

2021

LG H&H

TCFD Report

Task Force on Climate-related Financial Disclosures

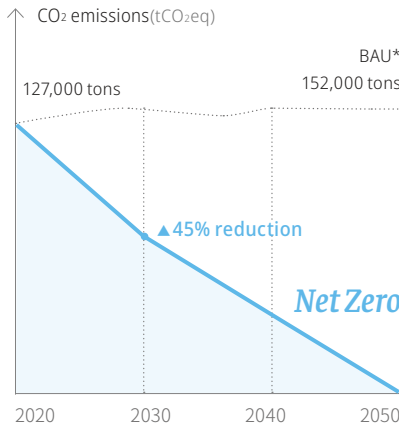
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Vision and Goals

Carbon Neutrality Neutral Ambition



* BAU(Business As Usual)

Greenhouse Gas Emissions in 2021

	(Unit: tCO ₂ -eq)		
	LGH&H	Coca-Cola Beverage	HAITAI htb
Scope 1	8,955	18,552	16,304
Scope 2	43,395	24,638	19,497
Scope 3	2,479	79	784
Sum	54,820	43,265	36,582

LG H&H Carbon neutralization vision and goals

Response to climate change became an international goal since the 2015 Paris Agreement set a 1.5°C limit on the rise of the average global temperature. The Special Report¹⁾ that the Intergovernmental Panel on Climate Change(IPCC) published in October, 2018 emphasized that climate change can cause various risks and that the temperature increase in 2100 compared to pre-industrial levels should be limited to 1.5°C to suppress those risks.

As an FMCG(Fast Moving Consumer Goods) production company with fast consumption due to the characteristics of its household goods, cosmetics, and beverages, LG H&H has established a strategy to minimize the impact. At the same time, we established an eco-friendly strategy that secures mid-to-long term business opportunities and declared '2050 Net Zero' to promise reducing carbon emissions by 45% in 2030 compared to 2020, along with achieving carbon neutrality by 2050.

For this, we are improving our manufacturing efficiencies, such as heat recovery and exchange, as well as the manufacturing process for the direct combustion device. Additionally, we are constantly examining renewable energy technologies including strategies for implementing EV100, solar energy, and hydrogen fuel cells.

LG H&H will achieve 2050 Net Zero through managing greenhouse gas emissions from all business sites across the country, expanding eco-friendly product line portfolios, and implementing both short-term and mid-to-long-term response strategies that contributes to a low-carbon economy.

Based on the vision 'the best living culture company that realizes the beauty and dreams of customers' since its foundation in 1947, we will constantly put in effort to ensure that the company and stakeholders contribute to create a low-carbon economy.

LG H&H Carbon Emission Prospection Prospect

(Unit: ktCO₂eq)



(Unit: ktCO₂eq)

Business sites	2017	2020	2021	2024	2025	2030	2040
● LG H&H	47.2	46.0	52.3	60.8	61.6	61.6	61.6
● Coca-Cola Beverage	46.3	44.5	43.2	50.3	50.3	54.3	54.3
● HAITAI htb	31.5	36.2	35.8	36.4	36.4	36.4	36.4
Sum	125.0	126.8	131.3	147.5	148.3	152.2	152.2

* Assume that the new expansion plans taking place after 2030 is considered in conjunction with carbon neutral measures.

1) IPCC, 1.5°C Special Report on Global Warming

Climate change response activities(management of greenhouse gas emissions)

LG H&H has been managing greenhouse gas emissions by establishing a greenhouse gas inventory in domestic and oversea subsidiaries since 2005. Additionally, we ensure objectivity regarding the performance of greenhouse gas emission through third-party verification, and report to the ESG committee after monitoring quarterly.

In 2021, LG H&H emitted 131,335tCO₂-eq of greenhouse gas in scope 1 and 2, and due to the establishment of new manufacturing facilities, it is estimated that will constantly increase. In order to achieve 'Net Zero' by 2050, we will continue to examine and apply usable greenhouse gas reduction measures such as improving efficiency in manufacturing processes, improving and developing product portfolios, and replacing our equipment using fossil fuels. Additionally, not only we manage the manufacturing process (Scope 1,2), but also expanded the scope of greenhouse gas management to the whole Value chain, including scope 3.

As part of this effort, LG H&H is conducting a carbon-neutrality support project for suppliers. We select small to mid-sized suppliers that face difficulties to reduce greenhouse gas, to support inventory establishment and verification, transfer technologies and know-hows to contribute accurate monitoring as well as reducing emissions. Through the establishment of an eco-friendly value chain, LG H&H is taking the lead for carbon neutrality and win-win value creation.

Climate change response activities(performing major reduction tasks)

LG H&H has set the greenhouse gas emission intensity of 0.135 tCO₂-eq/product-ton by 2025(LG H&H separate standard). To this end, we plan to introduce short-term countermeasures such as replacing motors in manufacturing facilities, installing inverters, and replacing old refrigerators. Coca-Cola Beverage and HAITAI htb also set up applicable technologies and reduction tasks such as installing heat pumps and wastewater process flow meters for the next 30 years.

Corporation Subsidiaries	Business sites	Reduction investment
LG H&H	Cheongju	<ul style="list-style-type: none"> · Replacement of manufacturing motors and installation of inverters · Replacement of(refrigerator pump) motors and installation of inverters · Use of minimum steam operating pressure · Elimination of steam leaks · Replacement to high-efficiency motors · Draw a utility tree diagram
	Ulsan	<ul style="list-style-type: none"> · Melting sheet heat exchange system · Install detergent raw material drum dissolution tank · Use of high-efficiency lighting equipment(LED)
Coca-Cola Beverage	Yeoju	<ul style="list-style-type: none"> · Improve the carbonated product utility process · Purchase a pipe leakage measurement device
	Yangsan	<ul style="list-style-type: none"> · Replacement of LED luminaires(26.208 kWh/year) · Improvement of the carbonated product utility process
	Gwangju	<ul style="list-style-type: none"> · Improvement of the carbonated product utility process
HAITAI htb	Cheonan	<ul style="list-style-type: none"> · Application of an apply external(waste) steam
	Pyeongchang	<ul style="list-style-type: none"> · Replacement of lighting equipments
	Iksan1	<ul style="list-style-type: none"> · Replacement of lighting equipments · Introduction of air compressor
	Iksan2	<ul style="list-style-type: none"> · Replacement of lighting equipment · Improvement of mixing ratio

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Report Overview

Since 2010, LG H&H has provided carbon emission-related information to the CDP(Carbon Disclosure Project). In particular, LG H&H ranked first in Korea's essential consumer goods industry in 2014, was chosen for the DJSI world index for 4 consecutive years as of 2021, and was included in the DJSI Asia Pacific index for 12 consecutive years.

Recently, as the market demand for companies to disclose climate change-related information has increased, TCFD(Task Force on Climate-related Financial Disclosures), established in 2015 by the Financial Stability Board(FSB), an international financial institution, published a proposal of recommendation to present corporate governance, strategy, risk management, indicators and reduction targets as a system for corporate climate change-related information disclosure. Currently(as of April 2022), 3,100 companies in 93 countries have declared their willingness to disclose climate-related information according to the recommendation by declaring their support for TCFD disclosure.

As an ESG leader in the industry, LG H&H plans to reflect the needs of the market and stakeholders and disclose information on climate change-related risks and opportunities following the TCFD recommendations. Through this, we will improve investors' understanding of LG H&H's response to climate change and contribute to the transition to a low-carbon economic society.

Key elements of the TCFD Recommendation



* Source : Recommendations of the Task Force on Climate-related Financial Disclosures

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Governance

G-a) Supervision of the Board of Directors on climate change-related crises/ opportunities

The LG H&H Board of Directors, with the CEO as the chairman, is in charge of making final decision for climate change risk and energy management based on the goals and performance related to greenhouse gas emission. We have been operating the ESG committee under the BOD since 2021 to effectively reflect non-financial factors such as customer value and governance as well as response to climate change in our business activities.

The ESG Committee is composed of the CEO and all independent directors and is held semi-annually. The committee serves as the control tower for ESG governance, reviewing response strategies and action plans related to climate change in sustainable management, monitoring the implementation status of goals, reviewing and approving final ESG reports, etc. In February 2022, the committee approved the resolution on establishing a carbon-neutral mid-to-long-term strategy, including management of greenhouse gas emissions, setting reduction targets, and investment plans to advance the climate change strategy.

In addition to the function of monitoring and making final decisions for climate change, the ESG committee is developing social corporate responsibility plans including, Borrowed Earth School program, Global eco leader support for nurturing future generations, ESG management assessment for strengthening supplier ESG, and establishing carbon inventory as well as providing reduction consulting.

We will continue to work closely with the management and working(working level group /operational) groups to do our best to ensure that ESG management is implemented company-wide.

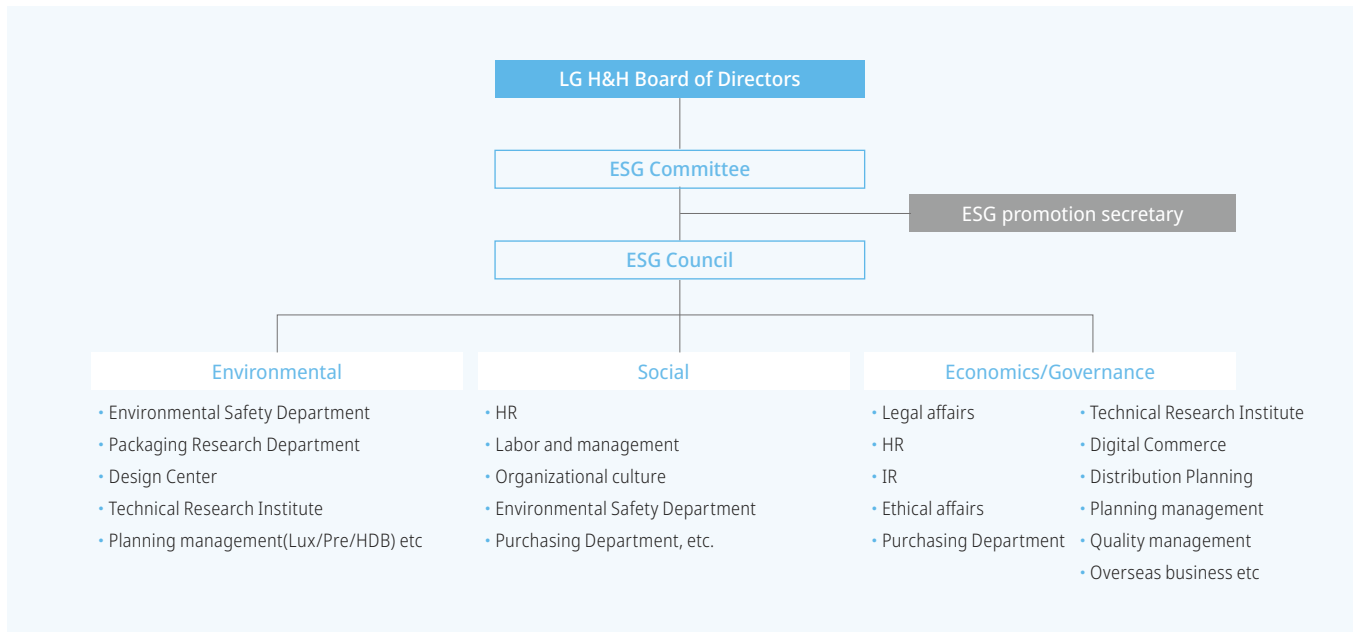


G-b) Management’s role in assessing and managing climate change-related crises/ opportunities

LG H&H operates the ESG Council(formerly the CSR Council), an ESG performance management working group chaired by the CFO under the ESG Committee, the control tower for ESG governance.

ESG Council performs functions such as establishing ESG and climate change-related action plans for each department, company-wide response plans to external stakeholder demands, and leading performance-related discussions. The council is held quarterly to monitor and evaluate the implementation of strategic tasks on ESG and climate change-related issues and report the results to the ESG committee.

As climate change is a factor that directly affects a company's production capacity and is directly related to sales, climate change-related performance indicators are reflected in the KPIs of C-Level executives, including the CEO and CFO, which acts as a motive for implementing eco-friendly policies. In addition, the ESG team(formerly CSR team) selects and plans ESG core strategic tasks and functions as the secretariat of the ESG Committee. As a dedicated ESG department, the team supports the implementation of climate change-related strategic tasks and monitors implementation status. The ESG team is also collaborating on the task discovery and implementation process of the ESG work-related working groups.



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Strategy

S-a) Climate change-related risks/opportunities identified by the organization over the short-, medium- and long-term

Period	Short-term 2020-2024	Mid-term 2025-2030	Long-term 2031-2040
Physical risks	<ul style="list-style-type: none"> · Damage to business sites and reduced productivity due to natural disasters caused by abnormal climate phenomena such as cyclones and floods · Possibility of a global epidemic outbreak such as COVID-19 	<ul style="list-style-type: none"> · Aggravated water shortage due to increase in global average temperature(increase in the cost of raw materials) · Relocation of production facilities to a place where water scarcity, temperature rise, and extreme climatic phenomena can be avoided(requires high capital investment) · Increase in electricity consumption for heating and cooling due to increase in global average temperature (increase in cost) · Impact of raw material supply and demand(cost increase) due to decrease in natural capital due to destruction of biodiversity/forest/natural environment · Decreased agricultural productivity due to intensification of extreme climatic events 	
Transitional risks	<ul style="list-style-type: none"> · Enhancing government greenhouse gas emission regulations and disclosure obligations · Expanding response to regulations related to food additives such as sugar · Expanding response to regulations related to plastic packaging production and disposal · Sales decline due to negative reputation due to the use of purchasing raw materials and packaging materials containing conflict minerals 	<ul style="list-style-type: none"> · Expanding investment production facilities to develop low-carbon products · Disruption in the supply and demand of packaging materials due to the expansion of international regulations due to environmental pollutants(non-recyclable plastics) 	<ul style="list-style-type: none"> · Decreased investment due to failure to respond to climate change, and decreased sales due to negative reputation.
Opportunities	<ul style="list-style-type: none"> · Increased demand for cosmetics/beverage products due to COVID-19 mitigation(starting normal business activities) · Increased consumer product purchase rate due to their improved awareness of LG H&H as an eco-friendly company through the expansion of eco-friendly material/product development (green products : eco-label/carbon footprint/ low-carbon certified products) · Preparation for a resource circulation system by launching a body scrub product using eco-friendly raw materials such as coffee bean by-products. · Reduced energy consumption due to the replacement of outdated facilities in the workplace 	<ul style="list-style-type: none"> · Energy saving through low-temperature emulsification process development · Advancement of product packaging technology through Green Packaging Guide · Reduced product production cost through efficient water use infrastructure · Creation of an upcycling ecosystem by upgrading the eco-friendly resource circulation system · Upcycling cosmetic containers that are difficult to recycle 	<ul style="list-style-type: none"> · Developing new products/services to help consumers in areas with extreme climate change, such as water shortages, to adapt to the climate (ex. Water use reduction by developing easy-to-clean cosmetics) · Increased demand for beverages due to rising temperature
Investment plans	<ul style="list-style-type: none"> · Replacement of old facilities · Investment in building insulation work · Increased share of renewable energy through solar energy investment (solar panel efficiency 27% in 2021 to 35% in 2030) 	<ul style="list-style-type: none"> · Reflecting on basic investment factors when building renewable energy buildings such as geothermal and solar power generation. · EV replacement of Logistic vehicles 	<ul style="list-style-type: none"> · Converting the power supply system through hydrogen fuel cell and step-by-step promotion of carbon neutralization (* Hydrogen power generation unit cost 250 won/kW to 131 won/kW in 2030)

* The 10 goals of carbon-neutral technological innovation by the Ministry of Science and Technology

S-b) Impact of climate change-related crises/opportunities on LG H&H's business, strategy, and financial plans

LG H&H clearly recognized and identified the business risks and opportunities that could arise from factors such as the global trend of responding to climate change through carbon emission reduction and the rise in temperature caused by climate change. By reflecting this into LG H&H's overall business strategy and management plan, we intend to use it as a driving force to secure competitiveness and reach our goal of achieving carbon neutrality in the long term.

To achieve carbon neutrality, we must undertake important tasks directly related to carbon and greenhouse gas emissions, such as reducing greenhouse gas emissions, expanding the use of new and renewable energy, developing biodegradable materials, and establishing a resource circulation ecosystem through the use of recyclable containers. At the same time, it is also essential to respond to climate change comprehensively, including crucial climate change indicators other than greenhouse gases, such as water conservation, electricity consumption, and reduction of waste emissions. LG H&H has established the following major response strategies to reduce carbon emissions by 45% by 2030 (compared to 2020), which is the pre-carbon neutral pre-carbon neutrality goal of 2050.

First of all, we will advance the monitoring and evaluation systems for greenhouse gas emissions by product and business sites to thoroughly understand the current status of LG H&H's greenhouse gas emissions and then develop improvements. We will continue to improve energy efficiency by installing heat exchangers at each LG H&H, Coca-Cola Beverage, and HAITAI htb business sites by 2030 and improving energy efficiency by replacing boilers. We will also implement an investment plan worth about 200 billion won by selecting 84 detailed technical tasks to apply annually in the areas of strategies for expanding the use of renewable energy and converting to eco-friendly vehicles.

In addition, we will reduce plastic consumption by about 20%, from 20,686 tons in 2020 to 16,549 tons in 2030, by promoting the development of eco-friendly products, raw materials, and packaging materials. As part of this effort, in 2021, we applied the world's first label-free contour bottle to a Coca-Cola container and contributed to promoting recycling and reducing plastic usage by launching shower products that replaced plastic fabrics with paper. We will also achieve the reduction target by 2022 by increasing the use of renewable and biodegradable biomaterials to 1% or so.

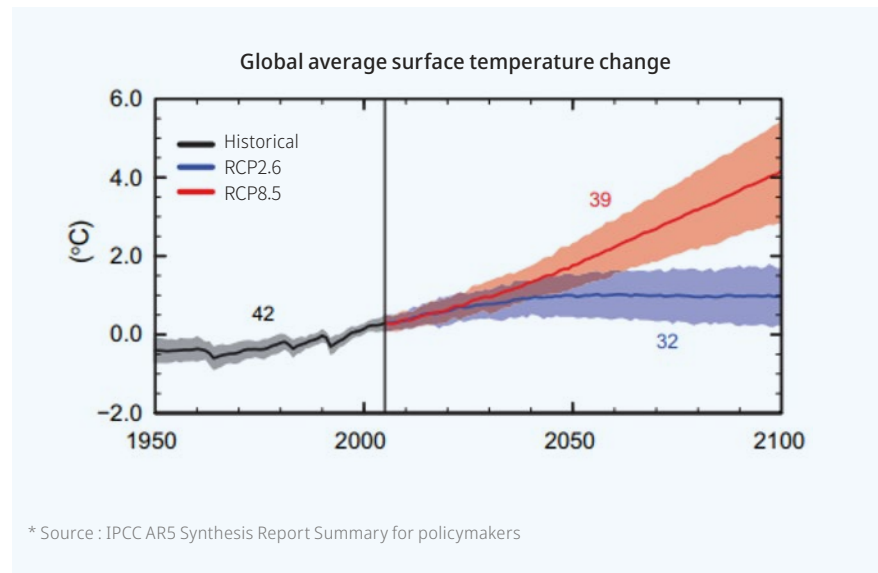
LG H&H intends to take a step closer to carbon neutrality through a more creative and challenging approach after 2030. Going beyond achieving existing initiatives such as RE100 and EV100, we will review innovative eco-friendly infrastructure investments such as LG H&H's hydrogen power plant construction.

S-c) Resilience of organizational strategies taking into account various climate change-related scenarios, including scenarios below 2°C

LG H&H has set a top-down reduction goal of reducing carbon emissions by 45% by 2030 based on the IPCC scenario, which limits the average global temperature rise to 1.5°C or less. The means to reduce the gap between the bottom-up reduction goal calculated by examining the tasks that can be performed within LG H&H, includes process efficiency improvement, fuel conversion, RE100, and EV100, will be determined flexibly by comparing the economic feasibility of reduction measures such as REC and boilers with the progress of climate change in the future.

We analyzed the IPCC's RCP4.5, RCP6.0, and RCP8.5 scenarios to identify the direct impact of climate change on LG H&H's business sites and production facilities. We will continue monitoring and minimizing physical risks such as heavy rain, heat waves, typhoons, sea-level rise, and fine dust identified by analyzing within the LG H&H's risk management system.

Scenario	Scenario Description	CO ₂ concentration as of 2100(ppm)
RCP1.9	Keeping the temperature rise at below 1.5°C according to the Paris Agreement	Less than 420
RCP2.6	Reducing greenhouse gas immediately	420
RCP4.5	Substantially realizing the greenhouse gas reduction policy	540
RCP6.0	Realizing the greenhouse gas reduction policy to some extent	670
RCP8.5	Maintaining current trend(without reduction efforts) GHG emissions	940



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Risk Management

R-a) The organization's process for identifying and assessing climate-related risks

LG H&H manages risks identified as impacting business through the 'Company-wide Integrated Risk Management System' and identifies and evaluates them into 'company-wide risks' and 'individual asset-level risks.'

At the company level, we are managing a vast pool of risks including climate change response, domestic and international social and economic issues, and issues derived from major overseas organizations, such as, the UN SDGs. We classify these risks as core corporate issues through a materiality assessment process based on the interests of internal stakeholders and trends of competitors in the same industry to manage them directly. The materiality assessment process is accomplished by assessing the potential size and impact of the identified risks.

At the individual asset level, we manage risks such as government regulations and current laws that can directly affect our business. We analyze and reflect climate change-related regulations and risks in advance before making decisions regarding the maintenance and expansion of production facilities, which are our core assets. As such, LG H&H has established and is operating a pre-emergency response plan to ensure critical assets under the influence of climate change to respond to risks preemptively.

R-b) Organizational processes to manage climate-related risks

The LG H&H ESG Committee has the final decision-making authority on climate change response and monitors and manages all ESG-related issues, including climate change response. The committee is responsible for managing risks related to climate change with the ESG Council and the Secretariat ESG Team and Working Group.

LG H&H is operating the Compliance Committee to respond to compliance-related issues from domestic and overseas. The Committee responds to comprehensive compliance issues by organizing experts in various fields, including the head of external cooperation, the head of Jeong-Do Management, and the head of overseas legal affairs, with the CFO as its chairperson.

Together with this, we operate a Preventive Management Committee that performs complex business-related risk management functions. The Preventive Management Committee conducts preemptive prevention activities for significant risks arising from matters that significantly impact business, such as facility investment, capital management, and accounting management.

R-c) Integration of processes to identify, assess and manage climate change-related risks into the organization-wide risk management

LG H&H operates a company-wide integrated risk management system to monitor and respond to potential risks. We monitor climate change-related risks quarterly by the ESG committee secretariat as part of the company-wide integrated risk management system and continue to understand the impact of climate change-related risks on business at the company level.

Also, in the long term, we review methods to effectively respond to risks by integrating the management and execution departments within the climate change risk response governance.

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Metrics and Target

M-a) Indicators used by the organization to assess climate change-related risks/ opportunities under its strategy and risk management process

LG H&H continuously monitors and evaluates climate change-related risks and opportunities by securing quantitative data on greenhouse gas emissions and their intensity directly affecting climate change. We disclose emission data from Scope 1, 2, and 3 to stakeholders through our sustainability report and CDP response sheet.

In addition, we established a system that could respond to both the short-term and mid-to – long-term climate change risks and opportunities that occur throughout our production activities, and disclose major environmental indexes other than greenhouse gas emission, which includes disclosing water use, wastewater and waste.

Greenhouse Gas

Business sites	Unit	2018	2019	2020	2021	
LG H&H	Emission	ton CO ₂ e	51,631	48,654	45,314	52,347
	Intensity	ton CO ₂ e/product-ton	0.115	0.12	0.122	0.148
Coca-Cola Beverage	Emission	ton CO ₂ e	46,436	46,938	44,514	43,189
	Intensity	ton CO ₂ e/product-ton	0.069	0.065	0.061	0.061
HAITAI htb	Emission	ton CO ₂ e	35,345	36,191	36,246	35,800
	Intensity	ton CO ₂ e/product-ton	0.067	0.066	0.067	0.068
Sum	Emission	ton CO ₂ e	133,413	131,791	126,074	131,335
	Intensity	ton CO ₂ e/product-ton	0.081	0.079	0.077	0.083

Energy consumption

Business sites	Unit	2018	2019	2020	2021	
LG H&H	Emission	TJ	1,118	1,023	991	1151.3
	Intensity	GJ/product-ton	2.489	2.532	2.671	3.265
Coca-Cola Beverage	Emission	TJ	887	902	867	851
	Intensity	GJ/product-ton	1.311	1.244	1.196	1.202
HAITAI htb	Emission	TJ	640	729	676	727
	Intensity	GJ/product-ton	1.212	1.328	1.244	1.379
Sum	Emission	TJ	2,645	2,655	2,533	2,729
	Intensity	GJ/product-ton	1.599	1.581	1.546	1.719

Water

Business sites	Unit	2018	2019	2020	2021	
LG H&H	Emission	ton	645,337	666,127	555,420	543,103
	Intensity	ton/product-ton	1.437	1.649	1.498	1.540
Coca-Cola Beverage	Emission	ton	1,698,814	1,879,051	1,726,739	1,772,995
	Intensity	ton/product-ton	2.512	2.591	2.382	2.505
HAITAI htb	Emission	ton	1,127,026	1,262,758	1,217,063	1,256,855
	Intensity	ton/product-ton	2.153	2.298	2.24	2.384
Sum	Emission	ton	3,471,177	3,807,935	3,499,222	3,572,953
	Intensity	ton/product-ton	2.100	2.268	2.135	2.250

M-b) Scope 1, 2 GHG emissions and related risks

To respond to climate change and minimize its impact on the environment, LG H&H quantitatively identifies greenhouse gas emissions (Scope 1, 2, 3) and manages its energy consumption as an index.

M-c) Goals and performance against goals used by the organization to manage climate change-related risks/opportunities

LG H&H is making every effort to reduce carbon emissions by 45% in 2030 compared to 2020 and achieve a carbon-neutral Net-Zero by 2050. In 2020, we emitted 45,314 tCO₂e of greenhouse gas, reducing 12% compared to 51,631 tCO₂e in 2018.

We will continue to improve process efficiency by replacing outdated equipments with high-efficiency production facilities, introducing solar power generation facilities, and reviewing renewable energy such as hydrogen fuel cells to local production facilities that can supply by-product hydrogen.

In particular, as we acknowledged that we need to expand the use of renewable energy, we will continue to review whether we can measure RE100 implementations, such as carbon certificate (REC) purchase and power sales contract (PPA) to reduce emissions in Scope 2, which accounts for 75% of LG H&H's greenhouse gas emissions (as of 2020).

In addition to the technical challenges of the production process, LG H&H aims to enhance ESG execution in all business areas by establishing the 'LG H&H ESG Awards' so that all in-house employees can continue to take an interest in and participate in ESG in their respective work areas. Especially, we can expect substantial emission reductions following the implementation of the system, including standards related to direct carbon emission reduction and the use of eco-friendly materials and packaging materials in the eco-friendly sector evaluation.

Wastewater

Business sites		Unit	2018	2019	2020	2021
LG H&H	Emission	ton	131,096	134,398	101,243	122,645
	Intensity	ton/product-ton	0.292	0.333	0.273	0.348
Coca-Cola Beverage	Emission	ton	926,066	997,235	938,682	940,976
	Intensity	ton/product-ton	1.369	1.375	1.295	1.329
HAITAI htb	Emission	ton	577,474	622,160	612,031	729,861
	Intensity	ton/product-ton	1.094	1.132	1.127	1.384
Sum	Emission	ton	1,634,635	1,753,793	1,651,956	1,793,482
	Intensity	ton/product-ton	0.989	1.045	1.008	1.130

Waste

Business sites		Unit	2018	2019	2020	2021
LG H&H	Discharge	ton	6,641	7,134	6,589	8,528
	Intensity	KG/product-ton	14.79	17.658	17.771	24.180
Coca-Cola Beverage	Discharge	ton	8,123	7,176	6,663	6,906
	Intensity	KG/product-ton	12.011	9.893	9.192	9.757
HAITAI htb	Discharge	ton	5,939	7,275	7,424	5,837.3
	Intensity	KG/product-ton	11.252	13.240	13.665	11.072
Sum	Discharge	ton	20,703	21,584	20,675	21,271
	Intensity	KG/product-ton	12.523	12.857	12.616	13.397

