplier Code of Conduct based on international norms such as the RBA Code of Conduct, UN Guiding Principles on Business and Human Rights (UNGPs), and OECD Guidelines for Multinational Enterprises. This code is distributed to suppliers, and their commitment to compliance is confirmed through an annual Supplier Code of Conduct Compliance Pledge. We also encourage the dissemination of our Supplier Code of Conduct to lower-tier suppliers.
2	**Supplier ESG self-assessment**	Since 2021, LG Chem has developed a self-assessment consisting of 121 criteria related to greenhouse gas emissions, energy consumption reduction, safety, health, human rights, and ethical management. This self-assessment is conducted annually for primary suppliers with an annual purchase amount of KRW 100 million or more and at least three purchase orders. In 2022, 762 suppliers completed ESG self-assessments, accounting for 71% of domestic purchasing expenditures and 31% of overseas purchasing expenditures. The results are categorized into ratings, with risks identified as High, Medium, or Low according to severity.

3	**On-site ESG audit**	For suppliers identified as high-risk based on the self-assessment results, LG Chem conducts on-site audits in collaboration with third-party organizations to identify improvement tasks. In 2022, 17 high-risk suppliers completed on-site audits, and corresponding improvement measures were proposed. 2022 On-site audit results – key improvement areas for 17 suppliers (a) Absence of established environmental management objectives and inadequate documentation of environmental performance. (b) Lack of human rights/ethical management-related regulations.
4	**Progress management**	Starting from 2023, we will assess and monitor the progress based on the improvement plans formulated by suppliers. However, for suppliers found to have significant violations such as inclusion of conflict minerals or non-compliance with labor-related legal regulations, immediate corrective actions will be demanded.
5	**ESG evaluation-based incentives and penalties**	We provide support to small and medium-sized suppliers that receive a Low Risk rating in their self-assessment. This support includes equipment replacement to improve energy efficiency at their facilities and operational funding to enhance ESG management. In 2022, four suppliers replaced equipment through the Small and Medium-sized Enterprises (SME) Collaborative Cooperation Program based on their ESG evaluation results, and two suppliers received ESG funds.

Building a Decarbonized Supply Chain

LG Chem is dedicated to building a decarbonized supply chain. We recognize the crucial role played by our raw materials suppliers in scope 3 upstream to respond to global environmental regulations and secure a competitive advantage around product sustainability. As such, we have instituted a scope 3 LCA task force that reports directly to the CEO to assist suppliers in measuring and managing their product carbon emissions and engaging in voluntary carbon reduction activities.

We prioritize collecting LCA data of high-carbon raw materials such as naphtha and benzene, as well as battery materials like cathode materials and separators subject to environmental regulations such as the EU's Battery Passport. We also help suppliers build their own LCA foundation by distributing PCF calculation guidelines based on our LCA methodology. We offer training programs to cultivate LCA management capabilities in the supply chain and introduce purchase incentives for suppliers that perform and deliver LCA results. Furthermore, we will help small and medium-sized businesses reduce carbon by utilizing shared growth funds and linking government-supported projects, and actively communicate our LCA methodology to customers to strengthen cooperation with our suppliers.

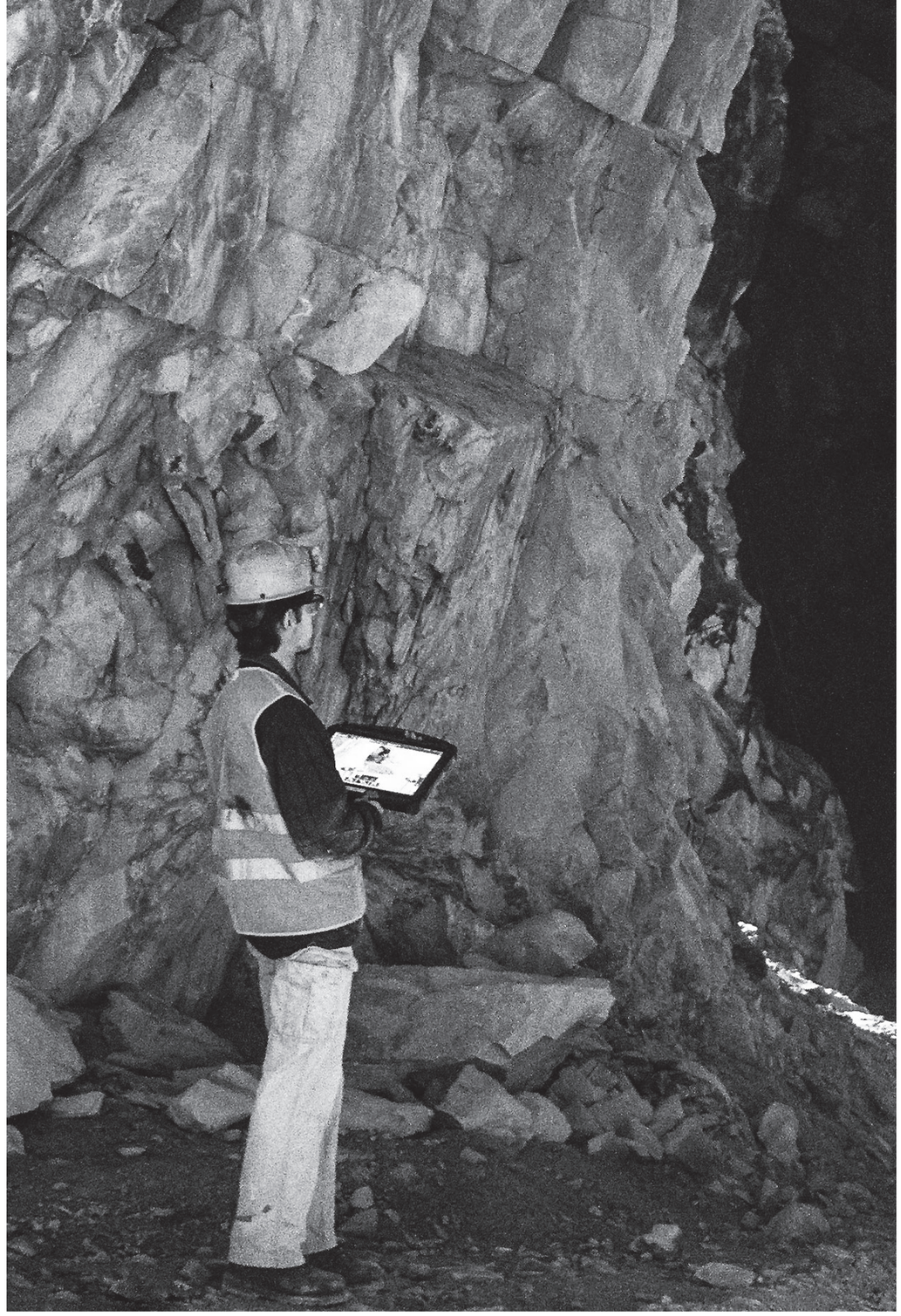
2022 Key Achievements

1	**Supplier ESG evaluation**	762 primary suppliers conducted ESG self-assessments, and based on assessment results, 101 companies (13%) were classified as high-risk group. Among the high-risk group, consisting of suppliers with High Risk ratings or scoring below the benchmark or having significant inadequacies, 17 companies were selected for on-site audits. Additionally, we supported the enhancement of ESG management for excellent suppliers through the Win-win Partnership Program.
2	**Revision of Supplier Code of Conduct**	LG Chem incorporated the content on human rights, environment, safety, and health, based on the Responsible Business Alliance (RBA) Code of Conduct (V7.0), into the LG Chem Supplier Code of Conduct. We receive pledges from our suppliers on this Code of Conduct, and monitor suppliers' ESG based on the codes outlined in the conduct.
3	**ESG training for procurement practitioners**	To establish sustainable supply chain strategies and perform procurement duties, LG Chem provided training on various ESG aspects, including the environment, human rights, and labor, to 47 procurement practitioners in business departments. In 2023, this education will be expanded to include suppliers.
4	**Participation in ESG consulting program**	Thirteen domestic small and medium-sized suppliers participated in the ESG management support program conducted by the Korea Commission for Corporate Partnership. The program covered diagnosis and consulting on ESG management of SMEs.
5	**Supply chain management system**	LG Chem developed an integrated procurement management system, standardizing the procurement process for both domestic and overseas sites, and enhancing supplier management and ESG response capabilities. Additionally, an integrated procurement portal capable of detecting, responding to, and managing financial, non-financial, and supply-related risk factors in real-time has been developed and is being utilized.
6	**Diversification of raw material procurement**	To prepare for supply chain disruptions due to geopolitical risks and other factors, LG Chem strategically procures raw materials through supplier diversification. In 2022, approximately 72% of the total raw material purchase amount was procured through this diversified approach.

Future Plans

In 2023, LG Chem plans to offer training for suppliers regarding greenhouse gas emissions, environment, safety, human rights, and labor practices. This initiative aims to enhance suppliers' understanding of sustainable business practices. Furthermore, we will revise our policies and establish processes to address issues within the supply chain, facilitating the establishment of a sustainable supply chain. Moreover, we are determined to strengthen our efforts for responsible minerals management. To achieve this, we will track our supply chain using templates provided by RMI (Responsible Minerals Initiative), including CMRT (Conflict Minerals Reporting Template), EMRT (Environmental Minerals Reporting Template), and PRT (Petroleum Reporting Template). We will also conduct ESG assessments of our suppliers and develop a Conflict-Affected and High-Risk Areas (CAHRA) identification tool to proactively identify potential risks within our supply chain.

Moving on to 2024, our focus will be on developing and implementing response strategies to mitigate identified risks associated with responsible minerals in our supply chain. Furthermore, we aim to expand the reach of LG Chem's sustainability strategies and enhance the ESG competencies of our suppliers. We will actively share best practices related to sustainability with our suppliers and recognize outstanding contributions through awards, to encourage greater participation from our suppliers.



OUR EMPLOYEES

LG Chem values diversity and inclusion, and believes these values lead to greater employee engagement and promote innovation. A diverse and inclusive workforce can lead to innovative ideas and products, better decision-making, and overall improvement in business performance.

Since 2019, we have implemented the Speak-up Table program, which encourages open communication and constructive feedback between the CEO and employees. Over the past four years, 1,569 employees have participated in 79 Speak-up Tables and provided valuable insights which helped create a more flexible organizational culture and smart work environment. In 2023, LG Chem launched the Discussion Table program, which provides a platform for all employees to actively listen to each other's opinions, engage in constructive discussions, and participate in decision-making processes. Through robust debates and dialogues between the CEO and employees, we aim to establish a diverse, fair, and inclusive work environment.

We are committed to creating a workplace where all employees have equal opportunities for growth and success, regardless of their background or identity. We will strive to enhance our policies and programs to foster a culture of diversity and inclusion, which will benefit all employees in the future.

PROTECTION OF LABOR RIGHTS

Global Human Rights and Labor Policy

In alignment with its "people-oriented management" philosophy, LG Chem firmly believes that respecting human rights is of utmost importance in conducting business. In 2016, we established and publicly disclosed our Global Human Rights and Labor Policy, which reflects and reaffirms the principles of various international human rights standards, such as the Universal Declaration of Human Rights, the UNGC Guiding Principles on Human Rights and Labor, the UN Guiding Principles on Business and Human Rights, the core conventions of the International Labour Organization, and labor laws of the countries and regions in which we operate. This comprehensive policy is applicable to all of our global sites. To enhance awareness and improve working conditions, we share the policy with all stakeholders directly impacted by our business activities, such as our customers and suppliers.

In line with the Global Human Rights Labor Policy, we are currently developing a checklist that encompasses various aspects of the human rights impacts and conduct diagnosis on potential human rights risks present at our business sites. In the second half of 2023, we plan to conduct surveys, self-assessments, and on-site inspections based on the checklists to identify areas that require improvement. In addition, we plan to collaborate with external organizations specializing in human rights to conduct human rights impact assessments. We will strive to minimize both potential and actual human rights risks and impacts identified from these assessments by continuously evaluating the effectiveness of our policies, improving our business processes, providing relevant training and refining our risk mitigation strategies.

Global Human Rights and Labor Policy

DE&I-BASED TALENT DEVELOPMENT

Competency-based Hiring

LG Chem is dedicated to building a diverse workforce and fostering an inclusive environment that promotes collaboration among individuals of diverse genders, ages, nationalities, races, and religions. In alignment with this commitment, we conduct various recruitment activities, such as gender-blind recruitment, business and campus tours as well as tech conferences, foreigner internship programs, talent development and job placement in non-metropolitan areas, and AI interviews. We aim to cultivate a diverse and exceptional talent pool and achieve sustainability through these recruitment activities. As a result of these strategies, we successfully hired 2,651 new employees in 2022.

Growth & Development Initiatives to Promote Diversity

LG Chem implements a range of training and mentoring programs designed to embrace and enhance diversity in all forms, including cognitive diversity, gender diversity, generational diversity, and cultural diversity. These initiatives are aimed at fostering a collective mindset that truly values diversity and inclusion, while also fostering mutual respect and collaboration among our employees. Through these programs, our primary objectives are to stimulate the discovery of innovative ideas and products, as well as to develop a corporate culture that supports sustainable management practices. By nurturing a diverse and inclusive environment, we believe we can unlock the full potential of our organization and achieve long-term success.

Gender diversity	Cultural diversity	Generational diversity	Cognitive diversity
— Female Talent Development Program	— Global Mobility — Inclusive Leadership — Global Teaming	— Co-mentoring	— Discussion Table — Dialogue with LG Chem — Working Together

Female Talent Development Program
As part of our commitment to increasing the representation of women in leadership roles, we support and empower female employees who demonstrate exceptional performance in their respective roles and exhibit the potential to become future leaders within our organization. Since its inception in 2019, the program has assisted each participant in designing a clear career vision and roadmap to guide their professional growth. In 2022, we had 54 participants in the program.

Global Mobility Program
To enrich our workforce with diverse perspectives and experiences, we encourage talented employees from diverse nationalities and cultures to work together. This program involves a counterpart program of the expatriate initiative, and invites foreign employees to work in Korea. Since its inception in 2018, there have been a total of 23 participants, 16 from China, 3 from Europe, and 4 from Asia, and as of today, 9 employees are working in Korea through this program.

TALENT GROWTH WITH THE COMPANY

At LG Chem, we are committed to creating an environment where our employees engage in meaningful work and actively enhance their skills and value. To achieve growth for both the individual and the company, we offer the following programs:

Achievement of Career Vision	Future Leaders	Global Talent	Experts
— Career Market — Career Week — Career Advisor	— LG&I (Candidate training) — Leadership training	— Overseas training program and Global MBA — Language programs	— Professional development — LG Chem Masters/ Experts

Career Market
Over the past 3 years, 1,274 employees have submitted applications for internal job postings, and 323 have relocated through this program. Since 2023, we have been running the Open Career system for R&D employees, allowing them to publicly post their career profiles at will. This enables them to receive transfer offers from other organizations or apply for internal job postings from other divisions. This program empowers employees to proactively seek career development opportunities and shape their own careers.

LG Chem Masters/Experts
LG Chem has introduced a new system called LG Chem Masters to recognize exceptional on-site technicians and to encourage experienced professionals with technical expertise. This initiative also aims to motivate the on-site technicians of the young generation and support their professional development. In 2022, as part of the on-site expert cultivation program, we selected 37 outstanding talents with specialized skills as LG Chem Experts within the factory. Among them, five were appointed as the highest-ranking on-site technicians known as LG Chem Masters, due to their exceptional experience and knowledge in their respective processes and facilities. These esteemed LG Chem Masters/Experts play a crucial role in leading improvement activities to enhance productivity on the field, providing technical guidance, and mentoring junior colleagues in their specialized fields.

Through these programs, LG Chem supports the competency development and growth of its employees, fostering a corporate culture of collective development.

WELL-BEING AND A HARMONIOUS LIFE

LG Chem values the health and well-being of employees and their families. We offer various programs to help employees and their families maintain a healthy work-life balance.

Physical and Mental Health

We offer an Employee Psychological Counseling Program to support the mental well-being of our employees. The program provides access to 24/7 counseling services through phone calls, text messages, or chats. Additionally, we support comprehensive medical check-ups to ensure our employees' physical health and provide medical expense coverage for diseases and injuries. Moreover, we strive to promote a harmonious integration of work and family life for our employees. We provide support for infertility treatments for couples and offer up to two years of parental leave for employees raising children under the age of six. Furthermore, in 2023, we introduced the Wellness Program to promote the physical and mental recovery of our employees.

Work-Life Balance

LG Chem is dedicated to fostering a corporate culture that promotes a healthy work-life balance. In 2018, we implemented the Flex Time system, which offers flexible working hours for all office staff. To address the issue of long working hours, we introduced a monthly optional working hour system, with an average of 40 hours per week and a maximum of 52 hours. For any weekday overtime and holiday work that exceeds the monthly basic working hours, we provide compensation in the form of 1.5 hours of paid leave for each extra hour worked. This ensures that employees have the opportunity to rest and recharge after extended working periods. In addition, we run a smart office that provides diverse working environments at off-site locations to create a more flexible and adaptable work environment that meets the needs of our employees.

Prevention of Harassment and Discrimination

LG Chem is committed to preventing harassment and discrimination in the workplace. We operate a harassment report center to maintain a safe working environment for employees, and upon receipt of the report, we carry out prompt and thorough investigations for each case and take appropriate measures.

- Filing a report: Employees can submit reports to the Harassment Reporting Center at any time through email, phone, or online forms.
- Review of reports: The Harassment Reporting Center reviews reports in a timely and confidential manner. The center takes all necessary steps to protect the identity of the reporting employee. If the reported information is confirmed to be true, the center takes immediate action to address the issue.
- Corrective measures: In cases of confirmed reports, the Harassment Reporting Center takes swift and decisive actions. The center may impose disciplinary measures on the responsible employee, provide support to the victim, or take other appropriate actions. We also conduct training on creating harassment- and discrimination-free organization, and provide guidance on the reporting procedures.
- Reporting and improvements: The Harassment Reporting Center consistently engages in the reporting and improvement activities. The center reviews the effectiveness of its policies and procedures on a regular basis and makes changes as needed. This allows us to continuously enhance our prevention and response system, and ensure a safe work environment for our employees.

LOCAL COMMUNITIES

LG Chem has a vision to connect corporate social responsibility (CSR) with environmental values and enrich human life and the society as a whole. To this end, we are promoting CSR projects that consider business connectivity, social demands, the achievement of the UN Sustainable Development Goals (SDGs), and partnerships with NGOs.

We actively gather opinions from local communities on environmental, economic, and social issues, such as air pollution, water quality, job creation, and education, through a variety of communication channels, including community meetings, community outreach programs, neighborhood councils, welfare facilities and group management committees near the business site. We are working to fulfill our corporate social responsibility and develop together with local communities by responding to their expectations and concerns on these issues.

Social Partnerships

LG CHEM'S EFFORTS TO MEET THE EXPECTATIONS OF THE COMMUNITY

LG Chem's Yeosu Plant, one of the company's major business sites, focuses on three key topics: environmental protection and climate change, social welfare, and job creation. The plant conducts a yearly survey of local citizens to gauge their expectations. The survey results for 2022 showed that the local community expects LG Chem to:

1 Conduct thorough environmental and safety management

2 Expand and participate in a variety of social welfare projects

3 Expand employment opportunities for local residents

Thorough Environmental and Safety Management

- LG Chem has built the first TMS control center in the petrochemical industry to continuously monitor the substances and emissions discharged into the air 24/7.
- We have built a Digital Twin Room to use a 3D virtual model of the factory to monitor the work situation and identify potential hazards. We also use equipment data to determine the appropriate replacement time for equipment.
- We are strengthening safety protocols by identifying injuries and insufficient use of safety gear with automated detection methods, and operating tasks in hazardous areas like confined or high-altitude spaces with the help of robots and drones.

Social Contribution and Welfare Programs

As a corporate citizen partner, LG Chem believes that businesses have a responsibility to contribute to society. Under this mission, We are conducting social contribution activities for youth, the elderly, and the environment under the three slogans “Nurturing Young Dreams”, “Well Aging”, and “Green Connector”.

Nurturing Young Dreams

Genie Day	The Genie Day program has granted wishes to over 3,500 disadvantaged youth for the past 10 years, giving them hope and the opportunity to pursue their dreams even in difficult circumstances.
Dream Box, Green Hope Box	The Green Hope Box program provides eco-friendly sanitary products to disadvantaged women and girls, helping them to live in a hygienic environment and pursue their dreams.
Dreaming Hope Smile	The Dreaming Hope Smile Program, a dental support project, has helped more than 600 disadvantaged youths restore their bright smiles and confidence.

Well Aging

LG Shinbaram Senior Center	We have been providing essential supplies to senior centers since 2011, helping them to create more comfortable and pleasant environments for seniors to live in.
Hope Food Truck	We have been providing hearty meals to the elderly since 2013.

Green Connector

Support for eco-friendly coffee compost	We have been providing local farmers with eco-friendly compost made from coffee grounds collected from our cafes since 2022.
Green House Project	We are working to make Ando Donggoji Village an energy self-sufficient island by supporting the installation of electric boiler in the village since 2023. This has helped village residents to save on electricity bills and receive a stable power supply.
Yeosu Ssudam	We have been supporting disadvantaged households in the region by providing LED lighting in exchange for garbage collected through a “plogging” campaign with teenagers. The program has benefited about 50 households since 2022.

Employment Opportunities for Local Residents

LG Chem has signed an MOU with Yeosu city to expand employment opportunities for local residents. We commit to hiring talents who lived in or studied in Yeosu for a certain period of time. We expect to provide quality jobs to local residents and contribute to the development of the local economy.

We will work with the local community to identify and mitigate potential risks, and protect the environment.

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PERFORMANCE DATA

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ESG PERFORMANCE DATA

ESG PERFORMANCE DATA

Greenhouse Gas Emissions		Unit	2020 ❶	2021 ❷	2022 ❸
Scope 1+2 Emissions	Global	tCO_2e	9,520,581	10,335,203	10,043,289
	Korea	tCO_2e	8,064,869	8,839,571	8,614,876
	excl. Korea	tCO_2e	1,455,712	1,495,632	1,428,413
	Emission intensity ❹	tCO_2e / KRW 1M	0.5528	0.4294	0.3948
Scope 1 Emissions	Global	tCO_2e	5,390,035	5,439,321	5,638,675
	Korea	tCO_2e	5,195,758	5,290,343	5,489,590
	excl. Korea	tCO_2e	194,277	148,978	149,085
	Emission intensity	tCO_2e / KRW 1M	0.3130	0.2260	0.2217
Scope 2 Emissions	Global	tCO_2e	4,130,546	4,895,882	4,404,614
	Korea	tCO_2e	2,869,111	3,549,228	3,125,286
	excl. Korea	tCO_2e	1,261,435	1,346,654	1,279,328
	Emission intensity	tCO_2e / KRW 1M	0.2399	0.2034	0.1732
Scope 3 ❺ Emissions	Total	tCO_2e	1,244,528	1,339,125	1,213,600
	1. Purchased goods and services	tCO_2e	517,985	571,164	425,556
	2. Capital goods	tCO_2e	14	56	83
	3. Fuel and energy-related activities (not included in Scope 1 or 2)	tCO_2e	121,904	175,732	193,940
	4. Upstream transportation and distribution	tCO_2e	318,438	197,919	124,744
	5. Waste generated in operations ❻	tCO_2e	59,993	63,358	61,972
	6. Business travel	tCO_2e	2,265	970	621
	7. Employee commuting	tCO_2e	4,737	7,488	10,474
	8. Investments ❼	tCO_2e	219,190	322,438	396,210

❶ Figures for Scope 1 and Scope 2 emissions in 2020 have been revised due to changes in the organizational boundaries.
❷ Figures for Scope 1 and Scope 2 emissions in Korea in 2021 have been partially revised based on the verification results of the Ministry of Environment.
❸ Figures for Scope 1 and Scope 2 emissions in Korea in 2022 are based on values reported to the Ministry of Environment, and the above figures are subject to revision depending on the verification outcomes.
❹ Emission Intensity = Global GHG Emissions / Revenues excluding LG Energy Solution, and Common and others
❺ Scope 3 emissions have been calculated on the relevant categories of GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011), and we plan to increase the scope of data collection.
❻ Figures reflect the combined GHG emissions from waste and wastewater discharge.
❼ Figures are based on the values reported to the Ministry of Environment, and the above figures are subject to revision depending on the verification outcomes.

Energy Consumption		Unit	2020 ❶	2021 ❷	2022 ❸
Total Energy Consumption	Global	TJ	132,593	178,405	151,401
	Korea	TJ	122,807	169,105	142,386
	excl. Korea	TJ	9,786	9,300	9,015
	Energy intensity ❹	TJ / KRW 1M	0.0077	0.0074	0.0060
Direct Energy Consumption (Fuel)	Global	TJ	98,446	109,043	107,352
	Korea	TJ	94,976	106,349	104,876
	excl. Korea	TJ	3,470	2,694	2,476
	Energy intensity	TJ / KRW 1M	0.0057	0.0045	0.0042
Indirect Energy Consumption (Steam, Electricity)	Global	TJ	34,147	69,362	44,049
	Korea ❺	TJ	27,831	62,756	37,510
	excl. Korea	TJ	6,316	6,606	6,539
	Energy intensity	TJ / KRW 1M	0.0020	0.0029	0.0017
Renewable Energy Consumption ❻	Global	MWh	1,760	306,316	761,967

❶ Figures for energy consumption in 2020 have been partially revised due to changes in organizational boundaries. Figures for indirect energy consumption have been partially corrected due to the consistent use of the unit conversion factor (1 MWh = 0.0036 TJ).
❷ Figures for energy consumption in Korea in 2021 have been revised based on the verification results of the Ministry of Environment.
❸ Figures for energy consumption in Korea in 2022 may be revised in the future based on the verification results of the Ministry of Environment.
❹ Energy Intensity = Global Energy Consumption / Revenues excluding LG Energy Solution, and Common and others
❺ Figures for electricity consumption in Korea include purchased electricity and self-generated electricity.
❻ Means of renewable energy procurement include green pricing, RECs (solar, wind), and self-generation (solar).

Water Resources Management		Unit	2020	2021	2022
Water Withdrawal ❶	Total	m³	66,937,657	78,063,643	74,781,261
	Surface water	m³	-	-	-
	Groundwater	m³	501,077	444,068	440,512
	Seawater	m³	-	-	-
	Municipal water	m³	66,420,490	77,597,935	74,326,951
	Other ❷	m³	16,090	21,640	13,798
	Water withdrawal intensity	m³ / KRW 1M	3.8869	3.2434	2.9400
	in regions with water stress	m³	4,496,621	4,521,147	4,457,410
Wastewater Discharge ❸	Total	m³	20,915,171	21,449,266	21,190,129
	Water discharge intensity	m³ / KRW 1M	1.2145	0.8912	0.8331
	in regions with water stress	m³	1,915,523	1,656,575	1,765,931
Water Consumption	Total	m³	46,022,486	56,614,377	53,591,133
	Water consumption intensity	m³ / KRW 1M	2.6724	2.3522	2.1069
	in regions with water stress	m³	2,581,098	2,864,572	2,691,479
Water Reuse Rate ❹		%	2.63	2.30	2.57

❶ Figures for water withdrawal in 2020 and 2021 have been partially revised due to changes in organizational boundaries.
❷ Other water sources include rainwater, reclaimed wastewater, etc.
❸ Figures for wastewater discharge in 2020 and 2021 have been partially revised due to changes in organizational boundaries and data coverage (includes wastewater not subject to legal reporting).
❹ The amount of recycled water within the operation and purchased reclaimed wastewater have been used to calculate water reuse rate.

Water Pollution Management		Unit	2020	2021	2022
Water Pollutant Discharge	COD ❶	Metric tons	653	589	472
	Discharge intensity	kg / KRW 1M	0.0379	0.0245	0.0186
	TOC ❶	Metric tons	148	318	457
	Discharge intensity	kg / KRW 1M	0.0086	0.0132	0.0179
	SS	Metric tons	319	255	240
	Discharge intensity	kg / KRW 1M	0.0185	0.0106	0.0094
	T-N	Metric tons	252	273	211
	Discharge intensity	kg / KRW 1M	0.0147	0.0113	0.0083
	T-P	Metric tons	31	25	34
	Discharge intensity	kg / KRW 1M	0.0018	0.0010	0.0013

❶ Reflects the gradual transition of reporting metrics from COD to TOC, in accordance with the Korean Water Environment Conservation Act.

Air Pollution Management		Unit	2020	2021	2022
Air Pollutant Emissions	Dust	Metric tons	122	167	183
	Emission intensity	kg / KRW 1M	0.0071	0.0069	0.0072
	NOx	Metric tons	867	4,134	3,823
	Emission intensity	kg / KRW 1M	0.0504	0.1718	0.1503
	SOx	Metric tons	141	184	240
	Emission intensity	kg / KRW 1M	0.0082	0.0076	0.0094
	VOCs	Metric tons	577	956	1,206
	Emission intensity	kg / KRW 1M	0.0335	0.0397	0.0474
	HAPs	Metric tons	241	273	298
	Emission intensity	kg / KRW 1M	0.0140	0.0113	0.0117

Waste Management		Unit	2020	2021	2022
Waste Generated	Total	Metric tons	230,942	278,345	279,585
	Waste intensity	Metric tons / KRW 1M	0.0134	0.0116	0.0110
Nonhazardous Waste	Total	Metric tons	110,922	153,981	150,922
	Recycling	Metric tons	74,724	108,145	111,612
	Incineration (w/ heat recovery)	Metric tons	11,894	22,682	23,149
	Incineration	Metric tons	16,018	12,359	6,177
	Landfill	Metric tons	8,286	10,795	9,984
	Other	Metric tons	-	-	-
Hazardous Waste	Total	Metric tons	120,020	124,364	128,663
	Recycling	Metric tons	49,919	53,961	60,374
	Incineration (w/ heat recovery)	Metric tons	46,478	53,407	54,361
	Incineration	Metric tons	22,652	15,501	12,862
	Landfill	Metric tons	972	1,495	1,066
	Other	Metric tons	-	-	-
Waste Recycling Rate	incl. Incineration (w/ heat recovery)	%	79	86	89
	excl. Incineration (w/ heat recovery)	%	54	58	62
Zero Waste to Landfill (ZWTL) designations ❶		Site	-	-	3

❶ Naju and Iksan (cathode materials) in Korea, Quzhou in China.

Hazardous Substances Management ❶	Unit	2020	2021	2022
Percentage of products containing REACH ❷ Annex 17 substances	%	29.80	16.10	9.69
Percentage of products containing REACH SVHCs ❸ substances	%	2.39	1.57	2.47
Percentage of products containing CMR ❹ substances	%	5.99	2.71	4.65
Hazardous chemicals risk assessment ❺	%	13.59	25.09	26.33

❶ Calculated the percentage of the number of products containing each substance to the number of products sold per year.
❷ The EU's system of Registration, Evaluation, Authorization and Restriction of Chemicals.
❸ Substances of Very High Concern; highly hazardous substances listed in Annex XIV of the EU's REACH regulations.
❹ Carcinogenic, Mutagenic and Reprotoxic chemicals.
❺ Percentage of substances completed/exempt from substance registration among the constituent substances of the sold product.

Reused/Recycled Materials	Unit	2020	2021	2022
Percentage of reused/recycled materials ❶ input	%	1.30	1.44	1.68

❶ The amount of Post-Consumer Recycled Polycarbonate (PCR PC) input relative to the total PC input has been used to calculate the percentage of reused/recycled materials input.

Employee and Process EH&S		Unit	2020	2021	2022 ❶
Employees	Fatality Rate ❷	Rate	0.0115	0.0056	-
	TRIR ❸	Rate	0.6506	0.7642	0.6079
	LTIR ❹	Rate	0.2476	0.2454	0.0968
Subcontractors	Fatality Rate	Rate	0.0051	-	0.0104
	TRIR	Rate	0.3345	0.5078	1.1025
	LTIR	Rate	0.1774	0.2132	0.3640
Process Safety ❺	PSE ❻	Case	5	-	1
	PSER ❼	Rate	0.0135	-	0.0035
Transport Incidents	Road	Case	1	1	1
	Rail	Case	-	-	-
	Ship	Case	1	-	-

❶ The accident rate is calculated by applying actual hours worked from 2022 onward.
❷ Fatality Rate: Total number of fatality cases * 200,000 / total hours worked
❸ Total Recordable Incident Rate: Total number of recordable incidents * 200,000 / total hours worked
❹ Lost Time Incident Rate: Total number of lost time incidents * 200,000 / total hours worked
❺ Process safety events are calculated based on the standards set in the Accident Index, which includes injuries, fires, leakages, amount of loss, etc.
❻ Process Safety Events
❼ Process Safety Event Rate: Number of process safety events * 200,000 / total hours worked

Diversity, Equity & Inclusion		Unit	2020	2021	2022
No. of Employees ❶ by Region	Total	Person	18,244	18,792	19,627
	Korea	Person	12,552	13,906	14,572
	China	Person	4,394	3,564	3,705
	Asia-Pacific (excl. China)	Person	706	627	578
	Europe	Person	318	419	471
	Americas	Person	274	276	301
No. of Executives ❷	Total	Person	110	110	113
	Male	Person	104	101	103
	Female	Person	6	9	10
No. of Employees by Employment Contract (Korea)	Non-fixed term	Person	12,402	13,652	14,249
	Fixed-term	Person	150	254	323
No. of Employees by Gender (Korea)	Male	Person	10,826	11,946	12,356
	Female	Person	1,726	1,960	2,216
	Ratio of female employees (non-fixed term)	%	14	14	15
	Ratio of female employees (incl. fixed-term)	%	14	14	15
No. of Employees by Age (Korea, non-fixed term employees)	Under 30	Person	2,375	2,441	2,508
	30 to 49	Person	7,718	8,655	9,110
	50 or above	Person	2,309	2,556	2,631
No. of Leaders in Revenue Generating Positions (Korea)	Male Leaders ❸	Person	699	833	910
	Female Leaders	Person	65	81	96
	Ratio of Female Leaders	%	9	9	10
No. of Employees R&D Positions (Korea, non-fixed term)	Male	Person	1,704	1,821	2,004
	Female	Person	800	855	962
	Ratio of Female	%	32	32	32
Social Minorities	Persons with disabilities ❹	Person	330	252	250
	National veterans	Person	276	270	286
Gender Pay Gap ❺	Non-management level (base salary)	%	76	77	80
	Management ❻ level (base salary)	%	93	94	94
	Management level (base salary + cash incentives)	%	94	94	94
	Executive level (base salary)	%	90	93	86
Parental Leave	Total number of employees due to return to work after taking parental leave	Person	101	129	157
	Male	Person	22	46	60
	Female	Person	79	83	97
	Total number of employees that did return to work after parental leave	Person	101	129	157
	Male	Person	22	46	60
	Female	Person	79	83	97

❶ Calculated based on the number of employees at the end of the fourth quarter of each year.
❷ Refers to executive officers and registered directors at the vice president level and above.
❸ Refers to employees at the positions of team leader and above, excluding executives.
❹ Figures represent the number of employees reported to the Korea Employment Agency for Persons with Disabilities. Figures of 2020 are before the spin-off of LG Energy Solution.
❺ Ratio of average female to male compensation, calculated by dividing the average compensation of all women in a position by the average compensation of all men in the same position. There are no distinctions based on gender, while factors such as years of service contribute to the pay gap.
❻ Refers to employees at the level of professionals/senior managers or above, excluding executives.

Employee Hires		Unit	2020	2021	2022
New Employee Hires	Total	Person	1,166	3,140	2,651
	Korea	Person	402	1,560	1,431
	excl. Korea	Person	764	1,580	1,220
by Employment Contract (Korea)	Non-fixed term	Person	319	1,330	1,261
	Fixed-term	Person	83	230	170
by Gender (Korea)	Male	Person	320	1,255	1,070
	Female	Person	82	305	361
by Age (Korea)	Under 30	Person	187	759	849
	30 to 49	Person	144	635	469
	50 or above	Person	71	166	113

Employee Turnover		Unit	2020	2021	2022
No. of Voluntary Turnover (Korea)	Total	Person	270	306	344
by Gender (Korea)	Male	Person	239	245	257
	Female	Person	31	61	87
by Age (Korea)	Under 30	Person	107	133	161
	30 to 49	Person	152	158	173
	50 or above	Person	11	15	10

Training and Development		Unit	2020	2021	2022
Training Hours (Korea, non-fixed term employees)	Total	Hour	425,420	567,604	506,803
	Male	Hour	362,611	449,714	412,266
	Female	Hour	62,809	117,890	94,537
	Average training hours per employee	Hour / Person	34.3	41.6	35.6
Mandatory Training Hours (Korea)	Total	Hour	77,558	69,170	95,990
	Male	Hour	73,304	57,675	86,004
	Female	Hour	4,254	11,496	9,986
Training Cost (Korea)	Total	KRW 10K	1,253,990	1,564,100	2,139,966
	Average training cost per employee	KRW 10K / Person	101	115	150

Labor and Human Rights		Unit	2020	2021	2022
Labor Union (Korea)	No. of employees eligible to join	Person	6,745	7,337	7,447
	No. of employees participating	Person	5,075	5,436	5,410
	Percentage of employees participating	%	75	74	73
Percentage of Employees Covered by Collective Agreements (Korea)		%	100	100	100

Supply Chain Management		Unit	2020	2021	2022
No. of Suppliers	Total no. of suppliers ❶	#	1,252	1,262	1,433
	Total no. of key suppliers ❷	#	216	240	178
ESG Self-Assessment	No. of suppliers that completed self-assessment	#	163	232	762
	No. of key suppliers that completed self-assessment	#	46	53	77
On-site ESG Audit	No. of high-risk suppliers ❸ subject to on-site audit	#	39	42	169
	No. of high-risk suppliers that completed on-site audit	#	-	-	17
	No. of high-risk key suppliers subject to on-site audit	#	11	-	1
	No. of high-risk key suppliers that completed on-site audit	#	-	-	-

❶ Suppliers refer to domestic and overseas suppliers with records of annual purchase amount of KRW 100M or more and 3 or more POs issued.
❷ Key suppliers refer to suppliers in the top 90% of purchase amounts, including companies of all sizes.
❸ High-risk suppliers refer to suppliers who fall under high risk rating as a result of self-assessment, or fall into the high-risk group due to a score below the standard, findings of critical non-conformance items, and etc.

Local Communities and Social Contributions		Unit	2020	2021	2022
Social Contributions	Total	KRW 100M	15,132	16,194	21,725
	Charitable donations	KRW 100M	13,288	15,216	21,072
	Community investments	KRW 100M	1,314	496	540
	Commercial initiatives	KRW 100M	531	482	113
Employee Volunteer Hours		Hour	4,879	4,965	3,371

Ethics, Anti-Corruption, and Fair Trade		Unit	2020	2021	2022
Corruption	No. of investigated cases	Case	5	7	14
	No. of handled cases	Case	2	3	4
Unfair Trade Practices	No. of legal investigations	Case	1	-	-
	No. of legal actions	Case	-	-	-
Ethics Training	No. of employees participating in Jeong-Do management ❶ training	Person	12,511	13,431	15,159
	No. of employees participating in fair trade ❷ training	Person	14,444	14,413	15,191

❶ Includes content on Jeong-Do management and the Code of Ethics.
❷ Includes content on subcontractors and compliance.

Information Security and Cybersecurity		Unit	2020	2021	2022
Information Security Training		Site	4	4	16
Information Security Training	Awareness activities	#	12	12	12
	Average training hours per employee	Min	30	30	30

Public Policy and Regulation	Unit	2020	2021	2022
Contributions to Trade Associations ❶	KRW 1M	2,091	2,223	2,497
Contributions to Political Campaigns ❷	KRW 1M	-	-	-

❶ Contributions have been made to the following top 5 organizations in 2022:
— World Economic Forum (WEF) : 431,259,000 (KRW)
— Korea Association of Business Executives : 331,082,000 (KRW)
— PC/BPA Council : 291,471,000 (KRW)
— Korea Petrochemical Association : 206,088,000 (KRW)
— Korea Vinyl Environmental Council : 202,500,000 (KRW)
❷ The Political Funds Act prohibits companies to sponsor political organizations.

Tax Strategies		Unit	2020	2021	2022
Total Reported Taxes ❶	Total	KRW 1M	367,839	1,235,790	641,482
	Korea	KRW 1M	692,538	672,683	747,539
	Asia (excl. Korea)	KRW 1M	290,065	565,833	389,245
	Europe	KRW 1M	6,800	- 61,505	186,016
	Americas	KRW 1M	53,112	2,421	4,141
	Others	KRW 1M	141	39	247
	Consolidated Adjustments	KRW 1M	- 674,817	56,319	- 685,706
Cash Payment on Corporate Tax		KRW 1M	513,128	1,281,796	1,707,449

❶ Based on consolidated financial statements from 2022.

Customer Satisfaction		Unit	2020	2021	2022
Customer Satisfaction Survey	Scope ❶	%	100	100	100
	Score	Score	80	79	84

❶ Refers to the percentage of business units that have conducted customer satisfaction surveys. Since 2020, the Customer Value Innovation Team has been conducting customer satisfaction surveys for customers across all business units.

Other Economic Performances		Unit	2020	2021	2022
Revenues	Total revenue	KRW 1M	29,984,350	42,599,284	51,864,888
	Petrochemicals	KRW 1M	14,015,584	20,175,492	21,151,355
	Advanced Materials	KRW 1M	2,547,495	3,202,981	3,435,076
	Life Sciences	KRW 1M	658,277	690,346	849,289
	LG Energy Solution	KRW 1M	12,363,524	17,803,863	25,586,365
	Common and others	KRW 1M	399,470	726,602	842,803
Revenue excluding LG Energy Solution, and Common and others ❷		KRW 1M	17,221,356	24,068,819	25,435,720
R&D Expenses	Total	KRW 1M	719,339	710,071	869,634
	Sustainability technology/product development ❸	KRW 1M	34,368	90,250	134,604

❶ Based on consolidated financial statements of FY 2022.
❷ Represents simple deductions of revenues of LG Energy Solution and Common and others from total, this figure has been used to calculate intensity of environmental performance data; Common and others include revenues of FarmHannong. For details, please refer to the notes to the consolidated financial statements.
❸ Includes expenses for projects in the areas of bio materials, recycling, and carbon neutrality.


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GRI INDEX

GRI INDEX

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GRI 417	417-1	Requirements for product and service information and labeling	-	Company website
GRI 417	417-2	Incidents of non-compliance concerning product and service information and labeling	-	Business Report-XI-3.
GRI 417	417-3	Incidents of non-compliance concerning marketing communications	-	Business Report-XI-3.

SASB INDEX

SASB INDEX

Topic	Code	Accounting Metric	Disclosures
Greenhouse Gas Emissions	RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	5,489,590 tCO_2e, 97% (emissions in Korea subject to K-ETS relative to global Scope 1 emissions)
	RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	LG Chem promotes direct reduction investments by taking into account the emission characteristics of each process. Upstream carbon emissions will be reduced by introducing mid- to long-term innovative technologies such as CCUS (Carbon Capture Utilization and Storage) and electrolytic furnaces at NCC (Naphtha Cracking Center) plants, while downstream carbon emissions will be reduced by managing energy demand, via switching to low-carbon fuels, introducing high-efficiency equipment, and recovering and utilizing unused energy.
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NO_X (excluding N_2O), (2) SO_X, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	(1) 3,823 tons (2) 240 tons (3) 1,206 tons (4) 298 tons
Energy Management	RT-CH-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	(1) 151,401 TJ (2) Domestic 13%, Overseas 59% (3) Domestic 1.7%, Overseas 44% (4) 1,470 GWh
Water Management	RT-CH-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	(1) 74,772,006 m^3, 6% (Percentage of water withdrawn from regions with water stress) (2) 53,581,878 m^3, 5% (Percentage of water consumption from regions with water stress)
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	4 incidents
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	As problems of water scarcity intensify throughout the world, so does the need for intelligent water management. We manage water use at our business sites every step of the way, from water withdrawal through the manufacturing stage, which includes raw material processing and cooling, to the discharge of properly treated wastewater. In particular, we aim to identify and minimize the amount of water withdrawal and consumption in water-stressed areas.
Hazardous Waste Management	RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	(1) 128,663 tons (2) 89% (incl. incineration w/ heat recovery) 62% (excl. incineration w/ heat recovery)
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	We aim to build close relationships with local communities by thoroughly managing the environment and safety around our business sites, providing employment and development opportunities to local communities, and running partnership programs. We also engage a wide range of stakeholders through employee volunteer works and community partnership programs.
Workforce Health & Safety	RT-CH-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	(1) (a) 0.6079 (b) 1.1025 (2) (a) 0 (b) 0.0104
	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	LG Chem makes environment, health, and safety its top management priorities and core tasks, and has established corporate-wide environmental and safety regulations and guidelines.
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	19% (Excluding revenues from LG Energy Solution)
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	(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, (2) percentage of such products that have undergone a hazard assessment	(1) 33.93 % (2) 82.38 %
	RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	(1) In accordance with our product environmental management guidelines, we rigorously identify substances requiring supervision from the raw material stage on. Hazardous substances are categorized as one of three types depending on their risk level, and we have an operational system to ensure that all such materials can be purchased only after confirming the details of their respective management requirements. We also observe the percentage of products containing restricted substances (Annex 17), SVHC substances, and CMR substances under REACH, and proactively check for hazardous risks. (2) By integrating information of product ingredients into a Bill of Substance (BoS) management system, we are constantly monitoring whether and how many hazardous substances are contained in the products we produce and sell. We are stepping up our efforts to reduce the harmful substances contained in our products, and we have also introduced a process to identify product toxicity as one of the Sustainable Value criteria for classifying products with distinguished social and environmental values in terms of sustainability from the product design stage.

Topic	Code	Accounting Metric	Disclosures
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	N/A
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	We are constantly seeking out public-private partnerships by identifying policy issues and regulations that may affect our business and pursuing government proposals. We participate in policy-making through our local public affairs networks at home and overseas, and continuously monitor new legislation and policies that may affect our global business. We also belong to domestic and overseas industry associations that represent our business areas, through which we convey industry opinions, and collaborate with various stakeholders by engaging in professional networking activities like external seminars, forums, and conferences. We secure incentives in connection with major investments, maintain and identify quota tariffs, and conduct policy support activities related to growth engines.
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Number of Process Safety Events (PSEs) : 1 Process Safety Event Rate (PSER) : 0.0035
	RT-CH-540a.2	Number of transport incidents	1

TCFD INDEX

TCFD INDEX

Recommendations	Disclosures
Governance	
a. Describe the board's oversight of climate-related risks and opportunities.	In April 2021, LG Chem established the ESG Committee to integrate into all of its practices the concept of sustainability, which encompasses both financial (growth) and non-financial (ESG) aspects, as a core value for growth. In line with our Diversity Principle, more than two thirds of the committee is comprised of independent directors that neither have common backgrounds, nor represent specific interests. As of 2022, the chairperson of LG Chem's ESG Committee is an independent director, and the company is working to achieve greater sustainability and diversity by appointing two new female independent directors. To solidify the ESG management system, the Committee meets twice a year (once each in the first and second halves) to solicit sustainability-related opinions, and report on and resolve major ESG issues. The committee discusses the company's fundamental sustainability policies, mid- to long-term goals, and ESG management strategies. The committee also checks the performance of its activities for the Net-Zero goal, which it reports regularly to the BOD. Recognizing the growing importance of ESG management and compliance on the global stage, LG Chem has decided to bolster the compliance review function of the BOD through the ESG Committee.
b. Describe management's role in assessing and managing climate-related risks and opportunities.	LG Chem's management established the Chief Sustainability Strategy Officer (CSSO) in 2021 to reinforce a systematic and professional approach to achieving sustainability. As the control tower on corporate-wide sustainability issues, the CSSO is responsible for accelerating sustainable management practices, actively communicating with stakeholders, and creating viable solutions grounded in science and technology. The CSSO monitors carbon reduction implementation results and performance of key sustainability indicators at least semi-annually, and reports them to the CEO. In addition, the CSSO leads the establishment and implementation of the corporate-wide sustainability management strategy by specifying the course of low-carbon business transformation measures and R&D by business division.
Strategy	
a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	LG Chem proactively identifies and assesses the actual and potential impacts of climate change across the entire value chain. In the short-term, we recognize carbon emission regulations, extreme weather events, and changing consumer perceptions as risk factors. The uncertainty of domestic emission allowance allocations and the intensification of regulations around the world are both major transition risks with potential financial impacts, while the growing frequency and intensity of extreme weather events is a major physical risk that may affect business operations like raw material procurement and production. Potential mid- to long-term risks include rising temperatures, and increased internal operating costs due to our efforts to reduce GHG emissions in and around our business sites. Nevertheless, we also believe that greater customer demand for low-carbon products is a powerful opportunity, and are reorganizing our business portfolio around sustainability.
b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	LG Chem introduced an internal carbon price (ICP) to proactively identify financial risks arising from future carbon emissions and accelerate the transition to a low-carbon management system. ICP is mainly used for mid- to long-term business planning and investment review. We are actively incentivizing carbon reduction activities and investments by applying a carbon price that exceeds the current price of emission allowances in our mid- to long-term business planning, and accounting for regulatory costs associated with carbon emissions in our investment economic analysis. In doing so, we are proactively responding to the uncertainty with allocations of domestic emissions allowances, and the trend toward stricter carbon-related regulations on a global scale.
c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	To keep pace with sustainable growth as a Top Global Sciecne Company, LG Chem has set a goal of Net-Zero by 2050. To achieve this, we have established an internal carbon reduction roadmap, starting with BAU refinement work, and have materialized action plans. We have also joined the Science-Based Targets initiative (SBTi) to demonstrate our leadership and commitment to carbon neutrality, and are working to establish emission reduction targets based on the 1.5°C pathway.

Recommendations	Disclosures
Risk Management	
a. Describe the organization's processes for identifying and assessing climate-related risks.	LG Chem identifies risks and opportunities centered on five key sustainability tasks: climate action, renewable energy transition, circular economy, environmental protection, and responsible supply chain. We conduct simulations of the financial impacts of changes in the external policy and regulatory environment (e.g. the adjustment of emission quotas, the introduction of carbon border taxes), and review data trends in indicators like GHG emissions and energy consumption, on a regular basis.
b. Describe the organization's processes for managing climate-related risks.	LG Chem is the first Korean company in the industry to establish an integrated carbon management system, the Net-Zero Management System (NZMS). We use NZMS as an important tool for business decision-making, comparing and reviewing the economic feasibility of investments for each carbon reduction task, and conducting simulations considering changes in the external environment (e.g. in the price of carbon credits). We also regularly report these issues to the BOD to strengthen corporate governance and develop board-centered responsible management practices that allow for a robust response to climate change.
c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	LG Chem has established a corporate-wide organic structure of cooperation to accelerate sustainability and push for efficient implementation. We operate a dedicated sustainability organization under the CSSO to analyze domestic and global legislative and regulatory trends, as well as changing global megatrends and stakeholder requirements, and thereby identify areas of improvement and check the status of ESG projects for each department within the organization. Major sustainability issues like climate change are discussed at management meetings involving the C-Level (monthly) and the ESG Committee meetings with the BOD (bi-annually), and integrated into the corporate-wide compliance, risk identification, inspection, and evaluation processes in line with the strengthening of ESG regulations.
Metrics and Targets	
a. Disclose the metrics used by the organization to assess climaterelated risks and opportunities in line with its strategy and risk management process.	In 2019, LG Chem established a sustainability vision and strategy centered on nine core areas. In 2020, we declared our mid- to long-term goals, which centered on five key sustainability tasks, including carbon-neutral growth. In 2021, to invigorate communications with various stakeholders and strengthen competitiveness, LG Chem selected 20 key indicators to prioritize in terms of environmental, social, governance, and growth, based on the concept of stakeholder capitalism as proposed by the World Economic Forum (WEF), and we are staying abreast of global megatrends and stakeholder demands as they evolve year to year.
b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Scope 1: 5,638,675 tCO_2e Scope 2: 4,404,614 tCO_2e Scope 3: 1,213,600 tCO_2e
c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	In February 2022, LG Chem advanced its carbon-neutral growth goal by 20 years and announced a new target of "2030 Carbon-neutral Growth" and "2050 Net-Zero" for Scope 1 and 2 emissions. To achieve this new goal, LG Chem is actively promoting new processes like switching to eco-friendly raw materials and fuels, and expanding the use of renewable energy. To enhance the low-carbon competitiveness of our products, we are establishing a management system for the voluntary area of emissions reporting (Scope 3) beyond the regulated areas (Scope 1 and 2).

ASSURANCE STATEMENT

LRQA INDEPENDENT ASSURANCE STATEMENT

Relating to LG Chem, Ltd.'s Sustainability Report for the calendar year 2022

This Assurance Statement has been prepared for LG Chem, Ltd. in accordance with our contract but is intended for the readers of this Report.

Terms of Engagement

LRQA was commissioned by LG Chem, Ltd. (LG Chem) to provide independent assurance on its 'LG Chem Sustainability Report 2022' ("the report") against LG Chem's data management procedure to a "limited level of assurance and materiality of professional judgement" using ISAE 3000 and ISAE 3410.

Our assurance engagement covered evaluating the accuracy and reliability of ESG performance data and information on pages 158-167 in the report relating to LG Chem's operations and activities in domestic and overseas sites[1] from 1 January 2022 to 31 December 2022.

Our assurance engagement excluded the data and information of LG Chem's suppliers, contractors and any third parties mentioned in the report.

LRQA's responsibility is only to LG Chem. LRQA disclaims any liability or responsibility to others as explained in the end footnote. LG Chem's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of LG Chem.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that LG Chem has not, in all material respects, disclosed accurate and reliable performance data and information as all errors identified during the assurance engagement were corrected.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Auditing LG Chem's data management systems to confirm that there were no significant errors, omissions or mis- statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification. We also spoke with those key people responsible for compiling the data and drafting the report.
- Checking whether direct (Scope 1) and indirect (Scope 2) GHG emissions, and energy consumptions in domestic sites were transposed correctly from the GHG inventory which was verified by the third-party assurance provider.
- Verifying other indirect GHG emissions (Scope 3) based on GHG Protocol - Corporate Value Chain (Scope 3) Accounting and Reporting Standard
- Checking whether financial data were transposed correctly from the financial statements.
- Reviewing additional evidence made available by LG Chem at its head office in Seoul.

LRQA's standards, competence and independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is LG Chem's certification body for ISO 9001 and ISO 14001. We also provide LG Chem with a range of training services related to management systems. The verification and certification assessments, together with the training, are the only work undertaken by LRQA for LG Chem and as such does not compromise our independence or impartiality.

Dated: 29 June 2023

Tae-Kyoung Kim
LRQA Lead Verifier
On behalf of LRQA
2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea
LRQA reference: SEO00000269

[1] Our engagement excluded verification of direct and indirect GHG emissions, and energy consumptions of overseas sites.

We value your feedback. We welcome any questions, comments or suggestions you may have regarding this report and our performance.

Please contact
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Email: sustain@lgchem.com

Related Information
Annual Business Report
Corporate Governance Report
LG Code of Ethics
Compliance Guideline
Responsible Sourcing Policy
Supplier Code of Conduct
Global Human Rights and Labor Policy
Social Partnerships
LETZero Product Book