

2023 LG H&H TCFD Report

Task Force on Climate-related Financial Disclosures

About This Report

Report Overview

Since 2021 LG H&H has been releasing the TCFD Report to communicate its climate-related strategy and performance to its stakeholders. This report aims to transparently share the impact of climate change on our business and financial stability, as well as our endeavors to mitigate climate-related risks and maximize opportunities.

Report Scope and Period

This report encompasses the climate change response activities and accomplishments of all LG H&H's domestic business sites, including LG H&H, Coca-Cola Beverage, and Haitai htb. The reporting period spans from January 1 to December 31, 2023.

Report Standard

This report has been prepared in accordance with the recommendations set forth by the TCFD(Task Force on Climate-related Financial Disclosures).

Report Assurance

The credibility of greenhouse gas emissions data and their calculation procedures presented in this report have been confirmed from Korean Foundation for Quality and Korea Productivity Center, independent third-party assurance agencies specializing in verification.

Changes

Certain environmental data in this report has been revised due to the recalculation of greenhouse gas emissions, energy usage, and waste discharge in 2023.

Directory for Inquiries

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Introduction

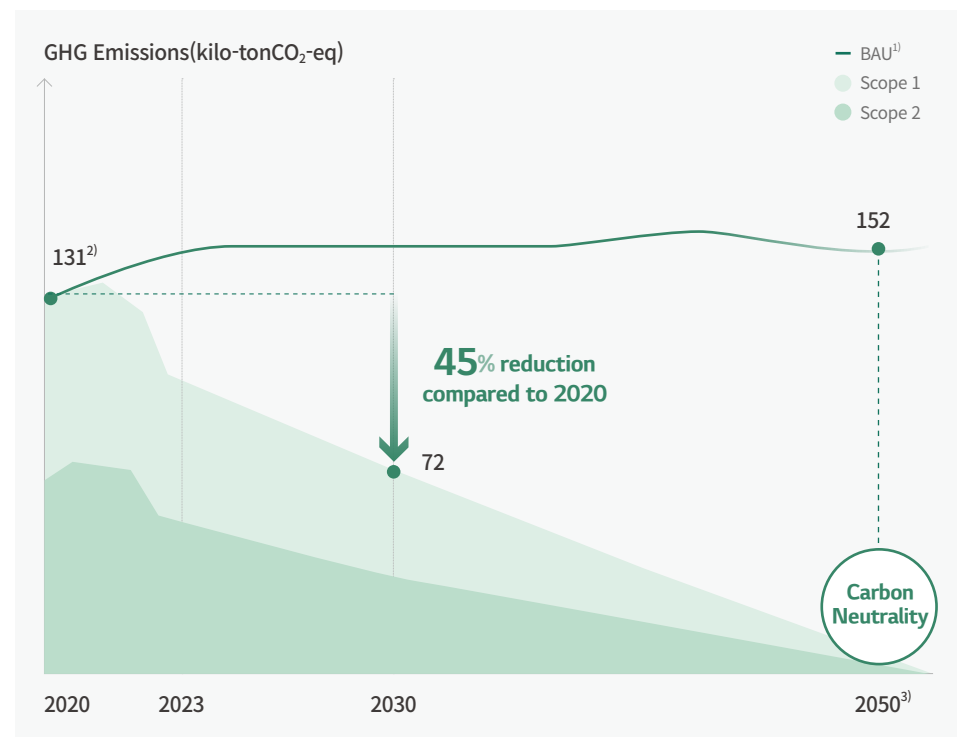
LG H&H's 2050 Carbon Neutrality Target and Vision

As a major challenge for sustainable development, LG H&H declared '2050 Carbon Neutrality' target in 2022 to minimize its environmental impact and align with the Paris Agreement and IPCC recommendations. By taking a part of the global efforts to limit the global warming by 1.5°C, LG H&H made an interim goal for reducing its Scope 1 and 2 emissions by 45% compared to 2020 in consideration of the Carbon Disclosure Project(CDP) and Science Based Targets initiative(SBTi) and started to implement the greenhouse gas(GHG) emissions reduction tasks in step by step to achieve this goal.

Our efforts to respond to climate change is spreading out beyond our own operations to our entire supply chain. To support the shared growth of suppliers, we have established GHG inventories for 13 suppliers in 2022 and 40 suppliers in 2023, calculated and verified their emissions, and trained their workers for climate change responses. Moreover, in 2023, we have provided consulting for energy-saving for 4 of them to identify ways to reduce 6.4%(2,176 tCO₂) of the suppliers' emissions, and we will continue to expand this service to reduce the suppliers' emissions and LG H&H Scope 3 emissions.

In addition to our response to climate change, we continue our efforts to expand the range of products that use recycled raw materials to promote circular economy. LG H&H is the first company in the domestic industry to develop a recycled sterilization pack packaging; we obtained a low-carbon certification for body lotion products by using of 98.5% of recycled PETs; and we won the Minister of Environment Award at the Green Packaging Competition for the cosmetic containers made of 100% waste plastic pyrolysis oil.

LG H&H recognizes our response to climate change not only a part of corporate operations but a key portion in our corporate culture and mission; by practicing "For Health Products, For the Beautiful Planet, For Refreshing Society," we aim to fulfill our responsibilities as true heirs to pass down a beautiful and healthy planet to our future generations.



1) BAU(Business As Usual) : the projection for GHG emissions for the future, assuming that current conditions are maintained without further reduction efforts
 2) The scope of the baseline year emissions is same as the scope of this report(the 3 major business units)
 3) The approval of the reduction target by SBTi is under internal review

Introduction

Key climate response actions and achievement in 2023-2024

External ratings on sustainability and climate change response

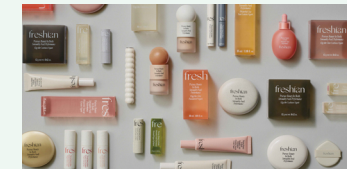


Member of
Dow Jones Sustainability Indices
Powered by the S&P Global CSA



- Dow Jones Sustainability Index, 'DJSI World' for 6 consecutive years
- CDP(Carbon Disclosure Project) Climate Change 'A-', Water Security 'B'
- MSCI ESG Ratings 'A'
- EcoVadis Sustainability Rating 'Gold'

Awards



- Grand Prize from the 13th Green Packaging Contest¹⁾
 - Awarded brand : a clean beauty brand, Beyond²⁾
 - Awarding body : Korea Environmental Packaging Promotion Agency
 - Main Award from Japan's Good Design Awards
 - Awarded brand : a vegan brand, 'Freshian'
 - Awarding body : Japan Industrial Design Promotion Association
- 1) Environment Minister's Award
2) 100% waste plastic pyrolysis oil container

Sustainability initiatives and agreements



- Continued PACT(Plastic Action) to reduce plastic waste with WWF Korea
- Made the business agreement with Korea Packaging Recycling Cooperative to enhance circular economy
 - 1) Business agreement for 'Expansion of ESG management and environmentally-friendly packaging'
 - through cooperation with the distribution industry, established a value chain for sustainable packaging
 - 2) Business agreement for 'Building a circular economy system through recycling sterilization pack

GHG management



- Accumulated investment of 3.1 billion won in promoting carbon neutrality tasks
 - Established GHG inventories and energy management system for domestic and overseas operations
 - Third-party verification of all domestic and overseas operations
 - Switched some of the company vehicles to electric vehicles and continued to install charging stations at operations and warehouse sites
 - Established the GHG inventories for 53 suppliers³⁾ in total and issued a guideline for carbon neutrality for suppliers
- 3) 13 suppliers in 2022 and 40 suppliers in 2023

Introduction



More products with enhanced circularity



- Bottle-to-bottle¹⁾ for 1.25L Coca-Cola
 - 10% recycled plastic and reduced the bottle weight by 5g(the highest usage of recycled PET among the domestic beverage companies)
 - Reduced PET usage by 534 tons(224 tons for using recycled plastics and 310 tons for weight reduction)
- 1) A circular recycling process of transforming used PET bottles into new transparent PET bottles through steps including cleaning and milling.



- Korea's first body product to obtain low carbon certification and ecolabel
 - The container material is changed to recycled PET to reduce carbon emissions generated during product manufacturing
 - Applied products : Beyond Deep Moisture(body emulsion and body wash, 300ml and 500ml each)



- Refill product pouch with single material
 - To improve the ease of recycling of the pouch, a single material²⁾ pouch is developed
 - Applied product : Safe Dish Soap Refill 1 L
- 2) Polyethylene(PE)



- Packaging material made of upcycled paper from waste clothing and pasteurization pack
 - 1) Waste clothing : collaborated with domestic paper companies to apply paper using materials that are difficult to recycle to product packages
 - Applied products: packaging of Ohui Ultimate Fit Jean Cushion
 - 2) Waste sterilization pack : made a business agreement for material circulation with KPRC and paper companies to enhance recycle ratio
 - Applied products : packaging for set box for Fu, Sum, Belief, etc.(paper containing materials extracted from pasteurization pack is used)



- Label removal for Pyeongchang Water 500ml to reduce waste(best grade for recycling)
- Reduced the bottle weight for Georgia 370/470 ml and Seagram 350ml by 4g and 7.6g each, resulting in the total plastic usage by 220 tons and 292 tons each



- A vegan certified product newly launched with more than 90% of nature-derived raw materials (ISO 16128)
 - Upcycled ingredients extracted from ugly crops and by-products are applied as cosmetic raw materials
 - Applied product : Ugly Lovely



- Applied a low specific gravity label with a specific gravity less than 1 that can be easily separated from PET with a specific gravity greater than 1 during the recycling process
 - Applied products : Jayeonpong Spray Dish Soap 750ml, Method Citric Acid Bathroom Cleaner 500ml, Toretta 500ml, Toretta Zero 500ml

Introduction

Sponsorship



- 
 - Sponsored the United Nations Youth Environmental Conference
 - The nation's only youth environmental convention
 - For sustainable cities amid the climate crisis, global future generations experience simulated UN meetings to derive practical alternatives to solve urban waste and energy problems
 - More than 300 people in youth from 12 countries participated in the general meeting on the agenda of "Climate Crisis and Cities."
- Sponsored the Seoul International Environmental Film Festival
 - Asia's largest environmental film festival, hosted by the Environmental Foundation
 - One of the world's top three environmental film festivals delivering awareness about the climate crisis and the importance of a sustainable future through various films on the theme of the climate and the environment
 - At the 20th Seoul International Film Festival, 2,833 films were submitted from 126 countries and 87 environmental films were screened



Conservation of biodiversity and forests



- 
 - With Ulsan-si Ulju-gun, Ulsan Buk-gu Office, and Forest of Life Environment NGO, created a park for urban ecosystem restoration
 - Created a park for birds(1,400 trees were planted) and cultivated 'citizen scientists' and 'forest commentators'
- Protecting endangered species 'Hangang Otters'
 - Protecting natural ecosystems and preserving biodiversity by protecting Hangang and major streams, which are habitats of otters, a first-class endangered wildlife and natural monument No. 330



Community engagement



- Launched 'The Earth World We Borrow in Metaverse,' to spread the eco-friendly world view of responding to climate change
 - In the metaverse, awareness of good environmental habits is spread through the "Escape the Climate Crisis" game in 7 global cities
 - About 6,000 middle school students nationwide were educated through the program
- Global eco-leader YOUTH(Green Value YOUTH)
 - It fosters more than 100 young climate activists domestic and abroad and conducts programs to seek solutions to carbon reduction in local communities
 - A campaign to establish an ordinance to support the collection of agricultural waste in Chuncheon, Gangwon-do(Gangwon National University)
 - Pilot installation of plastic bottle cover collection box in campus and upcycling activities(Yonsei University)
- The 2nd Mangsang Beach Beachcombing(coastal purification) Campaign is held in Donghae City with young climate and environmental activists
 - Collecting coastal waste in amount equal to 59 30-liter-waste bags with our employees and people from Wonju Regional Environmental Office, Donghae City Hall, etc.
- ESG Awards for suppliers
 - Promoting best practices in responding to climate change and risk management activities, including product development considering carbon reduction and resource circulation, and awarding seven suppliers

Conservation of biodiversity



- 

Category	Content	2023	2024
Ulleungdo	contracted cultivation area	3,300square meters	6,600square meters
	plant species	9species	15species
Cheongju garden	plant species secured	295species	330species
		30,000plants	32,000 plants

 - Development of native plant resources
 - Signed contracts with local farmers in Ulleungdo and Sejong City to grow a total of 11 species* of native plants
 - The development of native plant resources contributes to the creation of a sustainable community, the increase of farm household income through contract cultivation with local farms, the creation of social values such as restoration of ecosystem functions, and securing product competitiveness
 - Launched the Beyond Phytoaqua line launched(with ingredients from gold Buddhas and woolly Buddha flowers grown in Ulleungdo)
 - Expanded the contracted arm area in Ulleungdo and increased the number of plant species both in Ulleungdo andCheongju Garden
 - * Jeonho, mulberry, Ulleung seaweed, woolly Buddha flowers, gold bulbul candles, purple spots, raw quail, thorns, scabby flowers, cornelian cherry, and Vietnamese balm

Governance

Board’s oversight of climate-related issues

LG H&H has a governance structure centered on the board of directors and pursues responsible management. The board of directors consists of two executive directors, one non-executive director, and four independent directors. For transparency and independence of the board, the positions of the CEO and the chairman of the board of directors are separated. The board of directors is responsible for making final decisions on overall management issues of the company. Within the board of directors, there are four committees: the Audit Committee, the Internal Transactions Committee, the Nomination Committee, and the ESG Committee, which deliberate on issues and oversee related activities in each area to enhance the expertise and efficiency of decision-making. Each committee regularly reports its operational status to the board of directors.

ESG Committee

The ESG committee was established in 2021 to internalize non-financial factors such as responses to climate change and biodiversity into the decision-making process and to strengthen ESG execution capabilities. The committee consists of one executive director and four independent directors, holding at least two meetings each year.

The ESG committee establishes a company-wide climate strategy and regularly monitors the implementation of related activities. As a core part of enterprise-wide ESG governance, the committee facilitates the implementation of climate change response activities at the company level and enables close inter-departmental collaboration to effectively respond to climate change.

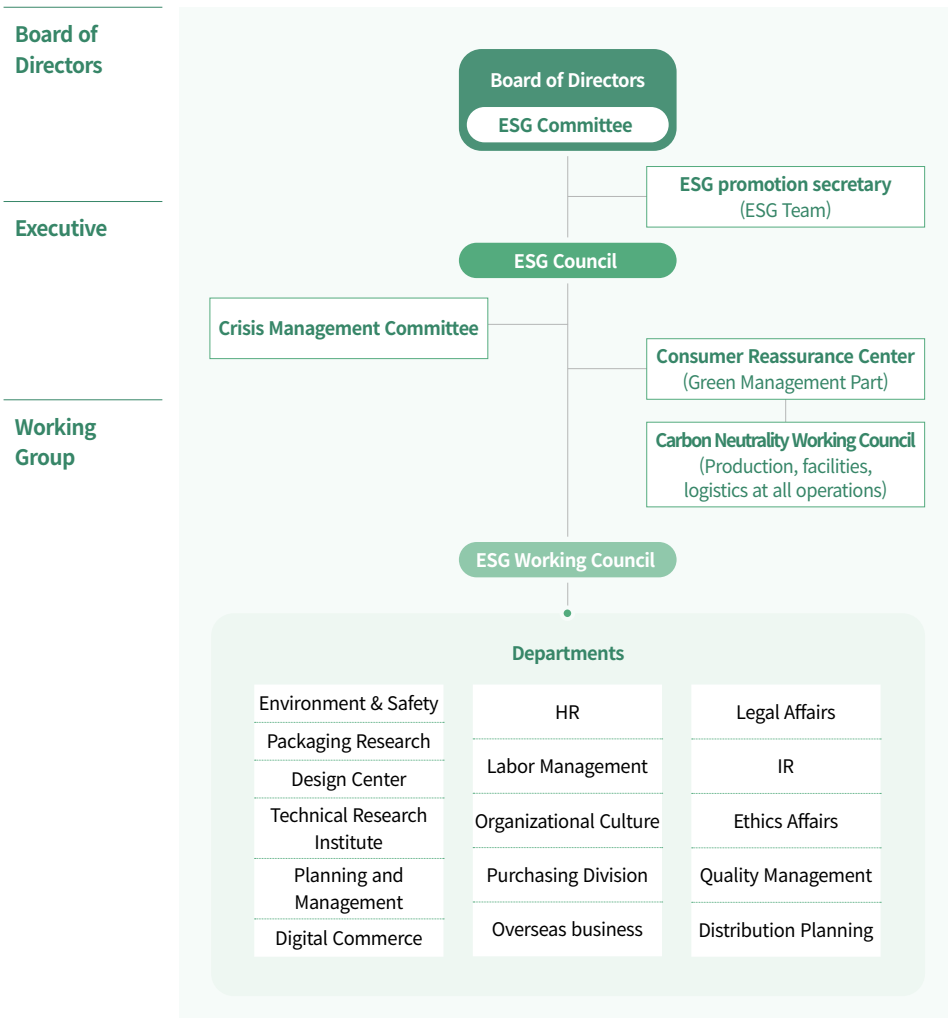
Climate change issues managed and supervised by the ESG committee include activities of associations for carbon neutrality, and through these activities we support and contribute to the Paris Agreement and the 2050 carbon neutrality goal at the national level as part of global efforts to limit global warming to within 1.5°C. The scope of the associations' activities for carbon neutrality cover all jurisdictions in which the company operates its business, and the committee monitors not only own operations' activities but also the participating associations' activities related to climate change on the same level to prevent any conflicts of interest on climate change issues.

ESG Committee

Founded	April 2021	
Meeting Intervals	Semi-annual(with ad hoc meetings as needed)	
Committee Members	Executive director	Jung Ae Lee
	Independent directors	Sang Hoon Kim(Chairperson), Woo Yeong Rhee, Tae Hee Lee, Jae Hwan Kim
Purpose	Incorporate non-financial considerations into business activities and strengthen ESG practices	
Activities	[April 2023]	
	<ul style="list-style-type: none"> • Report on risk management activities in 2023 and the future plan • Approval of green design strategy and plan for 2023 • Report on biodiversity conservation activities and plan • Report on the data security enhancement progress and plan 	
	[October 2023]	
	<ul style="list-style-type: none"> • Report on the climate change related activities and the plan for establishment of environment, health and safety system • Report on the status and plan of the supply price linkage system • Report on the ESG Awards for suppliers 	

Governance

Governance structure for management of climate-related issues



- 
ESG Committee (Semi-annually)
 - Establish company-wide ESG strategies and monitor improvement activities
 - Plan and review climate change action budgets
- 
Crisis Management Committee (Six times a year)
 - Deliberate on key issues in the operation of the crisis management system
 - Identify key risks and discuss high-risk remediation measures
- 
ESG Council (Quarterly)
 - Monitor and evaluate the implementation of ESG strategic tasks
 - Establish actions plans to address stakeholders' climate change and biodiversity needs
- 
ESG Working Council
 - Identify and execute on ESG challenges
 - Improve climate change response and biodiversity conservation efforts
- 
ESG Team
 - Respond to external disclosure and evaluation of ESG information and conduct due diligence of suppliers
 - Make plans for ESG core strategic tasks and promote the tasks to related departments
- 
Green Management Part
 - Establish company-wide strategy for the carbon neutrality goal and manage GHG reduction tasks
 - Respond to GHG regulations and product carbon footprint management through LCA
- 
Carbon Neutrality Working Council
 - Establish short-term reduction goals for each operation site
 - Execute emissions reduction tasks and develop new tasks for each operation site (Expanding reduction plans by sharing best cases of reduction tasks)

Governance

Management's role on climate-related issues

LG H&H has established an institutional foundation for systematic climate change response. In addition, we have assigned C-level executives to key governance organization established for sustainable management, giving them shared responsibility for climate change issues. As a member of the ESG committee under the board of directors, the CEO holds the final decision-making authority on the company's climate change response activities, while the CFO chairs the ESG Committee and shares the company's climate change response direction with all members. The CRO also chairs the Crisis Management Committee and the Green Product Review Council to strengthen the climate change risk mitigation activities from a company-wide integrated perspective and improve the transition to product packaging using recycled raw materials to promote circular economy.

Furthermore, to strengthen the motivation of the executives and employees for implementing environmental management, the major environmental management indicators such as the sales of the products with reduced environmental impact, enhancement of product's resource circularity and development of recycled packaging, etc. are linked to the performance evaluation of C-level management. In addition, we operate a climate change-related incentive system such as monetary rewards or awards based on evaluation of KPIs such as GHG emission reduction and energy saving performance for division heads, team leaders, and employees.

ESG Council

The ESG Council, held quarterly, is an organization that discusses ESG issues from an integrated company-wide perspective and reports the results to the ESG Committee to support related decision-making. The main functions of the council related to climate change include establishing a climate change response plan and monitoring and evaluating the implementation status of climate change strategic tasks.

ESG Team

The ESG Team, which is the secretariat of the ESG Committee, plans and selects climate change strategic tasks in collaboration with relevant business units and provides support to business units in the process of implementing strategic tasks. The team also monitors company-wide GHG emission performance on a quarterly basis and reports to the ESG Committee. In addition, as part of our shared growth activities with suppliers, we provide consulting services for establishing GHG inventories and reducing GHG emissions. We have supported 13 suppliers in 2022 and 40 suppliers in 2023 in calculating their Scope 1 and 2 GHG emissions, enabling them to voluntarily manage their GHG emissions. In the future, LG H&H will expand its support for all suppliers to build their GHG inventories.

Green Management Part

The Green Management Part calculates domestic and overseas GHG emissions(Scope1, 2 and 3) and strives to achieve GHG reduction targets. Through regular meetings, the part monitor trends in GHG reduction-related policies, technologies, and research, and collaborate with relevant departments to support implementation of reduction tasks and discovery of new tasks. In addition, the part calculates carbon footprint through life cycle evaluation of major products and prepares to obtain environmental certificates. Furthermore, the part is responsible for responding to climate-related domestic and global initiatives, such as CDP Climate Change, and domestic GHG reduction systems.

Carbon Neutrality Working Council(climate change managers at operation sites)

From production, facilities, logistics, and environmental parts from each operations from LG H&H, Coca-Cola Beverage, and Haitai htb, climate change managers are appointed to manage basic data such as energy use and production level and develop and implement GHG reduction tasks for each site/production line. Through this, we are contributing to the carbon neutrality target by managing the reduction amount every year in accordance with the GHG reduction goals for all operations.

Strategy

Six main strategies for achieving 2050 Net Zero

Process Efficiency



As a strategic approach to reducing GHG emissions, efforts are made to minimize the environmental impact of industrial activities by optimizing energy use and integrating renewable energy sources. This approach includes improving energy efficiency, process optimization, and heat recovery systems.

Transition to Eco-Friendly Vehicles



The transition to eco-friendly vehicles, such as electric vehicles and hydrogen vehicles, is an important strategy to reduce GHG emissions in the transportation sector. The transportation sector is one of the major causes of global GHG emissions, especially road traffic. The transition to eco-friendly vehicles can significantly reduce these emissions.

Portfolio/Development



It is a strategic approach to help companies maintain market competitiveness while enhancing long-term environmental sustainability through resource-circulating/low-carbon portfolio and product development, which leads companies to reorganize their product lines and service portfolios to reduce GHG emissions and minimize their impact on the environment.

Transition to Renewable Energy



A significant portion of GHG emitted by businesses come from purchased electricity (Scope 2). GHG emissions can be reduced by purchasing renewable energy such as solar and wind power or by directly generating electricity with a renewable source instead of purchasing grid electricity, of which a large proportion is fossil fuel-based energy. Electricity consumption is expected to continue to increase in the future due to energy transition and digitalization, so the transition to renewable energy is essential to achieving carbon neutrality.

Energy Transition



The energy transition refers to a broader approach that includes the transition from fossil fuels to renewable energy sources. This transition is essential for reducing GHG emissions and plays an important role in making energy systems sustainable worldwide.

Offset Program



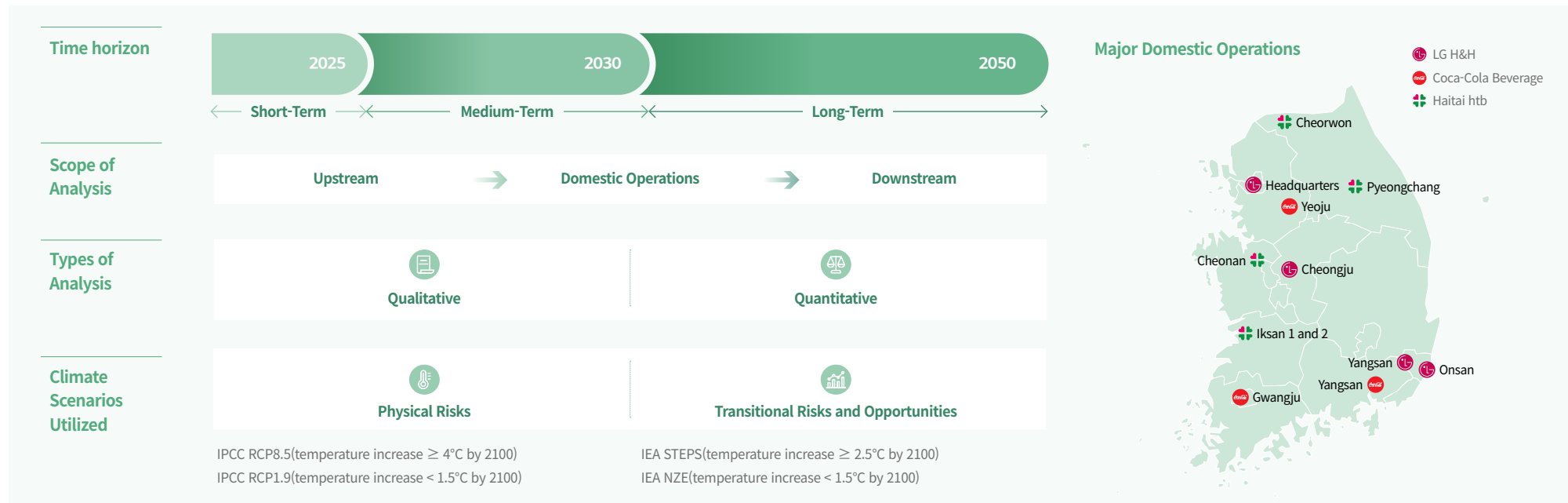
Offset programs refer to mechanisms by which companies or individuals support GHG reduction elsewhere to offset their carbon emissions. Afforestation and reforestation projects are often used as carbon offsets and are one of the effective ways companies or individuals can support them to offset their carbon emissions.

Strategy

Overview of the methodology for analyzing the financial impacts of climate change

LG H&H is closely examining the ripple paths through which risks and opportunities related to climate change affect business activities and reflects them throughout its business strategy and financial plan based on the TCFD recommendations. We have analyzed the financial impact of climate change based on four pillars: the time horizon, the scope of analysis, the types of analysis, and the climate scenarios to be utilized. The time horizon was divided into short-term(2025), medium-term(2030, 45% target point for carbon reduction), and long-term(2050, target year for achieving carbon neutrality) considering the business strategy and the carbon neutrality roadmap. The scope of analysis includes all value chain areas upstream, domestic workplaces, and downstream. In addition, the IPCC(Intergovernmental Panel on Climate Change) scenarios were used for physical risks caused by climate phenomena such as temperature rise, sea level rise, and natural disasters, and the International Energy Agency(IEA) scenarios were used for the expected transition risks and opportunities in the transition to a low-carbon economic society.

LG H&H has established a strategy to minimize the negative impact of climate change and maximize the positive impact on its business by referring to the results of the financial impact analysis based on the climate change scenario. In the future, we will continue to participate in the international efforts to respond to the climate crisis by linking the two directions of overcoming the climate crisis and creating business opportunities related to climate change in a harmonious way.



Strategy

Assessing resilience of our business under climate scenarios

Risk/Opportunity	Scenario ¹⁾	Description	Assumptions	Analytic perspective
Physical Risk	IPCC RCP1.9(+1.5°C)	• Low-carbon future scenario where sustainable growth and GHG mitigations are achieved in line with the goal of Paris Agreement	<ul style="list-style-type: none"> • Immediate transition to a low-carbon economy • Implementation of robust climate actions among economies 	• Identify the most severe risks caused by climate-change-driven natural disasters and change in weather patterns
	IPCC RCP8.5(+4°C)	• Baseline scenario without any specific GHG mitigation efforts	<ul style="list-style-type: none"> • Failure to reduce carbon emissions • Continued use of fossil fuels for technical and urban development 	
Transition Risk/Opportunity	IEA NZE(+1.5°C)	• Scenario where global energy sector achieves net-zero by 2050	<ul style="list-style-type: none"> • GHG reduction efforts on a global-level • All nations achieve net-zero commitments 	• Identify the most significant risks and opportunities from transitioning to a low-carbon economy or responding to evolving climate policies
	IEA STEPS(+2.5°C)	• High-carbon scenario without additional policy implementation	• All nations maintain the current policies related to climate change	

1) Temperature increase by 2100

Definition of climate-related risks and opportunities

Risk/Opportunity	Category	Definition
Physical Risk	Acute	• Risks driven by the increased frequency and intensity of extreme weather events such as typhoons, floods, heavy rain and droughts
	Chronic	• Risks arising from a long-term change in weather patterns, such as temperature change, sea level rise, heat waves, and change in precipitation patterns
Transition Risk	Policy and legal	• Risks associated with evolving climate policy and legislation(e.g. regulations on existing products and services, cap-and-trade, climate disclosure requirements, climate-related litigation claims, etc.)
	Technology	• Additional costs associated with expanding circular economy principles on products and transitioning to low-carbon technologies, and unsuccessful investment in new technologies
	Market	• Risks associated with changes in consumer behavior, commodities, and fluctuations in supply and demand for raw materials, goods, and services
Opportunity	Reputation	• Risks from changing consumer and investor preferences and increased stakeholder concerns and negative feedback
	Resource efficiency	• Enhanced efficiency through integration of energy, water, and waste reduction measures into infrastructure management, logistics and distribution process
	Energy use	• Reduced cost related to GHG emissions and energy costs by transitioning to low-carbon energy sources
	Products & services	• Opportunities due to changes in demand for beverage products due to physical changes in climate and increased consumer preference for products and services considering low-carbon/resource circulation
	Access to new markets	• Access to new markets and assets or utilization of public sector incentives
	Resilience	• Increase in financial and reputational stability by adopting sustainable solutions

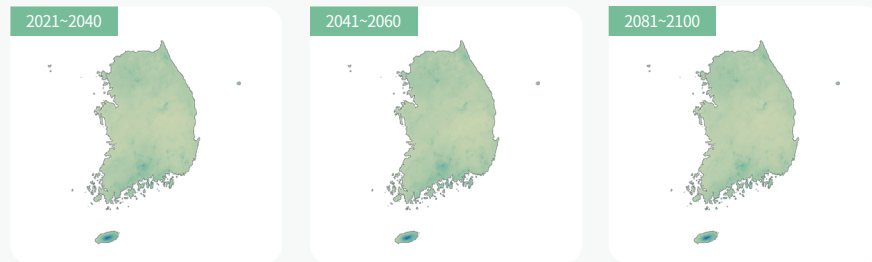
Strategy

Major climate changes in South Korea based on IPCC climate scenarios

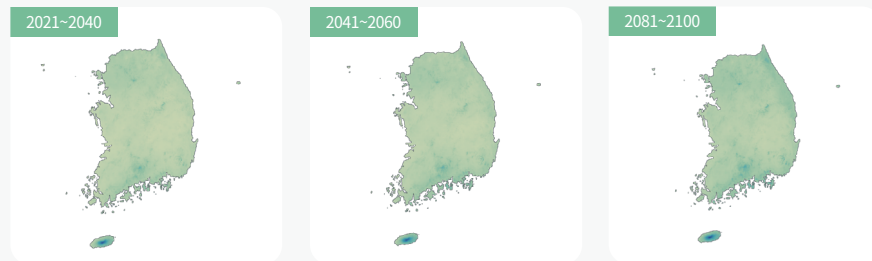
Heavy rain

Heavy rain refers to weather events where the 3-hour rainfall is more than 60 mm or the 6-hour rainfall is more than 110 mm. Even in the SSP1-2.6 scenario, which considers significant reduction of GHG emissions on global level in future, the average number of heavy rain days across the country is expected to increase from 2.4 days in the 20s to 2.7 days in the 30s and 2.7 days in the 50s. In the SSP5-8.5 scenario, which considers the current level of GHG emissions continues, the number of heavy rain days is expected to increase to 2.3 days in the 20s, 2.4 days in the 30s, and 2.6 days in the 50s.

IPCC SSP1-2.6



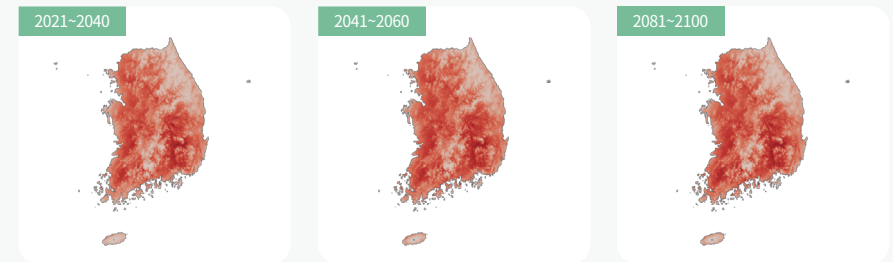
IPCC SSP5-8.5



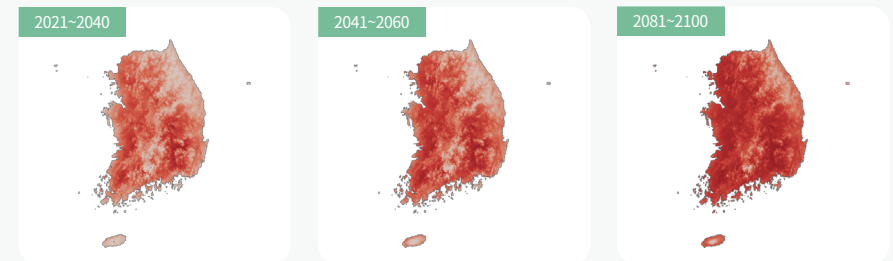
Heat wave

Heat wave refers to days when the daily maximum temperature is 33°C or higher. Even in the SSP1-2.6 scenario, which considers significant reduction of GHG emissions on global level in futures, the number of days with heat waves across the country is expected to increase gradually from 15.3 days in the 20s to 18.2 days in the 30s and 21.1 days in the 50s. In the SSP5-8.5 scenario, which considers the current level of GHG emissions continues, the number of days with heat waves is expected to increase significantly from 17.0 days in the 20s, 18.6 days in the 30s, and 33 days in the 50s.

IPCC SSP1-2.6



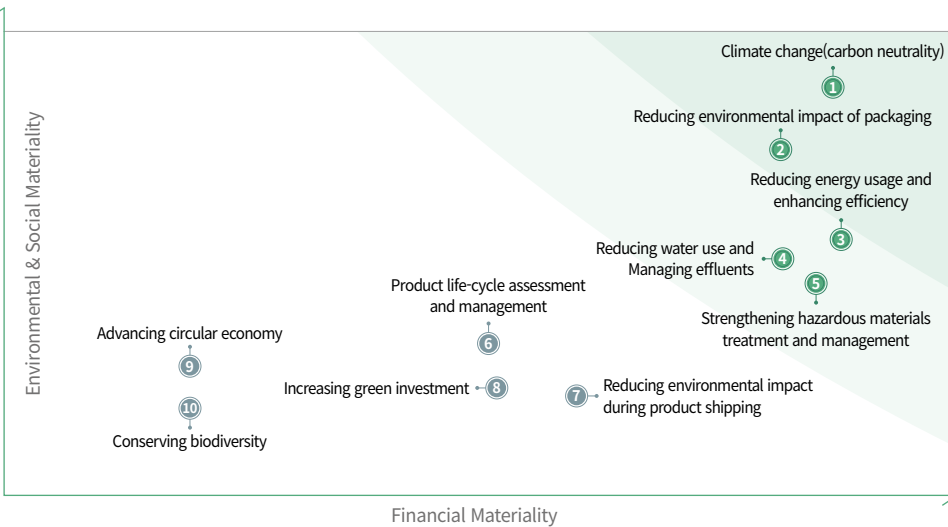
IPCC SSP5-8.5



* Source: Korea Meteorological Administration's Climate Information Portal Climate Change Situation Map

Strategy

Materiality assessment



Financial Materiality	Environmental & Social Materiality
<p>Impact of external environment/society on business activities(Outside-in perspective)</p> <ol style="list-style-type: none"> 1) Analysis of ESG Ratings: DJSI and KCGS ESG 2) Analysis of international standards: analysis based on financial materiality perspective of SASB and TCFD 3) Stakeholder survey analysis: investigation of materials affecting the financial performance of LG H&H(total of 871 people participated) 	<p>The impact of business activities on the external environment/society(Inside-out perspective)</p> <ol style="list-style-type: none"> 1) Analysis of competitors' materials: review of ESG materials in the sustainability reports of major competitors in the industry(11 companies in total) 2) Analysis of international standards: analysis based on impact materiality perspective of GRI, UN SDGs, ISO26000, and UNGC 3) Stakeholder survey analysis: investigation of the company's environmental/social impact to external stakeholders(100 people) 4) Media analysis: 1,123 valid articles

R&O	Factors	Impact Area within Value Chain			Impact Size	Materials
		Upstream	Domestic Operations	Downstream		
Physical Risk	Rising mean temperature	●	●	●	High	①
	Water-related risk	●	●	●	High	④
	Extreme variability in weather patterns	●	●	●	High	①
	Natural disasters	●	●	●	Medium	①
	Rising sea level				Low	①
Transitional Risk	Increase in GHG emissions price	●		●	High	①
	Strengthening regulations on products		●		Mid-high	⑤
	Increase in raw material cost	●	●		Mid-high	⑨, ⑩
	Enhanced emissions-reporting obligations	●	●		Mid-high	①
	Increase in energy price	●	●		Medium	③, ⑧
	Cost related to low-carbon technology		●		Medium	⑧
	Customer behavior change		●		Mid-low	
	Exposure to litigation		●		Low	
	Increase in stakeholder concerns		●		Low	
	Enhancement of product circularity	●	●	●	High	②, ⑥
Opportunities	Development recycled raw materials	●	●		Mid-high	②, ⑥
	Business diversification		●		Mid-high	
	Recycling products and resources	●	●	●	Medium	⑨
	Enhancement of external communications		●		Medium	
	Advanced packaging technology	●	●		Medium	②, ⑨
	Efficient production and distribution	●	●	●	Mid-low	②, ③, ⑦
	Infrastructure and process development		●		Mid-low	③, ⑧
	Access to new markets		●		Mid-low	
	Renewable energy programs		●		Mid-low	③, ⑧
	Reduced water use	●	●		Low	④
Low-/zero-emissions transportation	●	●	●	Low	⑦	

Strategy

Climate-related risks and opportunities

Physical risks

The physical risks related to climate change analyzed based on the IPCC RCP1.9 and RCP8.5 scenarios are as follows. The increase in the frequency of natural disasters such as typhoons and floods can harm real assets such as factory facilities, thereby acting as a direct factor in increasing maintenance costs and reducing production. In addition, it has been found that abnormal climate phenomena such as precipitation fluctuations and heat waves can increase procurement costs by causing delays in raw material production and transportation, as well as lower labor productivity by affecting workers' working environment.

Category	Risk	Period	Likelihood	Potential Financial Impacts	Response ⁴⁾
Acute risk	Natural disasters (typhoons, etc.) about 70 million KRW ¹⁾	Short-term	Very likely	<ul style="list-style-type: none"> Damage to the workplace and a decrease in production due to the increase in the frequency and intensity of abnormal weather such as typhoons(quantitative analysis) 	<ul style="list-style-type: none"> Establish response guidelines for natural disasters(designate responsible unit, provide training and manuals, assign roles, and secure disaster prevention infrastructure) Get insurance to mitigate asset damage losses Employee health management according to the company's climate change management policies
	Extreme weather events (heavy rain, etc.) about 7.4 billion KRW ²⁾	Medium-term Long-term	Medium	<ul style="list-style-type: none"> Increased recovery costs due to damage to production facilities(quantitative analysis) Agricultural productivity falls as climate volatility increases costs of purchasing agricultural raw materials 	<ul style="list-style-type: none"> Strengthen the safety of facilities according to the climate change management policies By 2028, 500 species of native plants will be cultivated and used as raw materials for products(mitigation of climate change and reduction of disaster risk)
Chronic risk	Increase in average temperature(Heat wave, etc.) about 700 million KRW ³⁾	Medium-term Long-term	Very likely	<ul style="list-style-type: none"> Increase in cooling power cost due to increase in air conditioning operation time (quantitative analysis) Increased water supply and demand costs due to the acceleration of water shortage caused by the global average temperature rise Reduced productivity due to the intensification of heat load events Deterioration in raw and product quality(increased refrigeration and logistics costs) 	<ul style="list-style-type: none"> Improve energy efficiency by investing in building insulation and high-efficiency equipment Expand the water recycling plan Establish of standards for adjustment of working hours and expansion of flexible work in the event of a heat wave warning Strengthen product quality control by establishing climate change management policies
	Risk related to water resource	Medium-term Long-term	Uncertain	<ul style="list-style-type: none"> Capital investment costs are incurred due to relocation of production facilities to secure stable raw water Increased research burden on products with reduced water use and related technologies 	<ul style="list-style-type: none"> Strengthen the natural disaster risk management system(establishment of manual, scenario analysis, and proactive measures to prepare for abnormal climate) Conduct Aqueeduct for water risk assessment Develop waterless formulation Reduce costs by reusing water and using rainwater
	Sea level rise	Medium-term Long-term	Medium	<ul style="list-style-type: none"> Lower production and lower sales due to submersion of factories near the coast 	<ul style="list-style-type: none"> Based on flooding simulation, remodel operation sites and get insurance against asset losses

1) Loss and recovery costs due to typhoons are calculated for the currently operating production facility assets by referring to the cost of damage to buildings caused by typhoons in Korea and the size of construction assets among the net assets

2) By estimating the impact of the increase in the number of heavy rain days expected in 2030 compared to 2023 on the operation rate of manufacturing facilities in areas where major workplaces are located, the loss of sales is calculated

3) Based on the increase in electricity costs in the three-year business, the estimated increase in electricity costs for the expected increase in the average maximum temperature in the summer of 2030 is calculated

4) Physical risk(both acute and chronic) response plans are short-term targets of less than 5 years and apply to all our new operations

Strategy

Transition risks

The climate change-related transition risks predicted based on the IEA NZE and STEPS scenarios are as follows. Additional operating costs are expected to be incurred in response to increased GHG emission prices and gradually strengthened emission disclosure obligations. Moreover, the increasing inclination of investors to consider our business’s climate commitment may limit the availability of our capital. In addition, the growing demand for low-carbon products is likely to impact the demand and sales of our existing product portfolio.

Category	Risk	Period	Likelihood	Potential Financial Impacts	Response
Policy and legal	Increased pricing of GHG emissions	Medium-term	Medium	<ul style="list-style-type: none"> Expanding production or export locations into regions with carbon taxes incurs response costs 	<ul style="list-style-type: none"> Operate carbon reduction activities based on conducting carbon footprint analysis Continue monitoring domestic and overseas trends and regulations
	Strengthened emissions reporting obligations	Short-term Medium-term	Certain	<ul style="list-style-type: none"> Increase in carbon management and mitigation costs attributed to enhanced carbon emissions reporting obligations 	<ul style="list-style-type: none"> Continue monitoring the possibility of applying GHG emissions regulations on the company products Establish GHG inventory management system to enhance accuracy
	Strengthening regulations on existing products	Short-term Medium-term	Certain	<ul style="list-style-type: none"> Cost incurred due to the strengthening of regulations related to standards and standards of food additives Increased disposal costs due to the expansion of regulations related to the movement and disposal of hazardous waste between countries(non-recyclable plastics, etc.) Expenses incurred for maintenance of the recycling management system due to reinforcement of recycling regulations, such as the recycling grade marking system Increased export risks and compliance costs due to intensified packaging management regulations Cost increases due to restrictions on environmentally hazardous substances and materials that cause high carbon emissions 	<ul style="list-style-type: none"> Continue monitoring regulatory trends and prospects in product sales areas Transition to lightweight plastic and sustainable materials Reduce recycling contribution costs by production of recyclable products
	Exposure to litigation	Medium-term Long-term	Medium	<ul style="list-style-type: none"> Litigation costs incurred due to non-compliance with climate change-related regulations and non-compliance with disclosure standards 	<ul style="list-style-type: none"> Monitor the development of climate related regulations and standards for disclosure(EU CBAM, US SEC, etc.) Monitor and respond to prevent greenwashing
Technical Risk	Low Carbon Technology Transition Costs about 88.6 billion won ¹⁾	Medium-term	Positive	<ul style="list-style-type: none"> Introduction of low carbon technology(electrification technology, production process efficiency improvement technology, etc.) and R&D costs are incurred 	<ul style="list-style-type: none"> Improvement of production process efficiency, such as replacement of old facilities Improving portfolio and product development such as lightening preform and charging at room temperature
Market Risk	Change in customer behavior about 54.2 billion won	Medium-term Long-term	General	<ul style="list-style-type: none"> Sales fall due to lower demand for existing products due to customer preference for low carbon products Demand for beverage products is expected to increase due to an increase in average temperature, but if it fails to respond appropriately, it will lose about 54.2 billion won per year²⁾ 	<ul style="list-style-type: none"> Expansion of products for obtaining environmental performance mark and environmental mark certification
	Increase in raw material costs about 2.6 billion won	Medium-term Long-term	Positive	<ul style="list-style-type: none"> Increased raw material purchase costs due to the lack of supply of sustainable raw materials such as Vegan and the increase in natural raw material prices due to the destruction of the ecosystem By 2030, the cost of low-carbon conversion of plastic manufacturers in the supply chain will be transferred, increasing the purchase cost by about KRW 2.6 billion³⁾ 	<ul style="list-style-type: none"> Continuous expansion of investment and process procurement inspections to preserve regional biodiversity Promotion of related projects such as resource circulation/alternative containers
	increase in the cost of purchasing energy about 31.7 billion won	Medium-term Long-term	Positive	<ul style="list-style-type: none"> Estimated to generate about 31.7 billion won in general electricity purchase cost in 2030(up about 15% from 2023) Increased procurement costs due to the need to expand the use of renewable energy in accordance with the national energy transition policy 	<ul style="list-style-type: none"> Establishment of solar power generation facilities in the workplace New and renewable energy development is reflected in basic investment items when building new buildings Introduction of Hydrogen Fuel Cells Estimated cumulative fuel and renewable energy conversion costs of KRW 43.6 billion in 2030⁴⁾
Reputation Risk	Increasing stakeholder concerns	Medium-term Long-term	Positive	<ul style="list-style-type: none"> Decrease in investment and fall in sales due to the spread of negative reputations caused by failure to respond to climate change 	<ul style="list-style-type: none"> Annual disclosure of GHG emissions and reduction activities Securing authentic customer communication and trust by expanding activities such as reducing GHG emissions and promoting product resource circulation Continuous ESG evaluation and due diligence for suppliers

1) Based on the internal investment plan, the investment cost required to reduce GHG emissions from currently operating production facilities is calculated

2) Calculated based on the sales of beverages and the expected sales growth rate in 2023

3) Calculated by referring to the cost of purchasing plastic, the industrial sector’s 2030 GHG reduction target(11.5%), the average settlement price of carbon credits(IEA), and the proportion of suppliers’ low-carbon conversion costs being passed on to the Company(internal data)

4) Based on the internal investment plan, the investment cost required to reduce GHG emissions and convert renewable energy generated by the use of thermal energy in the currently operating production facilities is calculated

Strategy

Opportunities

The potential financial impact of climate change opportunities analyzed based on IEA NZE and STEPS scenarios on business activities is as follows. It is expected that the efficient use of resources will reduce operating costs such as recycling costs and energy and water supply and demand costs. In addition, consumption for specific product groups such as soft drinks and body products is expected to increase due to the rise in average temperature. LG H&H will diversify its product portfolio in response to increasing demand

Category	Opportunities	Period	Likelihood	Potential Financial Impacts	Response
Resource efficiency	Eco friendly transportation	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Reduce GHG emissions and reduce fuel purchase costs by replacing vehicles in the workplace with environmentally friendly vehicles The use of carbon-reducing transportation means reduces GHG emissions and logistics costs incurred in the transportation process 	<ul style="list-style-type: none"> Introduction of environmentally friendly vehicles and establishment of charging infrastructure Consider drone delivery service
	Increase production and distribution process efficiency	Medium-term	General	<ul style="list-style-type: none"> Improve energy efficiency and save electricity bills by replacing old facilities and improving processes Reducing GHG emissions and reducing production costs by expanding resource circulation of product packaging technology Improve operational efficiency by entering famous online platforms and reduce logistics costs for operational by simplifying distribution processes 	<ul style="list-style-type: none"> Advance product packaging technology and increase resource circularity based on the Green Packaging Guide Digitalization of sales platforms and diversification of distribution channels
	Product/Resource recycle	Medium-term	Positive	<ul style="list-style-type: none"> Reduce recycling costs through product recycling and upcycling Increased revenue from increased recycling sales Reduce recycling contribution costs 	<ul style="list-style-type: none"> Advancement of resource circulation system <ul style="list-style-type: none"> - Creating an Upcycling Ecosystem - Expansion of waste plastic pyrolysis oil product containers and refill products
	Water resource reduction	Medium-term	General	<ul style="list-style-type: none"> Reduce water procurement costs by reducing water usage Lower production costs through improved water efficiency 	<ul style="list-style-type: none"> Discovering and expanding the use of recycled water Reduce costs through water reuse or superior use
	Infrastructure facilities and process development	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Save energy by building more efficient infrastructure(equipment deployment) 	<ul style="list-style-type: none"> Improvement of Energy Efficiency through Low Temperature Emulsification Process Development Acquisition of LEED certification¹⁾
Energy use	Use of lower-emission sources of energy	Medium-term Long-term	General	<ul style="list-style-type: none"> Reduce exposure to future fossil fuel price increases and reduce potential carbon tax through sourcing renewable energy 	<ul style="list-style-type: none"> Source renewable energy through REC, PPA, etc.

1) LEED(Leadership in Energy & Environmental Design) : Green Building Certification System established by the U.S. Green Building Council

Strategy

Category	Opportunities	Period	Likelihood	Potential Financial Impacts	Response
Product & Service	Development/utilization of raw materials with reduced environmental impact	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Improve the environmental impact of products to enhance corporate image and increase consumer product purchase rates 	<ul style="list-style-type: none"> Substantial Environmental Impact Increased application of reduced prescriptions
	Expand product/service development and sales	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Increasing corporate image and increasing consumer purchases due to expanding product development that reduces plastic and energy use Sales increase due to increased consumption of beverages and body products due to rising global average temperatures 	<ul style="list-style-type: none"> Acquiring eco-label, carbon footprint certification, and low-carbon certification on more products
	Advanced packaging tech.	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Reduce production costs by advancing product packaging technology with the Green Packaging Guide 	<ul style="list-style-type: none"> Continue packaging tech. development & cost reduction Promote collaboration with companies with new technologies
	Strengthen external communication	Short-term	Positive	<ul style="list-style-type: none"> Enhance corporate image and improve performance by participating in environmental initiatives and strengthening information disclosure Enhance corporate image and improve performance by participating in environmental initiatives and strengthening information disclosure Increase sales by improving consumers' brand preferences through promotion of environmental programs for stakeholders 	<ul style="list-style-type: none"> Active participation in ESG evaluation(DJSI, CDP, etc.) at home and abroad and conducting improvement activities Propagating the need to respond to climate change by conducting environmental education for youth through the metaverse
Market	Business diversification capabilities	Long-term	Uncertain	<ul style="list-style-type: none"> Floating assets increase due to new investment in plastics, products that reduce energy use or reduce carbon emissions 	<ul style="list-style-type: none"> Preparation for issuance of green bonds
	Expanding access to new markets	Short-term Medium-term	General	<ul style="list-style-type: none"> Increased sales due to increased access to consumers in climate-vulnerable areas and secured sales opportunities Revenues from products with improved environmental effectiveness in consideration of MZ generation consumption propensity 	<ul style="list-style-type: none"> Expansion of global new market(climate vulnerable areas) business Development of products with improved environmental effectiveness
Resilience	Joining renewable energy program	Short-term Medium-term	Positive	<ul style="list-style-type: none"> Increase consumer purchasing rate of products by enhancing corporate image following expansion of renewable energy investment 	<ul style="list-style-type: none"> Join RE100 and continue expansion of renewable energy investment

Risk Management

Climate change and environmental risk management process

LG H&H operates an integrated risk management system at the corporate level to efficiently manage risks that may hinder management activities. Strategy, finance, operations, and risk, and climate change risks are selected and managed by a company-wide risk management department or functional organization based on type and importance



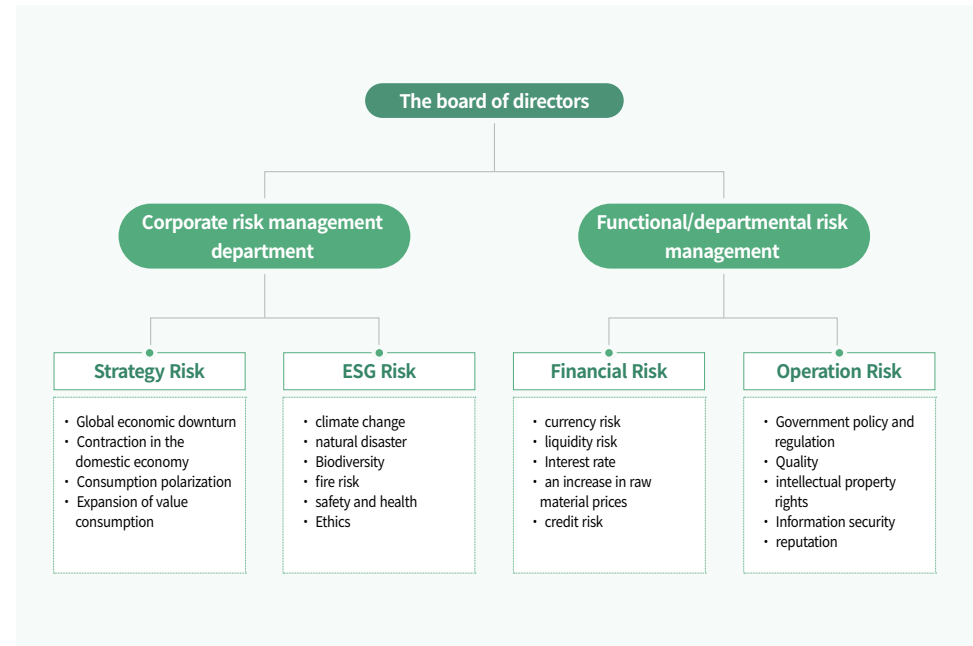
LG H&H follows TCFD recommendations to categorize and define climate change-related risks, and based on the definitions, identify all risk that could potentially affect the business. We categorize climate change-related risks into physical risks and transition risks. Physical risks consider potential financial impact caused by extreme weather events and change in weather patterns, and they are further categorized into acute risks and chronic risks based on the length of the duration of the impact. Transition risks are the risks rising from the transition to a low-emission society, related to policy and legal actions, technology changes, market responses, and reputational considerations.

LG H&H analyzes the potential impact of identified risks on business activities qualitatively and quantitatively and estimates the expected timing of the occurrence of risks during the company's short-, medium- and long-term business strategy. We collect opinions from internal departments on the results of the analysis to determine the priorities of risks and discuss the importance and urgency of response.

LG H&H sets management direction for all identified potential risks. For priority risks, we are carrying out activities to avoid or mitigate them. Furthermore, multiple departments cooperate to find ways to link those risks into company-wide business opportunities, thus utilizing the risks as a growth engine.

ESG Team quarterly monitors climate change risks to understand their impact on our business. ESG Council and ESG Working Council also regularly monitor the progress of climate change response activities.

Monitoring risk status and response progress are reported to the Board of Directors via ESG Committee.



Through the analysis of social and geopolitical environmental changes, major internal and external events, and accidents, 64 company-wide risk challenges were derived in 2023. Of these, 62 have been improved, and unfinished tasks are also being carried out with the aim of completing them in 2024

Metrics & Targets

Metrics

LG H&H sets and manages measurable indicators to systematically identify and manage the direct and indirect effects of climate change. Management indicators are divided into resource management as input management and energy / water use, GHG emissions, wastewater, and wastewater discharge, respectively as output management

These indicators are used to quantify environmental footprints, manage risks, and establish sustainable strategies, and secure the trust of investors and stakeholders by disclosing data through ESG reports and CDP responses. In addition, we will continue to manage climate change-related indicators to lay the groundwork for effective response to future climate information disclosure regulations

Targets

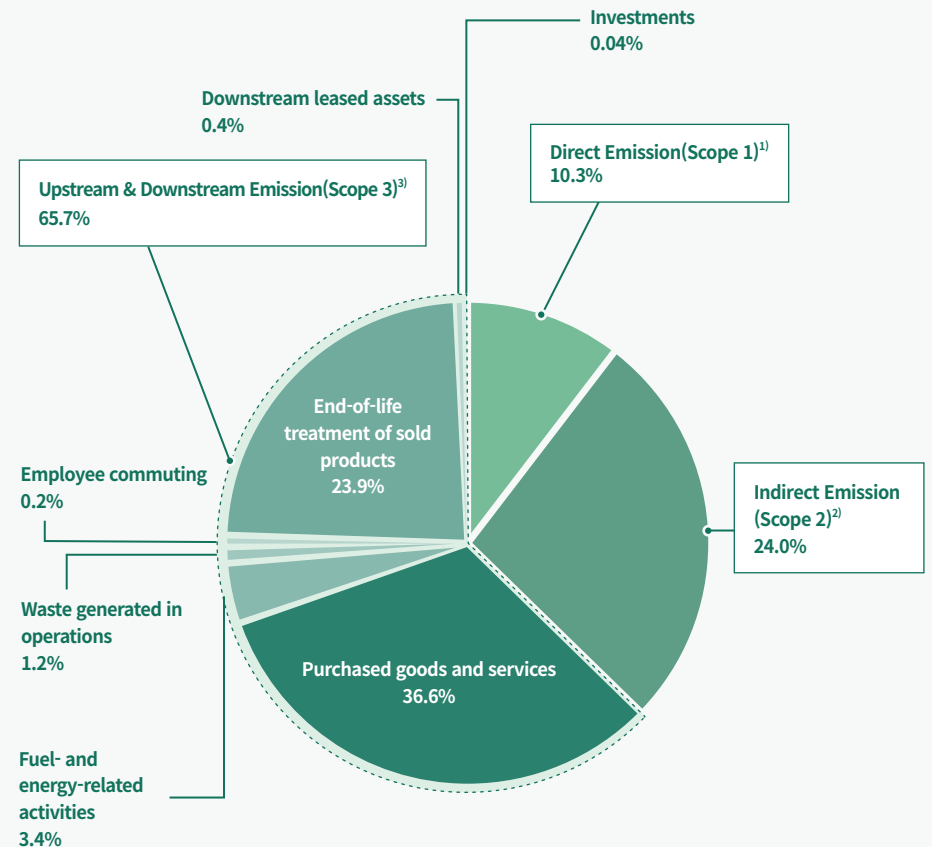
Emission management

LG H&H has joined global efforts to respond climate change, pushing for reduction tasks in stages and continuing to discover new tasks to achieve the goal of reducing Scope 1 and 2 GHG emissions by 45% compared to 2020 by 2030 and achieving carbon neutrality by 2050. In addition, we are striving to reduce our environmental footprint by setting short-term and medium-term goals for raw wastewater emissions and waste emissions.

Resource Management

The more efficient the use of resources such as energy and water, the less the environmental footprint can be. LG H&H aims to reduce water use per t of product to 1.46 tons by 2025 and to continue to improve energy use efficiency. In addition, by 2025, the company plans to reduce plastic use by 10 percent compared to 2020, achieve recycled plastic use by more than 5 percent, and raise the use rate of RSPO-certified raw materials to 64.9 percent.

GHG Emission of Corporate Value Chain(2023)



1) 37,781 tCO₂eq
 2) 87,706 tCO₂eq
 3) 240,356 tCO₂eq

Metrics & Targets

Scope 1 & 2 emissions¹⁾

Business unit	Scope	Unit	2020	2021	2022	2023
LG H&H	Scope 1	tCO ₂ -eq	9,219	9,679	8,564	7,355
	Scope 2		41,366	45,327	44,092	42,195
	Total emissions(Scope 1&2)		50,579	55,000	52,650	49,545
	Emissions intensity		tCO ₂ -eq/product-t	0.14	0.16	0.18
Coca-Cola Beverage	Scope 1	tCO ₂ -eq	20,408	18,552	21,617	19,786
	Scope 2		24,106	24,638	25,671	26,329
	Total emissions(Scope 1&2)		44,512	43,190	47,287	46,113
	Emissions intensity		tCO ₂ -eq/product-t	0.06	0.06	0.06
Haitai htb	Scope 1	tCO ₂ -eq	17,735	16,304	16,697	10,639
	Scope 2		18,515	19,497	19,710	19,182
	Total emissions(Scope 1&2)		36,246	35,800	36,406	29,818
	Emissions intensity		tCO ₂ -eq/product-t	0.07	0.07	0.07
Total	Scope 1	tCO ₂ -eq	47,362	44,535	46,878	37,781
	Scope 2		83,986	89,462	89,473	87,706
	Total emissions(Scope 1&2)		131,337	133,990	136,343	125,476
	Emissions intensity		tCO ₂ -eq/product-t	0.08	0.08	0.09

1) According to the GHG Emissions Trading System Emissions Reporting and Certification Guidelines, the total emissions may differ from the sum of site-level Scope 1 and 2 emissions because the total emissions sums the emissions from sites after rounding the decimals

Metrics & Targets

Scope 3 emissions

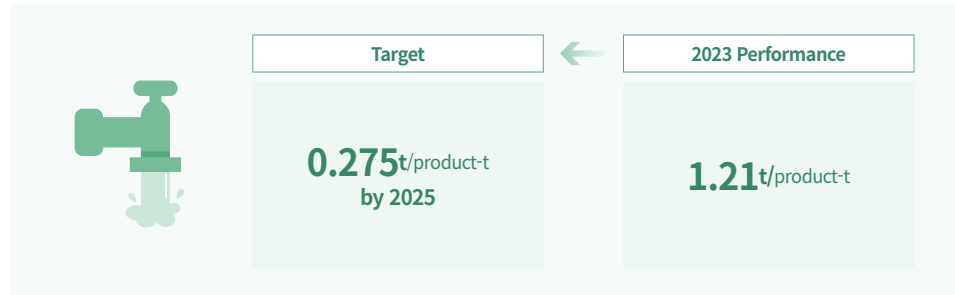
Category	Unit	2020	2021	2022	2023
(C1) Purchased goods and services		51,158	151,220	135,419	133,788
(C2) Capital goods		-	-	-	-
(C3) Fuel- and energy-related activities		14,066	14,278	14,348	12,562
(C4) Upstream transportation and distribution		-	-	-	-
(C5) Waste generated in operations		2,887	2,408	4,177	4,264
(C6) Business travel		-	-	-	-
(C7) Employee commuting		562	934	979	675
(C8) Upstream leased assets	tCO ₂ -eq	-	-	-	-
(C9) Downstream transportation and distribution		-	-	-	-
(C10) Processing of sold products		-	-	-	-
(C11) Use of sold products		-	-	-	-
(C12) End-of-life treatment of sold products ¹⁾		-	96,928	94,556	87,537
(C13) Downstream leased assets		51	778	1,052	1,377
(C14) Franchises		-	-	-	-
(C15) Investments		-	-	-	155
Total		68,724	266,546	250,532	240,356

Business unit	Category	Unit	2020	2021	2022	2023
LG H&H	(C1) Purchased goods and services		49,875	63,967	47,749	53,386
	(C3) Fuel- and energy-related activities		4,338	4,811	4,409	4,102
	(C5) Waste generated in operations		2,394	1,545	3,484	3,447
	(C7) Employee commuting	tCO ₂ -eq	562	934	979	675
	(C12) End-of-life treatment of sold products ¹⁾		-	27,538	26,376	25,348
	(C13) Downstream leased assets		51	778	1,052	1,377
	(C15) Investments ¹⁾		-	-	-	155
	Total		57,221	99,573	84,050	88,490
Coca-Cola Beverage	(C1) Purchased goods and services		1,283	79,047	78,428	72,106
	(C3) Fuel- and energy-related activities	tCO ₂ -eq	4,776	4,626	5,080	4,895
	(C5) Waste generated in operations		92	79	122	109
	(C12) End-of-life treatment of sold products ¹⁾		-	65,505	64,024	58,559
	Total		6,151	149,257	147,654	135,669
Haitai htb	(C1) Purchased goods and services		-	8,206	9,242	8,296
	(C3) Fuel- and energy-related activities	tCO ₂ -eq	4,951	4,842	4,859	3,565
	(C5) Waste generated in operations		401	784	571	708
	(C12) End-of-life treatment of sold products ¹⁾		-	3,885	4,156	3,630
	Total		5,352	17,716	18,828	16,198

1) The GHG emissions in the disposal phase of products sold in 2021 and 2022 are corrected

Metrics & Targets

Wastewater target and 2023 performance



Waste target and 2023 performance



Wastewater discharge

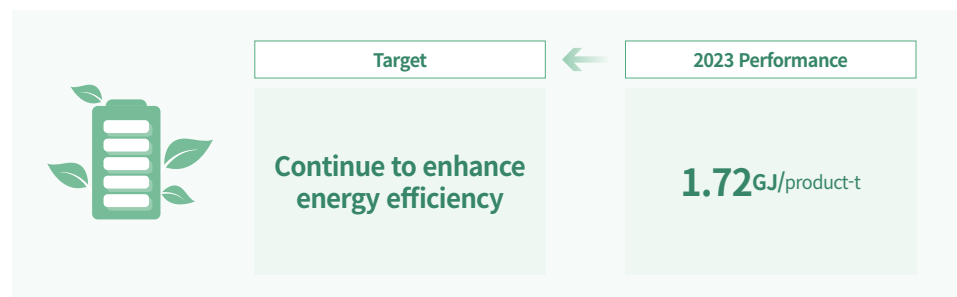
Business unit	Unit	2020	2021	2022	2023	
LG H&H	Discharge	t	101,243	122,645	105,730	107,766
	Intensity	kg/product-t	0.27	0.35	0.36	0.38
Coca-Cola Beverage	Discharge	t	938,682	940,976	1,014,701	1,022,526
	Intensity	kg/product-t	1.30	1.33	1.36	1.36
Haitai htb	Discharge	t	612,031	729,861	761,439	756,257
	Intensity	kg/product-t	1.13	1.38	1.40	1.44
Total	Discharge	t	1,651,956	1,793,482	1,881,870	1,886,549
	Intensity	kg/product-t	1.01	1.13	1.19	1.21

Waste discharge

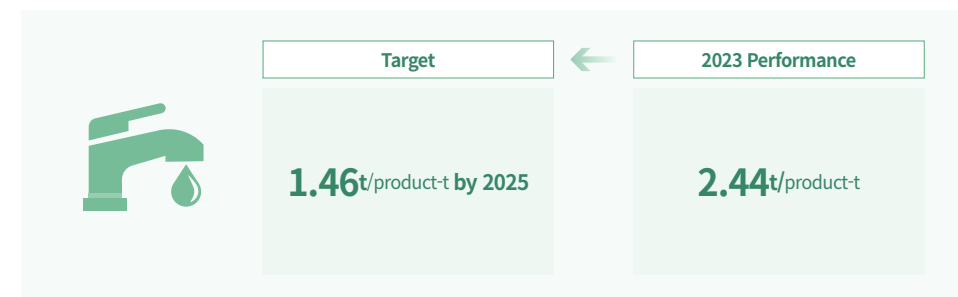
Business unit	Unit	2020	2021	2022	2023	
LG H&H	Discharge	t	10,535	11,307	10,303	10,307
	Intensity	kg/product-t	28.42	32.06	34.83	36.11
Coca-Cola Beverage	Discharge	t	6,663	6,906	6,957	5,445
	Intensity	kg/product-t	9.19	9.76	9.31	7.26
Haitai htb	Discharge	t	7,424	5,837	6,432	6,836
	Intensity	kg/product-t	13.67	11.07	11.86	12.98
Total	Discharge	t	24,622	24,050	23,692	22,589
	Intensity	kg/product-t	15.02	15.15	14.95	14.46

Metrics & Targets

Energy use target and 2023 performance



Water use target and 2023 performance



Energy use

Business unit	Unit	2020	2021	2022	2023	
LG H&H	Usage	TJ	1,090	1,200	1,147	1,084
	Intensity	GJ/product-t	2.94	3.40	3.88	3.80
Coca-Cola Beverage	Usage	TJ	867	851	924	902
	Intensity	GJ/product-t	1.12	1.20	1.24	1.20
Haitai htb	Usage	TJ	676	727	736	699
	Intensity	GJ/product-t	1.24	1.38	1.36	1.33
Total	Usage	TJ	2,633	2,778	2,807	2,685
	Intensity	GJ/product-t	1.61	1.76	1.77	1.72

Water use

Business unit	Unit	2020	2021	2022	2023	
LG H&H	Usage	t	555,420	595,782	575,270	603,575
	Intensity	t/product-t	1.50	1.69	1.95	2.11
Coca-Cola Beverage	Usage	t	1,726,739	1,772,995	1,917,543	1,910,603
	Intensity	t/product-t	2.38	2.51	2.57	2.55
Haitai htb	Usage	t	1,217,063	1,256,855	1,395,174	1,293,834
	Intensity	t/product-t	2.24	2.38	2.57	2.46
Total	Usage	t	3,499,222	3,625,632	3,887,987	3,808,012
	Intensity	t/product-t	2.14	2.28	2.45	2.44

Appendix

TCFD balance sheet

TCFD Recommended Disclosures	Corresponding Page	CDP Index
Governance		
a) Board of Directors’ oversight of risks and opportunities related to climate change	7~8	C1.1a, C1.1b
b) Management’s role in assessing and managing climate change-related risks and opportunities	8~9	C1.2
Strategy		
a) Climate change-related risks and opportunities identified in the short, medium, and long term	11~18	C2.1a, C2.3, C2.3.a, C2.4, C2.4a
b) The impact of climate change-related risks and opportunities on the organization’s business, strategic, and financial plans	14~18	C2.3.a, C2.4a, C3.2a, C3.2b, C3.3, C3.4
c) An organization’s climate strategy that considers climate change scenarios, such as a 2°C or less increase in surface temperature	10~18	C3.2, C3.2a, C3.2b
Risk Management		
a) The organization’s process for identifying and assessing climate change-related risks	19	C2.1b, C2.2, C2.2a
b) The organization’s process for managing climate change-related risks	19	C2.1, C2.2
c) How to integrate climate change-related risk identification, assessment, and management processes into enterprise risk management processes	19	C2.2
Metrics and Targets		
a) Metrics used by the organization to assess climate change-related risks and opportunities	20~24	C4.2, C4.2a, C4.2b, C9.1
b) Scope 1, 2, and 3 GHG emissions and associated risks	20~22	C6.1, C6.3, C6.5, C6.7a
c) Performance against goals and objectives used by the organization to manage climate change-related risks and opportunities	20, 23~24	C4.1, C4.1a, C4.1b, C4.2, C4.2a, C4.2b

Appendix

Scope 1, 2 Greenhouse Gas Emissions Verification Opinion Statement for 2023(LG H&H)

Verification Target

Korean Foundation for Quality(hereinafter ‘KFQ’) has conducted a verification of Scope 1, 2 Greenhouse Gas Emissions(hereinafter ‘GHG emissions’) of LG Household & Health Care Co.,(hereinafter ‘Company’) for 2023.

Verification Scope

KFQ’s verification scope covered on all facilities and emission sources under the operational control and organizational boundary of LG household & Health Care Co., during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme¹⁾], [2006 IPCC Guidelines for National Greenhouse Gas Inventories] for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment

Level of Assurance

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

Verification limitation

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

Verification Opinions

Regarding to the data of the greenhouse gas emission consumption from the report through the verification, KFQ provides our verification opinions as below

- 1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
- 2) The data and information used in calculating the GHG emissions were appropriate, reasonable, and no significant errors or omissions could affect verification statement were not found.
- 3) Thus, KFQ concludes that the GHG emissions of Company in 2023 is correctly calculated and stated in accordance with ‘Rule for emission reporting and certification of green.

Unit: tCO₂eq

Scope 1	Scope 2	Total
7,355	42,195	49,545

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



March 13th, 2024

Korean Foundation for Quality
CEO Ji-Young Song

Ji Young Song

Appendix

LG H&H Summary of GHG Emissions Results for 2023

Unit: tCO₂eq

Business site	Scope	Emissions
Ulsan	Scope 1	4,493.702
	Scope 2	9,698.781
	Total	14,192
Headquarters	Scope 1	537.346
	Scope 2	1,136.598
	Total	1,673
Cheongju	Scope 1	27.950
	Scope 2	10,385.110
	Total	10,413
Cheongju TP	Scope 1	816.902
	Scope 2	4,473,421
	Total	5,290
Onsan	Scope 1	1,167.557
	Scope 2	6,956.455
	Total	8,124
Incheon	Scope 1	140.091
	Scope 2	419.253
	Total	559

Unit: tCO₂eq

Business site	Scope	Emissions
Daejeon OBM Lab	Scope 1	0
	Scope 2	100.7
	Total	100
Magok SP Lab	Scope 1	46.833
	Scope 2	4,979.1
	Total	5,025
Daejeon Research Institute	Scope 1	100.136
	Scope 2	796.623
	Total	896
Warehouse	Scope 1	24.584
	Scope 2	3,054.498
	Total	3,079
Direct Sales	Scope 1	0
	Scope 2	194.587
	Total	194
Total	Scope 1	7,355
	Scope 2	42,195
	Total	49,545

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

Appendix

Scope 3 Greenhouse Gas Emissions Verification Statement for 2023(LG H&H)

Introduction

Korea Productivity Center Quality Assurance(hereinafter ‘KPC-QA’) has been engaged by LG H&H Co., Ltd (hereinafter the ‘Company’) to independently verify its 2022 Scope 3 Greenhouse Gas Emission Report(hereinafter ‘Inventory Report’) under limited assurance. It is the responsibility of the Company to compile the ‘Inventory Report’ according to the ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard. KPC-QA has responsibility to conduct verification based on the ISO 14064-3 to provide verification opinion on compliance of the ‘Inventory Report’ against verification criteria.

Verification Scope

The following are included in the scope of this Verification.

- Scope : Scope 3 – other indirect emissions
- Organizational boundaries : Domestic sites of LG H&H Co., Ltd
- Categories : Total 7 categories as below
 - Category 1. Purchased Goods and Services
 - Category 3. Fuel and Energy Related Activities Not Included in Scope 1 or Scope 2
 - Category 5. Waste generated in operations
 - Category 7. Employee commuting
 - Category 12. End-of-life treatment od sold products
 - Category 13. Downstream leased assets
 - Category 15. Investments

* According to the guidelines for LG H&H, small-scale emission facilities(facilities with less than 5% of total emissions or less than 100 tCO₂e), mobile combustion and lack of data partially excluded

** Category 1 limited to only 103 partner companies “Production Stage” out of total 160 partner companies

Assurance Level

Limited level of assurance

Conclusion/Opinion

Based on verification process according to the ISO 14064-3, KPC-QA obtained reasonable basis to express the following conclusion on the 2022 LG H&H Co., Ltd Inventory Report.

- 1) The Inventory Report has been prepared reasonably against ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard.
- 2) As a result of materiality assessment on Scope 3 GHG emissions of LG H&H Co., Ltd, the verification has been prepared in accordance with the requirements of ISO 14064-3.

Total Annual Emissions (tCO ₂ -eq)	Category 1. Purchased Goods and Services	53,386
	Category 3. Fuel - and Energy-Related Activities Not Included in Scope 1 or Scope 2	4,102
	Category 5. Waste Generated in Operations	3,447
	Category 7. Employee Commuting	675
	Category 12. End-of-life treatment od sold products	25,348
	Category 13. Downstream leased assets	1,377
	Category 15. Investments	155
	Total Emissions(Scope 3)	88,490

* Reporting Period : 2023.1.1 ~ 2023.12.31

June 12, 2024

Korea Productivity Center Quality Assurance
CEO **Kang Jang Jin**



KANG JANG JEAN

Appendix

Scope 1, 2 Greenhouse Gas Emissions Verification Opinion Statement for 2023(Coca-Cola Beverage)

Verification Target

Korean Foundation for Quality(hereinafter ‘KFQ’) has conducted a verification of Scope 1, 2 Greenhouse Gas Emissions(hereinafter ‘GHG emissions’) of Coca-Cola Beverage Company(hereinafter ‘Company’) for 2023.

Verification Scope

KFQ’s verification scope covered on all facilities and emission sources under the operational control and organizational boundary of Coca-Cola Beverage Company during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme¹⁾], [2006 IPCC Guidelines for National Greenhouse Gas Inventories] for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment

Level of Assurance

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

Verification limitation

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

Verification Opinions

Regarding to the data of the greenhouse gas emission consumption from the report through the verification, KFQ provides our verification opinions as below

- 1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
- 2) The data and information used in calculating the GHG emissions were appropriate, reasonable, and no significant errors or omissions could affect verification statement were not found.
- 3) Thus, KFQ concludes that the GHG emissions of Company in 2023 is correctly calculated and stated in accordance with ‘Rule for emission reporting and certification of green.

Unit: tCO₂eq

Scope 1	Scope 2	Total
19,786	26,329	46,113

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



March 13th, 2024
 Korean Foundation for Quality
 CEO Ji-Young Song

Ji Young Song

Appendix

Coca-Cola Summary of GHG Emissions Results for 2023

Unit: tCO₂eq

Business site	Scope	Emissions
Yeosu	Scope 1	8,231.057
	Scope 2	12,598.239
	Total	20,829
Yongsan	Scope 1	2,468.950
	Scope 2	6,943.731
	Total	9,412
Gwangju	Scope 1	1,664.874
	Scope 2	4,508.692
	Total	6,173
Warehouse	Scope 1	7,421.573
	Scope 2	2,277.958
	Total	9,699
Total	Scope 1	19,786
	Scope 2	26,329
	Total	46,113

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

Appendix

Scope 3 Greenhouse Gas Emissions Verification Statement for 2023(Coca-Cola Beverage)

Introduction

Korea Productivity Center Quality Assurance(hereinafter ‘KPC-QA’) has been engaged by Coca-Cola Beverage Company(hereinafter the ‘Company’) to independently verify its 2022 Scope 3 Greenhouse Gas Emission Report(hereinafter ‘Inventory Report’) under limited assurance. It is the responsibility of the Company to compile the ‘Inventory Report’ according to the ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard. KPC-QA has responsibility to conduct verification based on the ISO 14064-3 to provide verification opinion on compliance of the ‘Inventory Report’ against verification criteria.

Verification Scope

The following are included in the scope of this Verification.

- Scope : Scope 3 – other indirect emissions
- Organizational boundaries : Domestic sites of Coca-Cola Beverage Company
- Categories : Total 4 categories as below
 - Category 1. Purchased Goods and Services
 - Category 3. Fuel and Energy Related Activities Not Included in Scope 1 or Scope 2
 - Category 5. Waste generated in operations
 - Category 12. End-of-life treatment od sold products

* According to the guidelines for Coca-Cola Beverage Company, small-scale emission facilities(facilities with less than 5% of total emissions or less than 100 tCO₂eq), mobile combustion and lack of data partially excluded

Assurance Level

Limited level of assurance

Conclusion/Opinion

Based on verification process according to the ISO 14064-3, KPC-QA obtained reasonable basis to express the following conclusion on the 2022 Coca-Cola Beverage Company Inventory Report.

- 1) The Inventory Report has been prepared reasonably against ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard.
- 2) As a result of materiality assessment on Scope 3 GHG emissions of Coca-Cola Beverage Company, the verification has been prepared in accordance with the requirements of ISO 14064-3.

Total Annual Emissions (tCO₂-eq)	Category 1. Purchased Goods and Services	72,106
	Category 3. Fuel - and Energy-Related Activities Not Included in Scope 1 or Scope 2	4,895
	Category 5. Waste Generated in Operations	109
	Category 12. End-of-life treatment od sold products	58,559
	Total Emissions(Scope 3)	135,669

* Reporting Period : 2023.1.1 ~ 2023.12.31



June 12, 2024
Korea Productivity Center Quality Assurance
CEO Kang Jang Jin

KANG JANG JEAN

Appendix

Scope 1, 2 Greenhouse Gas Emissions Verification Opinion Statement for 2023(Haitai htb)

Verification Target

Korean Foundation for Quality(hereinafter ‘KFQ’) has conducted a verification of Scope 1, 2 Greenhouse Gas Emissions(hereinafter ‘GHG emissions’) of HAITAI htb Co., Ltd(hereinafter ‘Company’) for 2023.

Verification Scope

KFQ’s verification scope covered on all facilities and emission sources under the operational control and organizational boundary of HAITAI htb Co., Ltd during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme¹⁾], [2006 IPCC Guidelines for National Greenhouse Gas Inventories] for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment

Level of Assurance

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

Verification limitation

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

Verification Opinions

Regarding to the data of the greenhouse gas emission consumption from the report through the verification, KFQ provides our verification opinions as below

- 1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
- 2) The data and information used in calculating the GHG emissions were appropriate, reasonable, and no significant errors or omissions could affect verification statement were not found.
- 3) Thus, KFQ concludes that the GHG emissions of Company in 2023 is correctly calculated and stated in accordance with ‘Rule for emission reporting and certification of green.

Unit: tCO₂eq

Scope 1	Scope 2	Total
10,639	19,182	29,818

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



March 13th, 2024

Korean Foundation for Quality
CEO Ji-Young Song

Ji Young Song

Appendix

Haitai htb Summary of GHG Emissions Results for 2023

Unit: tCO₂eq

Business site	Scope	Emissions
Cheonan	Scope 1	7,966.427
	Scope 2	10,137.712
	Total	18,104
Pyeongchang	Scope 1	63.844
	Scope 2	5,995.308
	Total	6,059
Cheorwon	Scope 1	2.934
	Scope 2	843.610
	Total	846
Iksan1	Scope 1	1,148.851
	Scope 2	981.092
	Total	2,129
Iksan2	Scope 1	370.461
	Scope 2	910.041
	Total	1,280
Warehouse	Scope 1	1,086.592
	Scope 2	314.309
	Total	1,400
Total	Scope 1	10,639
	Scope 2	19,182
	Total	29,818

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

Appendix

Scope 3 Greenhouse Gas Emissions Verification Statement for 2023(Haitai htb)

Introduction

Korea Productivity Center Quality Assurance(hereinafter ‘KPC-QA’) has been engaged by HAITAI htb Co.,Ltd (hereinafter the ‘Company’) to independently verify its 2022 Scope 3 Greenhouse Gas Emission Report (hereinafter ‘Inventory Report’) under limited assurance. It is the responsibility of the Company to compile the ‘Inventory Report’ according to the ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard. KPC-QA has responsibility to conduct verification based on the ISO 14064-3 to provide verification opinion on compliance of the ‘Inventory Report’ against verification criteria.

Verification Scope

The following are included in the scope of this Verification.

- Scope : Scope 3 – other indirect emissions
- Organizational boundaries : Domestic sites of HAITAI htb Co.,Ltd
- Categories : Total 4 categories as below
 - Category 1. Purchased Goods and Services
 - Category 3. Fuel and Energy Related Activities Not Included in Scope 1 or Scope 2
 - Category 5. Waste generated in operations
 - Category 12. End-of-life treatment od sold products

* According to the guidelines for HAITAI htb Co.,Ltd, small-scale emission facilities(facilities with less than 5% of total emissions or less than 100 tCO₂eq), mobile combustion and lack of data partially excluded

Assurance Level

Limited level of assurance

Conclusion/Opinion

Based on verification process according to the ISO 14064-3, KPC-QA obtained reasonable basis to express the following conclusion on the 2022 HAITAI htb Co.,Ltd Inventory Report.

- 1) The Inventory Report has been prepared reasonably against ISO 14064-1 and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain(Scope 3) Accounting and Reporting Standard.
- 2) As a result of materiality assessment on Scope 3 GHG emissions of HAITAI htb Co.,Ltd, the verification has been prepared in accordance with the requirements of ISO 14064-3.

Total Annual Emissions (tCO₂-eq)	Category 1. Purchased Goods and Services	8,296
	Category 3. Fuel - and Energy-Related Activities Not Included in Scope 1 or Scope 2	3,565
	Category 5. Waste Generated in Operations	708
	Category 12. End-of-life treatment od sold products	3,630
	Total Emissions(Scope 3)	16,198

* Reporting Period : 2023.1.1 ~ 2023.12.31



June 12, 2024

Korea Productivity Center Quality Assurance
CEO **Kang Jang Jin**

KANG JANG JEAN

Appendix

Green Taxonomy

LG H&H's industries are not included in the carbon-intensive industries with the most significant potential for climate change mitigation or adaptation by the European Commission. LG H&H's business activities preemptively reviewed "Eligible Activities" and "Aligned Activities" defined by the EU Green Taxonomy to enhance stakeholders' understanding of the sustainability of our business activities. LG H&H classified eligible and suitable activities for turnover, operating expenses(OpEx), and capital expenses(CapEx)¹⁾ as of the end of December 2023(FY 2023) as follows.

1) Capital expenditure: from the total annual CapEx of the company, the ratio of taxonomy-eligible activities are 30.7% These are mainly related to real estate acquisition and management thus cannot be classified as "Taxonomy-aligned."

Economic Activities	Code	Turnover		CapEx		OpEx	
		Million KRW	%	Million KRW	%	Million KRW	%
A. Taxonomy-eligible activities							
A.1 Aligned activities							
-	-	-	-	-	-	-	-
A.2 Eligible but not Taxonomy-aligned activities							
Installation and operation of electric heat pumps	4.16	-	0.0%	1,263	0.8%	-	0.00%
Material recovery from non-hazardous waste	5.9	-	0.0%	3,074	1.9%	-	0.00%
Construction of new buildings	7.1	-	0.0%	9,784	5.9%	-	0.00%
Renovation of existing buildings	7.2	-	0.0%	15,989	9.7%	-	0.00%
Installation, maintenance and repair of energy efficiency equipment	7.3	-	0.0%	3,804	2.3%	-	0.00%
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5	-	0.0%	4,436	2.7%	-	0.00%
Installation, maintenance and repair of renewable energy technologies	7.6	-	0.0%	3,935	2.4%	-	0.00%
Data processing, hosting and related activities	8.1	-	0.0%	6,805	4.1%	-	0.00%
Data-driven solutions for GHG emissions reductions	8.2	-	0.0%	1,591	1.0%	-	0.00%
Subtotal(A.1+A.2)		-	0.0%	50,681	30.7%	-	0.00%
B. Taxonomy-non-eligible activities							
Taxonomy-non-eligible activities		6,804,839	100.00%	114,319	69.3%	165,700	100.00%
C. Total(A + B)		6,804,839	100.00%	165,000	100.00%	165,700	100.00%

