KT&G - Climate Change 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

KT&G is growing into a global giant company beyond the domestic market, focusing on tobacco, health functional foods, cosmetics, bio and pharmaceuticals, and real estate businesses. KT&G pursues "Making a Better Life Together" with society, and continues to create social values and expand sustainability activities based on the business philosophy: ‘Exemplary company’, ‘Progressive company’, and ‘Inclusive company’.

KT&G conducts a materiality assessment every year to identify and effectively manage key ESG management issues that may affect stakeholders and the company. As a result of the materiality assessment, climate change was identified as a major issue in ESG management, and KT&G has established a vision and strategy system for environmental management, ‘KT&G Green Impact’, which is focused on mitigating climate change impact and transition to a circular economy, in order to reduce climate change risks and discover business opportunities. We are conducting various projects to effectively achieve mid- to long-term goals for emission reduction, carbon neutrality, water reduction, and waste recycling, and trying to minimize environmental impact across the entire value chain and create shared value for stakeholders.

In particular, KT&G has established mid- to long-term reduction targets in accordance with the Global Science-Based Target Initiative (SBTi) guidelines to minimize the negative impact of greenhouse gas emissions and strengthen the responsibility of the entire value chain from supply chain to consumer use. It aims to reduce greenhouse gas emissions by 42% compared to 2020 by 2030, and further contribute to creating a low-carbon society by achieving Value Chain carbon neutrality 2050 years ago.

In addition, KT&G takes actions to tackle climate change based on the framework of governance, strategy, risk management, and target & metrics, suggested by the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, to identify actual financial impacts of climate change and strengthen the level of response. We are carrying out climate change response activities across all areas and are striving for more effective climate-related financial disclosures.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

Indonesia
Republic of Korea
Russian Federation
Turkey

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

KRW

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

C-AC0.6b/C-FB0.6b/C-PF0.6b

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Do not own/manage land

Please explain

KT&G does not own tobacco farms or farmland, and the total amount of tobacco leaf produced in Korea is purchased and used for KT&G's products. In recognition of tobacco farms and farmers as important partners in the value chain, KT&G supports them for economic and social stability and productivity improvement through various shared-growth programs. To mitigate emissions throughout tobacco cultivation and drying processes, in particular, KT&G has reduced the use of chemical fertilizers and established a low-carbon tobacco processing environment, by promoting eco-friendly fertilizers through joint research and collaboration with domestic tobacco farmers.

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Tobacco

% of revenue dependent on this agricultural commodity

60-80%

Produced or sourced

Sourced

Please explain

As of the end of 2021, KT&G purchased a total of 38,903 tons of tobacco leaf, of which 8,013 tons (21%) was procured in Korea. The remaining 79%, or 30,890 tons, was purchased from major overseas suppliers in the US and Brazil.

Agricultural commodity

Timber

% of revenue dependent on this agricultural commodity

60-80%

Produced or sourced

Sourced

Please explain

KT&G's business requires wood products including filters, packaging materials, and tip papers for tobacco business and packaging materials for health functional foods, cosmetics, and bio and pharmaceuticals businesses.

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	KR7033780008

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The Board of Directors (BOD) reviews and discusses matters related to climate change and establishment and implementation of ESG strategies. KT&G grants the final decision-making authority and responsibility to the BOD on ESG-related matters, and accordingly, the Board is in charge of in-depth discussion of environmental issues, review and decision on mid- to long-term strategies for climate change. The BOD also deliberates and reviews the annual budget required to implement the mid- to long-term environmental strategies, thereby making climate-related financial decisions for the company. The BOD evaluates and monitors the company's key ESG activities and performance every year. In April 2021, the mid- to long-term ESG strategy (environment sector) was reported to the Board, including the expansion of renewable energy use and the advancement of greenhouse gas emission management, for the review and supervise.
Board-level committee	KT&G established the "ESG Committee" in February 2022 to strengthen its expertise in ESG issues and to implement advanced strategies through in-depth discussions. As the top decision-making body on climate change and ESG matters, the ESG Committee is chaired by an outside director, and it consists of five directors including the chairman of the committee. The ESG Committee reviews the KT&G Report, which discloses key ESG management performance, including climate change, to stakeholders, and conducts deliberation and resolution on basic ESG policies and strategies, as well as mid- to long-term goals. In addition, it manages and supervises significant ESG-related risks and responses, including climate change.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	As the highest permanent decision-making body, the BOD deliberates and decides on the main corporate business agenda. The Board has the authority to manage, supervise and make decisions on ESG issues, including climate change response, and reviews and supervises the company-wide annual budget plan, including ESG and climate change response activities. The Board also reviews mid- to long-term climate change strategies and supervises the implementation of major tasks. The BOD meeting shall be held regularly, seven times a year, and additionally if necessary. It was held 13 times in 2021. Since 2022, "ESG Committee" has been in operation under the BOD to strengthen the expertise and operational efficiency. The Board reviews and deliberates on major climate-related ESG issues through the committee and the committee is regularly briefed on the goals and progress of the mid- to long-term ESG plans which include climate change response activities. The company does not have a separate committee for risk management, and the Audit Committee which consists of only outside directors is, therefore, responsible for monitoring the status of company-wide risk management. The operational regulations specifies roles and responsibilities regarding the risk management as per the BOD and each committee, according to which climate change risks are reported to and managed by the ESG Committee. When it comes to climate change and ESG risks, the internal audit department, an independent organization under the Audit Committee, inspects progress on ESG management, including climate change issues, and reports the result to the Audit Unit. Through this, we monitor the status of ESG management practices and the progress of mid- to long-term ESG tasks in the entire company, while inspecting the roles and responsibilities assigned to major organizations.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	KT&G closely examines expertise and independence of director candidates in accordance with the candidate screening criteria. In particular, we try to ensure their expertise is aligned with our corporate strategies during the screening process. KT&G's mid- to long-term strategies for the environment sector includes promotion of renewable energy for emission reduction. Candidates' experience and performance in renewable energy-related industries were reviewed during the selection process of directors.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

[CFO]

In KT&G, the CFO, an executive director and general manager, is responsible for overall management of ESG issues in the company, including climate change issues. As such, the CFO directly supervises the ESG planning team, a company-wide ESG control tower, which is in charge of establishing an ESG management system and leading incorporation and implementation of corporate ESG issues. The ESG Management Council is the highest decision-making-assisting organization, consisting of executive members of all business areas, discusses ESG and environmental issues from an integrated perspective. The ESG planning team regularly reports management and performance monitoring data for climate change-related issues at least four times a year to the BOD.

[ESG Committee]

The ESG Committee is a committee within the BOD established in February 2022 for the purpose of strengthening the BOD's expertise in ESG issues. This committee manages and supervises the environmental impact and ESG issues affecting KT&G's overall business operations, and receives and reviews the materiality assessment of ESG issues, including climate change, at least once a year. The committee is chaired by an outside director and consists of one chairperson and four members as of 2022. The ESG Committee reviews the KT&G Report, which discloses key ESG management performance, including climate change, to stakeholders, and conducts deliberation and resolution on basic ESG policies and strategies, as well as mid- to long-term goals. In addition, it manages and supervises significant ESG-related risks and responses, including climate change.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Energy reduction project Behavior change related indicator Company performance against a climate-related sustainability index	One of management performance indicators for the CEO evaluates their progress in establishment and incorporation of the ESG management system in the company. In accordance with the remuneration & payment regulations, CEO is given a performance-based bonus ranging from 0 to 255% of the basic annual salary based on the performance evaluation conducted by the Evaluation Committee, a subcommittee under the BOD consisting of only outside directors, in consideration of ESG performance and corporate value creation. The ESG management performance is evaluated according to the achievement of mid- to long-term goals in main ESG focus areas including climate change. In detail, we apply major external evaluation methods that can objectively measure climate change and ESG performance, such as MSCI, CDP and KCGS (Korea Corporate Governance Service), and the performance against target is assessed quantitatively. We also conduct a comprehensive evaluation on activities to strengthen the ESG management system for corporate sustainability, including climate change response. Through this, activities related to ESG management and climate change response are encouraged so that companies can create long-term and sustainable values. In addition, if matters involving intentional or severe negligence of top management, including the CEO, are found, KT&G can clawback and reduce the performance-based bonus of the parties involved according to the corporate policy.
Chief Financial Officer (CFO)	Monetary reward	Company performance against a climate-related sustainability index	KT&G evaluates performance of its internal directors in the aspect of ESG management and corporate value creation in accordance with remuneration regulations, and pays a bonus ranging from 0 to 150% of the basic annual salary every year. The CFO's ESG management performance is evaluated with indicators that could enhance the level of company-wide ESG management including climate change response and encourage continuous management activities. As a key management member in charge of evaluating and managing climate change-related risks and opportunities, the CFO's incentives are linked with the company's sustainability indices related to climate change, and major environmental impact reduction activities such as emission reduction and energy saving are evaluated.
Business unit manager	Monetary reward	Emissions reduction target	In KT&G, ESG KPIs are assigned by headquarters (HQ), which aims to achieve detailed goals by setting climate change response directions suitable for the business characteristics of each HQ. The R&D HQ, for instance, sets technology development or certification activities to improve product eco-friendliness as its detailed goals, and incentives are given according to the level of achievement.
Procurement manager	Monetary reward	Supply chain engagement	The Raw Material Headquarters (HQ), which procures raw materials, including overseas tobacco leaf, and performs supplier-related activities, are given incentives according to the performance of increasing social and environmental value of the supply chain. In an aim to increase social/environmental value of the supply chain, the Raw Material HQ conducts measures to mitigate environmental impact of tobacco farms, strengthens supply chain management, and implements support programs for supplier companies.
Process operation manager	Monetary reward	Emissions reduction target Efficiency project	The Manufacturing HQ is given incentives according to the implementation of the mid- to long-term environmental management strategies and the achievement of short-term goals. Various activities to mitigate major environmental impacts are included in KPIs, such as reducing emission intensity and water usage intensity as well as increasing waste recycling rate. The Manufacturing Unit also reviews and implements the optimal method to introduce renewable energy in the manufacturing process.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	The mid-to long-term environmental management strategies include a long-term vision until 2050 and define 0 to 3 years as short-term.
Medium-term	3	5	The mid-term goals and action plans of the mid- to long-term strategies are set for 3 to 5 years
Long-term	5	10	The long-term GHGs reduction target was set to the year 2030, and the ultimate target year of carbon neutrality was set to 2050.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

KT&G analyzes materiality of impact when evaluating substantive financial or strategic impact of issues affecting the company and its stakeholders. The materiality analysis process involves measuring business impact, stakeholder impact, and value chain impact, based on which priorities of issues are derived and management directions are set accordingly. The business impact refers to the impact on the company's sales, costs, reputation, and regulatory response. The stakeholder impact is derived by analyzing importance and interest from the perspective of major stakeholders such as customers, investors, employees, business partners, and the government. The value chain impact is analyzed by assessing social, economic, and environmental impacts by issue in terms of value chain.

Based on the materiality analysis, climate change response activities are classified as a key issue in KT&G. In detail, the materiality of climate change risks on the business is evaluated based on the financial impact and likelihood of occurrence, and the risks are classified and identified through this process. The materiality analysis for ESG issues is reported to the BOD by the CFO. In accordance with the internal delegation guidelines and the purchase regulations, major risks that can lead to financial impacts of KRW 100 million or more are defined as substantive financial or strategic impacts. The corresponding financial impact accounts for 0.003% of sales in 2021.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
1. Company-wide risk management process KT&G operates a standardized integrated risk management system throughout its business operations. In particular, for more effective risk management, KT&G devised the 'Three Lines of Defense Model', a system combining a working-level department, a dedicated management department for each sector and the independent audit department so that company-wide risk management organizations and processes are operated in an integrated way. Regular company-wide risk assessments are performed for financial/non-financial risks twice a year, and non-regular assessments are conducted occasionally when risks occur or their likelihood of occurrence shifts due to change of conditions. A dedicated organization is established in each business sector to deal with related risks. Climate change risks are managed by the ESG planning team, reported to the CFO and finally to the ESG Committee within the BOD. 2. Climate change risk management process 1) Identification of risks and opportunities Potential climate change risks and opportunities are identified by evaluating their materiality on a quantified scale according to their likelihood and financial impact. In accordance with the TCFD recommendations, the likelihood of occurrence is analyzed by each physical/transition climate scenario, and risk impact is evaluated based on short-term, medium-term, and long-term time period. 2) Response to risks For example, in a climate scenario bearing a high risk of transition, the price of emission permits under the emission trading system (ETS) is highly likely to increase, which will have a low impact in the short term, but may act as a financial burden on companies in the medium to long term. In order to hedge this risk, the responsible department established a plan for internal carbon pricing and reported measures to apply it. 3) Monitoring KT&G monitors the performance of the risk response activities to improve them, if necessary, or seek new countermeasures. 4) Update and report We update the watchlist and materiality analysis of climate change risks and opportunities by reviewing climate change-related research data, related policies, activities of the peer group, and opinions from working-level departments, and report the updates to the ESG Committee.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As a company subject to Korea Emission Trading Scheme (K-ETS), KT&G is obligated to calculate and report its emissions every year. And if its emissions exceed the allowances allocated by the government, internal reduction activities or purchase of emission permits are required. As such, in order to fulfill the obligation, costs for purchasing emission permits and investment expenditures for reduction activities may arise, which may lead to financial impact. In addition, non-compliance with regulations may result in fines and risk factors that may undermine the company's reputation. According to the climate scenario analysis, it was found that carbon prices are likely to soar in a climate scenario bearing high transition risk, which may lead to an increase in KT&G's operating costs if it is required to purchase emission permits. Therefore, annual energy consumption and GHG emissions are strictly managed throughout the company, and carbon price risks are mitigated by establishing mid- to long-term goals and by carrying out investments for emissions reduction.
Emerging regulation	Relevant, sometimes included	The Korean government has presented its macro-level strategies and goals regarding carbon neutrality in the 2050 Long-term Low Emission Development Strategies (LEDS). As such, there is a possibility that new regulations will be introduced to reduce emissions and environmental impacts, and the intensity of regulations or the speed of change is expected to be greater in scenarios with high transition risks. Moreover, KT&G is affected by various climate-related regulations as it operates business by procuring raw materials and importing products from many countries around the world. In such a situation where the risk of the new regulation occurs, the company may be required to introduce additional facilities or actions in compliance with the requirements of the new regulation. Therefore, KT&G monitors newly proposed climate change-related laws and regulations regularly or occasionally if necessary, and responds to them strategically by analyzing the new regulatory impact.
Technology	Relevant, sometimes included	It is important to clearly establish the correlation between the technology and company and the impact of introduction, as the technology can impact vastly on climate change and companies. A new technology can have a relatively large impact in a scenario with a high transition risk, and this may be either a risk or an opportunity depending on the situation. For instance, a newly introduced technology may become a risk factor when the analysis turns out wrong, misleading investments and finally undermining the company's competitiveness in the future. On the contrary, it can become an opportunity factor in terms of price competitiveness if it manages to reduce energy costs drastically and manufacturing costs consequently. Therefore, KT&G is continuously evaluating technology risks, while continuing to increase investment in technologies that can improve energy efficiency or reduce the product carbon footprint.
Legal	Relevant, always included	It is mandatory to ensure legal compliance in operating corporate business activities. Based on the climate change risks identified in accordance with the TCFD recommendations, litigation and legal matters are not found to be a high risk factor, but rather a potential risk that can have impact ranging from fines to operation restrictions in case of violation. Thus, it is necessary to check compliance continuously. KT&G monitors the compliance of its business sites under the company-wide environmental management system which is stricter than the legal requirements.
Market	Relevant, always included	In a climate scenario with high physical risk, worsening climate risks may affect the yield of tobacco leaf and act as an additional risk to the procurement of raw materials. In addition, in climate scenarios with high transition risk, competition for farmland may intensify as global restrictions on land and forest use are tightened and more stringent land-use guidelines are applied, reducing available land for growing crops. In either case, raw material procurement costs may increase due to fluctuations of production and the raw material production costs may be affected due to an increase in land use costs. This can act as pressure to decrease product margins or increase unit price due to higher cigarette production costs. In addition, changing consumer behaviors with preference for low-carbon products are also included in the market risk.
Reputation	Relevant, always included	As the understanding, interest, and expectations of major stakeholders, including consumers, for climate change response activities are increasing, the impact of the company's climate change response activities on corporate reputation is expanding. Therefore, KT&G assesses the climate change-related reputational risks by considering them as potential risks that may affect the company's long-term performance. As a result of risk assessment based on climate scenario analysis, reputational risk depends on the climate change-related awareness and perspective of major stakeholders such as customers, investors, NGOs, and employees, and is highly influential to corporate credit rating and consumer preference, if the company fails to meet the stakeholders' demand or expectation. KT&G gathers climate-related issues and opinions from various stakeholders and assesses their materiality in the process of publishing the annual KT&G Report (Sustainability Report), thereby listening to stakeholders' opinions and disclosing information on climate change activities transparently.
Acute physical	Relevant, always included	Acute physical type of risk was evaluated according to the TCFD recommendations, and the severity of the physical climate events was analyzed by time horizon according to the IPCC's RCP scenarios. Risks from climate events such as typhoons and floods can affect KT&G's manufacturing facilities and warehouses, as well as its logistics network and major crops. Accordingly, KT&G establishes and operates an emergency response contingency plan including disaster recovery in each business site, while internally conducting risk assessment to identify and evaluate harmful risk factors for each business site. In addition, we have also established damage recovery manuals for each situation at all business sites for rapid recovery in case of a disaster. Also, we are carrying out financial support activities for rapid recovery in the event of natural disasters in domestic leaf tobacco farms.
Chronic physical	Relevant, always included	As a result of the scenario analysis in accordance with the TCFD recommendations, it was confirmed that the chronic physical risks caused by climate change affect KT&G's supply chain and all value chains. Climate events such as precipitation fluctuation, temperature changes, and water shortages can have a gradual but fatal impact on cultivation of tobacco leaf. KT&G conducted a water risk assessment for all business sites in Korea and abroad, using the World Resources Institute's global water risk mapping tool (WRI Aqueduct Water Risk Atlas), and it was found that business sites in Indonesia and Turkey are located in a high water risk environment. Based on the assessment result, KT&G is implementing measures for efficient water consumption and water risk reduction in the corresponding workplaces.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The carbon pricing mechanism which has an impact on the company is Korea Emission Trading Scheme (K-ETS). K-ETS is an emission trading system in which the government allocates annual emission allowances to companies so that they are required to emit GHGs within the allocated range, and the surplus or shortage of emissions can be traded through the carbon market. As of 2021, KT&G has approximately 170 workplaces and 500 facilities subject to GHG data collection under the K-ETS application, so data input, verification, and collection may take a lot of time. This can become a risk factor for timeliness and accuracy in the process of securing data to respond to regulations on the emission trading scheme. In addition, KT&G purchased 6,475 tCO2eq of emission rights in addition to the 102,651 tCO2eq of emission rights allocated free of charge as of 2021. And KT&G has recorded KRW 269 million as a provision for GHG in accounting. In 2021, the carbon price showed high variability and uncertainty in K-ETS, fluctuating from a low of KRW 11,550 to a high of KRW 35,350. Potential financial risks are expanding due to price rises of emission permits, as total emission allowances are reduced in accordance with the national carbon neutrality roadmap and policies. According to the IEA NZE 2050 scenario, particularly, which assumes a high transition risk, a carbon price is expected to be formed at USD 130, further increasing its financial impact.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

2251051086

Potential financial impact figure – maximum (currency)

2715205838

Explanation of financial impact figure

There is a high uncertainty in predicting carbon price in K-ETS with its high volatility. Accordingly, in order to manage carbon prices in a more stable manner and promote climate change-related investment decisions, KT&G introduced the internal carbon pricing system in which the internal carbon price has been set to KRW 50,000, which is higher than the maximum price in the actual market by approximately KRW 10,000. Accordingly, an internal guideline was established to solve the risk of carbon price volatility and to make cost-effective investment decisions. Moreover, we conducted a carbon price forecast depending on the impact of transition risk by applying the climate scenario analysis model in accordance with the TCFD recommendations, and estimated the potential financial impact based on the comparison between the emissions allocated from K-ETS and the KT&G's emissions predicted based on the SBTi 1.5℃-aligned pathway. As a result, it was analyzed that a financial impact ranging from KRW 2.2 billion to KRW 2.7 billion would occur in the third planning phase of the emission trading scheme (2021-2025). 1. Scenarios with high transition risk: (Emissions allocated during the third planning phase - Emissions based on the SBTi 1.5℃-aligned pathway) * Carbon price forecast based on IEA NZE scenario = KRW 2.7 billion 2. Scenarios with low transition risk: (Emissions allocated during the third planning phase - Emissions based on the SBTi 1.5℃-aligned pathway) * Carbon price forecast based on IEA STEPS scenario = KRW 2.2 billion

Cost of response to risk

20858197000

Description of response and explanation of cost calculation

KT&G is carrying out investments to reduce its GHG emissions and alleviate allowance purchase costs. By investing KRW 20,858,197,000 in the replacement of electric vehicles for internal combustion engine vehicles and the Factory Energy Management System (FEMS), we are striving to expand the amount of greenhouse gas reduction, and the amount invested in these activities is set as the management cost. - Electric vehicle replacement for company-owned vehicles: KRW 18,500,000,000 - FEMS (Factory Energy Management System): KRW 1,800,000,000 - Work place lighting LED replacement: KRW 327,857,000 - Investment in other activities: KRW 230,340,000 In addition, KT&G estimates the costs required to comply with the ETS as provisions in accounting and reports them through business reports

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Shift in consumer preferences

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
The emergence of 'Greensumers,' consumers preferably opting for green products, indicates that environmental values of products and services are becoming increasingly crucial behind consumers' purchasing behaviors. As such, a number of companies are introducing eco-friendly elements throughout the value chain including production process and distribution, as well as developing green products. In particular, consumers corresponding to the Millennials and Generation Z, which will become the main purchasing power in the future, tend to consider eco-friendly values more than previous generations. They prefer products from eco-friendly companies, products with eco-friendly packaging materials, and recyclable or biodegradable products. KT&G is also actively carrying out activities to strengthen the eco-friendliness of products throughout the value chain in accordance with the changing consumer needs. KT&G has established a team dedicated to research on green products in the R&D HQ to come up with more integrated strategies and measures at the company level. It mainly focuses on developing green new eco-friendly alternate technologies while securing fundamental technologies resilient to environmental issues, and the detailed tasks include developing green new materials and alternate materials to substitute existing materials and establishing a design process of low-carbon products. In the short term, we will prioritize discovering and developing alternate materials such as biodegradable OPP films, and in the mid to long term, we plan to expand investment to develop eco-friendly technology in regard to product life cycle. In addition, KT&G promotes green purchases of recyclable eco-friendly materials for cigarette and next-generation leaf tobacco products based on the green purchase guidelines which specify targets, scope, and procedures of green purchasing

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
26142000000

Potential financial impact figure – maximum (currency)
52284000000

Explanation of financial impact figure
If KT&G succeeds in capturing the changing purchase patterns and producing products that could satisfy consumers, this could make our products more attractive than competitors'. However, it is very limited to clearly deduce the impact of consumers' purchasing decision criteria to the sales of major KT&G products. Assuming that consumers' preferences for green products have an impact of 0.5% to 1.0% of net sales, the corresponding financial impact is estimated to be about KRW 26.1 billion to 52.3 billion as of 2021.

Cost to realize opportunity
113853000000

Strategy to realize opportunity and explanation of cost calculation
KT&G is promoting green purchases as well as R&D projects for application of green materials in the products based on the goal of 100% application of recyclable packaging materials and 100% replacement of aluminum inliners with paper ones, in order to meet customers' demand for eco-friendly products and reduce environmental impact. As such, the costs invested to realize the opportunity of the changing consumer preferences consists of about KRW 67.5 billion for R&D expenses and KRW 46.4 billion for green purchasing costs as of 2021.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan
Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan
Yes

Mechanism by which feedback is collected from shareholders on your transition plan
We do not have a feedback mechanism in place, but we plan to introduce one within the next two years

Description of feedback mechanism
<Not Applicable>

Frequency of feedback collection
<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)
220727_KT&G TCFD Strategies and Plans_eng_finv2.pdf
2021_KT&G_report.pdf

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	KT&G performed scenario analysis in accordance with the TCFD recommendations. KT&G applied various variables and policy conditions of the IEA NZE 2050 scenario for scenario analysis assuming a 1.5℃ temperature rise and high transition risks. For the contradictory scenario, the IEA STEPS scenario was applied and analyzed. The scenario analysis considered the conditions of 2025, 2027, 2030, and 2050, according to KT&G's planning period, and quantitative analysis (e.g. financial impact of carbon prices) was performed as well as qualitative analysis, by applying measurable factors such as carbon price and energy efficiency improvement status. The main assumptions used in this scenario cover areas of policy, energy, legal compliance, technology, market and reputation. (only partially provided considering limited space) I. Policy 1. GHGs emission regulations 1) In order to achieve the net zero goal, the government is assumed to enforce strengthened regulations and policies for immediate reduction of GHG emissions. - In some cases, GHG-related regulations may be newly established or reinforced. - Under the current emission trading scheme, the price of emission permit may increase significantly, and the values are determined according to the IEA NZE 2050 scenario (USD 51 in 2025, USD 130 in 2030, USD 250 in 2050) - In addition, it is highly likely that the paid allocation rate will increase. -Government support for related investment activities may be promoted to encourage the use of renewable energy and raise its share. 2) Impact - Increases in direct and indirect emissions-related costs and increased burden - Increased investment costs for emissions reduction - Decreases in national emission allowances and reduced allocated allowances It is included in the carbon price in the entire business process, including raw materials, production and distribution, and may affect the sales costs. II. Market 1. Land use regulations, decarbonized agriculture, and restrictions on land reclamation 1) Due to strengthening restrictions and guidelines on use of land, availability of farmland for crops may decrease, which may reduce crop production and increase raw material prices. 2) Impact Increased raw material procurement costs for tobacco and the raw materials made of wood, including filters and packaging materials
Physical climate scenarios: RCP 4.5	Company-wide	<Not Applicable>	For a scenario analysis assuming high physical risks, KT&G applied RCP 4.5 in accordance with the TCFD recommendations. Based on the RCP 4.5 scenario specified in the IPCC AR5, acute and chronic climate risks were analyzed as per time horizon. The scope of analysis includes Korea, Turkey, Indonesia, and Russia where KT&G's business sites are located, and climate risk conditions of each region were also considered. The contrary scenario was analyzed using the RCP 2.6. The scenario analysis considered the climate conditions of 2025, 2027, 2030, and 2050, according to KT&G's planning period. The level of risk and potentials for the physical risks, such as typhoons, hurricanes, severe rainfalls, floods, heat waves, sea level rises and water shortage, were quantified as 'likelihood of occurrence' as per each time horizon. In addition, sensitivity and vulnerability were calculated in consideration of the industrial characteristics associated with the impact of each physical risk. Exposure to risks was also assessed considering population, GDP, and agricultural land ratio in terms of impact by type of physical risk. As a result of the risk analysis based on likelihood and impact, typhoons, hurricanes, heavy rains and floods were found to have high risks within a short period of time among acute physical risks, and temperature changes and water shortage were derived as high risks and sea level rises were found to be risks in need of caution among chronic risks.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

KT&G considers the focal questions as a milestone that indicates the direction and essence of the scenario analysis. We ask the questions to ourselves in the process of analysis when it is difficult to draw clear results due to the broad and dispersed focus. The focal questions that KT&G sought to answer by means of climate change scenario analysis are as follows. 1. According to the climate scenario, when and in what kind of situation do we find ourselves? 2. How prepared and resilient are we to climate-related risks and opportunities after the transition to a low-carbon economy? 3. In a situation where physical risks are maximized, what kind of risks do our risk-exposed business sites face? And how often? 4. When and what kind of response activities should the company take against the risks above?

Results of the climate-related scenario analysis with respect to the focal questions

In summary of KT&G's scenario analysis, the company is exposed to significant transition risks and physical risks in any climate scenario situation. The climate change risks can differ in terms of timing and severity depending on the scenario, but cannot be eliminated completely in the scenario. In the first scenario, characterized by the relatively low physical risk and relatively high transition risk, the financial impact from the emission costs in 2030 could be about 3.7 times higher than in 2020 due to a sharp rise in carbon prices (emission allowance price). Accordingly, it is required to establish a strategic management and reduction plan for GHG emissions to alleviate and prevent the financial impact. Accordingly, KT&G has established a GHG emission reduction plan that complies with the SBTi's 1.5℃-aligned reduction pathway, and is currently in the process of verification by the SBTi. In addition, there is also highly likely that regulations to promote eco-friendly packaging materials and recycling will be reinforced, which may increase the cost of redesigning products and packaging to comply with regulations. In response to this, we have established and are actively pursuing goals to expand the use of recyclable materials and strengthen product recyclability by 2025. In addition, risks related to the cultivation of leaf tobacco, a major raw material, were also derived as a result of climate scenario analysis. In a situation with high transition risks, agricultural lands for growing crops may decrease as restrictions and guidelines regarding land and forest use may become more stringent. Accordingly, there is a risk of increased raw material sourcing costs due to the drop of crop production and raw material price rises. KT&G established an environmental management vision with the goal of achieving carbon neutrality by 2050 based on recognition of the climate crises. A mid- to long-term environmental strategy was established and reported to the ESG committee, including effective investment plans for emission reduction, such as expanding consumption of renewable energy-generated power and establishing solar PV power facilities. In the second scenario, which is characterized with the relatively high physical risk and relatively low transition risk, the overall disaster resilience is required to be enhanced, and the severity of impact needs to be assessed by risk factor, as both acute and chronic physical risks aggravate. In order to respond to the CDP Water, KT&G utilized WRI's Aqueduct tool to identify water risks for domestic tobacco supply chains and major material suppliers as well as our domestic and overseas manufacturing sites.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Evaluation in progress	Increasing consumer preference for eco-friendly products is clearly a factor that may impact product sales, but a more in-depth analysis is needed on the extent and timing of the impact. It is required to analyze consumers' major determinants of purchasing KT&G's products. Consumers' consideration or awareness of a product's environmental value is included in the determinants and is required to be monitored and analyzed annually or occasionally when necessary. Accordingly, a regular product and brand preference survey plan reflecting eco-friendliness will be established and carried out within the next two years.
Supply chain and/or value chain	Yes	Crop growth is greatly affected by physical risks of climate change, and the related standards of the sustainability guidelines in the crop cultivation region may also be strengthened according to the transition risk. Supply chain-related risks were rated relatively high for both the scenario with high transition risks and the scenario with high physical risks. Both scenarios show high risks in the short term, and the risk level in the long term by 2030 and 2050 is also found to be high in both scenarios. Therefore, KT&G defines the main supply chain including tobacco farmers and the raw material sourcing stage as the major value chain requiring advanced management. KT&G analyzes its water-related risks through WRI's water risk assessment, including domestic tobacco supply chain and key raw material suppliers and conducts verification of Scope 3 emissions to expand the scope of emission management to the entire value chain.
Investment in R&D	Yes	It is getting more essential to secure competitive edge in sustainability in relation to corporate social responsibility, and the demand for green product development is continuously increasing across all industries, as observed in the fine plastics issues. In this sense, according to the climate scenario analysis, the changing consumer preference for green products and the strengthened regulations on products' ecofriendliness are expected in the scenario with high transition risks. As a strategic response to the risks, KT&G has established a team dedicated to research on green products in the R&D HQ. The team focuses on developing alternate green technologies while securing fundamental technologies resilient to environmental issues by developing green new materials and alternate materials to substitute existing materials. In the short term, we will prioritize discovering and developing alternate materials such as biodegradable OPP films, and in the mid to long term, we plan to expand investment to develop eco-friendly technology in regard to product life cycle.
Operations	Yes	KT&G introduced the internal carbon pricing system for more stable management of emission costs as it was forecasted that the carbon price burden will aggravate according to emissions in the operation of business sites, and the uncertainty in the price will increase in the climate scenario having high transition risks. (Details will follow in C11.) It is expected that the carbon price burden due to greenhouse gas emissions will increase in the course of operation of the business site in a climate scenario with a high transition risk and uncertainty about the price is expected to increase. (Report via C11 module for details) In addition, we are promoting renewable energy use in order to mitigate emissions. As such, we are planning to establish in-company renewable energy facilities, including roof solar panels and carry out investment in boiler efficiency improvement. Furthermore, we are conducting analysis of the level of response and exposure to risks according to regional and environmental characteristics of each KT&G business site, based on the physical risks derived by the company-wide climate scenario analysis.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Capital allocation Liabilities	[Direct cost & Estimated liabilities] As a company subject to allocation of emission allowances under the K-ETS, KT&G must purchase additional emission permits if its emissions exceed the annual allowances. Allowances purchase costs and emissions reduction costs are included in KT&G's financial plan as operating costs. We determine the purchase of additional allowances by comparison between initial emissions and expected annual emissions using facilities' production capacity and energy consumption data. The costs associated with regulatory compliance, such as purchase costs of additional allowances, are included in the OPEX plan, which is executed by the approval of the CFO. In addition, KT&G estimates the expected costs regarding emissions exceeding the annual allowance limit and records them as provisions in accounting. [Capital Allocation] KT&G's internal carbon price, introduced in 2022, encourages consideration of potential burden of carbon costs when making investment decisions and is used as a guideline of economic analysis for promoting feasibility of climate change investment activities. The internal carbon price is used to estimate cost savings from investment activities for climate change response, and it is applied in the process of calculating the payback period for emissions reduction and improvement activities. The internal carbon price is currently at KRW 50,000/ton CO2, which is higher than the maximum of previous allowance prices, and KT&G operates the process of readjusting price in preparation for market price rising above the internal carbon price.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?
No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2020

Base year Scope 1 emissions covered by target (metric tons CO2e)
39284.74

Base year Scope 2 emissions covered by target (metric tons CO2e)
84623.48

Base year Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
123908.22

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year
2030

Targeted reduction from base year (%)
42

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
71866.7676

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
36622.11

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
83893.56

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
120515.67

% of target achieved relative to base year [auto-calculated]
6.51893796876431

Target status in reporting year
Revised

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition
1.5°C aligned

Please explain target coverage and identify any exclusions
There is no emission source excluded from the scope of the emission reduction target, and it applies to the company-wide scope including domestic and overseas business sites. KT&G submitted its emission target to SBTi, and the procedure for target verification is scheduled. The emission target submitted to the SBTi is judged to be a science-based reduction target because the reduction pathway was established according to the 1.5℃-aligned condition of the emissions of Scope 1 and 2 using the “SBTi Target Setting Tool”.

Plan for achieving target, and progress made to the end of the reporting year
With a target to successfully achieve the mid-to-long-term GHG reduction target by 2030, KT&G comprehensively reviewed the short-term potential, reduction potential, and effectiveness and selected essential items for GHG reduction. We selected feasible tasks in various reduction areas such as energy efficiency improvement, fuel conversion, introduction of renewable energy, and reduction of fossil fuel use, and prioritized projects with excellent reduction effects compared to investment through cost-benefit analysis. In 2021, we carried out greenhouse gas reduction activities such as installation of LED lighting in the workplace, conversion of electric vehicles for business use, and improvement of air conditioning systems. Currently, the progress curve for reducing GHG emissions is 6.7%, which is faster than the SBTi 1.5℃-aligned reduction path, which requires a 4.2% annual reduction, but data will be needed more time later to predict the progress of achieving the reduction target.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 2: Capital goods
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products
Category 15: Investments

Base year
2020

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)
207659.64

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
207659.64

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2030

Targeted reduction from base year (%)
25

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
155744.73

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
204952.85

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
204952.85

% of target achieved relative to base year [auto-calculated]
5.21389712512264

Target status in reporting year
Revised

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
Emissions are calculated for Scope 3 categories except for Scope 3 categories that are not relevant. KT&G submitted its emission target to SBTi, and the procedure for target verification is scheduled. The emission target submitted to SBTi is judged to be a science-based reduction target because the reduction path was established according to the well below 2℃ condition of Scope 3 emissions using the "SBTi Target setting Tool".

Plan for achieving target, and progress made to the end of the reporting year
KT&G is striving to reduce Value Chain emissions (Scope 3) through active cooperation with partners by expanding and managing the responsibility for greenhouse gas emissions due to business activities. In addition, KT&G supports domestic leaf tobacco farmers to reduce greenhouse gas emissions generated during leaf tobacco cultivation. By providing high-efficiency dryers for heat recovery and reuse to leaf tobacco farms in Korea, we are trying to help leaf tobacco farms reduce their energy consumption. These high-efficiency dryers can reduce emissions by about 3-4%, compared to conventional bulk dryers. Total 2,279 units were sponsored in 2020 and 2,482 units in 2021, and we plan to accelerate the reduction of emissions through continuous supplier support projects. We will continue to strive to achieve our reduction target through Scope 3 emission management. And the achievement path for this year, the first year of the target implementation, has been reduced by about 5.2%, which is a little faster than the SBTi well below 2℃ condition, but we will ensure that the target can be implemented through continuous observation of progress.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Net-zero target(s)

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1
Abs2

Target year for achieving net zero
2050

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain target coverage and identify any exclusions
KT&G's mid- to long-term GHG reduction target is to achieve Scope 1+2: 42% and Scope 3: 25% compared to 2020 by 2030, and to be carbon neutral by 2050. The target has been submitted to SBTi, and verification is scheduled to proceed. The targets submitted to the SBTi were established in accordance with the guidelines presented by the SBTi, and therefore we consider these targets as science-based targets.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Unsure

Planned milestones and/or near-term investments for neutralization at target year
<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)
KT&G plans to support social welfare institutions to reduce GHG emissions from vehicle operation by providing them with electric vehicles, and is reviewing the effectiveness and timing of implementation.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	0
To be implemented*	2	11972
Implementation commenced*	4	5889
Implemented*	4	1276
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
1014

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
374737000

Investment required (unit currency – as specified in C0.4)
116400000

Payback period
<1 year

Estimated lifetime of the initiative

16-20 years

Comment
The optimal operation control and efficiency of the air conditioning facility were improved by optimizing the operating time of the air conditioning facility in the factory and introducing an inverter. Through this, the greenhouse gas was reduced by 1,014tCO2eq per year.

Initiative category & Initiative type

Energy efficiency in production processes	Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)
65

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
23221000

Investment required (unit currency – as specified in C0.4)
67540000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Through the cold water coil of the air conditioner, a condensed water waste heat recovery system was established that could utilize water with increased temperature as hot water. Through this, the amount of steam used to increase the temperature of water was reduced, resulting in a reduction in greenhouse gases.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
168

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
56610000

Investment required (unit currency – as specified in C0.4)
327857000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
KT&G reduced 168tCO2eq of GHG emissions by reducing power consumption by replacing lights at LED major facilities with LEDs.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
29

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
13498000

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
Ongoing

Comment
KT&G reduced the power consumption of production facilities by improving the automatic power shutdown setting of the air cleaner. Through this, it is possible to reduce greenhouse gas emissions by minimizing unnecessary power maintenance time and reducing power consumption. In addition, there was no additional investment cost because the settings of the equipment system were updated.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal price on carbon	As the payback period calculation method, which was previously calculated as “investment cost/energy saving cost”, is changed to “investment cost/(energy saving cost + internal carbon price)” due to operation of internal carbon price, leading to shortening the payback period of the investment in climate change response activities. As such, the internal price enables us to make positive decisions in the internal investment policy and decision-making process for various emission reduction activities, and serves as a major guideline to determine priorities of the reduction activities by comparing the financial impact of expected reductions from the activities

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
No

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	KT&G recalculated its emission for 2020, the previous year and base year, for the following reasons. [Scope 1, 2] The scope of data collection includes domestic and overseas business sites, the same as the previous year, but the scope of verification has been changed. While the verification took place only for domestic business sites in the previous year, the scope was extended to overseas business sites this year. As a result, the Scope 1 & 2 emissions have been changed as the corresponding errors were corrected accordingly. [Scope3] In regard to Scope 3, five categories in 15 evaluation items were additionally calculated based on the previous year's report, and the scope of data collection was expanded to include overseas. In addition, the emission figures for the previous years (2020, 2021) have been included after the first verification done in 2022.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	Emissions were recalculated according to the changes in the reporting boundary and the scope of data collection reported in C5.1b, and the emissions in 2020 were reported accordingly based on the extended scope. Recalculation takes place if there occurs a significant change in reporting, such as the changed data collection scope, as in the case of Scope 3, or an error or typo is found.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
39284.74

Comment
This include emission from domestic and global facilities' LNG, diesel, fuel consumption and waste incineration.

Scope 2 (location-based)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
84623.48

Comment
This include emission from domestic and global facilities' electricity consumption.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
6505.28

Comment

Scope 3 category 2: Capital goods

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
23.63

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
3451.64

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
5629.52

Comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
3467.89

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
314.12

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
2211.28

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
12308.97

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
1592.13

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
25675.04

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
41680.59

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
Korea GHG and Energy Target Management System Operating Guidelines

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
36622.11

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment
Market-based calculation is not applicable since the power is solely supplied by KEPCO in a single power grid.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
83893.56

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
KT&G's Scope 2 data includes emissions from South Korean operations and Russian, Indonesian, and Turkish operations.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
114663

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
58

Please explain
We received most of our activity data directly from our partners, such as fertilizer usage during leaf tobacco cultivation, fuel usage during drying, flat leaf manufacturing, general materials, and NGP production. The emission factor is based on the Korea GHG and Energy Target Management System Operating Guidelines and IPCC Guidelines, and the latest data from the IEA was used for the electricity emission factor for manufacturing plants where some overseas partners are located. In the case of overseas leaf tobacco, annual purchase data was used as activity data, and emission factors were calculated by applying emission factors in the cultivation and drying stages among the LCA calculation results performed for domestic leaf tobacco.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
8

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
For OA devices such as PCs, printers, and multifunction devices purchased, it was calculated by applying the emission factors of the pre-manufacturing stage among the emission factors provided by the manufacturer or the LCI DB of the Ministry of Environment. If the product is not the same purchased product, a similar product among the products that the manufacturer provides emission factors was applied.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
3240

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Emissions were calculated by applying the DB (Ministry of Environment LCI DB) provided by the Ministry of Environment to the pre-production stage for each fuel source used at domestic and overseas business sites.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
5054

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
28.4

Please explain
We used domestic and overseas leaf tobacco and material transportation information (purchase amount by partner company, transportation method, transportation distance) as activity data, converted it into fuel consumption, and calculated the emission according to the emission factor provided by the Ministry of Environment.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
4090

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We report waste generated at our business sites in Korea to the Allbaro system, a legal waste disposal system. The amount of general and designated waste generated was classified by treatment method, and the emission factor provided by the Ministry of Environment was applied according to the treatment method to calculate the amount of waste.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
703

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
For overseas business trips during the reporting period, the distance between the departure and destination was used as activity data and calculated based on this.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2210

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
In the case of employee commuting, it was difficult to obtain data on commuting means and distance for each employee, so the average commuting distance in statistical data, the ratio by means of transportation, and emission coefficients for each mode of transportation provided by the Ministry of Environment were used to calculate the calculation.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
In the case of Korea, where our head office is located, in accordance with the reporting guidelines, all business sites to which our operation control is applied, even if they are owned by other organizations, are reported as scopes 1 and 2. Since scope 3 does not overlap with scope 1 and 2, there is no upstream rental property that falls under this standard, and therefore it does not apply to us.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7394

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
7.4

Please explain
In the case of exporting our products overseas, including overseas sites, we calculated the emissions by applying the emission factors for each transportation method (marine, air) provided by the Ministry of Environment as activity data for finished products and semi-finished products. For sales products distributed in Korea, the emission factor for each fuel was applied after converting to the amount of fuel based on the distance traveled from the domestic business site to the warehouse, and the sum of emissions from domestic distribution and overseas distribution was reported as downstream transportation and distribution.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
In general, intermediate goods go through additional processing steps, but tobacco, our main product, is sold to consumers as a final product, and there is no separate processing after sale.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2067

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Our cigarette tobacco products do not consume a energy during the use stage, so they do not emit greenhouse gases. However, in the case of NGP (Next Generation Product), since only the stick is repeatedly used and replaced by charging the device, it corresponds to the greenhouse gas emission of the use stage. The annual electric charge emission was calculated by applying the domestic electricity EF as the charging time and stick sales activity data for each NGP product.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
25787

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Among our products, cigarette butts in the case of tobacco products and sticks and devices in the case of NGPs generate greenhouse gases in the process of waste disposal. At the time of disposal, average cigarette butt length, filter and cigarette weight data were used for recommended products, and representative weight was used for NGP sticks. In the case of the NGP device, the ratio of the waste treatment method was determined in consideration of the internal components and calculated by applying the emission factor.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This category is not applicable as we do not have downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This category is not applicable as we do not have franchises.

Investments

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
39738

Emissions calculation methodology
Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Among the subsidiaries in which we have an controlling interest, we calculated the greenhouse gas emissions corresponding to the shares we own as the investment category of Yungjin Pharm and KGC Ginseng Corporation, which are obligated to report greenhouse gas emissions in Korea.

Other (upstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

No

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities

Tobacco

Do you collect or calculate GHG emissions for this commodity?

Yes

Please explain

As KT&G does not own tobacco farmlands, emissions regarding tobacco cultivation are not included in Scope 1 and 2 emissions. Emissions from the tobacco cultivation were calculated and included in Scope 3 emissions.

Agricultural commodities

Timber

Do you collect or calculate GHG emissions for this commodity?

Yes

Please explain

KT&G's business requires wood products including filters, packaging materials, and tip papers for tobacco business and packaging materials for health functional foods, cosmetics, and bio and pharmaceuticals businesses.

C-AC6.9a/C-FB6.9a/C-PF6.9a

(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.

Timber

Reporting emissions by

Total

Emissions (metric tons CO2e)

21862

Denominator: unit of production

<Not Applicable>

Change from last reporting year

This is our first year of measurement

Please explain

KT&G calculates the emission of materials derived from Timber, such as packaging materials and cigarette filters, when calculating Scope3 emissions.

Tobacco

Reporting emissions by

Total

Emissions (metric tons CO2e)

76802

Denominator: unit of production

<Not Applicable>

Change from last reporting year

Lower

Please explain

Emissions reported as 26,816.471 tCO2eq in 2020 were revised while validating the Scope 3 data validation in 2022. It included emissions from overseas leaf tobacco procurement processes that were not included in the 2020 data, and the 2020 leaf tobacco data was calculated as 82,648tCO2eq by applying activity data modification. The amount of leaf tobacco-related emissions in 2021 that were verified by applying the same criteria was 76,802tCO2eq. As detailed classifications included in the process of calculating leaf tobacco-related emissions, domestic leaf tobacco cultivation and drying, Reconstituted Tobacco Leaves manufacturing, and overseas leaf tobacco cultivation and drying process were applied. The Korea GHG and Energy Target Management System Operating Guidelines and IPCC guidelines were applied to the methodology for calculating emissions.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
3.45e-8

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
120515.67

Metric denominator
unit total revenue

Metric denominator: Unit total
3490455807608

Scope 2 figure used
Location-based

% change from previous year
4.27

Direction of change
Decreased

Reason for change
In 2021, the emission intensity decreased by 4.27% compared to 2020. Due to the emission reduction activities, KT&G's emissions decreased by about 2.7% from 123,908tCO2eq in 2020 to 120,515tCO2eq in 2021. Reduction activities such as the replacement of workplace LEDs, introduction of electric vehicles, and application of FEMS played a major role in energy saving and emission reduction, as well as the emission decreases from workplaces and employees' commuting trips due to the remote working environment promoted by the COVID-19 outbreak.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	36271.19	IPCC Second Assessment Report (SAR - 100 year)
CH4	200.1	IPCC Second Assessment Report (SAR - 100 year)
N2O	150.83	IPCC Second Assessment Report (SAR - 100 year)
HFCs	0	IPCC Second Assessment Report (SAR - 100 year)
PFCs	0	IPCC Second Assessment Report (SAR - 100 year)
SF6	0	IPCC Second Assessment Report (SAR - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Republic of Korea	33744.09
Indonesia	1041.08
Russian Federation	1230.93
Turkey	606.01

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.
By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Sintanjin (Korea) Factory	13226.79	36.43379	127.42993
Gwangju (Korea) Factory	2113.16	35.203928	126.878165
Gimcheon (Korea) Factory	1850.36	36.125916	128.066582
Yeongju (Korea) Factory	6644.98	36.788549	128.624129
Cheonan (Korea) Factory	1784.6	36.826617	127.147274
Other offices in Korea	8124.2	37.50653	127.065294
Indonesia Factory	1041.08	-7.767499	112.741901
Russia Factory	1230.93	55.239072	36.697133
Turkey Factory	606.01	38.128173	27.694217

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity
Processing/Manufacturing

Emissions category
<Not Applicable>

Emissions (metric tons CO2e)
31949.43

Methodology
Default emissions factor

Please explain
Total direct emissions produced from fuel excluding fleet (Scope 1)

Activity
Distribution

Emissions category
<Not Applicable>

Emissions (metric tons CO2e)
4672.68

Methodology
Default emissions factor

Please explain
Total direct emissions produced from fuel consumption (diesel, gasoline, LPG) of fleet (Scope 1)

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Republic of Korea	75418.15	
Indonesia	6116.88	
Russian Federation	1580.1	
Turkey	778.43	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.
By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Sintanjin (Korea) Factory	25410.93	
Gwangju (Korea) Factory	6548.89	
Gimcheon (Korea) Factory	2382.24	
Yeongju (Korea) Factory	11512.85	
Cheonan (Korea) Factory	2992.43	
Other offices in Korea	26570.81	
Indonesia Factory	6116.88	
Russia Factory	1580.1	
Turkey Factory	778.43	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?
Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	1276	Decreased	1.03	In 2021, we reduced GHG emissions by reducing energy use and improving efficiency by carrying out activities to reduce GHG emissions, such as installing LED lighting in the workplace, converting electric vehicles for business use, and improving the operation of air conditioning systems. As a result of the reduction activities completed in 2021, the emission of 1,276tCO2eq was reduced, and 1,276/123,908.22*100=1.03% decreased compared to the emission of 123,908tCO2eq in 2020.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	2116.55	Decreased	1.71	KT&G actively supported remote work for the health and safety of its employees as the COVID-19 pandemic spread. As the number of people working from home increased, energy consumption in offices and workplaces decreased. Scope 1 and 2 emissions decreased by 2,116.tCO2eq, which was 2,116/123,908.22*100=1.71% lower than the 123,908tCO2eq in 2020.

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?
Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	188869.21	188869.21
Consumption of purchased or acquired electricity	<Not Applicable>	0	175839.71	175839.71
Consumption of purchased or acquired heat	<Not Applicable>	0	7819.45	7819.45
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	280.77	<Not Applicable>	280.77
Total energy consumption	<Not Applicable>	280.77	372528.37	372809.14

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other biomass

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
19450.35

MWh fuel consumed for self-generation of electricity
16.03

MWh fuel consumed for self-generation of heat
19434.32

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
169418.86

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
169418.86

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
188869.21

MWh fuel consumed for self-generation of electricity
16.03

MWh fuel consumed for self-generation of heat
188853.18

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	280.77	280.77	280.77	280.77
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Republic of Korea

Consumption of electricity (MWh)
161920.79

Consumption of heat, steam, and cooling (MWh)
7819.45

Total non-fuel energy consumption (MWh) [Auto-calculated]
169740.24

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Indonesia

Consumption of electricity (MWh)
7908.6

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
7908.6

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Russian Federation

Consumption of electricity (MWh)
4437.25

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4437.25

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Turkey

Consumption of electricity (MWh)
1853.84

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1853.84

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Other, please specify (Waste recycling rate(%))

Metric value
72.51

Metric numerator
Waste recycled(Ton)

Metric denominator (intensity metric only)
Waste generated (Ton)

% change from previous year
33.66

Direction of change
Increased

Please explain
Since this indicator is a recycling rate, the direction of increase indicates a positive performance. We have set target to reach 90% in waste recycling rate by 2030 at our all manufacturing operations. The amount of waste generated in 2021 was 8,989 tons, of which 6,482 tons were recycled, recording a recycling rate of 72.51%. This is a decrease of 924 tons from 9,863 tons of waste generated in 2020, and an increase of 1,131 tons of recycling.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
(주)□□□□□_2021□ □□가□ □□□ □□□□ □□ □□□□□.pdf

Page/ section reference
Page 50 - Scope of Assurance / Verification Approach / Conclusions / Relevant standard

Relevant standard
Korean GHG and energy target management system

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
AS_GHG_KT&G_Overseas_EN_2021_V1.1.pdf

Page/ section reference
page 1-2 Scope of Assurance / Verification Approach / Conclusions / Relevant standard

Relevant standard
ISO14064-1

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
(주)□□□□_2021□ □□가□ □□□ □□□□ □□ □□□□.pdf

Page/ section reference
Page 50 - Scope of Assurance / Verification Approach / Conclusions / Relevant standard

Relevant standard
Korean GHG and energy target management system

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
AS_GHG_KT&G_Overseas_EN_2021_V1.1.pdf

Page/ section reference
page 1-2 Scope of Assurance / Verification Approach / Conclusions / Relevant standard

Relevant standard
ISO14064-1

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Investments
Scope 3: Downstream transportation and distribution
Scope 3: Use of sold products
Scope 3: End-of-life treatment of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
AS_GHG_KT&G_Scope 3_EN_2021_V1.1.pdf

Page/section reference
page 1-2 Scope of Assurance / Verification Approach / Conclusions / Relevant standard

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Korea ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Korea ETS

% of Scope 1 emissions covered by the ETS
92.14

% of Scope 2 emissions covered by the ETS
89.9

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
102651

Allowances purchased
6475

Verified Scope 1 emissions in metric tons CO2e
33744.09

Verified Scope 2 emissions in metric tons CO2e
75418.15

Details of ownership
Facilities we own and operate

Comment
KT&G is a company subject to allocation of allowances under the Korea Emissions Trading Scheme (K-ETS). It is applied to Scope 1 and 2 emissions from Korean business sites, and greenhouse gases emitted from overseas business sites do not fall under this emission trading schemes. The figures entered as verified Scope 1 and 2 emissions are domestic emissions, and overseas emissions were also verified and reported.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

KT&G is a company subject to allocation of allowances under the Korea Emissions Trading Scheme (K-ETS). The emissions trading system has the advantage of enabling market participants' voluntary reduction or technology development through emissions adjustment and cost minimization. On the other hand, the price of emission allowance is volatile and difficult to predict due to the market mechanism, and this can become a risk factor for future investment. Accordingly, KT&G conducts a mid- to long-term forecast of emission allowances, introduces internal carbon pricing, and carries out company-wide energy saving activities.

Based on the result of our own analysis of the ETS market, the emission allowances that are allocated free of charge to the company is expected to decrease in the future, and consequently, the allowance trading price is expected to rise. Accordingly, our energy consumption and emissions are managed from a company-wide perspective. In particular, we have defined the long-term carbon cost of the emission trading system as a potential risk factor, and introduced an internal carbon pricing system to respond to this. The internal carbon price is set at 50,000 won/ton CO2, which is higher than the maximum of the previous allowance prices, so that potential carbon costs can be taken into account in the process of investment decision-making. We have a process established for readjusting the internal carbon price in case of market price rises.

Furthermore, KT&G is trying to minimize environmental impact through various tasks by means of environmental indicators including GHGs, water and waste. We continuously make efforts to reduce emissions mainly by developing and applying energy-saving technologies and expanding renewable energy. We are also planning to introduce FEMS in the entire manufacturing sites by 2023, in an effort to reinforce the management system. In addition, roof solar power generation equipment has been installed in our manufacturing sites in order to reduce emissions by increasing the use of renewable energy and accrediting REC performance.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Stakeholder expectations
Change internal behavior
Drive low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope
Scope 1
Scope 2

Application
KT&G's internal carbon price, introduced in 2022, encourages consideration of potential burden of carbon costs when making investment decisions and is used as a guideline of economic analysis for promoting feasibility of climate change investment activities. The internal carbon price is used to estimate cost savings from investment activities for climate change response, and it is applied in the process of calculating the payback period for emissions reduction and improvement activities. The internal carbon price is currently at KRW 50,000/ton CO2, which is higher than the maximum of previous allowance prices, and KT&G operates the process of readjusting price in preparation for market price rising above the internal carbon price.

Actual price(s) used (Currency /metric ton)
50000

Variance of price(s) used
KT&G's internal carbon price is applied in the domestic regions and business units under the influence of the K-ETS, as well as in the decision-making process, as a uniform price, and is incorporated in investment activities for emission reduction that can affect the entire company. Based on the continuous monitoring of the allowance price in the domestic ETS market, an additional process is in place to readjust the internal carbon price, if the market price is higher than the internal one. The current internal carbon price of KRW 50,000/ton CO2 is about KRW 9,200 higher than the cumulative maximum price of domestic emission permits.

Type of internal carbon price
Shadow price

Impact & implication
As the Payback period calculation method, which was previously calculated as “investment cost/energy saving cost”, is changed to “investment cost/(energy saving cost + internal carbon price)” due to operation of internal carbon price, leading to shortening the payback period of the investment in climate change response activities. As such, the internal price enables us to make positive decisions in the internal investment policy and decision-making process for various emission reduction activities, and serves as a major guideline to determine priorities of the reduction activities by comparing the financial impact of expected reductions from the activities.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
59.55

% total procurement spend (direct and indirect)
72.6

% of supplier-related Scope 3 emissions as reported in C6.5
18.47

Rationale for the coverage of your engagement
KT&G is striving to lower supply chain risks by incorporating ESG evaluation in both supplier quality (SQ) evaluation for new supplier selection and regular supplier evaluation for existing suppliers. During the process of selecting new suppliers, ESG-related items are evaluated, which account for 40% of the total items, and on-site due diligence is carried out by the evaluation team. In order to preemptively identify risk factors that are likely to cause non-compliance issues, KT&G plans to establish a regular system for supplier ESG evaluation and monitor potential risks continuously. Regular ESG evaluation is conducted on a yearly basis in Korea to suppliers charging at least KRW 100 million and corresponding to 95% of our total purchase costs. It was implemented for 53 companies, which correspond to 59.6% out of total internal and external suppliers in terms of number of suppliers and 72.6% in terms of procurement share.

Impact of engagement, including measures of success
In the guidelines of KT&G supplier ESG evaluation indicators, score standards and check points for each evaluation item are presented. For example, when evaluating the management level of energy consumption and GHG emissions, we review the establishment of management policies for energy and carbon emissions, emission reduction goals and related action plans. The overall evaluation results are delivered in two ways, result for an individual supplier and result for overall suppliers, and the suppliers subject to the evaluation are given the results by each evaluation item along with a list of improvement tasks. As a result of the ESG evaluation conducted to 53 suppliers in the first half of 2021, the environment sector, including the level of response to climate change, presented 73.46 points on average. KT&G aims to improve the suppliers' scores by sector. It was confirmed that 12 out of the 18 suppliers (66.7%) that conducted on-site visits in 2021 had higher scores from on-site evaluation than online self-evaluation scores. In addition, we derived improvement tasks regarding the environment sector for nine suppliers and are monitoring the progress of the implementation.

Comment

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

KT&G announced the mid to long-term goals by 2025, including expanding scope of its supply chain management and building sustainable partnership. We are deriving plans to support suppliers to build ESG capacities in meeting legal requirements as the first step, fulfilling social responsibility as the second step, and creating social value as the third step.

By providing high-efficiency dryers for heat recovery and reuse to leaf tobacco farms in Korea, we are trying to help leaf tobacco farms reduce their energy consumption. These high-efficiency dryers can reduce emissions by about 3-4%, compared to conventional bulk dryers. Total 2,279 units were sponsored in 2020 and 2,482 units in 2021, and we plan to accelerate the reduction of emissions through continuous supplier support projects.

In addition, for the purpose of strengthening partner companies' ESG capabilities including climate change, we are reinforcing management of tobacco farms to the peer group level through the Sustainable Tobacco Program (STP) for overseas tobacco suppliers, while

supporting domestic tobacco suppliers to improve their agriculture environment in cooperation with KTGO (Korea Tobacco Growers Organization).

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Complying with regulatory requirements

Description of this climate related requirement
KT&G established an environmental management policy to fulfill its social responsibility for the environment and promote the Green Impact in operating business. The same level of compliance is recommended throughout the entire business value chain, including customers, suppliers, distribution, and logistics as well as employees of the company and its subsidiaries. In addition, the KT&G Supplier Code of Conduct was enacted to encourage suppliers' fulfillment of social, environmental and ethical responsibilities, and suppliers are required to sign on its compliance with the code of conduct when making a contract as well as on annual compliance agreement. Through this, we are mandating our partners to minimize their impact on the local community and the environment and comply with environmental laws and regulations. In case of non-compliance, the contract is suspended, and the suspension is maintained until their improvement actions. In addition, we are making efforts to fundamentally reduce and eliminate all types of waste, including wastewater by identifying the use of chemical substances causing environmental pollution and promoting recycling and reuse.

% suppliers by procurement spend that have to comply with this climate-related requirement
100

% suppliers by procurement spend in compliance with this climate-related requirement
100

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Suspend and engage

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?
Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number
MP1

Management practice
Fertilizer management

Description of management practice
KT&G minimizes carbon impact by reducing the use of chemical fertilizers and expanding consumption of eco-friendly fertilizers through joint research and collaboration with tobacco farms. Nitrogen-based fertilizers are a major emission source of nitrogen dioxide (NO2), a greenhouse gas, and reduced use of chemical fertilizers can decrease fertilizer-generated emissions.

Your role in the implementation
Financial
Knowledge sharing

Explanation of how you encourage implementation
KT&G provides tobacco farmers with eco-friendly fertilizers necessary for the growth of tobacco leaf. And we provide tobacco farmers with the agronomy practice manual which contains sections such as fertilizer, land, crop, waste management etc. We plan to apply the Sustainable Tobacco Programme (STP) to encourage tobacco farmers to implement best agronomy practices. In addition, we schedule periodic field visits to provide technical assistance and training via KTGO to contracted farmers.

Climate change related benefit
Emissions reductions (mitigation)
Reduced demand for fertilizers (adaptation)

Comment

Management practice reference number
MP2

Management practice
Reducing energy use

Description of management practice
We are carrying out a project to support recovery of waste heat discarded in the process of drying tobacco leaf. We are saving energy in the tobacco processing stage by attaching heat recovery devices to the tobacco dryer, thus reducing the consumption of kerosene. We aim to improve the efficiency of a total of 4,000 tobacco dryers in tobacco farms by 2030 through this project.

Your role in the implementation
Financial

Explanation of how you encourage implementation
We encourage engagement of tobacco farms by financially sponsoring the installation of tobacco dryers as well as promoting the effect and economic benefits of reducing kerosene consumption through efficiency improvement.

Climate change related benefit
Emissions reductions (mitigation)
Reduced demand for fossil fuel (adaptation)

Comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?
Yes

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
Yes

Attach commitment or position statement(s)
220727_KT&G TCFD Strategies and Plans_eng_finv2.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy
KT&G conducts regular monitoring of ESG issues including climate change and laws and policy trends related to KT&G's major business areas through the ESG Planning Team and Compliance Support Department. Through this, the impact analysis according to the policy direction of the government/National Assembly is conducted, while the company's response level and ESG strategic direction are reviewed.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Emissions trading schemes
Mandatory climate-related reporting

Specify the policy, law, or regulation on which your organization is engaging with policy makers
1. K-ETS KT&G is a company subject to the Korea Greenhouse Gas Emissions Trading Scheme (K-ETS) and is obligated to calculate and report its emissions every year.
2. Mandatory disclosure on climate change In the plan for mandatory ESG information disclosure announced by the Financial Services Commission of the Republic of Korea, it is stated that ESG information disclosure will be mandatory for all listed companies by 2030, starting from 2025 for a certain number of listed companies.

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
Republic of Korea

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
1. KT&G communicates with government policy makers through participation in government-led public hearings and policy briefings related to greenhouse gas regulations.
2. In order to improve the level of mandatory disclosure related to climate change, we are participating in the "Korea TCFD Alliance", a private coalition to respond to climate change disclosure. Through this, we plan to carry out cooperative activities to revitalize the TCFD-based climate disclosure system and improve the response level.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
It is uncertain when the government introduces the mandatory disclosure of ESG information. For example, the governance report disclosure system for listed companies began as an autonomous disclosure in 2017 and was converted to a mandatory disclosure in one year after the system was applied in 2018. KT&G has published a sustainable management report, "KT&G Report," since 2019, before the mandatory disclosure of ESG information, and is responding to the information disclosure system in advance.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports

Status
Complete

Attach the document
KT&G+2021+annual report.pdf

Page/Section reference
- Greenhouse gas emissions and energy usage: Page 293 - Matters concerning the Board of Directors; pages 298–30 - Environmental-related matters, such as targets for reducing greenhouse gas emissions; Page 36

Content elements
Governance
Emissions figures
Emission targets

Comment
The annual report is published before the verification of the GHG data of the reporting year, and only the GHG emissions of the previous reporting year are disclosed. The GHG data of the reporting year is disclosed through the sustainability report.

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2021_KT&G_report.pdf

Page/Section reference
45p- Governance(Environment management) 47p- Emissions Targets 49p- Emissions figures(Value chain GHG emissions) 50p- Strategy(Climate Scenario Analysis) 51p- Climate change Risk & opportunities 98p- Governance(Board and Committee) 133p- Energy and Emission data 134p- Other metrics 171p- 3rd party verification report

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C13. Other land management impacts

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?
No

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	ESG-related issues, including biodiversity topic, are managed through the ESG Committee. As the chief officer regarding ESG-related matters, the CFO oversees and supervises company-wide ESG activities. KT&G identifies major risks considering the nature of its business and seeks countermeasures after identifying the impact of its business activities over biodiversity across the entire value chain, including business sites.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have endorsed initiatives only	<Not Applicable>	SDG

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in both our upstream and downstream value chain	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Please select

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Details on biodiversity indicators Biodiversity strategy	60~61p Biodiversity related policies and Conservation Activities 2021_KT&G_report.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

-

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Senior Executive Vice President	Chief Financial Officer (CFO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms