

C0. Introduction

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C0.1

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

Hwaseung Enterprise Co. Ltd. ("Hwaseung Enterprise" hereafter) is a leading athletic footwear and headwear manufacturing group with operations in Southeast Asia. Hwaseung Enterprise produces Footwear, Headwear and Apparel Brands such as adidas, Nike, Lacoste, allbirds, Hoka& Fanatics among others. The company operates as a subsidiary of Hwaseung Industries Co. Ltd.

Hwaseung Enterprise is the first Footwear Manufacturing Company to be a signatory for The UNFCCC Global Climate Action Charter.

To commit for UNFCCC, Hwaseung Enterprise set up the target

1. **30% GHG emissions reduction across the entire value chain by 2030 compared with 2020 levels**
2. **Eliminate coal from our facilities by 2030**
3. **We are aspiring to source 100% Renewable Energy by 2030**

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	Yes	1 year

C0.3

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**(C0.3) Select the countries/areas for which you will be supplying data.**

- China
- Indonesia
- Viet Nam

C0.4

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

- USD

C1. Governance

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C1.1

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

- Yes

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Other C-Suite Officer, please specify (Executive Chief Operating Officer)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Other C-Suite Officer, please specify (Strategic Advisor)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Chief Operating Officer (COO)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Environment/ Sustainability manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Sustainability committee	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Process operation manager	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

**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	Hwaseung Enterprise offers non-monetary incentives for the management of climate-related issues, including in the form of employee recognition and awards. In addition, as of 2021, Hwaseung Enterprise has established Cascading Goals reaching across all levels of the organisation globally, from the CEO to Executive COOs to COOs and finally down to relevant operational teams. The Cascading Goals will be reflected in the annual employee performance appraisal process and bonus. They will include specific KPIs on the development of and progress against environmental data reporting and quality, energy efficiency and renewable energy action plans and environmental targets

**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

**C2.3**

**(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**

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods
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**Primary potential financial impact**

Decreased revenues due to reduced production capacity

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

With human-induced climate change, weather events such as storms, heat waves and floods will become more frequent and intense. Hwaseung's factories and production line are located in China and Southeast Asia (e.g. Vietnam, Indonesia). Floods and typhoons happen frequently in Vietnam, while tornadoes and landslides are the most common natural disasters in Indonesia. The consequences of natural disasters will become more severe, with risks of damaging properties, factory temporary shutdowns and loss of life. This in turn might disrupt our supply chain and production capacity.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

40000000

**Potential financial impact figure – maximum (currency)**

120000000

**Explanation of financial impact figure**

The financial impact is estimated based on projected loss of revenues across our sites globally from factory temporary shutdowns during and after natural disasters, with assumptions made on the frequency of natural disasters and number of days factories cannot operation.

**Cost of response to risk**

40000000

**Description of response and explanation of cost calculation**

A rough estimation is made based on the cost to repair and maintain Hwaseung's factories that are affected by weather events. Mitigation system, including pump installation, adaptation management (sourcing elsewhere), slope maintenance and recovery expenditures are taken into consideration.

**Comment**

Further analysis should be completed to assess the potential financial impacts and cost of response to risk.

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Downstream

**Risk type & Primary climate-related risk driver**

Reputation	Shifts in consumer preferences
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Environmental sustainability is a growing concern for customers. As consumers increasingly embrace social causes and environmental protection, they seek products and brands that align with their values. In order to mitigate this risk, Hwaseung has been actively collaborating with its clients to identify opportunities to improve the sustainability performance of its products, including using recycled materials, enhancing the durability of the products and enhancing end user engagement and awareness.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

20000000

**Potential financial impact figure – maximum (currency)**

50000000

**Explanation of financial impact figure**

The reputation of Hwaseung and demand from consumers are highly correlated to the company's sales and revenues. For this reason, the potential financial impact is estimated as a proportion of our annual revenues lost.

**Cost of response to risk**

25000000

**Description of response and explanation of cost calculation**

The financial impact can be categorized into two aspects: operating expenditures (OPEX) and capital expenditures (CAPEX). In terms of OPEX, there will be an increase in costs from procuring raw materials that are more sustainable and durable. Moreover, an increase in CAPEX will also be expected, due to acquisition of new plants and equipment.

**Comment**

As a supplier and manufacturer, this is considered as an indirect impact for Hwaseung. We are collaborating with our clients to ensure their brand value is aligned with sustainability to meet their customers' demand.

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**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Mandates on and regulation of existing products and services
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Mandates and regulations on carbon emissions are a potential risk if Hwaseung is unable to reduce its energy and carbon footprint. This could lead to higher indirect and direct operating costs (e.g. higher costs of goods sold, taxes, fines) and reputational damage. Hwaseung has been actively participating and engaging in sustainable development in the industry. In 2021, Hwaseung joined the UNFCCC's Fashion for Global Climate Action Initiative, committing to a reduction of 30% in absolute GHG emissions across its value chain by 2030, with 2020 as the base year.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

1100000

**Potential financial impact figure – maximum (currency)**

2800000

**Explanation of financial impact figure**

Hwaseung continually strives to not only meet but also exceed local regulations and to demonstrate robust sustainability management practices in line with the UNFCCC's Fashion Charter aspirations. We foresee that our annual operating and capital costs will increase to ensure compliance with upcoming regulatory and sectoral requirements, including to invest in new equipment and infrastructure, and to implement our sustainability strategy.

**Cost of response to risk**

3000000

**Description of response and explanation of cost calculation**

In order to comply with current regulations and mandates, Hwaseung shows continuous effort to invest and develop new technologies and equipment, aiming to reduce the company's carbon footprint and resource consumption. In particular, advancement in boiler operation is one of the main focuses of Hwaseung, as part of the coal phase out solutions. Additionally, expenditure is required to develop sustainable strategies and management system.

**Comment**

As a strict minimum, Hwaseung will ensure compliance to all environmental regulations it is subject to. As a member of UNFCCC's Fashion Charter, we strive to align our strategy with the goals of the Paris Climate Change Agreement.

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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**

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Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Primary potential financial impact**

Reduced indirect (operating) costs

**Company-specific description**

With continuous improvements in production and distribution processes, Hwaseung can benefit from a reduction in operating costs, such as electricity, fuel, machinery repair and maintenance, wastewater discharge, etc. As a key apparel and footwear manufacturer in Asia, Hwaseung has been developing innovative solutions in its production line. Due to the high water consumption in the dyeing process, Hwaseung initiated research on the wastewater recycling to minimize the environmental footprint of the products we manufacture. Moreover, Hwaseung strives for energy efficiency in its production line and manufacturing facilities, achieved by a continuous systematic evaluation of resource efficiency and optimisation of production processes.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

The figure is estimated from a high-level assessment of energy efficiency reduction potential across the Hwaseung Enterprise group.

**Cost to realize opportunity**

6000000

**Strategy to realize opportunity and explanation of cost calculation**

The figure is estimated from a high-level assessment of energy efficiency reduction potential across the group

**Comment**

We are in the process of developing a continuous improvements system, where we will identify, measure and implement carbon reduction opportunities across all of our sites globally, with the intent to set site-level targets and KPIs by the end of 2021.

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Primary potential financial impact**

Returns on investment in low-emission technology

**Company-specific description**

The apparel, footwear and textile industry comprises a large number of factories, which altogether consume a significant amount of energy and electricity. Hwaseung is in the process of developing its renewable energy strategy, leveraging both renewable energy procurement and on-site generation. This includes the installation of solar rooftop panels across its operations in Vietnam, Indonesia and China. In addition to a reduction in emission, most of Hwaseung's low-carbon energy opportunities present an a financially positive business case, with an average payback of 6-7 years. In addition, Hwaseung prioritises coal phase-out as part of their operation strategies. As a member of UNFCCC's Fashion for Global Climate Action Initiatives, Hwaseung committed to refraining from construction of new coal-fired boilers or other sources of coal-fired heat and power generation by 2025. We are in the process of identifying low-carbon fuels for heating, including for example rice husk pellets in Vietnam.

**Time horizon**

Medium-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)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

6000000

**Potential financial impact figure – maximum (currency)**

45500000

**Explanation of financial impact figure**

Implementation of renewable energy and low emission transition strategies help to secure economical benefits in the long run. Hwaseung is currently assessing various RE options, including installation of solar PV panels on our rooftops. The provided range is based on different business models (e.g. direct investment, leasing) over a 10-year period.

**Cost to realize opportunity**

25000000

**Strategy to realize opportunity and explanation of cost calculation**

Initial financing is required to facilitate adoption of RE strategies, particularly in the case of direct investment of solar PV panels.

**Comment**

Hwaseung is currently developing rooftop solar projects in regions where they operate, including Vietnam, Indonesia and China. This strategy can help supporting our daily electricity consumption.

**Identifier**

Opp3

**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 resulting from increased demand for products and services

**Company-specific description**

As part of its commitment to sustainability, Hwaseung is collaborating with clients to develop more sustainable and durable products. This opportunity can not only create revenue growth from increased demand for sustainable products, but can also reinforce Hwaseung Enterprise's reputation and position in the marketplace. In order to reduce the carbon emissions of its products, Hwaseung is in the process of evaluating the feasibility of using more recycled materials in its products. We also continuously strive to enhance our manufacturing processes to use less resources (energy, water, materials, chemicals, etc.) Besides, our R&D department is studying and developing biodegradable and eco-friendly biomaterials for footwear, apparel and accessories.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

50000000

**Potential financial impact figure – maximum (currency)**

100000000

**Explanation of financial impact figure**

The potential financial impact is estimated as an annual increase in our revenues from the sales of more sustainable products. The progress and maturing of low-emission good will help Hwaseung yielding and securing revenue in sales. Therefore, the financial impact is estimated based on a set of assumptions made to our annual revenues.

**Cost to realize opportunity**

25000000

**Strategy to realize opportunity and explanation of cost calculation**

Investing in research and development is a key factor for companies to improve environmental sustainability through innovative products and services. A ballpark estimate on Hwaseung's expenditure on developing low emission goods is made, considering the cost of R&D in the area, innovation and laboratory investment.

**Comment**

We are continuously improving and promoting sustainability across our operations. We are also innovating and investing in new products and services that are more durable with recycled materials through R&D.

### C3. Business Strategy

## C3.1

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### (C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

## C4. Targets and performance

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### C4.1

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

Absolute target

#### C4.1a

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

**Target reference number**

Abs 1

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based) +3 (upstream & downstream)

**Base year**

2020

**Covered emissions in base year (metric tons CO2e)**

1033339

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

**Target year**

2030

**Targeted reduction from base year (%)**

30

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**

723337.3

**Covered emissions in reporting year (metric tons CO2e)**

1033338

**% of target achieved [auto-calculated]**

0.000322578876180356

**Target status in reporting year**

New

**Is this a science-based target?**

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

**Target ambition**

Well-below 2°C aligned

**Please explain (including target coverage)**

Hwaseung Enterprise is a signatory of the UNFCCC Fashion Industry Charter for Climate Action. By doing so, Hwaseung Enterprise is aiming to do its share to limit global warming to well below 2°C above pre-industrial levels. Among the pledges of UNFCCC signatories, Hwaseung Enterprise committed to 30 percent aggregate GHG emission reductions in Scope 1, 2 and 3 emissions by 2030 against a baseline of no earlier than 2015. 2020 was selected as the base year as it contains the latest set of up-to-date environmental data and is most aligned with Hwaseung Enterprise's business and operations. Base year emissions currently consist of our Scope 1 and 2 emissions, and Scope 3 emissions from a preliminary mapping leveraging the GHG Protocol Scope 3 Evaluator. Our Scope 3 inventory will be refined in coming years to provide more accurate data, particularly for Scope 3 emissions that are the most material to our business.

### C4.2

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#### (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

Other climate-related target(s)

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**(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: absolute or intensity**

Absolute

**Target type: energy carrier**

All energy carriers

**Target type: activity**

Consumption

**Target type: energy source**

Low-carbon energy source(s)

**Metric (target numerator if reporting an intensity target)**

Please select

**Target denominator (intensity targets only)**

&lt;Not Applicable&gt;

**Base year**

2020

**Figure or percentage in base year**

26

**Target year**

2030

**Figure or percentage in target year**

100

**Figure or percentage in reporting year**

26

**% of target achieved [auto-calculated]**

0

**Target status in reporting year**

New

**Is this target part of an emissions target?**

Abs1

**Is this target part of an overarching initiative?**

Other, please specify (UNFCCC Fashion Industry Charter for Climate Action)

**Please explain (including target coverage)**

As a signatory of the UNFCCC Fashion Industry Charter for Climate Action, Hwaseung Enterprise committed to not installing new coal-fired boilers or other sources of coal-fired heat and power generation as soon as possible and latest by 2025. In addition, Hwaseung Enterprise committed to phase out coal from all its applications by 2030 at the latest.

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**Target reference number**

Low 2

**Year target was set**

2021

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Metric (target numerator if reporting an intensity target)**

Percentage

**Target denominator (intensity targets only)**

&lt;Not Applicable&gt;



**Base year**

2020

**Figure or percentage in base year**

1

**Target year**

2030

**Figure or percentage in target year**

100

**Figure or percentage in reporting year**

1

**% of target achieved [auto-calculated]**

0

**Target status in reporting year**

New

**Is this target part of an emissions target?**

Abs1

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain (including target coverage)**

As part of its commitment to sustainability, Hwaseung Enterprise set the target to achieve 100% renewable electricity by 2030, leveraging both onsite (e.g. solar PV on rooftops) and offsite (e.g. PPAs, EACs) solutions across its global operations.

**C4.2b**

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

**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

**C4.3b**

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

**Initiative category & Initiative type**

Low-carbon energy consumption	Low-carbon electricity mix
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**Estimated annual CO2e savings (metric tonnes CO2e)**

665

**Scope(s)**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

123328

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

<1 year

**Comment**

Our HWT site located in China is participating in a renewable energy policy led by the Mongolian provincial government, where 20% of the electricity purchased from the grid comes from renewable sources (wind and solar PV).

**Initiative category & Initiative type**

Energy efficiency in buildings	Maintenance program
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**Estimated annual CO2e savings (metric tonnes CO2e)**

363

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

77259

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Several of our sites implement maintenance procedures, including for motors, motor belts and air compressors.

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
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**Estimated annual CO2e savings (metric tonnes CO2e)**

353

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

75054

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

150108

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

Ongoing

**Comment**

As part of its Energy Management System, our largest site, HwaseungVina, implemented measures to enhance HVAC energy efficiency.

**Initiative category & Initiative type**

Energy efficiency in production processes	Compressed air
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**Estimated annual CO2e savings (metric tonnes CO2e)**

305

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

44264

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

23687

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

Ongoing

**Comment**

We have implemented multiple energy reduction opportunities with regards to compressed air across our global operations, including but not limited to: - Installing low pressure compressed air systems - Continuous maintenance, inspection and replacement of parts (e.g. filters) - Installing ducting systems to reduce temperature.

**Initiative category & Initiative type**

Low-carbon energy generation	Solar PV
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**Estimated annual CO2e savings (metric tonnes CO2e)**

297

**Scope(s)**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

63243

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

379456

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

The Hwaseung Rach Gia site in Vietnam installed solar PV panels on its rooftops for onsite generation and consumption. In 2021, we will initiate a programme to install solar PV across all our facilities

**Initiative category & Initiative type**

Energy efficiency in production processes	Machine/equipment replacement
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**Estimated annual CO2e savings (metric tonnes CO2e)**

187

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

39745

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

74914

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Several of our footwear manufacturing facilities replaced traditional motors with more energy-efficient servo motors for sewing machines

**Initiative category & Initiative type**

Energy efficiency in production processes	Fuel switch
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**Estimated annual CO2e savings (metric tonnes CO2e)**

154

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

261708

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

785124

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Our Dae Young Indonesia site transitioned from using Liquefied Petroleum Gas (LPG) to natural gas for stationary fuel combustion.

**Initiative category & Initiative type**

Energy efficiency in buildings	Insulation
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**Estimated annual CO2e savings (metric tonnes CO2e)**

60

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

12632

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

21053

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

One of our sites located in China, HWD, equipped ovens (heating & drying machines) in assembly lines with thermal insulation materials.

**Initiative category & Initiative type**

Company policy or behavioral change	Resource efficiency
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**Estimated annual CO2e savings (metric tonnes CO2e)**

43

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

9087

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Several of our sites have implemented policies to turn off machinery and IT equipment during business off-hours (e.g. Lunch)

**Initiative category & Initiative type**

Energy efficiency in production processes	Cooling technology
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**Estimated annual CO2e savings (metric tonnes CO2e)**

17

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Please select

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

1632

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

3264

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Our Hwaseung Indonesia factory replaced Solenoid condensate drain with zero loss drain (ZLD).

**Initiative category & Initiative type**

Waste reduction and material circularity	Product/component/material recycling
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**Estimated annual CO2e savings (metric tonnes CO2e)**

183

**Scope(s)**

Scope 3

**Voluntary/Mandatory**

Voluntary

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

172744

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

1113103

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Our Hwaseung Polytech site recycles E-TPU.

**Initiative category & Initiative type**

Energy efficiency in production processes	Reuse of water
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**Estimated annual CO2e savings (metric tonnes CO2e)**

15

**Scope(s)**

Scope 3

**Voluntary/Mandatory**

Voluntary

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

16810

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Our Hwaseung Polytech site in Vietnam installed a water circulation system between steam and cooling water to reused water.

**C5. Emissions methodology**

**C5.2**

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

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

The Greenhouse Gas Protocol: Scope 2 Guidance

**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)**

34042

**Start date**

January 1 2020

**End date**

December 31 2020

**Comment**

Scope 1 emissions include the following emission sources that are generated by our sites globally, in accordance with the GHG Protocol: - Stationary fuel combustion, including natural gas, coal, LPG, diesel and biomass; and - Mobile fuel combustion, including LPG, diesel and petrol. Scope 1 emissions from Hwaseung Global, a subsidiary of Hwaseung Enterprises providing transportation and delivery services, is excluded from Hwaseung Enterprise as they are immaterial to the overall footprint (<1% of total Scope 1 and 2 location-based emissions). Scope 1 emissions accounted for 28% of our Scope 1 and 2 (location-based) inventory in 2020.

**Past year 1**

**Gross global Scope 1 emissions (metric tons CO2e)**

14142

**Start date**

January 1 2019

**End date**

December 31 2019

**Comment**

There were no changes in the boundary of our Scope 1 emissions from 2019 to 2020. Scope 1 emissions increased from 2019 to 2020 due to the opening of new facilities that operate stationary fuel combustion boilers.

**C6.2**

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**(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**

Our Scope 2 emissions inventory includes all the following emission sources that are generated by our sites globally: - Purchased electricity consumption, both from the grid and from renewable sources (e.g. PPA); and - Purchased steam consumption. Other potential Scope 2 emission sources (e.g. purchased heat, purchased cooling) are not relevant to our operations. Scope 2 emissions are quantified and reported with the location-based and market-based methods. Location-based emissions are quantified using the national grid factors published by the International Energy Agency (IEA). Market-based emissions are quantified using the emission factor hierarchy presented in the GHG Protocol Scope 2 Guidance

**C6.3**

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

**Reporting year**

**Scope 2, location-based**

86759

**Scope 2, market-based (if applicable)**

86094

**Start date**

January 1 2020

**End date**

December 31 2020

**Comment**

As compared to 2019, Hwaseung's scope 2 emissions increased by 13% and 14% with respectively the location-based and market-based methods. This is mainly due to business expansion and the opening of a few sites in Vietnam and Indonesia during the reporting period.

**Past year 1**

**Scope 2, location-based**

76937

**Scope 2, market-based (if applicable)**

75613

**Start date**

January 1 2019

**End date**

December 31 2019

**Comment**

There were no changes in the boundary of our Scope 2 emissions from 2019 to 2020.

**C6.5**

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**(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

**Metric tonnes CO2e**

684169

**Emissions calculation methodology**

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on global 2020 spend on respectively i) purchased goods and ii) purchased services.

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

0

**Please explain**

We understand that purchased goods and services are a major contributor to our overall carbon footprint. We are continuously collaborating with brands to use more sustainable and durable materials. We are also a signatory of the UNFCCC Fashion Charter, which is currently developing a methodology for quantifying Scope 3 emissions in a more robust and consistent manner across the sector, which we will follow once ready.

**Capital goods**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

74468

**Emissions calculation methodology**

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on global 2020 spend on capital goods.

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

0

**Please explain**

As we own and operate multiple apparel and footwear facilities, we invest every year into new assets, including buildings, equipment, vehicles, among others.

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

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

25862

### Emissions calculation methodology

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on our Scope 1 and 2 emissions in 2020. Our energy consumption was obtained from third-party evidence, including utility bills and purchase records.

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

100

### Please explain

Fuel-and-energy-related activities (not included in Scope 1 or 2) cover the extraction, processing and distribution of the fuels we consume, including coal, natural gas, LPG, diesel, purchased electricity, purchased steam and purchased hot oil, among others.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

15118

### Emissions calculation methodology

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on global 2020 spend on third-party transportation and distribution with a breakdown by freight type (air, sea, rail and road).

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

0

### Please explain

Upstream transportation and distribution cover all transportation and distribution of Hwaseung Enterprise's products across the entire value paid by Hwaseung Enterprise to a third-party. This includes, among others, third-party transportation and distribution between our facilities, from our suppliers to our facilities, and from our facilities to our client's warehouses and distribution centres. Emissions associated from transportation and distribution managed and operated by Hwaseung Enterprise are included in our Scope 1 and 2 emissions.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

4662

### Emissions calculation methodology

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on global 2020 spend on waste management

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

0

### Please explain

Although waste management, according to the Scope 3 mapping, captures a limited portion of our total Scope 3 emissions, we are committed to reducing our waste footprint. To do so, we aim to not only minimize the amount of waste we generate at the source, but also implement opportunities to recover the waste generated. In 2021, we will start operating a waste management and recycling facility in Ho Chi Minh to enhance to recovery of our recyclable waste.

## Business travel

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

1127

### Emissions calculation methodology

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on global 2020 spend on business travel. As the travel type was unknown, a conservative assumption was made that all business travel was conducted by air, the most carbon-intensive travel type.

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

0

### Please explain

Given the nature of our operations and value chain as a footwear and apparel manufacturer, business travel is not material to our overall carbon footprint.



## Employee commuting

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Given the nature of our operations and value chain as a footwear and apparel manufacturer, employee commuting is not material to our overall carbon footprint.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Hwaseung Enterprise does not lease any upstream assets.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

All emissions pertaining to transportation and distribution paid for by Hwaseung Enterprise are included in our "upstream transportation and distribution". Downstream transportation and distribution are not material to our overall carbon footprint, as they pertain to distribution from clients' warehouses to stores and end consumers.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Hwaseung Enterprise produces finished products which do not require any further processing after being sold.

## Use of sold products

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

65527

### Emissions calculation methodology

Emissions from the use of sold products are generated from energy consumption during washing and drying. There is no primary emissions data available for the use of Hwaseung Enterprise's products. For the purpose of the Scope 3 mapping, we assumed that all our products would have an average lifetime of 2 years, and product-specific washing cycle frequency (52 times per year for clothes, and once a year for headwear and footwear). We then applied a global average energy consumption per washing and drying cycle and average global emission factor from electricity consumption to estimate the associated emissions.

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

0

### Please explain

Emissions from the use of sold products will vary greatly across our products.

## End of life treatment of sold products

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

29402

### Emissions calculation methodology

There is no primary emissions data available for the disposal of Hwaseung Enterprise's products. We quantified the total weight of products manufactured by Hwaseung Enterprise in 2020 using our production volume and average product weight for respectively our Footwear and Apparel divisions. Then, we applied the emission factor from DEFRA, with the assumption that our products after use are disposed through landfill by end consumers.

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

0

### Please explain

The end of life treatment of sold products can have a significant impact depending on the disposal method of the clothes and footwear we produce. As a UNFCCC Fashion Charter signatory, we will intend to collaborate with the industry and relevant institutions to promote the collection, recycling and/or reuse of apparel and footwear products.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Hwaseung Enterprise does not lease any downstream assets.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Hwaseung Enterprise does not have any franchises.

## Investments

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

16961

### Emissions calculation methodology

Emissions were estimated using the GHG Protocol Scope 3 Evaluator, based on 2020 investment into the Sung Shin Indonesia joint venture.

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

0

### Please explain

The only relevant investment from Hwaseung Enterprise consists of an investment in a joint venture, Sung Shin Indonesia. All investments over which Hwaseung Enterprise have operational control over are included in our Scope 1 and 2 emissions.

## Other (upstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

All material Scope 3 emission sources are captured in the categories above.

**Other (downstream)**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

All material Scope 3 emission sources are captured in the categories above.

C6.10

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**(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**

0.0001304026

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

120801

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

926362100

**Scope 2 figure used**

Location-based

**% change from previous year**

38

**Direction of change**

Increased

**Reason for change**

As compared to 2019, there is an increase in emissions intensity per revenue observed in 2020. This was caused by an increase in our absolute emissions from organic growth, couple with a reduction in revenues from 2019 to 2020

---

**Intensity figure**

0.0100615043

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

120801

**Metric denominator**

Other, please specify (Kilogram of fabric)

**Metric denominator: Unit total**

12006157

**Scope 2 figure used**

Location-based

**% change from previous year**

46

**Direction of change**

Increased

**Reason for change**

Emissions intensity per pair of shoes increased from 2019 to 2020, from the opening of new sites in 2020 which are not yet running at full capacity. In addition, only certain sites across our operations produce apparel. This as a result skews the intensity figures as our global total Scope 1 and 2 emissions are used as the numerator (and not only Scope 1 and 2 emissions from apparel facilities).

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**Intensity figure**

0.0014427111

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

120801

**Metric denominator**

Other, please specify (Pair of shoes)

**Metric denominator: Unit total**

83731249

**Scope 2 figure used**

Location-based

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**% change from previous year**

45

**Direction of change**

Increased

**Reason for change**

Emissions intensity per pair of shoes increased from 2019 to 2020, from the opening of new sites in 2020 which are not yet running at full capacity. In addition, only certain sites across our operations produce footwear. This as a result skews the intensity figures as our global total Scope 1 and 2 emissions are used as the numerator (and not only Scope 1 and 2 emissions from footwear facilities).

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**Intensity figure**

0.0001296847

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

120136

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

926362100

**Scope 2 figure used**

Market-based

**% change from previous year**

39

**Direction of change**

Increased

**Reason for change**

As compared to 2019, there is an increase in emissions intensity per revenue observed in 2020. This was caused by an increase in our absolute emissions from organic growth, couple with a reduction in revenues from 2019 to 2020.

---

**Intensity figure**

0.010006116

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

120136

**Metric denominator**

Other, please specify (Kilogram of fabric)

**Metric denominator: Unit total**

12006157

**Scope 2 figure used**

Market-based

**% change from previous year**

48

**Direction of change**

Increased

**Reason for change**

Emissions intensity per pair of shoes increased from 2019 to 2020, from the opening of new sites in 2020 which are not yet running at full capacity. In addition, only certain sites across our operations produce apparel. This as a result skews the intensity figures as our global total Scope 1 and 2 emissions are used as the numerator (and not only Scope 1 and 2 emissions from apparel facilities).

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**Intensity figure**

0.001434769

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

120136

**Metric denominator**

Other, please specify (Pair of shoes)

**Metric denominator: Unit total**

83731249

**Scope 2 figure used**

Market-based

**% change from previous year**

46

**Direction of change**

Increased

**Reason for change**

Emissions intensity per pair of shoes increased from 2019 to 2020, from the opening of new sites in 2020 which are not yet running at full capacity. In addition, only certain sites across our operations produce footwear. This as a result skews the intensity figures as our global total Scope 1 and 2 emissions are used as the numerator (and not only Scope 1 and 2 emissions from footwear facilities).

C7. Emissions breakdowns

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C7.9

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**(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

C8. Energy

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C8.2

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**(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

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**(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	141617	141617
Consumption of purchased or acquired electricity	<Not Applicable>	1062	172708	173770
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	7645	7645
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	770	<Not Applicable>	770
Total energy consumption	<Not Applicable>	1833	321969	323802

C12. Engagement

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C12.1

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

C15. Signoff

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C-FI

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**(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.**

Hwaseung Enterprise was the first footwear manufacturer to sign the UNFCCC Fashion Industry Charter for Climate Action. As part of this commitment, we have taken in the past year tremendous steps to our sustainability performance, including the development of a global governance structure around environmental stewardship and of system to measure and track our environmental performance and continuous improvements. In parallel, we are initiating a solar PV installation programme spanning all our global operations, and evaluating onsite renewable electricity solutions that would be available. We also committed to phase-out coal by 2030, and are assessing low-carbon thermal energy sources.

Tackling the impact from our operations is only the first step. A majority of our emissions comes our value chain, in particular from raw materials and product use and disposal. We will leverage our strategic business relationship with our clients and participation in the UNFCCC Fashion Industry Charter for Climate Action to foster collaboration and transformation across the entire industry.

### C15.1

**(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	CEO / HS Enterprise.	Chief Executive Officer (CEO)

### 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	

#### SC0.2

**(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?**

#### 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.**

#### SC1.2

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

#### 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
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#### SC1.4

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

SC2.1

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

SC2.2

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

Submit your response

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**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Customers	Non-public	<Not Applicable>

**Please confirm below**

I have read and accept the applicable Terms