

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

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

Hankook Tire & Technology Co., Ltd. is Korea's first tire manufacturer, growing together with Korea's tire industry. It is the No. 1 tire company in Korea that currently sells the largest number of automobile tires in the region.

Moreover, with four regional headquarters, thirty sales branches, five R&D centers and eight production sites around the world, the company sells its products in over 180 countries, ranking world's 7th-largest tire manufacturer in terms of sales. It is a global company with more than 80% of its total sales in overseas markets. Hankook Tire & Technology, loved by its customers for its exceptional quality and customer satisfaction, will continue to develop an environmentally-friendly technology and carry out diverse activities that can contribute to the local community, to share and give back the love from the customers and continue to achieve healthy and sustainable growth.

[Ref. 1] Our official corporate name was changed to further enhance our technology-based innovation to reach out to our customer from May 8, 2019. (from "Hankook Tire Co., Ltd." to "Hankook Tire & Technology Co., Ltd.") However, we use both the previous and current names to maintain brand value.

[Ref. 2] Tennessee Plant was newly included in the organizational boundaries since 2018.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

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

China
Hungary
Indonesia
Republic of Korea
United States of America

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

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	KR7161390000

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 or committee	Responsibilities for climate-related issues
Board Chair	<p>(i) Job title: Chairman of the Board of Directors, Chairman of the ESG Committee in the Board</p> <p>(ii) Position in the corporate structure: President & CEO(Chief Executive Officer)</p> <p>(iii) Explanation: In order to expedite the internal decision-making process and increase efficiency, the Board of Directors at Hankook Tire & Technology operates the ESG Committee to handle more delicate, key issues while activities of the Board of Directors focuses on other matters pertaining to responsible management. The ESG Committee is composed of directors within the company, led CEO at Hankook Tire & Technology.</p> <p>The Committee deliberate on and resolve matters related to company-wide risk management issues including climate change issues.</p>

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	Please explain
Scheduled – all meetings	<p>Overseeing and guiding employee incentives</p> <p>Reviewing and guiding strategy</p> <p>Overseeing and guiding the development of a transition plan</p> <p>Monitoring the implementation of a transition plan</p> <p>Monitoring progress towards corporate targets</p> <p>Overseeing value chain engagement</p> <p>Reviewing and guiding the risk management process</p>	<p>Hankook Tire & Technology changed the existing Management Committee to the ESG Committee in March 2021 to prevent potential risks in overall corporate management and solidify corporate sustainability. The previous Management Committee only performed deliberation and decisions on general management and finance matters, while the new ESG Committee additionally plays the role of monitoring sustainability risk in all non-financial areas including climate change and environmental issues, along with decision making. Meetings are classified as either ordinary meetings or extraordinary meetings. Ordinary meetings in principle are held on the third or fourth Monday of every month. However, if there are unavoidable circumstances, an ordinary meeting may be rescheduled to another date with prior notice. Extraordinary meetings are held when required.</p>

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
Row 1	Yes	The board of directors of Hankook Tire & Technology (HKT) consists of 3 inside directors and 4 outside directors. 1 inside director supervises the ESG management of HKT, and the ESG Team is supervised directly by the inside director. Under the current director's supervision, the Mid- to Long- Term ESG Strategy and the Carbon Neutrality Roadmap were established, and orders to review possible implementation method of RE100. The monitoring and instructions on the issues related to climate change are evidences that the member has capable of responding to such issues. The climate change-related leadership of the corresponding director has continuously made an impact on the board of directors.

C1.2

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

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

- Managing climate-related acquisitions, mergers, and divestitures
- Providing climate-related employee incentives
- Developing a climate transition plan
- Implementing a climate transition plan
- Integrating climate-related issues into the strategy
- Setting climate-related corporate targets
- Monitoring progress against climate-related corporate targets
- Managing value chain engagement on climate-related issues
- Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Corporate Sustainability/CSR reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Annually

Please explain

The ESG Strategy Committee is chaired by the CEO and regularly attended by eight key sector executives. Held annually in February or March to review key issues discussed at the previous year's ESG Steering Committee, share changing ESG trends, and determine future direction. Key challenges determined by the ESG Strategy Committee are implemented by the ESG Steering Committee. The ESG Steering Committee is divided into eight topics and is operated under the responsibility of the responsible executive.

Among the 8 committees, 3 committees are dedicated to addressing climate change-related issues. The Climate Change Committee oversees matters pertaining to Scope 1 and 2 emissions during the manufacturing phase, while the Supplier Committee focuses on evaluating and managing carbon neutrality of our suppliers. The Product Environmental Committee is responsible for establishing and implementing initiatives related to the development of eco-friendly products and materials. The tasks performed by these 8 ESG Operating Committees are under the supervision of respective executives. The outcomes, strategic directions, and identified issues will be revisited in the subsequent ESG Strategy Committee meeting.

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	Climate-related issues are a major incentive factor, especially in Korea and Hungary, because GHG emission trading systems are also in operation.

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

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Board approval of climate transition plan
Achievement of a climate-related target
Reduction in absolute emissions
Energy efficiency improvement
Reduction in total energy consumption
Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to

Long-Term Incentive Plan

Further details of incentive(s)

The CEO's incentives are divided into short-term and long-term performance categories. Since assessing ESG (Environmental, Social, and Governance) performance in the short term can be challenging, it is considered in the long-term incentives. The long-term incentives are granted based on a comprehensive evaluation of the management performance from financial perspectives (key managerial indicators, revenue growth, etc.), strategic/innovation perspectives (organizational innovation activities, identification of new growth drivers, etc.), and ESG perspectives (GHG emissions reduction, external ESG ratings, etc.).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

When evaluating incentives for the CEO's long-term performance, the ESG perspective holds significant weight, with a particular focus on GHG emissions reduction and external ESG ratings. Hankook Tire established a carbon-neutral roadmap in 2021 and actively initiated efforts towards achieving Net-zero by 2050 through its participation in SBTi (Science-Based Targets initiative) in 2022. To achieve Scope 1 and 2 emissions reduction, the company adopted key strategies such as improving energy efficiency, utilizing low-carbon energy sources, fuel conversion, and implementing optimal energy management. As a result, 61 reduction initiatives were implemented in 2022. Regarding Scope 3 reduction, Hankook Tire mainly focuses on material sourcing and distribution. The company is actively engaged in securing low carbon materials and pursuing carbon neutrality within its supply chain.

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	5	Short term in plan establishment and risk assessment is defined as up to 5 years.
Medium-term	5	10	Mid term in plan establishment and risk assessment is defined as between 5 to 10 years.
Long-term	10	30	Long term in plan establishment and risk assessment is defined as between 10 to 30 years.

C2.1b

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

Hankook Tire & Technology (HKT) identifies and evaluates issues or risks that can influence business or stakeholders. The issue pool is formed with the issues that are thought to be important outside and an analysis of the internal environment, and priority is derived by putting together the interest of stakeholders and business importance. If the financial influence of a related business issue is at least KRW 300 million, the issue is evaluated as a risk candidate, while specific standard values are not set for business opportunities. Contents of importance assessments and major initiatives are announced in an ESG report every year.

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

The identification, assessment, and management of climate change risks and opportunities follow the following process:

1) Climate Change Risk Identification and Assessment

Hankook Tire identifies and evaluates climate change issues and risks during the first and second halves of the year to respond to climate change risks. The ESG team identifies climate change-related risks and opportunities based on internal and external trends, stakeholder demands, regulatory changes, and other relevant factors. The identified risks undergo a review of their impact, financial implications, and urgency, and the key risks and opportunities are reported to the management.

2) Procedures for Managing Climate Change-Related Risks

The key risks and opportunities reported to the management are categorized into short-term (0-5 years), medium-term (5-10 years), and long-term (10 years or more) risks. The respective departments are guided to set goals and formulate core tasks to address these identified risks. As these risks may occur throughout the value chain, they are addressed through three of the eight ESG Operating Committees: Climate Change Committee, Supplier Committee, and Product Environmental Committee. The Climate Change Committee deals with risks related to operations, while the Supplier and Product Environmental Committees focus on risks associated with the supply chain, material sourcing, product development, and overall assessment. All initiatives formulated by these operating committees are reported to the ESG Strategy Committee, chaired by the CEO, and their progress is monitored through the ESG Operating Committees. The ESG Strategy Committee convenes once a year, while the ESG Operating Committees meet three times a year.

3) Integration of Climate Change Risks into the Overall Risk Management System

The Management Diagnosis Department conducts an annual survey to identify company-wide risks, including types, specifics, deadlines, and evaluation methods for potential risks in each department. The ESG team incorporates climate change risks, where financial implications exceed KRW 300 million, into the company-wide risk management items. Additionally, relevant executives may be invited to the ESG Strategy Committee to provide insights. In 2022, the estimated financial impact of the Emissions Trading System revision until 2030 was calculated and presented to the ESG Strategy Committee for inclusion in the company-wide risk management items.

C2.2a

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

Relevance & inclusion	Please explain
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Current regulation	Relevant, always included	<p>(i) Risk Type Example: At the end of 2022, Europe reached a collective agreement on the revision of the Emissions Trading System, substantially increasing their reduction targets. The EU-ETS adjusted its goals from a 43% reduction compared to the 2003 levels to a 62% reduction. Consequently, the annual mandatory reduction rate will be higher, and the allocation of free allowances is expected to decrease further. Additionally, Korea is undergoing significant institutional adjustments in preparation for the start of the 4th Phase in 2026. Currently, the company receives 90% of free allowances, but this ratio is expected to decrease in the 4th phase.</p> <p>(ii) Potential Impact Example: These proposed revisions are expected to have a significant financial impact on Hankook Tire. For instance, if greenhouse gas emissions remain at similar levels, the cost of purchasing emission credits for the Hungary plant in 2030 is projected to increase by over 2 times the current amount.</p>
Emerging regulation	Relevant, sometimes included	<p>(i) Risk Type Example: Among the newly reviewed policy changes, there are the mandatory climate disclosure requirements and Europe's supply chain due diligence directive. In response to recent greenwashing concerns, Europe, the United States, South Korea, and other countries are transitioning from voluntary to mandatory climate disclosures. As the disclosure requirements vary, many companies are feeling the burden of preparation. Regarding Europe's supply chain due diligence directive, companies are required to investigate and publicly disclose the status of their suppliers' human rights and environmental practices. The revised directive now includes environmental aspects such as financial and investment information related to achieving carbon neutrality and climate crisis response capabilities.</p> <p>(ii) Potential Impact Example: Hankook Tire must establish an internal disclosure system following the climate disclosure guidelines set forth in Europe and South Korea. Given the increased interest of external stakeholders in companies' climate actions, efforts should be made to disclose accurate and improved information. The supply chain due diligence directive could result in increased climate activity demands for automotive companies, necessitating the establishment and management of a scrutiny system for our suppliers as well. These newly reviewed policy changes may indirectly and directly raise operating costs and prompt increased investments for carbon reduction efforts.</p>
Technology	Relevant, always included	<p>(i) Risk Type Example: Tires are products installed on automobiles, indirectly influencing car energy consumption. Due to this reason, many countries have introduced tire labeling regulations. Recently, international standards</p>

		<p>for tire efficiency have been revised, demanding products with higher energy efficiency than before.</p> <p>(ii) Potential Impact Example: Sustained research and development efforts are required to enhance tire energy efficiency while maintaining their inherent functions, such as reducing rolling resistance, improving wet grip, and achieving lightweight design. Research and development in this area may take a considerable amount of time to yield satisfactory results and involve substantial R&D costs.</p>
Legal	Relevant, always included	<p>(i) Risk Type Example: Recent instances of greenwashing have led to the implementation of relevant regulations. Depending on the country, misleading consumers regarding product sustainability may result in investigations or fines. Therefore, failure to provide accurate information about climate or product efficiency on product labels or advertisements can have significant consequences not only for car manufacturers and consumers but also negatively impact the company's image.</p> <p>(ii) Potential Impact Example: In accordance with regulations in export countries, fines of up to 4% of annual revenue or a specified maximum amount can be imposed. Particularly, Europe, one of Hankook Tire's major markets, has significantly strengthened its penalty levels, which may result in fines and, in some cases, imprisonment of up to 2 years. Such situations can severely damage the company's image and give rise to legal liabilities.</p>
Market	Relevant, always included	<p>(i) Risk Type Example: Due to the growing trend of eco-friendly consumption and external factors, there is an increasing demand for environmentally friendly products from consumers. For example, consumers are requesting products to be manufactured using 100% renewable energy or purchasing low-carbon materials to reduce the carbon footprint of products. Additionally, as the transition from internal combustion engine vehicles to electric vehicles accelerates, there is also an increasing demand for tires designed specifically for electric cars.</p> <p>(ii) Potential Impact Example: If the company fails to meet the consumer demand for eco-friendly products, it may result in failed contracts with consumers and a disadvantageous position in a limited market share. Therefore, it is crucial to understand the changing market needs and diversify the product lineup, offering low-carbon footprint products and tires designed for electric vehicles to remain competitive and meet sustainability goals.</p>
Reputation	Relevant, sometimes included	<p>(i) Risk Type Example: As ESG factors become a consideration in corporate evaluations, global investors are referring to disclosure information (ESG reports)</p>

		<p>and ESG assessment results from organizations like MSCI, CDP, DJSI, etc., to make investment decisions. Additionally, with the increasing awareness of climate change, general consumers are demanding social responsibility from companies that fail to take appropriate actions. Such companies can face reputational impacts through media coverage and public criticism.</p> <p>(ii) Potential Impact Example: These risks may lead to a loss of customer trust, resulting in a decline in stock prices, reduced revenue, and withdrawal of investments, all of which can affect the company's value and financials. Once a company's image is tarnished, it may require significant time and effort to rebuild, causing potential long-term financial impacts.</p>
Acute physical	Relevant, always included	<p>(i) Risk Type Example: Natural disasters with severe impacts, such as hurricanes, typhoons, and flooding due to climate change, can cause damage to properties and disrupt the supply chain of materials and products. For instance, factory areas may experience flooding, leading to damage to production facilities and nearby infrastructure, resulting in delays in product manufacturing and distribution due to disaster recovery and facility reinforcement.</p> <p>(ii) Potential Financial Impact Example: In cases of facility damage caused by natural disasters, direct and indirect costs may be incurred for flood protection and disaster recovery efforts, along with potential increases in insurance costs. Moreover, if product sales are delayed due to issues in the distribution network, consumer concerns about supply capacity may arise.</p>
Chronic physical	Relevant, always included	<p>(i) Risk Type Example: As the Earth's average temperature rises, the ecosystem environment may undergo changes, which can particularly impact the sourcing of tire materials. For instance, in the case of natural rubber, which is primarily imported from Southeast Asia, changes in cultivation environments can disrupt the supply of raw materials.</p> <p>(ii) Potential Financial Impact Example: In that case, reduced supply may result in higher product prices. As natural rubber constitutes a significant proportion of Hankook Tire's imported raw materials, increased purchase costs may occur. Moreover, substantial maintenance costs may be invested to secure a reliable supply chain, and there may be an expansion in research and development costs for developing alternative raw materials.</p>

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

Company-specific description

Hankook Tire's factories in Korea and Hungary are participating in Emissions Trading Systems. They receive allocations from respective governments, and if their greenhouse gas emissions exceed the allocated quotas, they need to purchase additional emission credits from the market or from other obligated entities. The current status of Emissions Trading System compliance for Korea and Hungary factories is as follows:

1) Factory in Korea : Starting from the fourth phase plan in 2026, it is anticipated that free allowances will be insufficient. The Korean government is currently undergoing significant institutional adjustments, and the free allocation of allowances is expected to be significantly reduced from the current 90%. Considering that the emission allowance target for the Korean facility is approximately 460,000 tCO₂eq, even a 5% shortage in allowances could result in significant cost expenditures.

2) Factory in Hungary: The free allocation of allowances for the Hungarian factory has sharply decreased since 2021, leading to the current practice of purchasing emission credits. In 2022, approximately KRW 4.8 billion was spent on emission credit purchases, and there will be no free allocation of allowances beyond 2030, which will likely escalate costs further. If the factory needs to purchase emission credits equivalent to the current free allocation, an additional minimum of KRW 1.3 billion may be incurred by 2030.

Therefore, Emission Trading System present a significant financial risk for Hankook Tire and are categorized as one of the major climate-related risks.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

55,641,036,840

Potential financial impact figure – maximum (currency)

65,059,447,600

Explanation of financial impact figure

The financial impact is estimated to be the cumulative cost of purchasing emissions credits from 2023 to 2030 for both the Korean and Hungarian factories. The cost calculation is based on the following assumptions:

- 1) The potential impact figure represents the total estimated cost of purchasing emissions credits from 2023 to 2030.
- 2) The purchase amount for 2023-2030 is calculated assuming the same emissions as the actual performance in 2022.
- 3) The assumed price per ton of emissions credits is KRW 30,000 to 40,000 for Korea and KRW 123,210 to 136,900 for Hungary.

Based on these assumptions, the potential impact figures are as follows:

- 1) Korean Factory: Total purchase amount (485,411 tCO₂) * Purchase price (KRW 30,000 to 40,000/tCO₂) = approximately KRW 15 to 19 billion.
- 2) Hungarian Factory: Total purchase amount (333,404 tCO₂) * Purchase price (KRW 123,210 to 136,900/tCO₂) = approximately KRW 41 to 46 billion.
- 3) Total: Approximately KRW 56 to 65 billion.

Cost of response to risk

3,670,000,000

Description of response and explanation of cost calculation

Hankook Tire has set Science-Based Targets and developed a company-wide carbon neutrality roadmap in response to increasing carbon emission costs and climate change. The Net zero targets align with the 1.5°C scenario and are approved by SBTi. To achieve the near term target of 46% reduction in Scope 1 and 2 emissions by 2030, Hankook Tire is investing in carbon reduction activities across its manufacturing operations.

In 2022, Hankook Tire invested a total of KRW 3.67 billion in eight factories. Through energy diagnostics, 112 energy-saving items were identified, with 61 currently in progress. The main activities include: 1) Investments in equipment efficiency (e.g., replacing outdated equipment with energy-efficient alternatives, retrofitting existing utility facilities), 2) Air/steam leak improvements, 3) Waste heat recovery system implementation, and 4) Enhancements in factory operation methods. Among these activities, the most significant investment is in equipment efficiency.

For instance, the Hungarian factory invested approximately KRW 715 million, mainly for replacing outdated pumps and inverters with energy-efficient equipment (achieving a

minimum 3-5% improvement) and installing a heat recovery device in the existing boiler to establish a waste heat recovery system. As a result, the estimated GHG reduction for 2022 amounts to 45,096 tCO₂, with an energy saving of 550 TJ.

Recognizing the significance of greenhouse gas and energy savings in their manufacturing facilities, Hankook Tire actively monitors and reports energy performance on a monthly basis. Furthermore, we are planning to continue expanding related investments in the future.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Technology

Transitioning to lower emissions technology

Primary potential financial impact

Increased capital expenditures

Company-specific description

Tires do not directly consume energy or emit greenhouse gases when installed on vehicles, but they indirectly impact the energy consumption of vehicles through their characteristics, such as rolling resistance and braking performance. To address this, many countries have introduced tire labeling systems to help consumers differentiate products with good energy efficiency and prohibit the sale of products that do not meet the minimum standards.

Recently, in Korea, there is a movement to revise domestic standards in response to the upward revision of the international standard 'UN ECE R 117' for tire efficiency. In Europe, it is expected that strengthened efficiency criteria will be applied from next July. The criteria are expected to be raised for attributes that are closely related to energy efficiency, such as rolling resistance and wet grip performance. In light of these changes, Hankook Tire must launch improved products to adapt to market demands. Hankook Tire's products (PCR, TBR, SUV) sold in Europe and Korea account for approximately 47% of the total sales. Failure to properly respond to the updated standards may result in a decrease in revenue. Therefore, Hankook Tire needs to proactively address these changes to ensure its products meet the new efficiency standards and maintain its market position in both regions.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

15,420,785,888

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Based on the assumptions provided, the estimated potential impact figure for the financial impact due to the introduction of improved efficiency standards in Europe and Korea can be calculated as follows:

- 1) Total tire sales revenue for Hankook Tire in 2022: KRW 8,161 billion.
- 2) Ratio of products sold in Europe and Korea out of the total production in 2022: 47%.
- 3) Percentage of products rated at least grade C: 59.8% based on 2022 revenue.

With these assumptions, the potential impact figure can be calculated as follows:
2022 Sales Revenue (KRW 8,161 billion) * Ratio of products sold in Europe and Korea (47%) * Ratio of products below grade C (1 - 59.8%) * Ratio of products not meeting the improved minimum efficiency grade (1%) = KRW 15.4 billion.

This means that there is an estimated potential revenue reduction of KRW 15.4 billion due to approximately 1% of the products failing to meet the improved minimum efficiency standards in Europe and Korea. Hankook Tire should take these potential financial impacts into consideration and work towards ensuring its products meet the new efficiency standards to maintain its market competitiveness and revenue in both regions.

Cost of response to risk

39,700,000,000

Description of response and explanation of cost calculation

Since the implementation of the EU Labeling system in November 2012, Hankook Tire's rolling resistance (RR) performance has shown continuous improvement. As of 2023, for a specific tire specification (235/55R19), the Summer tires already meet the highest RRC (rolling resistance coefficient) 1st grade criteria, and All Season tires are planned to meet the 1st grade criteria in 2024. Additionally, to contribute to reducing CO2 emissions for climate change, Hankook Tire aims to develop tires with further improvements in RRC: 11% for Summer tires and 17% for All Season tires by 2030, not just settling for the Labeling 1st grade.

Hankook Tire employs various technologies to enhance Low Rolling Resistance (LRR) for these improvements. In terms of the tire compound, they improve the wear and heat

resistance performance by utilizing functionalized polymer technology and substituting natural oils for petroleum oils. We also optimize the network between polymer and silica and fine-tune the compound mixture. On the structural side, we are developing high-strength cord technology, which maintains the same strength but reduces the weight of the cord used in tires, leading to an optimized rubber volume and enhancing LRR performance without significant trade-offs.

The results of these efforts, with approximately 11.4% of total sales revenue in 2022 coming from products that satisfy the top grades (A~B) for rolling resistance. Hankook Tire's risk mitigation costs in 2022 are associated with research and development and equipment investments related to these efforts to improve LRR performance in their tire products.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Hankook Tire's main customers are divided into two categories: general consumers and automotive companies. Recently, the automotive industry has been experiencing an increased demand for low-carbon product manufacturing based on Life Cycle Assessment (LCA). This demand arises from various factors, such as stronger regulations on internal combustion engine vehicles, automotive companies' pursuit of carbon neutrality goals, and the need to secure a low-carbon footprint.

There are two main activities that they generally require from us.

- 1) The first is the use of renewable energy in manufacturing facilities. This demand is mainly coming from European automotive companies, with Hankook Tire's factories in Hungary and China often being the target for such requirements.
- 2) The second is the use of low-carbon raw materials. To achieve carbon savings during the material acquisition stage, the application of bio-based raw materials or the submission of improved carbon footprints may be requested.

PCR (Passenger Car Radial) products, which Hankook Tire currently sells in Europe, account for approximately 24% of total sales volume. Therefore, failure to meet the changing market demands for low-carbon products could result in losing market share and potentially impacting revenue.

To maintain competitiveness and adapt to the evolving market, Hankook Tire needs to proactively respond to these demands by focusing on low-carbon manufacturing practices, adopting renewable energy sources, and considering the use of low-carbon raw materials in tire production processes. This will not only align the company with market expectations but also contribute to our customers' sustainability goals.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

114,264,318,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Based on the assumptions provided, the estimated potential financial impact for Hankook Tire can be calculated as follows:

- 1) Total tire sales revenue for Hankook Tire in 2022: KRW 8,161 billion.
- 2) Ratio of products sold to the specific automotive companies out of the total production in 2022: 14%.

The potential impact figure can be calculated as follows: 2022 Sales Revenue (KRW 8,161 billion) * Ratio of products sold to the specific automotive companies (14%) * Market share loss (10%) = KRW 114 billion.

This means that there is an estimated potential revenue loss of KRW 114 billion if Hankook Tire faces a 10% market share loss due to demands for eco-friendly activities and plans, or monitoring of carbon emissions by automotive companies in 2022.

Hankook Tire should consider these potential financial impacts and take proactive measures to meet the demands and maintain its market share to sustain its revenue in the automotive industry.

Cost of response to risk

7,968,326,041

Description of response and explanation of cost calculation

Hankook Tire has been actively responding to the increasing demand for low-carbon products in the automotive industry by investing in sustainable raw materials and

renewable energy use. Here are the key initiatives:

1) Sustainable Raw Materials: Sustainable raw materials refer to recycled and renewable alternatives that can replace traditional petroleum-based materials. Examples include synthetic rubber from renewable and bio-based sources, recycled PET codes, recycled carbon black, and bio-based oils. Hankook Tire's goal for sustainable raw material usage is set at 40% by 2030, and we achieved 28.1% in 2022. To support the procurement of low-carbon materials, Hankook Tire invested approximately KRW 0.55 billion in 2022. Additionally, they are actively working on securing reliable suppliers and engaging in R&D collaborations with partner companies.

2) Renewable Energy: Considering the varying infrastructures in different regions, Hankook Tire has formulated a long-term strategy for using renewable energy in its global factories, taking into account economic viability and regional conditions. In 2022, the Hungarian factory purchased GoO (Guarantees of Origin) for 24 GWh of renewable energy as a pilot project. Furthermore, the Korean factory participated in the Green Premium (0.11 GWh) initiative. Additionally, Hankook Tire is in the process of installing solar power facilities at the Korean factory, which is scheduled to be operational from 2024. For renewable energy initiatives in 2022-2023, Hankook Tire invested approximately KRW 7.415 billion. These efforts are expected to result in an estimated greenhouse gas reduction of approximately 32,538 tCO₂ in 2022.

By investing in sustainable raw materials and renewable energy, Hankook Tire demonstrates its commitment to sustainability and reducing its environmental impact, aligning with the growing demand for low-carbon products in the automotive industry.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Cyclone, hurricane, typhoon

Primary potential financial impact

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

Company-specific description

Hankook Tire is aware of the increasing frequency of natural disasters such as storms, floods, and droughts due to climate change, which can have impacts on various aspects including raw material sourcing, manufacturing, and distribution. Particularly, major disasters classified as significant hazards have the potential to directly affect our facilities and distribution networks. To address this, the SHE (Safety, Health, and

Environment) Committee under the ESG Operations Committee oversees and manages related activities, reporting any significant issues to the CEO.

Currently, we primarily focus on monitoring risks related to our facilities, especially in regions like China's Chongqing and Indonesia, where the incidence of heavy rains and droughts has been increasing. Even temporary disruptions can have direct implications for our operations, so we conduct regular leak repair and infrastructure inspections to mitigate potential impacts.

The negative impacts we anticipate are as follows:

- Reduced production and equipment damage, leading to decreased output.
- Business operation disruptions due to internal and external logistics challenges.
- Potential decrease in revenue due to the business impact of the disasters.

To proactively manage and respond to these risks, Hankook Tire is committed to ongoing efforts in effectively dealing with natural disasters. We aim to be flexible and responsive in handling such situations, ensuring our business resilience and continuity in the face of these challenges.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

20,034,000,000

Potential financial impact figure – maximum (currency)

46,746,000,000

Explanation of financial impact figure

Based on the provided assumptions, the estimated potential financial impact for Hankook Tire due to natural disasters such as hurricanes and typhoons can be calculated as follows:

- 1) Daily loss cost due to abnormal operations: KRW 0.9 billion.
- 2) Estimated time for damage recovery (factory restoration, alternative distribution securing, etc.): 3-7 days.
- 3) Assuming a 6.0% increase in global precipitation frequency based on the RCP 8.5 scenario.
- 3) Cumulative damage amount for the years 2024 to 2030.

The potential impact figure can be calculated as follows: Daily loss cost (KRW 0.9 billion/day) * Recovery time (3-7 days) * Increased precipitation frequency (1+6%) *

Cumulative period (7 years) = KRW 20.03 ~ 46.75 billion.

This means that Hankook Tire could potentially face losses ranging from approximately KRW 20.03 billion to KRW 46.75 billion as a result of disruptions caused by natural disasters such as hurricanes and typhoons from 2024 to 2030. It is essential for Hankook Tire to consider these potential financial impacts and take appropriate measures to strengthen its disaster preparedness and resilience to mitigate potential losses.

Cost of response to risk

1,289,651,960

Description of response and explanation of cost calculation

Hankook Tire is proactively preparing for the increasing occurrence of natural disasters such as floods and storms by conducting regular inspections and maintenance at its global facilities. In order to withstand heavy rainfall, measures such as drainage systems, roof leakage prevention, and waterproofing are carried out. Additionally, in times of need, new drainage systems or additional water catchment facilities are installed to ensure swift water discharge and minimize losses.

Over the past three years, Hankook Tire has invested approximately KRW 1.28 billion in disaster prevention efforts across eight global facilities. These efforts have resulted in maintenance covering an area of approximately 80,000 square meters at around 596 different locations. As a result, there have been no major disruptions to factory operations caused by concentrated heavy rain or excessive rainfall during this period. However, it is expected that the costs associated with such preventive measures will increase as the frequency of natural disasters becomes more frequent in the future.

By taking proactive measures to inspect and reinforce facilities against potential damages from natural disasters, Hankook Tire aims to reduce the risk of disruptions and minimize potential financial impacts. The ongoing investment in disaster prevention is an important step in ensuring the resilience and continuity of operations in the face of increasing climate-related challenges.

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Chronic physical

Changing precipitation patterns and types (rain, hail, snow/ice)

Primary potential financial impact

Increased direct costs

Company-specific description

The primary material used to manufacture tires is natural rubber. Hankook Tire procures natural rubber from various countries, with Indonesia (44.8%), Thailand (25.5%), Côte d'Ivoire (8.9%), Cambodia (1.4%), and Vietnam (0.04%) being the main sources. The volume of natural rubber purchases represents a significant portion, accounting for over 20% of the total raw material procurement. These countries, especially Thailand, Indonesia, and Malaysia, produce about 80% of the world's natural rubber. However, these regions are highly vulnerable to climate change.

According to the IPCC report, extreme weather events such as heatwaves and heavy rainfall, which are exacerbated by climate change, are predicted to occur more frequently in Asian regions. These climate impacts can lead to reduced cultivation areas, rubber tree diseases caused by pests, and changes in growing environments, which can disrupt the harvesting of natural rubber. As a result, a decrease in the supply of natural rubber may result in increased raw material prices. This could potentially lead to higher purchasing costs and affect the overall cost competitiveness of Hankook Tire. Given the significance of natural rubber in tire production and the increasing vulnerability of key producing regions to climate change, Hankook Tire must closely monitor the potential impacts of climate change on the natural rubber supply chain and explore strategies to enhance supply chain resilience. This may include diversifying sourcing regions, investing in sustainable rubber production practices, and engaging with local communities and suppliers to promote climate resilience and sustainability in the natural rubber sector.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

84,844,700,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Based on the provided assumptions, the estimated potential financial impact for Hankook Tire due to the increase in natural rubber prices can be calculated as follows:
1) Potential impact figure represents the total additional expenditure expected from 2024 to 2035.

2) The cumulative natural rubber purchase amount for Hankook Tire in 2022 is KRW 737 billion.

3) The increase in natural rubber prices is assumed to be 0.1% by 25 years and then 1.13% from the 26th year onward (based on World Bank forecast data).

Using this logic, the projected additional expenditure for the year 2024 would be KRW 737 billion * 0.1% = KRW 0.737 billion. Similarly, the estimated additional expenditure for each subsequent year can be calculated based on the specified percentage increases in natural rubber prices.

Summing up these annual additional expenditures from 2024 to 2035, the total amount is estimated to be KRW 84.8 billion.

This potential financial impact highlights the importance for Hankook Tire to closely monitor natural rubber price trends and explore strategies to mitigate the impact of rising prices. It also emphasizes the need for sustainable sourcing practices and proactive measures to ensure supply chain resilience amidst potential fluctuations in raw material costs.

Cost of response to risk

84,954,600

Description of response and explanation of cost calculation

Hankook Tire actively participates in the Global Platform for Sustainable Natural Rubber (GPSNR) to establish a sustainable natural rubber supply chain. GPSNR is a global platform involving various stakeholders, including natural rubber growers, dealers, manufacturers, and automotive companies, to commit and support activities for sustainable supply chains. Hankook Tire is a founding member of GPSNR and has announced its "Sustainable Natural Rubber Policy," striving to reduce risks through related initiatives.

In 2022, Hankook Tire engaged in Project TREE's Joint Pool Account (JPA) activities, providing support to 1,159 small-scale natural rubber farmers with tapping knives and formic acid. Additionally, 221 farms received smartphones to accelerate supply chain traceability. These efforts aim to enhance productivity and quality of natural rubber while ensuring sustainable supply chains through improved farm management.

The cost invested in these initiatives during 2022 amounted to KRW 0.85 billion.

Hankook Tire's participation in GPSNR and related activities demonstrates its commitment to promoting sustainable practices within the natural rubber industry, contributing to both environmental and social benefits.

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

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Hankook Tire's Korean and Hungarian factories both participate in mandatory Emissions Trading Systems(ETS). While ETS is mostly viewed as a risk, it can also present opportunities to engage in the carbon market. However, the Hungarian factory faces a challenge as it receives significantly lower free allocation from the government compared to its actual emissions. Despite investing heavily in greenhouse gas reduction, it may find it challenging to generate additional revenue through the sale of surplus emission allowances due to the limited allocation.

Conversely, the Korean factory is not in a severe shortage of emission allowances during the third phase(until 2025). This situation allows it to capitalize on opportunities by selling surplus emission allowances in the carbon market and expect financial gains. In fact, in the years 2021-2022, the Korean factory has experienced financial benefits by selling its surplus emission allowances in the carbon market, further highlighting the potential as an opportunity.

Overall, carbon market participation is perceived as an opportunity for Hankook Tire, particularly in its Korean factory, where surplus emission allowances can be leveraged to gain financial benefits. On the other hand, the Hungarian factory faces a more challenging situation due to the insufficient free allocation of emission allowances, which limits its ability to generate additional revenue from the carbon market.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

5,612,778,125

Potential financial impact figure – maximum (currency)

7,857,889,375

Explanation of financial impact figure

The potential impact figure based on the estimated revenue from ETS in the Korean facilities (Daejeon Plant, Geumsan Plant, Headquarters, etc.) following Hankook Tire's carbon reduction path for 2023-2025 is as follows. Considering the assumptions and figures applied for cost calculation:

1) The potential impact figure represents the expected revenue from ETS during 2023-2025.

2) Assuming a 25% reduction in Scope 1 and 2 emissions for Korean facilities compared to 2019 levels by following the carbon reduction path towards 2030.

3) The surplus emission credits is 224,511tCO₂.

The unit price for Korean emission allowances is assumed to range from a minimum of KRW 25,000 to a maximum of KRW 30,000 per tCO₂.

As a result, the potential impact figure is approximately KRW 5.6 billion to KRW 7.8 billion.

Cost to realize opportunity

736,853,500

Strategy to realize opportunity and explanation of cost calculation

Hankook Tire has established a carbon-neutral roadmap in 2021 and actively engaged in initiatives to achieve Net zero by 2050. In 2022, the company joined the Science-Based Targets initiative (SBTI) to further its efforts towards this goal. To enhance the management of global facilities, a dedicated Energy Project Team was created, responsible for setting energy reduction targets, monitoring performance, and identifying energy-saving measures at each facility. Progress is reported to the management team and CEO through the Climate Change Committee.

During 2022, Hankook's Korean facility invested approximately KRW 0.74 billion in greenhouse gas reduction efforts, implementing around 18 activities. These initiatives involved upgrading utility equipment such as transformers, refrigeration units, and pumps to high-efficiency alternatives. Additionally, waste heat generated during certain processes was captured and recycled for reuse, starting with process improvements to ensure energy-efficient practices.

Furthermore, in 2023, Hankook Tire is introducing solar power facilities at the Geumsan Plant, which are set to be operational in the first half of 2024. As a result of these

initiatives, it is estimated that in 2022, the company achieved a reduction of approximately 23,817 tCO₂ and saved around 187TJ of energy.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Climate change regulations have led to significant changes in the transportation sector, with the most prominent being the rapid growth of the electric vehicle (EV) market. The global trend of transitioning from internal combustion engine (ICE) vehicles to electric cars is strongly evident in countries like the United States, Europe, Korea, and China. Customer demand for electric vehicles has surged dramatically. Some countries in Europe and the United States are even planning to ban the introduction of new ICE vehicles, prompting automotive companies to accelerate the electrification of their vehicle lineup.

Electric motors in EVs operate silently and rely on electricity, making them distinct from traditional ICE engines. Additionally, the presence of batteries adds to the vehicle's weight. In response to these characteristics, Hankook Tire has developed the iON tire, tailored specifically for electric vehicles. In 2022, the company made a groundbreaking move by introducing the world's first full lineup of tires exclusively designed for electric cars to the market. The surge in the electric vehicle market and consumers' new needs have become a driving force for introducing innovative tire products in the market.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,632,347,400,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact is calculated based on the estimated annual revenue when Hankook Tire achieves its target for the iON tire, which accounts for approximately 20% of the total revenue. To calculate the potential impact, the following assumptions and figures were applied:

- 1) Hankook Tire's tire sales revenue in 2022 is KRW 8,161 billion.
- 2) The revenue target for the iON tire in 2025 is to achieve approximately 20% of the total revenue (with iON tire revenue being 11% of total revenue in 2022).
- 3) The estimated annual revenue when the revenue target is achieved.

Accordingly, the potential impact figure is approximately KRW 1,632 billion, representing the projected annual revenue when the iON tire achieves its revenue target.

Cost to realize opportunity

20,708,906,680

Strategy to realize opportunity and explanation of cost calculation

The iON tire has been extensively developed not only to address the characteristics of electric vehicles (EVs) such as noise and handling but also to enhance energy efficiency. The investment in research and development has been substantial. Here are some key improvements and features:

- 1) Electric vehicles rely on generating electricity from batteries to move, making low rolling resistance tires essential to maintain driving range and minimize electric consumption. The iON tire reduces rolling resistance through optimized EV compounds and curing technology, which plays a crucial role in tire energy efficiency and is a significant factor in tire labeling system.
- 2) Electric vehicles have a heavy battery weight and produce high torque due to electric motors, requiring tires with high grip levels. To enhance wet grip and traction, the iON tire features a new tread design with improved tread compounds. Wet grip, similar to rolling resistance, is an important factor evaluated in tire labeling system.
- 3) To minimize uneven tire wear caused by heavy EVs, the iON tire is equipped with a stiffness profile optimized for heavy loads and ensures uniform tread wear, thereby enhancing tire durability and optimizing the product's lifespan.

To apply the best technology to the iON tire, Hankook Tire's R&D center has invested significant resources, including a considerable workforce and research and development expenses. The estimated cost for this opportunity realization is approximately KRW 20.71 billion, which represents the R&D expenditure in 2022.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Ability to diversify business activities

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Hankook Tire is expanding the concept of sustainability beyond its products and venturing into mobility solutions to create new business opportunities. As part of this initiative, we are researching and developing Intelligent Tires, which go beyond traditional tire functionalities to include composite sensors embedded inside the tires. Intelligent Tires are equipped with sensors that gather and analyze various data, such as tire temperature, air pressure, tread wear status, and even road conditions. This allows for precise estimation and monitoring, contributing to safer and more sustainable vehicle operation. With the ability to detect road characteristics, Intelligent Tires further enhance vehicle efficiency and safety.

The growing market for electric vehicles places a strong emphasis on their safety, and the rise of electric cars presents a significant opportunity for Hankook Tire's Intelligent Tires to become a key player in this expanding sector. By combining tire efficiency, safety, and innovative technology, Hankook Tire is paving the way for a new generation of business opportunities in the mobility industry.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

81,617,370,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Hankook Tire estimates the potential financial impact based on the assumption that we successfully commercialize mobility solution and generate revenue from them. The primary target for revenue generation is set at 1% of the total sales. Based on the following assumptions and figures:

- 1) Hankook Tire's tire sales revenue in 2022 is KRW 8,161 billion.
- 2) The revenue generated from Intelligent Tires and mobility solution accounts for approximately 1% of the total sales.

The estimated potential financial impact is approximately KRW 81.6billion. This indicates the expected revenue that can be generated when the Intelligent Tires are commercialized and integrated into their business operations, contributing to the company's overall financial performance.

Cost to realize opportunity

69,585,667

Strategy to realize opportunity and explanation of cost calculation

In 2021, Hankook Tire initiated a pilot project for the development of Intelligent Tires in collaboration with the US-based technology startup and the eco-friendly waste management company . The project aims to utilize data collected through intelligent sensors to develop algorithms that can convert the data into meaningful information, including tire tread lifespan prediction, anomaly detection, optimization of maintenance intervals, real-time alerts, and more. To ensure the accuracy of the system, gathering as much data as possible is crucial, and Hankook Tire is actively collecting data from different driving environments at their own tire performance testing facility, Technoring. This effort is focused on improving the precision of the technology.

The research and development achievements obtained through these efforts will be patented, reinforcing Hankook Tire's R&D competitiveness in the future tire industry. The incurred cost for these opportunities amounts to KRW 69.58 million, which was invested in R&D activities in 2022.

Comment

C3. Business Strategy

C3.1

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

Row 1

Climate transition plan

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

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

HKT has a phased feedback process for ESG issues including climate change. First, yearly performance is reported to management staff by the ESG Strategy Committee and the future direction and major agendas are discussed. Then, the ESG Steering Committee meeting is held and various tasks are performed in connection with works under the responsibilities of the executive staff in charge. The performance status is monitored on a quarterly basis and the ESG Strategy Committee receives feedback from the CEO. Major agendas are submitted back to the ESG Committee under Board of Directors for review. In this way, promotion strategies and activities of HKT are performed through the process of getting feedback from the executive staff in charge, CEO and Board of Directors.

Frequency of feedback collection

Annually

Attach any relevant documents which detail your climate transition plan (optional)

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	
Row 1	Yes, qualitative and quantitative

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
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Transition scenarios IEA SDS	Company-wide		<p>The Sustainable Development Scenario (SDS) presented by the IEA follows the path of “Well below 2°C” that the Paris Agreement aims at. This scenario assumes that developed countries, China, and other countries reach carbon neutrality by 2050, 2060, and 2070, respectively. According to the SDS scenario, an increase in global temperatures can be limited to 1.65°C with a 50 percent chance and can be reduced to 1.5°C after 2070. The SDS set parameters such as economic growth rate by country, fluctuation of energy mix, fossil fuel price, and future carbon price, and provides policy assumptions and costs for core technologies to realize these according to scenario prospects. Among these, prospects and policy advice on energy mix, carbon price, and transportation, which are closely associated with the business of HKT, were intensively reviewed, and the analysis results were grafted and reflected in the promotion strategies and vision of HKT's carbon neutrality roadmap and reduction target. For example, as a result of analysis of the conversion scenario, policies that can directly affect HKT the most were evaluated as the Emission Trading System and carbon tax. With the reduction of GHG emissions in worksites (Korea, Hungary) that implement the Emission Trading System as a priority, implementation strategies such as the use of renewable energy, optimization of energy efficiency, and reduction plan are reflected in the carbon neutrality roadmap. These roadmap contents were approved by a periodic Board of Directors meeting and shared companywide, and future implementation status will be monitored by the ESG Strategy Committee every year, and associated contents are reported to the ESG Committee under the Board of Directors.</p>
Physical climate scenarios RCP 8.5	Company-wide		<p>RCP 8.5 presented in the fifth IPCC report is a scenario assuming that GHG will be continuously emitted at the current trend rate. RCP 8.5 predicts that the carbon dioxide concentration will reach 940 ppm by the end of the 21st century (2070 -2099) caused by human activities, raising the average global temperature by 4.8°C and precipitation by 6.0%. In the case of Korea, if GHG is emitted as stated in the RCP 8.5 scenario, Korea's average temperature and precipitation are predicted to rise by 6.0°C and 20.4%, respectively, by the end of the 21st century (2070-2099), from which it</p>

		<p>is analyzed that the overall Asian region is vulnerable to climate change compared to the global area. HKT currently has eight manufacturing plants, five of which are located in Asia. Thus, these climate prospects can disrupt property and plant operations of HKT. Also, it can affect future supply and demand for the raw materials of tires. Natural rubber has the highest purchase cost percentage for the raw materials of tires and is mainly imported from Southeast Asia. Extreme climatic phenomena such as the rapid rise of temperature, frequent heavy rain and droughts can disrupt the supply of natural rubber by changing growing conditions, and widen the range of fluctuation of prices of raw materials. Therefore, HKT sets the mid-to long-term goal for sustainable raw material use and reflected it in the carbon neutrality roadmap, and supplemented the roadmap by establishing implementation plans such as a review of alternative raw materials. HKT also supplemented the content to establish an efficient transportation system by adding plans for eco-friendly transportation system conversion and optimization of transportation distance to reduce GHG emissions in the distribution stage of the roadmap. Also, HKT performs inspection of leaking parts and repairs every year to prepare for the rainy season and natural disasters and will tighten the monitoring level according to changing climate phenomena to more systematically manage the fields.</p>
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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

What is the main impact of the transition scenario and physical climate scenario analysis on our organization and what is reflected in the strategy?

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

SDS analysis identified the ETS as the carbon regulations that can directly affect HKT and carbon prices in 2050 are expected to be 160USD/tCO₂ in developed countries, leading to the conclusion that they will have a significant impact on business operation.

For example, if the ETS transitions to 0% free allocation, Korea and Hungary plant have to purchase full credits, the financial impact is estimated to be KRW 97.356 billion annually. Since this is considered a significant cost, HKT has established plans to prioritize Scope 1,2 reductions, and developed strategies by reviewing technologies. Also, it has set a timeline to use renewable energy given the price projections of LCOE. According to the technological costs of SDS, LCOE for Solar PV is projected to be 15-30USD/Mwh in 2050, and compared to the future energy and CO2 credit costs, it is more beneficial to use renewable energy than national electricity. With RE100 achievement in 2030 at the Hungary plant as the start, solar PV installation plans and other method(REC, PPA) are being developed. These details were approved by the ESG Strategy Committee and shared with all worksite, and also announced in the ESG Report. Monitoring of the status is planned to be checked by Climate Change Committee, and the implementation strategy will be updated according to the monitoring results. Our near-term and net-zero targets have been approved by SBTi (Science Based Targets initiative) as of July 18, 2023. The SBTi follow the "well below 2°C" at a minimum, so the roadmap of HKT can be regarded as being faithfully developed according to the corresponding scenario.

According to the RCP 8.5 analysis, factors projected to have the direct impact on HKT are extreme climate conditions and rainfall pattern changes. If climate conditions become severe due to flooding or heavy rain, damage to worksites, increases in the price of raw materials may occur. In particular, material price rise is thought to be the biggest financial burden. Natural rubber, which comprises the largest proportion of tire materials, is imported mostly from Southeast Asia, so if its supply decreases because of heat waves or floods in Asian countries vulnerable to climate change, the burden on business will be significant. The cost of natural rubber purchase was KRW 737billion and if the price increases by 1% we will bear an additional cost of KRW 7.37billion annually. As a result, HKT defined a long-term objective for the use of sustainable materials and reflected it in roadmap, and developed strategies including searching for alternative materials. We are also continuing to study the possibility of rubber extraction from dandelion as an alternative to preparing for a decrease in the supply of natural rubber. Furthermore, we are conducting leakage area inspections and repairs to be prepared for the annual rain seasons, and it plans to perform systematic site management by increasing the monitoring level according to the weather conditions.

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	Yes	The explosive growth of the electric vehicle (EV) market has been a significant driving force for Hankook Tire to develop

		<p>new products and launch its brand. In 2021, Hankook Tire made continuous R&D investments and stayed ahead in technology development to enhance the specialized performance of EV tires based on the fundamental core performance required for electric cars while overcoming trade-off performance challenges.</p> <p>Electric vehicles, being heavier and more powerful than internal combustion engine vehicles, demand tires with reinforced load-bearing capacity and grip as well as ultra-low noise performance. In response to the rapidly growing EV market and paradigm shift, Hankook Tire launched the iON brand of EV tires in 2022, creating a full lineup of tires optimized for EV characteristics, and became the first in the world to do so.</p> <p>Presently, Hankook Tire supplies tires to premium brand EVs and has been selected as the official partner for the '2022-23 Formula E World Championship,' showcasing its leadership in EV tire technology. Hankook Tire is proud to prove its position as a leader in the industry, sharing the tire technology and heritage of iON with the world as it partners with Formula E.</p>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>The climate crisis, which has led to unstable raw material supplies and increasing customer demands for reduced product carbon footprints, has significantly influenced Hankook Tire's expansion of supply chain management activities.</p> <p>To address the sustainable supply chain development of natural rubber, which is projected to be highly affected by climate change, Hankook Tire actively participates in the GPSNR (Global Platform for Sustainable Nature Rubber). GPSNR is a global platform involving various stakeholders, committed to sustainable supply chain activities and supporting their implementation. In 2022, through the Project TREE's JPA (Joint Pool Account) initiative, Hankook Tire provided support such as tapping knives and formic acid to 1,159 small-scale natural rubber farms, while offering smartphones for supply chain traceability acceleration to 221 farms. These efforts are aimed at enhancing natural rubber productivity and quality and building a sustainable supply chain through proper plantation management.</p> <p>Additionally, in 2022, to induce carbon neutrality among partner companies, Hankook Tire shared its ESG vision and carbon neutrality roadmap at the Supplier Meeting and conducted a Carbon Survey. This survey allowed Hankook Tire to understand the carbon management status and</p>

		carbon neutrality plans of partner companies, enabling them to identify carbon footprints and develop support and management systems for smaller enterprises facing challenges in achieving carbon neutrality.
Investment in R&D	Yes	<p>In 2021, Hankook Tire became the first in the tire industry to obtain ISCC PLUS at its Geumsan Plant. Following this achievement, the company is currently pursuing ISCC PLUS certification at its Hungarian plant, which is currently under review. Hankook Tire has received recognition for its use of eco-friendly materials by replacing petroleum-based oil with natural oil and petroleum chemical products with bio-based polymers. By developing recyclable and renewable materials to replace traditional petroleum and mineral-based materials, Hankook Tire is enhancing the competitiveness of sustainable material technology.</p> <p>In 2022, Hankook Tire succeeded in developing tires with 55% sustainable materials, including renewable and bio-based synthetic rubbers, recycled PET codes, recycled carbon black, bio-based silica, oils, and resins. These tires are currently undergoing rigorous durability testing to validate their performance. Furthermore, to achieve carbon neutrality, Hankook Tire is gradually expanding its sustainable materials supply chain and necessitating continuous research and development efforts.</p>
Operations	Yes	<p>The carbon regulations, including ETS, have influenced Hankook Tire's efforts to reduce greenhouse gas emissions in its manufacturing facilities. To address the increasing carbon emission costs and respond to climate change, Hankook Tire established a carbon neutrality roadmap in 2021 and participated in the SBTi (Science Based Targets initiative) in 2022. The company aims to achieve a 46% reduction in Scope 1 and 2 emissions by 2030, and it is investing in carbon reduction activities across its manufacturing operations to meet this near term target.</p> <p>In 2022, Hankook Tire implemented approximately 61 energy-saving and greenhouse gas reduction activities across eight factories. Some of the key initiatives included investing in equipment efficiency improvements such as replacing outdated facilities and revamping existing utility systems, addressing air and steam leaks, establishing waste heat recovery systems, and optimizing factory operation methods. Additionally, to focus on managing its global factories more effectively, Hankook Tire established an energy project team in 2022. This team is responsible for setting energy reduction targets for each global factory,</p>

		<p>monitoring performance, and identifying energy-saving measures. The progress of these initiatives is reported to the management and CEO through the Climate Change Committee.</p> <p>By undertaking these measures and investments, Hankook Tire is actively working towards its emissions reduction goals, contributing to a more sustainable future while complying with carbon regulations.</p>
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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	Revenues Direct costs Indirect costs Capital expenditures	<p>The impacts of climate-related risks and opportunities are evident across all aspects of Hankook Tire's operations. To address these challenges, the company has formulated a 2030 roadmap with key focus areas of Eco value chain, Sustainable Product, and Responsible Engagement. Each year, specific initiatives are planned and incorporated into the financial plan to achieve these targets.</p> <p>Direct and indirect costs mainly pertain to carbon reduction activities at manufacturing facilities. Hankook Tire prioritizes energy efficiency and sets annual energy reduction goals for its global factories, investing in equipment replacement, process optimization, and renewable energy installations. These investment plans are expected to expand further in alignment with Hankook Tire's carbon neutrality roadmap.</p> <p>Revenue and capital expenditure are influenced by market changes and the launch of eco-friendly products through research and development efforts. The company has set an internal target of 80% eco-friendly product ratio by 2030, leading to significant investments in various technologies, such as bio-based compounds, lightweighting, and 3D printing, resulting in improved tire labeling grades and the development of tires with 55% sustainable materials.</p>

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy

Row 1	Yes, we identify alignment with a sustainable finance taxonomy	At both the company and activity level
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C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization’s climate transition.

Financial Metric

Revenue/Turnover

Type of alignment being reported for this financial metric

Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported

Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

8,200,000,000,000

Percentage share of selected financial metric aligned in the reporting year (%)

11.4

Percentage share of selected financial metric planned to align in 2025 (%)

15

Percentage share of selected financial metric planned to align in 2030 (%)

20

Describe the methodology used to identify spending/revenue that is aligned

Tire manufacturing does not fall under the economic activities prescribed by Taxonomy. However, since tires are an important factor in the energy efficiency of vehicles (weight, rotational resistance, etc.), they can make a significant contribution to achieving greenhouse gas reduction targets in the land transport industry. As a basis for this, there is a tire labelling scheme.

This is a system that encourages manufacturers to produce and sell high-efficiency tire products and allows consumers to easily distinguish and purchase high-efficiency products, and is already in place in many major countries, including Korea, Europe, and Japan.

Tire labeling shows the fuel efficiency (rolling resistance) and safety (wet grip) performance of the tire separately. Since Taxonomy focuses on environmental impacts, the most relevant performance can be "rolling resistance," and activities that improve it indirectly affect greenhouse gas emissions and positively affect the goal of mitigating

climate change.

Hankook Tire & Technology has defined financial costs for rotational resistance A&B-grade products, which can be considered energy-efficient based on European labeling grades (A to E), as eligible economic activities. At the same time, investments in reducing greenhouse gases (using renewable energy, installing high-efficiency equipment, etc.) in production plants were also considered.

C3.5b

(C3.5b) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Economic activity

Manufacture of low carbon technologies for transport

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

8,200,000,000,000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

11.4

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

Type(s) of substantial contribution

Calculation methodology and supporting information

Energy efficient tires based on European labeled Rolling Resistance values (A&B) sales have been defined as eligible economic activities.

Technical screening criteria met

Yes

Details of technical screening criteria analysis

Tires are important factors in the energy efficiency of vehicles (weight, rotational resistance, etc.), so they can make a significant contribution to achieving the greenhouse gas reduction targets in the transport industry. As a basis for this, there is a tire labeling scheme. This is a system that encourages manufacturers to produce and sell high-efficiency tire products and allows consumers to easily distinguish and purchase high-efficiency products, and is already in place in many major countries, including Korea, Europe, and Japan. Tire labeling shows the fuel efficiency (rolling resistance) and safety (wet braking) performance of the tire separately. Since Taxonomy focuses on environmental impacts, the most relevant performance can be "rolling resistance," and activities that improve it indirectly affect greenhouse gas emissions and positively affect the goal of mitigating climate change.

Do no significant harm requirements met

Yes

Details of do no significant harm analysis

We have reviewed the "Do No Significant Harm" principle in accordance with EU Taxonomy and confirmed that there are no significant impacts accordingly.

Minimum safeguards compliance requirements met

Yes

Details of minimum safeguards compliance analysis

We have reviewed the "Minimum safeguard" in accordance with EU Taxonomy and confirmed that there are no significant impacts accordingly.

C3.5c

(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

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

Is this a science-based target?

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Target ambition

1.5°C aligned

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2019

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

272,309.74

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

980,457.27

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

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

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

1,252,767.01

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

95.26

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO₂e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO₂e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO₂e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO₂e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO₂e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO₂e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO₂e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO₂e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO₂e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

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

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

96.3

Target year

2030

Targeted reduction from base year (%)

46.2

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

673,988.65138

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

248,403

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

904,410

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

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

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

1,152,813

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

17.2698250567

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2 emissions included. Scope 1&2 GHG emissions of 33 sales coporation were excluded because they have low influence even less than 5% of the total.

Plan for achieving target, and progress made to the end of the reporting year

HKT's GHG emission reduction activities are mainly classified into four sectors: High efficiency of facilities, energy optimization and leakage prevention, improvement of operation methods, and fuel conversion. In 2022, a total of 61 activities were performed, among which the improvement of operation methods and energy leakage prevention activities were most effective for GHG emission reduction. For example, energy unnecessarily consumed in operating plants could be saved with efficient equipment use through an electricity demand response system or reduction of air pressure loss with the optimization of the pneumatic system.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Is this a science-based target?

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

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 9: Downstream transportation and distribution

Category 12: End-of-life treatment of sold products

Category 15: Investments

Base year

2019

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

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

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

2,617,141.38

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

170,604.1

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

453,270.77

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

424,270.03

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

11,403.43

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

2,643.09

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

15,265.29

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

56,326.1

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

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

3,750,924.19

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

3,750,924.19

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

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

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

100

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

100

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

100

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

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

98.5

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

98.5

Target year

2030

Targeted reduction from base year (%)

27.5

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

2,719,420.03775

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

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

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

2,594,189

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

156,972

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

335,798

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

432,253

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

10,136

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

7,476

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

14,092

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

52,038

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

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

3,602,954

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

3,602,954

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

14.3450891281

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

The evaluation of Scope 3 emissions resulted in the exclusion of 7 out of the 15 Scope 3 categories. These exclusions are mainly due to their minimal impact on emissions or their inapplicability to tire products. The emissions from these excluded categories account for 1.5% of the total Scope 3 emissions and sufficiently meet the exclusion criteria of SBTi. (Excluded Categories : 6. Business travel, 7. Employee commuting, 8. Upstream leased assets, 10. Processing of sold products, 11. Use of products, 13. Downstream leased assets, 14. Franchises)

Plan for achieving target, and progress made to the end of the reporting year

Most emissions in scope 3 come from the stages of raw material purchase. In the raw material purchasing stage, it is important to use a raw material with low carbon emission. Therefore, we encourage GHG reduction activities through communication with our suppliers. And R&D is underway to replace petroleum-based raw materials with bio-based or recycled raw materials.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

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

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Low-carbon energy source(s)

Base year

2019

Consumption or production of selected energy carrier in base year (MWh)

1,608,388

% share of low-carbon or renewable energy in base year

0.04

Target year

2050

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

2.3

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

2.2609043617

Target status in reporting year

Underway

Is this target part of an emissions target?

As the emissions caused by the use of renewable energy fall under SCOPE 2, it is related to the GHG emission reduction target for SCOPE 1 and 2.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

HKT's plants are all included in the subject category. The time to achieve 100% low-carbon energy will be set differently by plant, taking into account the circumstances of each country.

Plan for achieving target, and progress made to the end of the reporting year

HKT will convert the electricity used in all global worksites to low carbon energy by 2050. For phased conversion of low carbon energy, HKT will create a portfolio for various and stable use of renewable energy, including green tariff, solar self-consumption, power purchase agreements (PPA), and equity investments. A method HKT is looking at as a priority is the installation of a PV system and purchase of a Renewable Energy Certificate (REC). The PV system is considered to be installed in worksites or warehouse roofs and used for part of office or plant electricity. However, since it is difficult to cover all power currently used in worksites with PV energy due to the characteristics of the process, purchase of REC is also being considered.

List the actions which contributed most to achieving this target

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2019

Target coverage

Product level

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Other, please specify
Other, please specify
Eco- friendly product production

Target denominator (intensity targets only)

Base year

2018

Figure or percentage in base year

35.79

Target year

2030

Figure or percentage in target year

80

Figure or percentage in reporting year

60.5

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

55.8923320516

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. This target is related to scope3 emissions.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

HKT defines environmentally friendly products as tires that not only satisfy safety performances with considerations of their basic roles and characteristics, but also environmental impact reduction performances such as climate change, waste and noise. The ratio of products manufactured in 2022 that satisfy these requirements was approximately 60.5%, and this figure is officially announced in the ESG report.

Plan for achieving target, and progress made to the end of the reporting year

As part of the environmentally friendly tire technology development process, data such as air pressure, sudden acceleration/deceleration and idling were collected and analyzed using sensors attached on tires to contribute to developing technologies capable of reducing fuel consumption and increasing service life. Tires attached with sensors were installed on a bus, and various tests were conducted for a year for verification. Also, HKT is making various efforts to promote resource circulation, which

minimizes resource consumption and waste generation, and reuses resources already used. The company developed a hybrid PE-film which expanded the ratio of recycled materials in polyethylene films used in tire production, and it is currently in use at Daejeon plant and Geumsan plant, and the company plans to expand its application globally.

List the actions which contributed most to achieving this target

Target reference number

Oth 2

Year target was set

2021

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Land use change

Percent of supply chain compliant with zero gross deforestation

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

26

Target year

2030

Figure or percentage in target year

40

Figure or percentage in reporting year

28.1

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

15

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. This target is related to scope3 emissions.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

HKT defines sustainable materials as "renewable material," "recycled material," and "sustainable supply chain (suppliers with supplier ESG assessment grade A)." The ratio of materials that satisfy the sustainable material criteria among purchased materials in terms of weight is approximately 28.1%, and this figure is officially announced in the ESG report.

Plan for achieving target, and progress made to the end of the reporting year

Hankook Tire is taking various initiatives to promote sustainability and reduce carbon emissions during the process of acquiring materials, aiming to prevent the depletion of natural resources. In 2021, the company achieved a significant milestone by obtaining ISCC PLUS, for its Gumsan Plant. Following this success, we are currently in the process of pursuing ISCC PLUS for Hungary Plant. By replacing petroleum-based oil with natural oil and synthetic rubber with bio-based polymers, Hankook Tire has earned recognition for its use of eco-friendly materials.

Moreover, the company continues its research and development efforts to explore recyclable and renewable materials. Collaborating closely with suppliers, we are actively seeking bio materials as part of its commitment to sustainability and environmental responsibility.

List the actions which contributed most to achieving this target

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, and this target has been approved by the Science Based Targets initiative

Please explain target coverage and identify any exclusions

Net-zero target include boundaries considered in scope 1, 2, 3 absolute reduction target. Scope 1 and 2 include 8 worksite of Hankook Tire, and Scope 3 selected 8 categories as the management scope.

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

Yes

Planned milestones and/or near-term investments for neutralization at target year

Hankook Tire is committed to reducing greenhouse gas emissions in its manufacturing facilities by developing annual energy-saving plans for each global plant. In 2022, through energy diagnostics, 112 energy-saving items were identified, and 61 of these items were implemented. The remaining 51 items will undergo internal review for potential adoption in 2023-2024. Additionally, the company is focusing on reducing emissions in the Scope3 category, particularly in the area of raw material acquisition, which accounts for a significant portion of emissions. Hankook Tire achieved a 28.1% reduction in 2022 and aims to secure a 40% reduction by 2030 through partnerships and research and development efforts to ensure sustainable sourcing of raw materials.

Planned actions to mitigate emissions beyond your value chain (optional)

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	13	
To be implemented*	35	10,137
Implementation commenced*	60	28,073
Implemented*	4	1,438
Not to be implemented	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 production processes
Other, please specify
Improvement of process operation method

Estimated annual CO₂e savings (metric tonnes CO₂e)

646

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

391,877,231

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

0

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

Minimizing steam usage through improvement in distillation process operation

Initiative category & Initiative type

Energy efficiency in production processes
Compressed air

Estimated annual CO₂e savings (metric tonnes CO₂e)

711

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

232,252,354

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

0

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

Minimizing Air leakage

Initiative category & Initiative type

Energy efficiency in production processes

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

82

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

26,667,000

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

90,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

6-10 years

Comment

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	We are using part of the dedicated budget for energy reduction activities at our production sites, including process optimization, waste heat recovery, and introduction of high-efficiency facilities, etc. The budget classified as the corresponding item has a structure that is difficult to change after it is allocated, and is settled to be connected to related investment.
Dedicated budget for low-carbon product R&D	We are using part of the dedicated R&D budget for developing low-carbon products, including high-efficient tires with lower rolling resistance.
Compliance with regulatory requirements/standards	We established relevant targets to comply with climate change regulations, including emissions trading scheme to drive investments in emissions reduction activities.
Internal price on carbon	To reflect cost saving effects caused by GHG emission reductions during investment reviews, we calculate the internal carbon price every quarter and inform related departments of it.
Marginal abatement cost curve	We calculate a marginal abatement cost curve (MACC) and use it as a decision-making tool for the selection of a reasonable GHG reduction plan between “direct investment” and “purchase of allowance units.”

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Road

Other, please specify
Tire

Description of product(s) or service(s)

The rubber tire and tube manufacturing industry is not directly listed as a regulated economic activity in the taxonomy. However, tires play a crucial role in the energy efficiency of vehicles due to factors such as weight and rolling resistance, making them capable of significantly contributing to greenhouse gas reduction goals in the transport sector. To support this, the Tire Labeling System is in place. This system encourages manufacturers to produce and sell high-efficiency tire products while enabling consumers to easily distinguish and purchase more efficient products. It has been implemented in several major countries, including Korea, Europe, and Japan. Tire labeling displays ratings for tire performance in terms of fuel efficiency (rolling resistance) and safety (wet grip). Since the taxonomy focuses on environmental impacts, the most relevant performance aspect is the "rolling resistance," and efforts to improve it indirectly affect greenhouse gas emissions, making a positive contribution to climate change mitigation goals.

In line with this, Hankook Tire has defined financial costs related to A and B-grade products for rolling resistance, based on Europe's labeling ratings (A~E), as eligible economic activities.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify
LCA data for tire was used. Internal definition of eco-friendly product.

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

A-B grade PCR products with a lifespan of 42,000 km.

Reference product/service or baseline scenario used

For passenger car tires, the average carbon footprints per tire in Europe were the baseline, while for truck tires, reduction was calculated based on the average carbon footprints of the products that are sold by HKT.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

173,480

Explain your calculation of avoided emissions, including any assumptions

The reduction amount was calculated by multiplying the carbon footprint difference value of low-carbon products compared to the baseline by the sales performance of eco-friendly products. GHG emission reduction = (Baseline carbon footprints - carbon footprints of low-carbon products) * production quantity of low-carbon products

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

11.4

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

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 No, but we have discovered significant errors in our previous response(s)	There have been changes in this year's emissions calculation as follows: 1) Scope 1, 2 boundaries Previously, we disclosed emissions from major global factories with significant emission impacts. However, starting this reporting year, we have added emissions from our headquarters, R&D centers, and four subsidiaries for management purposes. 2) Calculation logic for Scope 3 Following the Scope 3 calculation guidance outlined by the GHG

		<p>Protocol, the amounts paid by Hankook Tire in downstream distribution are now included in the upstream distribution. Additionally, as tires are not products that directly consume energy, there are no emissions from the use stage included in the minimum boundary. Optional emissions are reported for reference purposes.</p>
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C5.1c

(C5.1c) Have your organization’s base year emissions and past years’ emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years’ recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	<p>There have been changes in this year's emissions calculation as follows:</p> <p>1) Scope 1, 2 boundaries Previously, we disclosed emissions from major global factories with significant emission impacts. However, starting this reporting year, we have added emissions from our headquarters, R&D centers, and four subsidiaries for management purposes.</p> <p>2) Calculation logic for Scope 3 Following the Scope 3 calculation guidance outlined by the GHG Protocol, the amounts paid by Hankook Tire in downstream distribution are now included in the upstream distribution. Additionally, as tires are not products that directly consume energy, there are no emissions from the use stage included in the minimum boundary. Optional emissions are reported for reference purposes.</p>	No

C5.2

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

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

272,309.74

Comment

Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

980,457.27

Comment

Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2 emissions included.

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

980,457.27

Comment

Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2 emissions included.

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

2,617,141.38

Comment

Scope 3 category 2: Capital goods

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

170,604.1

Comment

We would like to make a correction to the emissions data reported in our 2022 CDP response.

There was an error in the baseline year emissions, and we would like to provide the corrected figures.

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

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

453,270.77

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

424,270.03

Comment

We would like to make a correction to the emissions data reported in our 2021 CDP response.

Among the emissions calculated by downstream distribution, all cases paid by Hankook Tire are included in Category 4.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

11,403.43

Comment

We would like to make a correction to the emissions data reported in our 2022 CDP response. GHG emissions from recycling and recovering are excluded.

Scope 3 category 6: Business travel

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

1,370

Comment

We used the Scope 3 evaluator provided by the GHG Protocol to calculate greenhouse gas emissions. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Scope 3 category 7: Employee commuting

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

33,308.1

Comment

We used the Scope 3 evaluator provided by the GHG Protocol to calculate greenhouse gas emissions. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Under the control approach, greenhouse gas emissions in this category are calculated including scope 1 and 2.

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

2,643.09

Comment

We would like to make a correction to the emissions data reported in our 2022 CDP response. Only downstream transportation emissions not paid by Hankook Tire are included.

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Tyres are treated as finished products and this category is not applicable to tyre products.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

28,360,355.68

Comment

According to the GHG Protocol's Technical Guidance for Calculating Scope 3 Emissions, the use stage is only included if the product directly consumes energy. Since tires indirectly influence automobile fuel consumption through factors such as rolling resistance and acceleration resistance, they are evaluated as indirect impacts and therefore excluded from Hankook Tire's Scope 3 management boundary (optional).

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

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

15,265.29

Comment

We would like to make a correction to the emissions data reported in our 2022 CDP response. GHG emissions from recycling and recovering are excluded.

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

17,484

Comment

We used the Scope 3 evaluator provided by the GHG Protocol to calculate greenhouse gas emissions. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Scope 3 category 14: Franchises

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

5,465

Comment

We calculated emissions by sampling several franchise and determining the average value. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Scope 3 category 15: Investments

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

56,326.1

Comment

The emissions of subsidiaries included in Category 15 have been changed to Scope 1, 2.

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.

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

Korea GHG and Energy Target Management System Operating Guidelines

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

Other, please specify

IEA (International Energy Agency) CO2 Emissions from Fuel Combustion Highlights

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)

248,403

Comment

Global manufacturing site, Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2 emissions included.

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 are reporting a Scope 2, market-based figure

Comment

Hankook Tire & Technology 2022/23 ESG Report accounts the Scope 2 emissions following both the location-based methods and market based methods .

C6.3

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

Reporting year

Scope 2, location-based

914,206

Scope 2, market-based (if applicable)

904,410

Comment

Global manufacturing site, Domestic office(Headquarter, two R&D centers) and subsidiary (Hankook Precision Works,Hankook Engineering Works,Hankook Donggeurami Partners, Model Solution) scope 1 and 2 emissions included.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 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)

2,594,189

Emissions calculation methodology

Hybrid method

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

10.6

Please explain

Category 1 includes all raw materials purchased by Hankook Tire during the reporting year, including natural rubber, carbon black, synthetic rubber, bead wire, process oil,

and other chemicals. Some emission factors were used by receiving data from the supplier, and the Ecoinvent database was applied if there was no data.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

156,972

Emissions calculation methodology

Average data method

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

0

Please explain

Category 2 includes all types of assets purchased by Hankook Tire during the reporting year, including buildings, machinery, equipment, supplies, office equipment, and testing equipment.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

335,798

Emissions calculation methodology

Average data method

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

0

Please explain

Ecoinvent LCI DB was used to calculate the Category 3 emissions, which includes upstream emissions from purchased fuels and electricity as well as T&D losses.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

432,253

Emissions calculation methodology

Distance-based method

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

0

Please explain

The GHG emissions generated during the distribution process, where Hankook Tire made payments for raw material procurement and product transportation, are included.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

10,136

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

Emissions from waste disposal (incineration, landfill) and transportation for waste disposal included.

Business travel

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO₂e)

1,976

Emissions calculation methodology

Average spend-based method

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

0

Please explain

We used the Scope 3 evaluator provided by the GHG Protocol to calculate greenhouse gas emissions. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Employee commuting

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO₂e)

33,638

Emissions calculation methodology

Average data method

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

0

Please explain

Emissions have been calculated, but as a result of the review during the screening stage, the effect on emissions is not significant, so it is excluded from scope 3 management.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Under the control approach, greenhouse gas emissions in this category are calculated including scope 1 and 2.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

7,476

Emissions calculation methodology

Distance-based method

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

0

Please explain

Only downstream transportation emissions not paid by Hankook Tire are included.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Tyres are treated as finished products and this category is not applicable to tyre products.

Use of sold products

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

25,501,726

Emissions calculation methodology

Average product method

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

0

Please explain

According to the GHG Protocol's Technical Guidance for Calculating Scope 3 Emissions, the use stage is only included if the product directly consumes energy. Since tires indirectly influence automobile fuel consumption through factors such as rolling resistance and acceleration resistance, they are evaluated as indirect impacts and therefore excluded from Hankook Tire's Scope 3 management boundary (optional).

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

14,092

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

It includes emissions from landfilling and transportation for waste disposal.

Downstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

18,528

Emissions calculation methodology

Asset-specific method

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

0

Please explain

We used the Scope 3 evaluator provided by the GHG Protocol to calculate greenhouse gas emissions. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Franchises

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

10,823

Emissions calculation methodology

Average data method

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

0

Please explain

We calculated emissions by sampling several franchise and determining the average value. However, due to poor data quality, improvements are needed in this area. Furthermore, considering the minimal impact on emissions, these items are currently excluded from Hankook Tire's Scope 3 management boundary.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

52,038

Emissions calculation methodology

Investment-specific method

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

0

Please explain

The emissions of subsidiaries included in Category 15 have been changed to Scope 1, 2.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

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

0.000000137

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

1,152,813

Metric denominator

unit total revenue

Metric denominator: Unit total

8,394,203,036,511

Scope 2 figure used

Market-based

% change from previous year

11

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities
Change in revenue
Change in boundary

Please explain

Compared to the previous year, while the revenue increased by approximately 18%, greenhouse gas emissions only increased by around 4%. As a result, emissions intensity decreased. The reasons for the decrease in emissions intensity are as follows:

- 1)The increase in production volume, sales revenue, and investment returns led to an 18% increase in revenue compared to the previous year.
- 2)The calculation scope expanded to include not only global factories but also emissions from the headquarters, R&D centers, and subsidiaries starting this year. Consequently, greenhouse gas emissions increased by 4% compared to the previous year.
- 3)Despite the increase in production volume, efforts in energy conservation have minimized the growth of greenhouse gas emissions. (Production volume increased by 4% compared to the previous year, while greenhouse gas emissions from global factories increased by 1.88% compared to the previous year.)

Intensity figure

0.99

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

1,152,813

Metric denominator

metric ton of product

Metric denominator: Unit total

1,158,242

Scope 2 figure used

Market-based

% change from previous year

0.03

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Change in boundary

Please explain

The reason for the 0.03% decrease in emissions intensity is as follows:

1)The calculation scope expanded to include emissions from the headquarters, R&D centers, and subsidiaries, in addition to global factories, starting this year. As a result, emissions increased by 4% compared to the previous year. When compared to the emissions calculated based on the previous boundary, Scope 1, 2 emissions increased by only 1.88% compared to the previous year.

2)The production volume increased by approximately 4% compared to the previous year. Some of the production volume that had declined due to the impact of the COVID-19 pandemic has recovered.

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	248,118	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	98	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	187	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Republic of Korea	121,880

China	24,164
Hungary	50,176
Indonesia	31,592
United States of America	20,591

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO ₂ e)
Tire manufacturing plant	245,480
Headquarters, R&D center etc	2,320
Subsidiaries (Hankook Engineering Works, Hankook Precision Works, Model Solution, Hankook Donggeurami Partners)	603

C7.3b

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

Facility	Scope 1 emissions (metric tons CO ₂ e)	Latitude	Longitude
Daejeon Plant (DP)	43,575	36.451659	127.413184
Geumsan Plant (KP)	75,382	36.116229	127.528231
Jiaxing Plant (JP)	1,607	30.793572	120.757012
Jiangsu Plant (HP)	818	33.572286	118.987914
Chongqing Plant (CP)	21,739	29.638753	106.752593
Hungary Plant (MP)	50,176	46.999763	18.928521
Indonesia Plant (IP)	31,592	-6.361529	107.161464
Tennessee Plant (TP)	20,591	36.563465	-87.247213
Headquarters(Technoplex)	175	37.402921	127.105918
R&D Center (Technodome)	2,125	36.377392	127.33725
R&D Center (Jangdong)	20	36.392468	127.358422
Hankook Engineering Works	173	36.368997	127.413705

Hankook Precision Works	396	36.444805	127.39658
Model Solution	34	37.469467	126.889752
Hankook Donggeurami Partners	0	36.449645	127.408614

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion	245,265
Mobile combustion	3,016
Production of rCB (Recovered Carbon Black)	0
Gaseous waste incineration (facility to prevent air pollution)	122

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Republic of Korea	352,399	352,349
China	377,056	377,056
Hungary	52,984	43,238
Indonesia	102,214	102,214
United States of America	29,553	29,553

C7.6

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

- By business division
- By facility
- By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
-------------------	--	--

Tire manufacturing plant	889,188	879,392
Headquarters, R&D center etc	11,264	11,264
Subsidiaries (Hankook Engineering Works, Hankook Precision Works, Model Solution, Hankook Donggeurami Partners)	13,754	13,754

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)
Daejeon Plant (DP)	154,651	154,601
Geumsan Plant (KP)	172,730	172,730
Jiaxing Plant (JP)	157,542	157,542
Jiangsu Plant (HP)	154,147	154,147
Chongqing Plant (CP)	65,367	65,367
Hungary Plant (MP)	52,984	43,238
Indonesia Plant (IP)	102,214	102,214
Tennessee Plant (TP)	29,553	29,553
Headquarters(Technoplex)	1,504	1,504
R&D Center (Technodome)	8,004	8,004
R&D Center (Jangdong)	1,756	1,756
Hankook Engineering Works	4,413	4,413
Hankook Precision Works	5,594	5,594
Model Solution	3,310	3,310
Hankook Donggeurami Partners	437	437

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Purchased electricity	804,149	794,352
Purchased steam	110,057	110,057

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

Hankook Engineering Works

Primary activity

Industrial machinery

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

306-81-13566

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Given by the Korea National Tax Service.

Scope 1 emissions (metric tons CO₂e)

173

Scope 2, location-based emissions (metric tons CO₂e)

4,413

Scope 2, market-based emissions (metric tons CO₂e)

4,413

Comment

Subsidiary name

Hankook Precision Works

Primary activity

Metal processing

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

119-81-08208

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Given by the Korea National Tax Service.

Scope 1 emissions (metric tons CO₂e)

396

Scope 2, location-based emissions (metric tons CO₂e)

5,594

Scope 2, market-based emissions (metric tons CO₂e)

5,594

Comment

Subsidiary name

Model Solution Co., Ltd.

Primary activity

Metal processing

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

113-81-96403

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Given by the Korea National Tax Service.

Scope 1 emissions (metric tons CO2e)

35

Scope 2, location-based emissions (metric tons CO2e)

3,310

Scope 2, market-based emissions (metric tons CO2e)

3,310

Comment

Subsidiary name

Hankook Donggeurami Partners Co., Ltd.

Primary activity

Other professional services

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify
666-81-00186

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Given by the Korea National Tax Service.

Scope 1 emissions (metric tons CO₂e)

0

Scope 2, location-based emissions (metric tons CO₂e)

437

Scope 2, market-based emissions (metric tons CO₂e)

437

Comment

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?

Increased

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 in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	9,796	Decreased	0.89	Hankook Tire is actively engaged in various activities to promote the use of renewable energy in its global factories. The Daejeon factory participated in a Green Premium Auction (110 MWh), while the Hungary factory purchased GoOs (Guarantees of Origin) for 24,000 MWh. The emission variation rate is calculated as $9,796 / 1,104,155 * 100 = 0.89\%$.
Other emissions reduction activities	45,836	Decreased	4.15	A total of 61 greenhouse gas reduction activities have been implemented in Hankook Tire's global factories, resulting in an estimated reduction of approximately 45,836 tCO ₂ . (For more details on the reduction activities, please refer to C2.3a.) The emission variation rate is calculated as $45,836 / 1,104,155 * 100 = 4.15\%$.
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary	27,941	Increased	2.53	Scope 1, 2 emissions include emissions from the headquarters, R&D centers, and subsidiaries. As a result, there has been an increase of 27,941 tCO ₂ compared to the previous year. The emission variation rate is calculated as $27,941 / 1,104,155 * 100 = 2.53\%$.
Change in physical operating conditions				

Unidentified				
Other				

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?

Market-based

C8. Energy

C8.1

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

More than 15% but less than or equal to 20%

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	No
Consumption of purchased or acquired steam	Yes
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)	LHV (lower heating value)	0	1,285,402	1,285,402
Consumption of purchased or acquired electricity		36,803	1,594,648	1,631,451
Consumption of purchased or acquired steam		0	600,482	600,482
Consumption of self-generated non-fuel renewable energy		685		685
Total energy consumption		37,488	3,480,533	3,518,021

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	Yes
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

LHV

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

0

Comment

Other biomass

Heating value

LHV

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

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

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

0

Comment

Coal

Heating value

LHV

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

0

Comment

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

11,879

MWh fuel consumed for self-generation of electricity

331

MWh fuel consumed for self-generation of heat

11,455

MWh fuel consumed for self-generation of steam

93

Comment

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

1,273,523

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

526

MWh fuel consumed for self-generation of steam

1,272,997

Comment

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

Heating value

LHV

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

0

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

1,285,402

MWh fuel consumed for self-generation of electricity

331

MWh fuel consumed for self-generation of heat

11,981

MWh fuel consumed for self-generation of steam

1,273,091

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	1,632,467	1,632,467	37,488	37,488
Heat	11,981	11,981	0	0
Steam	1,873,573	1,873,573	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption

Republic of Korea

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydro, Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

110

Tracking instrument used

Korean REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

Republic of Korea

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Country/area of low-carbon energy consumption

Hungary

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydro, Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

24,000

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Country/area of low-carbon energy consumption

Hungary

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydro, Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

12,693

Tracking instrument used

Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute

Hungary

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Republic of Korea

Consumption of purchased electricity (MWh)

758,913

Consumption of self-generated electricity (MWh)

0

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

195,154

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

954,067

Country/area

China

Consumption of purchased electricity (MWh)

459,810

Consumption of self-generated electricity (MWh)

685

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

405,328

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

865,823

Country/area

Hungary

Consumption of purchased electricity (MWh)

194,437

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

194,437

Country/area

Indonesia

Consumption of purchased electricity (MWh)

140,192

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

140,192

Country/area

United States of America

Consumption of purchased electricity (MWh)

78,099

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

78,099

C9. Additional metrics

C9.1

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

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	No third-party verification or assurance

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

1

 Hankook Tire & Technology ESG Report 2022-23_eng_230724.pdf

Page/ section reference

English Full version of ESG Report 22/23 will be uploaded by August :

<https://www.hankooktire.com/global/en/esg/esg-report.html>

(i) Emissions data: p.65 (ii) Independent assurance statement: p.77

Relevant standard

DNV VeriSustain Protocol/ Verification Protocol for Sustainability Reporting

Proportion of reported emissions verified (%)

53

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

1

 Verification Statement on 2022.pdf

Page/ section reference

Daejeon Plant & Geumsan Plant (Korea plants), headquarters, R&D centers

Relevant standard

Korean GHG and energy target management system

Proportion of reported emissions verified (%)

47

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

1

 Hankook Tire & Technology ESG Report 2022-23_eng_230724.pdf

Page/ section reference

English full version of ESG Report 22/23 will be uploaded on below link by August.

<https://www.hankooktire.com/global/en/esg/esg-report.html>

(i)Emissions data: p.65 (ii) Independent assurance statement: p.77

Relevant standard

DNV VeriSustain Protocol/ Verification Protocol for Sustainability Reporting

Proportion of reported emissions verified (%)

64

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

1

 Verification Statement on 2022.pdf

Page/ section reference

Daejeon Plant & Geumsan Plant (Korea plants), headquarters, R&D centers

Relevant standard

Korean GHG and energy target management system

Proportion of reported emissions verified (%)

36

Scope 2 approach

Scope 2 market-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

1

 Hankook Tire & Technology ESG Report 2022-23_eng_230724.pdf

Page/ section reference

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<https://www.hankooktire.com/global/en/esg/esg-report.html>
 (i)Emissions data: p.65 (ii) Independent assurance statement: p.77

Relevant standard

DNV VeriSustain Protocol/ Verification Protocol for Sustainability Reporting

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?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

 Hankook Tire & Technology ESG Report 2022-23_eng_230724.pdf

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Emissions reduction activities	DNV VeriSustain Protocol/Verification Protocol for Sustainability Reporting	English full version of ESG Report 22/23 will be uploaded on below link by August. https://www.hankooktire.com/global/en/esg/esg-report.html (i) data: p.39,40
C8. Energy	Energy consumption	DNV VeriSustain Protocol/Verification Protocol for Sustainability Reporting	English full version of ESG Report 22/23 will be uploaded on below link by August. https://www.hankooktire.com/global/en/esg/esg-report.html (i) data: p.64
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	DNV VeriSustain Protocol/Verification Protocol for Sustainability Reporting	English full version of ESG Report 22/23 will be uploaded on below link by August. https://www.hankooktire.com/global/en/esg/esg-report.html (i) data: p.65

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.

EU ETS

Korea ETS

C11.1b

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

EU ETS

% of Scope 1 emissions covered by the ETS

19

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

9,199

Allowances purchased

46,400

Verified Scope 1 emissions in metric tons CO₂e

47,349

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

Korea ETS

% of Scope 1 emissions covered by the ETS

49.71

% of Scope 2 emissions covered by the ETS

37.27

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

467,218

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

122,016.19

Verified Scope 2 emissions in metric tons CO₂e

340,741.58

Details of ownership

Facilities we own and operate

Comment

C11.1d

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

HKT engages in various activities to comply with the Emission Trading System. It develops energy reduction plans for domestic/overseas plants and implements related activities every year. During profitability review sessions, the company reviews not only reduced energy costs but also reduced greenhouse gas emissions and carbon emission credits costs before making decisions. In 2022, Hankook Tire introduced 61 energy-saving activities in its global factories, resulting in a GHG reduction equivalent to approximately 55,633 tCO₂. (For more details on the reduction activities, please refer to C2.3a.)

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

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.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of allowances under an Emissions Trading Scheme

Objective(s) for implementing this internal carbon price

Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Navigate GHG regulations
Stakeholder expectations
Stress test investments

Scope(s) covered

Scope 1
Scope 2

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Evolutionary

Indicate how you expect the price to change over time

We set internal carbon pricing on a quarterly basis, based on the average transaction price of the last 12 months.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO₂e)

24,087

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO₂e)

26,741

Business decision-making processes this internal carbon price is applied to

Capital expenditure
Operations
Risk management
Opportunity management

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify

고효율 설비 교체, 재생에너지 사업, 연료 전환 등 에너지 및 온실가스 저감과 관련된 투자에 주로 적용됩니다.

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

Internal carbon pricing is commonly utilized when making decisions regarding energy-saving and greenhouse gas reduction activities in manufacturing facilities. The carbon reduction amount is considered as a revenue when evaluating the economic feasibility of projects. Carbon allowance prices have significantly increased compared to the past and are now consistently incorporated into economic evaluations. With expectations of further price increases, there is a high possibility of expanding reduction activities within the facilities.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers/clients

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 GHG emissions data at least annually from suppliers
Collect targets information at least annually from suppliers
Collect other climate related information at least annually from suppliers

% of suppliers by number

47

% total procurement spend (direct and indirect)

41

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

14.7

Rationale for the coverage of your engagement

Hankook Tire initiated a 2022 Carbon Supplier Survey targeting raw material suppliers, as their Scope 3 emissions are significantly influenced by emissions from raw material procurement. Out of 257 suppliers, we received responses from 120, mainly obtaining information on carbon neutrality targets, RE100 initiatives, and product carbon footprints. The emissions associated with the purchase of raw materials from these 120 suppliers mainly fall under Category 1, amounting to approximately 450,000 tCO₂. This accounts for approximately 14.7% of the total Scope 3 emissions related to suppliers (3.05 million tCO₂). Hankook Tire plans to conduct the carbon survey annually with the goal of achieving a 100% response rate from raw material suppliers and intends to utilize the gathered data to establish a carbon management system in collaboration with suppliers. (Note: Scope 3 categories related to suppliers: 1, 4, 5, 9, 12)

Impact of engagement, including measures of success

The product carbon footprint data obtained through the carbon survey of raw material suppliers will be utilized in calculating Hankook Tire's Scope 3 emissions under Category 1. The more primary data gathered, the stronger the connection between the suppliers' carbon reduction efforts and Hankook Tire's Scope 3 emissions reduction. Therefore, these engagement activities are crucial. Additionally, by examining the RE100 initiatives of the suppliers, Hankook Tire can estimate the potential reduction in emissions related to raw material procurement and establish any necessary additional activities and support mechanisms accordingly.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Climate change performance is featured in supplier awards scheme

% of suppliers by number

97.6

% total procurement spend (direct and indirect)

98

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

84.8

Rationale for the coverage of your engagement

Hankook Tire is continuously monitoring the ESG capabilities of its partners and encouraging them to improve their ESG management practices through self-assessments. To achieve this, we have institutionalized the inclusion of ESG self-assessments in procurement contracts, and for new registrations of raw material suppliers, submitting self-assessment results has become mandatory. The ESG evaluation encompasses various indicators, including environmental management, such as climate change, human rights, and ethical management.

In the 2022 ESG assessment, a response rate of 97.6% was achieved for 413 facility and raw material supplier companies. The emissions ratio was calculated by considering the total emissions in Category 1 (260 million tCO₂) as a part of the total Scope 3 emissions (approximately 305 million tCO₂).

Impact of engagement, including measures of success

Supplier ESG assessment results are divided into three grades: G (Green), Y (Yellow), R (Red), and 0 (no response) according to scores for ESG management, and the purchasing department monitors variations in status every year. The audit consists of seven categories - operation of ESG management system, human rights & labor, ethics management, corporate philanthropy, safety & health, environment and climate change management, and ESG management of suppliers. Audit results are offered to suppliers for corrective action plans (CAPs), which will help suppliers' improve their own sustainability and mutual growth with Hankook Tire & Technology. Going forward, we will recommend suppliers that receive audits to establish and implement corrective action plans.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

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

100

Please explain the rationale for selecting this group of customers and scope of engagement

We provide online purchasing guidelines to allow customers to evaluate energy consumption efficiency of Hankook Tire & Technology products before purchasing. Through its tire energy consumption grading system, customers can understand fuel saving and GHG emissions reduction effects by comparing tire labels. (<https://www.hankooktire.com/kr/ko/help-support/warranty/labeling.html>) . The energy consumption based on the tire's efficiency rating is associated with the use stage. Since customer-related categories are only relevant to the use stage, Scope 3 emissions account for 100% of the overall emissions in this context.

Impact of engagement, including measures of success

By disclosing and enabling comparability of tire-specific efficiency ratings to consumers, it influences the selection of products with higher labeling grades. Therefore, the engagement performance is measured by the revenue generated from products with excellent efficiency ratings (B grade or higher). In 2022, the revenue from products satisfying the excellent ratings (A to B grades) accounted for approximately 11.4% of the total revenue.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not 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

Purchasing renewable energy

Description of this climate related requirement

The factories producing products delivered to Hankook Tire by our suppliers are required to use renewable energy. The usage methods for renewable energy follow the guidelines of RE100, and relevant documentation (such as certification) is submitted as proof. This initiative began in 2023, so there are no performance results to report for the current reporting year.

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

16

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

0

Mechanisms for monitoring compliance with this climate-related requirement

Certification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

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

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

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)

Please find attached the SBTi Net zero approved letter and Certificate. Hankook Tire's target status will be on the official SBTi website by August.

(<https://sciencebasedtargets.org/companies-taking-action/>)

 SBTi Certificate_Hankook Tire _ Technology.pdf

 Net Zero Approval Letter_Hankook Tire _ Technology.docx (2).pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

1. Hankook Tire & Technology has continuously been participating in public hearings related to climate change, including on the GHG Emission Trading Scheme, and presenting its opinions directly to government management agencies whenever there is a prior announcement of the enactment or amendment of related laws or guidelines. 2. Hankook Tire & Technology is a member of KBCSD (Korea Business Council for Sustainable Development). If there are issues related to Korea's environmental policy, including K-ETS, we submit comments to the Ministry of Environment through KBCSD. Also, we are engaged in the establishment of national environmental policies by discussing the suggested opinions with higher level government officers including Vice

Minister of Environment through the Environment Policy Council meeting held twice a year and the Operation Committee held every month.

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?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

In Korea, The Emission Trading System has been adopted and operated as a greenhouse gas regulation since 2015. Hankook Tire is participating as a mandatory company and reports energy usage and greenhouse gas emissions to all corporations owned by Hankook Tire, including Daejeon plant and Geumsan plant. Currently, we are carrying out the 3rd phase ('21-25) and receive a free allocation of 90%.

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related reporting
Climate-related targets
Emissions – CO2

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Republic of Korea

Your organization's position on the policy, law, or regulation

Undecided

Description of engagement with policy makers

Hankook Tire has recognized issues with the calculation method used to identify industries at risk of carbon leakage in Korea's Emission Trading System. The selection process designates industries as at risk of carbon leakage if they exceed certain thresholds in terms of cost incidence and trade intensity. This calculation is based on industry-specific data such as annual average revenue, import value, value-added production, and emissions. What Hankook Tire discovered is that the scope of data extraction for these calculations (e.g., organizational boundaries for each industry) varies, leading to inconsistencies. As a result, Hankook Tire provided recommendations and suggested establishing consistent criteria for these calculations.

In response to Hankook Tire's input, the Ministry of Environment is considering incorporating the recommendations into the 4th planning period (2026-2030) of the Emission Trading System.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

The Emissions Trading System has been a significant driving force for Hankook Tire in reducing greenhouse gas emissions and promoting energy efficiency. This is due to the fact that one ton of CO₂ is considered as a tradable unit, making the ETS play a pivotal role. As a result, Hankook Tire considers the potential reduction in greenhouse gas emissions as a financial consideration when investing in equipment for its global factories, which contributes significantly to achieving net-zero emissions. This approach aligns with their commitment to reducing their carbon footprint and making substantial contributions towards their net-zero goals.

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

The Korea Tire Manufacturers Association (KOTMA)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The Korea Tire Manufacturers Association (KOTMA) supports the Korean government's regulatory measures on climate change, but it is responsible for reviewing flaws in laws, enforcement ordinances and guidelines to prevent the tire industry from being at a disadvantage. Equations and standards for selecting industries eligible for free allocation in the Emission Trading System have also been discussed with tire

manufacturers to propose a revision to the Ministry of Environment, and the association is endeavoring in resolving related matters by forming a consultative body to ensure fair assessments in the future.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

2,600,000,000

Describe the aim of your organization's funding

Support association operating costs

Have you evaluated whether your organization's engagement with this trade association 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, incorporating the TCFD recommendations

Status

Underway – previous year attached

Attach the document

1

 Hankook Tire & Technology ESG Report 2022-23_eng_230724.pdf

Page/Section reference

ESG report : <https://www.hankooktire.com/global/en/esg/esg-report.html>

- (i) Emission targets(p.39) (ii) GHG reduction activities (p.40) (iii) GHG emission data (p.65) (iv) TCFD details (p.74)

AR report : <https://www.hankooktire.com/global/ko/investors/financial-reports/annual-reports.html>

- (i) GHG reduction activities (p.71) (ii) Emission targets(p.71)

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Comment

Attached is a link to download AR (annual report) due to the large file size.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Business Ambition for 1.5C Task Force on Climate-related Financial Disclosures (TCFD) UN Global Compact	Hankook Tire shows support for projects or campaigns undertaken by the institution by participating in related initiatives. In addition, we are faithfully engaged in activities that must be implemented as a participating member, and actively utilize the education and benefits provided by the institution to reflect them in Hankook Tire's ESG activities.

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
Row 1	No, and we do not plan to have both within the next two years

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
Row 1	Yes, we have made public commitments only	Commitment to Net Positive Gain Commitment to No Net Loss Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas

		Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Commitment to no conversion of High Conservation Value areas Commitment to secure Free, Prior and Informed Consent (FPIC) of Indigenous Peoples Commitment to no trade of CITES listed species
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C15.3

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

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Direct operations
 Upstream
 Downstream

Tools and methods to assess impacts and/or dependencies on biodiversity

IBAT – Integrated Biodiversity Assessment Tool
 Other, please specify
 Life Cycle Assessments

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

Hankook Tire&Technology is currently managing the life cycle assessment impact assessment results, including the evaluation of impacts on biodiversity, and the IBAT Tool is used to understand biodiversity in the workplace and nearby areas.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

No

C15.5

(C15.5) 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	Law & policy

C15.6

(C15.6) 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	Yes, we use indicators	Other, please specify Internal indicator(Life Cycle Assessment)

C15.7

(C15.7) 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 Influence on public policy and lobbying	p. 49 https://www.hankooktire.com/global/en/esg/esg-report.html  1

 1ESG-Report-2022-23_Kor.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	Vice President of HR Division & Sustainability	Other C-Suite Officer

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	8,394,203,036,511

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

BMW AG

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

3,030

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRGO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

14,183,668

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

BMW AG

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

10,856

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

14,183,668

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process

Requesting member

Daimler Truck AG

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

1,329

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRGO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

6,219,976

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Daimler Truck AG

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

4,760

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

6,219,976

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Ford Motor Company

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

6,468

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

30,274,119

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Ford Motor Company

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

23,170

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

30,274,119

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

General Motors Company

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

3,606

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRGO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

16,880,557

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

General Motors Company

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

12,920

Uncertainty ($\pm\%$)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

16,880,557

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Hyundai Motor Co

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

4,419

Uncertainty ($\pm\%$)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRGO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

20,684,051

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Hyundai Motor Co

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

15,831

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

20,684,051

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Kia Motors Corp

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

2,358

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

11,034,936

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Kia Motors Corp

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

8,446

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

11,034,936

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Nissan Motor Co., Ltd.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

2,645

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

12,378,425

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Nissan Motor Co., Ltd.

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

9,474

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

12,378,425

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Renault Group

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

237

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1,107,891

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Renault Group

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

848

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1,107,891

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Stellantis N.V.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

1,040

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4,867,344

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Stellantis N.V.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

1,040

Uncertainty (±%)

5

Major sources of emissions

Fossil fuel(Boilers, air pollution prevention facilities(CRCO, CFRTO))

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4,867,344

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

Requesting member

Stellantis N.V.

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO₂e

3,725

Uncertainty (±%)

5

Major sources of emissions

Purchased electricity, purchased steam

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4,867,344

Unit for market value or quantity of goods/services supplied

Kilograms

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Based on the organizational and operational boundary defined in the Greenhouse Gas Protocol(WRI/WBCSD), we included all Scope 1 and Scope 2 GHG sources which directly and indirectly affect our tire manufacturing process.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

Hankook Tire & Technology informed the information about our emissions to our customers according to the weight of sold products in the form of following documents.

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- Korea GHG and Energy Target Management System Operating Guidelines
- ISO 14064-1
- IEA CO2 Emissions from Fuel Combustion Highlights

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
We face no challenges	

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

We don't have much difficulty in allocating our emissions as not only shipping destinations of our sold products are clearly predetermined but the weight of sold products to each client is tracked at the same time.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

15

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service

H426

Description of good/ service

PCR(Passenger Car Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO₂e per unit

341

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

K125

Description of good/ service

PCR(Passenger Car Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO₂e per unit

677

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

H436

Description of good/ service

PCR(Passenger Car Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO2e per unit

938

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

RH12

Description of good/ service

PCR(Passenger Car Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO2e per unit

1,624

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

TH22

Description of good/ service

TBR(Truck Bus Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO₂e per unit

3,918

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

K435

Description of good/ service

PCR(Passenger Car Radial) Tire

Type of product

Final

SKU (Stock Keeping Unit)

EA (unit of tire product)

Total emissions in kg CO₂e per unit

475

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service

H436

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO₂e per unit

18.6

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H436

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO₂e per unit

0.55

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H436

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

7.88

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H436

Please select the scope

Scope 3

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO2e per unit

1.72

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H436

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

925

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H436

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

15.3

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO2e per unit

14.1

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.64

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

9.12

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 3

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO2e per unit

0.43

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO₂e per unit

321.5

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

H426

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO₂e per unit

4.34

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO2e per unit

33.1

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.72

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

13.09

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO₂e per unit

0.84

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO₂e per unit

652

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K125

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO₂e per unit

23.41

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO₂e per unit

37.8

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.92

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

15.7

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 3

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO2e per unit

3.47

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

1,590

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

RH12

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

24.3

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO2e per unit

113

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

17.16

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

113.16

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 3

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO2e per unit

19.25

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

3,778

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

TH22

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

122.24

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 3

Please select the lifecycle stage

Material acquisition

Emissions at the lifecycle stage in kg CO2e per unit

23

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.58

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO2e per unit

9.67

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 1 & 2

Please select the lifecycle stage

Manufacturing

Emissions at the lifecycle stage in kg CO₂e per unit

9.73

Is this stage under your ownership or control?

Yes

Type of data used

Primary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 3

Please select the lifecycle stage

Distribution

Emissions at the lifecycle stage in kg CO₂e per unit

0.68

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO₂e per unit

460

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

K435

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO₂e per unit

19

Is this stage under your ownership or control?

No

Type of data used

Secondary

Data quality

The emissions data is negative value because GHG emissions are reduced in this stage.

If you are verifying/assuring this product emission data, please tell us how

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
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SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

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