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TUNG HO STEEL

Task Force on Climate-Related
Financial Disclosures

氣候相關財務揭露報告書

TCFD
2021



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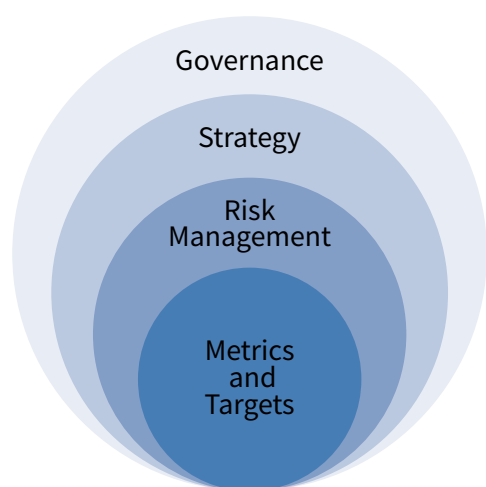
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1. Principles of Climate-Related Financial Disclosures

In view of global warming, extreme weather events, and the rise in the awareness of environmental protection, energy conservation, safety, health, and ecological conservation, the Company has established a framework to identify potential material risks and opportunities in operations with respect to the four core elements stated in the Task Force on Climate-Related Financial Disclosures (TCFD) published by the Financial Stability Board (FSB) and propose corresponding countermeasures: "Governance", "Strategy", "Risk Management", and "Metrics and Targets". The Company also signed to become a TCFD Supporter* in February 2021.

* List of TCFD Supporters: <https://www.fsb-tcfd.org/supporters/>

The Company pays close attention to the trend of global climate change and the direction of global responses, including climate change as a material issue in sustainable corporate development and one of the critical, material risks for continual analysis and control, and engages in the adaptation and mitigation of greenhouse gases (GHGs). Besides engaging in GHG emission inventory since 2003, the Company has also participated in the voluntary reduction program to actively disclose GHG management information for the reference of stakeholders. Apart from registering the inventory results in the Taiwan GHG Emissions Registry, the Miaoli Works implemented the product carbon footprint (CFP) verification of hot-rolled H beams and steel plates in 2010, the Kaohsiung Works the product CFP verification of hot-rolled H beams and re-bars in 2013, and the Taoyuan Works the product CFP verification re-bars in 2014 and 2019.



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

2. Climate-Related Governance

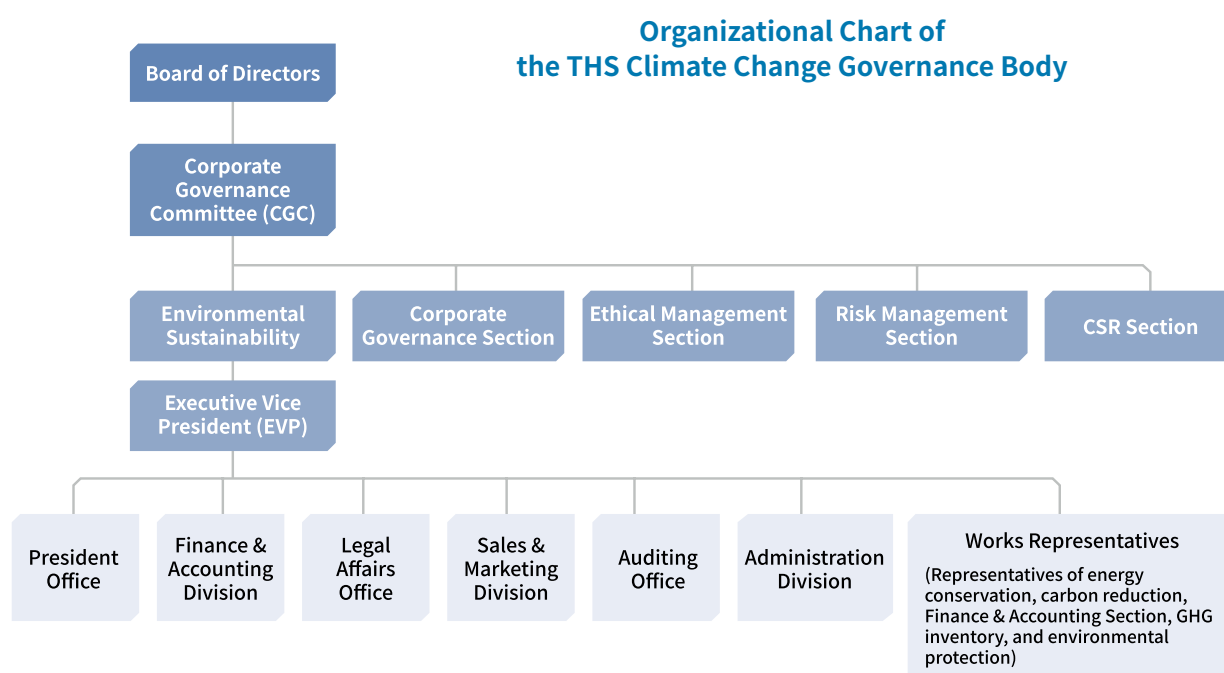
● The Board is Responsible for the Governance of Climate Change Issues

The board reviews and guides strategy, action plans and objectives, monitors implementation and performance every year, and reviews GHG reduction targets and achievement rates.

The Corporate Governance Committee (CGC, a functional committee) has been established under the board with three members. With the chairperson as the convener, over half the committee members are independent directors and appointed by the board to handle issues related to climate change, including

the establishment, overseeing, and review of the systems and targets for achieving environmentally sustainable development. The corporate governance committee holds at least two committee meetings a year and reports content related to climate change to the board every year. The risk management, strategy, and targets related to climate change in this report were approved at the 9th meeting of the 24th board on May 11, 2021.

In response to climate change-related issues, the Company has hired external instructors to provide related training and education on climate governance and TCFD disclosure practice for board members and senior officers for a total of 60 hours.



● Climate Issue Representative (CIE) Under the Board

The Environmental Sustainability Section (ESS) has been established under the board's CGC with staff assigned by all corresponding departments, with the executive vice president (EVP) as the section chief. The ESS assesses and manages climate-related risks and opportunities and establishes the relevant strategies and targets. ESS periodically reports its performance to CGC.

● Reward Mechanisms for Climate Change-Related Issues

Article 10 of the "Board Performance Evaluation Regulations" stipulates that the results of board performance evaluation shall be the reference for director election or nomination, and the results of performance evaluation of individual directors the reference for the determination of their salary and remuneration. The "Board Performance Evaluation Regulations" will be amended in 2021 to include climate change-related items in the evaluation.

In addition, the Company has established the "Improvement Proposal Reward Regulations" to accept proposals for improvements related to climate change countermeasures, GHG reduction, and energy conservation. Rewards will be awarded according to the review results and project performance.

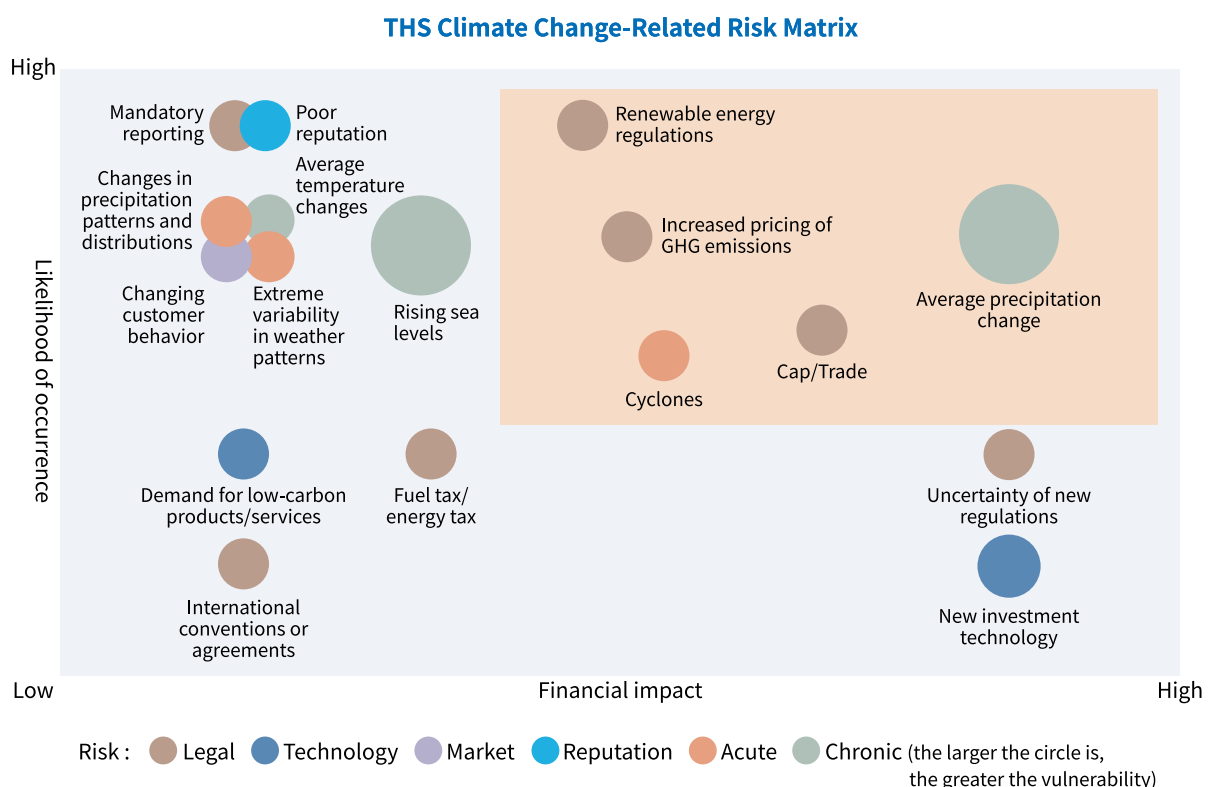
3. Management of Climate Change-Related Risks and Opportunities

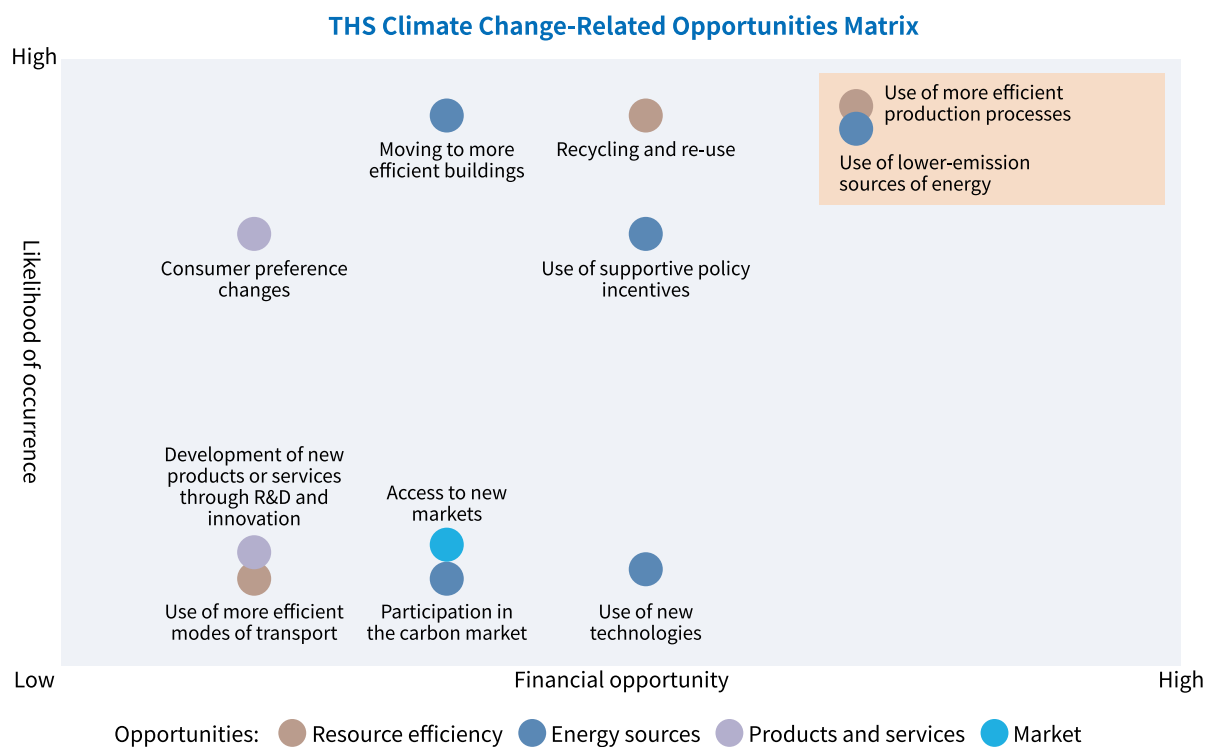
● Identification of Climate Change-Related Risks and Opportunities

The ESS under the CGC of THS is responsible for the management of climate change-related issues. Besides learning about the contents of international initiatives and organizations related to various sustainability and climate change issues, the Company has taken the concerns and evaluation criteria of international initiatives into account when establishing environmental and GHG policies to facilitate conformity with international development trends and to enhance the Company's capacity in addressing climate change.

At the climate risk and opportunity identification meeting convened by the ESS, apart from assessing the countermeasures and financial impacts of the major short-, medium-, and long-term risks and opportunities identified with respect to the list of transition risks, physical risks, and opportunities recommended by the TCFD, departments also consider the impacts on the Company's business operations and strategies of products and services, the supply chain, adaptation and mitigation activities, R&D investment, and business operations (including business types and facility locations). The identification and assessment of climate change-related transition risks and physical risks includes the degree of impact on business operations, likelihood of occurrence, and vulnerabilities caused. The identification and assessment of climate change-related opportunities also includes the degree of impact on business operations and likelihood of occurrence. After discussing the results of the matrix analysis of the identification results, the ESS eventually identified five climate change-related risks and two climate change-related opportunities for the CGC to hold the TCFD risk and opportunity response discussion meeting to determine the Company's climate change-related countermeasures.

Below shows the climate change-related risk and opportunity matrix established according to the identification results:





● Description of Climate Change-Related Risks

The climate change-related risks identified by the Company are classified by type and by item as follows:

Risk Type / Item	Identified Risk	Time Horizon	Likelihood of occurrence	Financial Impact	Potential Vulnerability	Risk Sorting
Transition Risk - Policy and Legal Risk	Cap/Trade	Medium-Term (3–10 years)	Possible	Likely	Rare	2
	Increased pricing of GHG emissions	Short-Term (0–3 years)	Likely	Possible	Rare	3
	Renewable energy regulations	Medium-Term (3–10 years)	Unlikely	Possible	Rare	5
Physical Risk - Acute	Cyclones	Short-Term (0–3 years)	Very Likely	Unlikely	Rare	4
Physical Risk - Chronic	Average precipitation change	Short-Term (0–3 years)	Likely	Very Likely	Very Likely	1

Risk ranking from high to low: average precipitation change, cap/trade, increased pricing of GHG emissions, tropical cyclones, and renewable energy regulations. The following describes the contents, financial impacts, countermeasures, and costs of individual risks:

◎ Risk Ranking 1: Average Precipitation Change

Referring to the average precipitation change as a result of changes in precipitation patterns (e.g., water rationing or suspension of water supply)

Financial Impact Type	<p><u>Decreased revenue</u></p> <p>Reduced precipitation results in insufficient water sources in reservoirs which leads to water rationing by zone and decreased production.</p> <p><u>Increased direct costs, increased indirect costs, increased capital expenditure</u></p> <p>The Company's Miaoli Works and Kaohsiung Works have groundwater rights, while the Taoyuan Works have reduced production due to water rationing. Purchasing water can fulfill production demand.</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$32.53 million</p> <p>The Miaoli Works and Kaohsiung Works have groundwater rights, and water rationing has less impact on them. The maximum withdrawal of the Taoyuan Works is limited to 15%. If water rationing lasts for four months a year, the daily production will be reduced by 4%, accumulating a loss of NT\$32.53 million/year.</p>	<p>NT\$10.27 million to NT\$15.41 million</p> <p>During the maximum rationing period, the required water supplementation is estimated at 107MT/day. If the unit water cost is NT\$800–NT\$1,200/MT, the risk cost will be NT\$10.27 million to NT\$15.41 million.</p>	

◎ Risk Ranking 2: Cap/Trade

Each works has an emission cap. If emissions exceed the cap and additional quota cannot be bought from the market, the fine will be NT\$3,000/tCO₂e.

Financial Impact Type	<p><u>Increased direct cost</u></p> <p>After the passage of the "Greenhouse Gas Reduction and Management Act", if enterprises fail to purchase quotas from the carbon market for their excessive emissions, the fine will be NT\$3,000/tCO₂e. This means the Company will face increased direct costs.</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$28.48 million/year</p> <p>Assuming that the cap begins in 2030, with the nationally determined contributions (NDC) as the target of allocation, then according to the Company's current GHG emission target, 2030 emissions will exceed NDC (reduction by 20%) by 9,495 MtCO₂e, and the fine is estimated at NT\$28.48 million.</p>	<p>NT\$18.30 million/year</p> <ol style="list-style-type: none"> 1. It is projected that THS Group will generate renewable energy independently in 2032 with the solar energy system and wind turbines with an installed capacity of 20MW and 19.9 MW (including the 11.5 MW in 2015) respectively. They will supply about 6.3% of the total electricity required for production to reduce emissions by about 38,048 MtCO₂e (4.7%) and carbon fee expenditure by NT\$3.8 million/year. 2. The investment of new wind turbines with capacity of 8.4 MW is NT\$350 million. The profit from electricity retailing is NT\$21 million. After deducting the opportunity cost at NT\$3.75 million/year, net income will be NT\$17.24 million/year. 3. The investment of the new 20 MW solar energy system is NT\$900 million to comply with the big electricity consumer clause. The expenditure will increase by NT\$2.75 million/year. 	

© Risk Ranking 3: Increased pricing of GHG emissions

The government charges the cap fee from enterprises according to the "Greenhouse Gas Reduction and Management Act".

Financial Impact Type	<p><u>Increased direct cost</u></p> <p>It is estimated that after the passage of the "Greenhouse Gas Reduction and Management Act", the carbon fee for GHG emissions will be NT\$100/tCO₂e, increasing the direct cost of business operations. The cost will increase more if the unit price per tCO₂e increases.</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$81.28 million/year</p> <p>Based on the 2019 emissions of 812,764 MtCO₂e, the estimated carbon fee is NT\$81.28 million/year.</p>	<p>NT\$18.30 million/year</p> <ol style="list-style-type: none"> 1. It is projected that THS Group will generate renewable energy independently in 2032 with the solar energy system and wind turbines with an installed capacity of 20MW and 19.9 MW (including the 11.5 MW in 2015) respectively. They will supply about 6.3% of the total electricity required for production to reduce emissions by about 38,048 MtCO₂e (4.7%) and carbon fee expenditure by NT\$3.8 million/year. 2. The investment of new wind turbines with capacity of 8.4 MW is NT\$350 million. The profit from electricity retailing is NT\$21 million. After deducting the opportunity cost at NT\$3.75 million/year, net income will be NT\$17.24 million/year. 3. The investment of the new 20 MW solar energy system is NT\$900 million to comply with the big electricity consumer clause. The expenditure will increase by NT\$2.75 million/year. 	

© Risk Ranking 4: Tropical Cyclones

The higher the sea water temperature is, the more water tropical cyclones such as typhoons will carry, increasing their power.

Financial Impact Type	<p><u>Decreased revenue</u></p> <p>Typhoons will damage the factory buildings and equipment, affecting production.</p> <p><u>Increased direct cost</u></p> <p>Typhoons reduce production and increase costs.</p> <p><u>Increased indirect cost</u></p> <p>Typhoons will damage factory buildings and equipment, thus more insurance expenditures must be made.</p> <p><u>Increased capital expenditure</u></p> <p>Cyclones will damage factory buildings, which requires extra cost for repairing.</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$44.72 million</p> <p>Throughout the years, typhoon Soudelor in 2015 caused the biggest damage to all three works. The repairing costs totaled NT\$44.72 million, causing a huge financial impact.</p>	<p>NT\$28.51 million</p> <p>Risks are transferred to insurance, with the scope covering fires, fires caused by explosions, thunderstorms, explosions, earthquakes, typhoons, and floods. In 2020, the amount of premium totaled NT\$28.51 million.</p>	

◎ Risk Ranking 5: Renewable Energy Regulations

According to the heavy electricity user clause in the "Renewable Energy Development Act", the replacement rate is 10% of the contract capacity.

Financial Impact Type	Increased direct cost, increased capital expenditure. The capital expenditure increases if the generation cost of the self-installed solar energy system is higher than the equivalent electricity price from Taiwan Power Company (TPC).	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
NT\$0 The new 20 MW solar energy system will be completed by the end of 2023 to comply with the chartered capacity in the early-bird incentive for heavy electricity users.	NT\$2.75 million 1. The estimated cost for the 20 MW solar energy system is NT\$900 million. The estimated output is 25,000,000 kWh. 2. The generation cost is about NT\$2.64/kWh, NT\$0.11/kWh higher than TPC's equivalent electricity price at NT\$2.53/kWh. Therefore, the capital expenditure will increase by NT\$2.75 million.	

● Description of Climate Change-Related Opportunities

The climate change-related opportunities identified by the Company are classified by type and by item as follows:

Opportunity Type / Item	Identified Opportunity	Time Horizon	Likelihood of occurrence	Financial Impact	Opportunity Sorting
Resource efficiency	Use of more efficient production processes	Short-Term (0-3 years)	Very Likely	Likely	1
Energy sources	Use of lower-emission sources of energy	Short-Term (0-3 years)	Very Likely	Likely	2

Opportunities include the use of more efficient production processes and lower-emission sources of energy. The following describes the contents, their financial impacts, countermeasures, and costs of individual opportunities:

◎ Opportunity Ranking 1: Use of More Efficient Production Processes

Use of more efficient production processes (e.g. use of more energy-efficient processes or enhancement of process efficiency)

Financial Impact Type	<p><u>Decreased direct cost, decreased indirect cost</u></p> <p>After equipment improvement, product costs are reduced as production efficiency is effectively enhanced, unit energy consumption is reduced, equipment availability is enhanced, and recycling rates are enhanced.</p> <p><u>Increased capital expenditure</u></p> <p>Purchase of new equipment.</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$23.68 million</p> <p>The use of more efficient equipment will effectively enhance production efficiency and reduce production costs. Every year, this can help reduce 1% of the electricity expenditure. Based on the electricity consumption at NT\$2/kWh in 2019, this can help save NT\$23.68 million.</p>	<p>NT\$13.20 million</p> <ol style="list-style-type: none"> 1. A sum of NT\$7.2 million is spent on the purchase of high-efficiency inverter compressors and the replacement of inverter motors for water treatment at the Taoyuan Works to save electricity by up to 1,850,000 kWh/year. A sum of about NT\$6 million is spent on the replacement of high-efficiency compressors at the Miaoli Works to save electricity over 700,000 kWh/year. 2. Participation in the Set Up Program of the World Steel Association (worldsteel) for free guidance. Reduce the Company's emissions and energy intensity to that of the top 15% of the steel industry through current mature technologies and practices. 	

◎ Opportunity Ranking 2: Use of Lower-Emission Sources Energy

In the future, the Company will use low-carbon energy including wind power and solar energy.

Financial Impact Type	<p><u>Increased direct cost, increased capital expenditure</u></p> <p>Purchase of new wind turbines and gain from the sales of renewable energy certificates (RECs).</p>	
Potential Financial Impacts / Description of Financial Impacts	Risk Corresponding Costs / Risk Corresponding Countermeasures	
<p>NT\$21 million/year</p> <p>New wind turbines with capacity of 8.4 MW will generate electricity of about 21,000,000 kWh/year at about NT\$2/kWh. As it is NT\$1/kWh lower than the REC price of NT\$3/kWh, the gain from REC sales will be NT\$21 million.</p>	<p>NT\$3.76 million/year</p> <p>A sum of NT\$350 million will be invested in new wind turbines with capacity of 8.4MW. The opportunity cost (compound interest) over a period of 15 years is NT\$56.34 million, with an average of NT\$3.76 million/year.</p>	

4. Climate Change-Related Strategy

● Analysis of Climate Change-Related Scenarios

Climate change-related risks and opportunities affect the Company's strategy and financial planning. Therefore, climate change-related scenarios are analyzed both qualitatively and quantitatively to facilitate the adoption of appropriate countermeasures. After discussing climate change-related scenarios with respect to the 2°C scenarios (2DS), 1.5°C scenarios, NDC, and representative concentration pathways (RCPs), and assessing climate change-related physical risks with the tools provided by the National Science and Technology Center for Disaster Reduction (NCDR) and the Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP), the Company eventually selected 2DS and RCP2.6 as the climate change-related scenarios for assessing physical risks and described the climate change-related risks and opportunities with respect to the physical risks and transition risks (legal) contained in these scenarios.

● Climate Change-Related Strategy

With respect to the risk responses (risk elimination, risk reduction, risk dispersal, and risk transfer) in the Company's "Risk Management Policy and SOP", the Company has assessed the identified risks and opportunities and established corresponding countermeasures.

Climate change has been worsening as extreme weather events increase, giving rise to the public's awareness and initiatives for climate change mitigation and great opportunities for expanding the use of the low-carbon and recycled steel made with electric arc furnaces (EAFs), as is the case of THS. When all steelmakers pay the fair carbon fee based on their emissions, EAFs emitting only one fourth of the CO₂ of traditional blast furnaces will be more cost-competitive.

Besides promoting energy conservation, THS is also actively engaged in energy development. For example, after investing in five wind turbines, the Company acquired the electricity enterprise license and began the wholesale of electricity in 2016. In 2019, THS founded the Tung Sugar Energy Service Co., Ltd. and established a biomass energy processing center to generate electricity using the biogas from anaerobic fermentation. In addition, the biogas residue is sold as organic fertilizers to improve the current disposal of biomass waste, to achieve the goal of turning waste into resources and waste into energy and thereby fulfill the spirit of the circular economy and sustainable development. Generation at 4,238,000 kWh/year is expected to start in Q3 2022. In addition, the Company has actively planned spaces within the works, such as open spaces and rooftops, to install renewable energy generation equipment to enhance the proportion of renewable energy use. We aim to become the leader of the world's EAF steel and lead the industry with a lower intensity of carbon emissions.

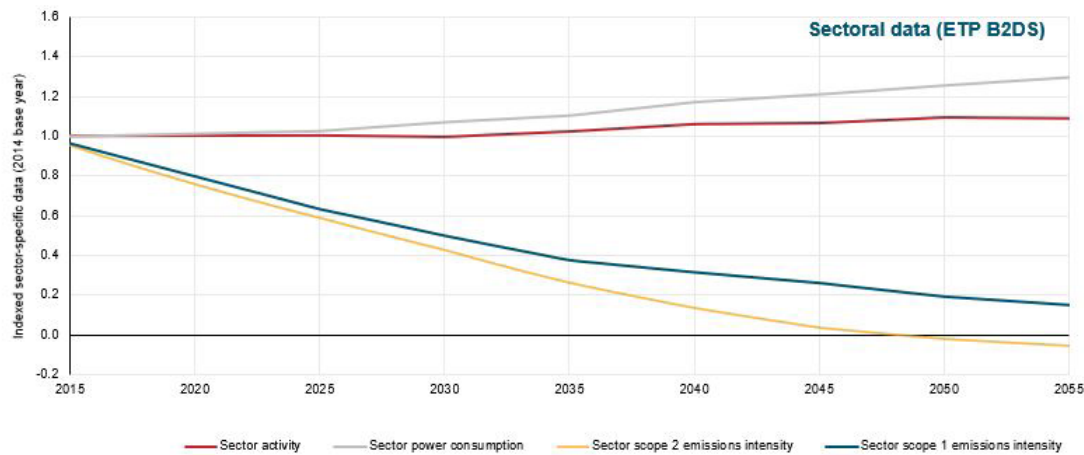
Through industry-government-academia seminars and communication with government agencies, we actively promote the low-carbon emission characteristic of EAFs. We also actively participate in related international initiatives, such as the EPD, CDP, and TCFD. By following the recommendations of TCFD and other internationally accepted frameworks, we make a full disclosure and good practice of climate change-related risks and opportunities. Apart from connecting with the world, we also consider our future targets and policies for carbon reduction and take concrete actions to actively respond to the expectations of all stakeholders and thereby ensure the Company's sustainable development.

5. Climate Change-Related Metrics and Targets

● Science-Based Targets (SBT)

Besides assessing climate change-related metrics and targets based on the science-based targets, the president follows up, reviews, and determines the necessary measures for the "performance and target differences in GHG emission intensity of the works" at the monthly target meeting.

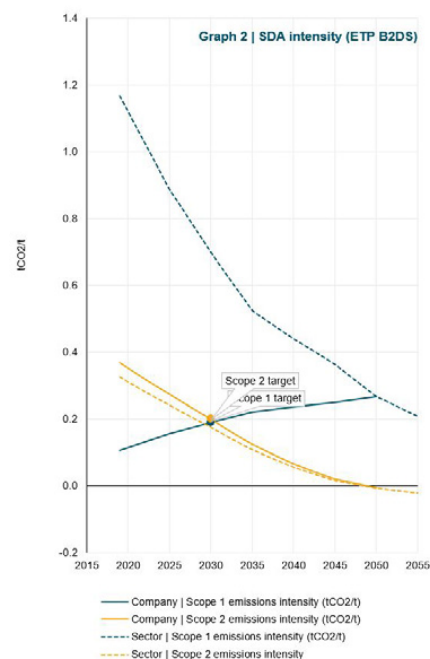
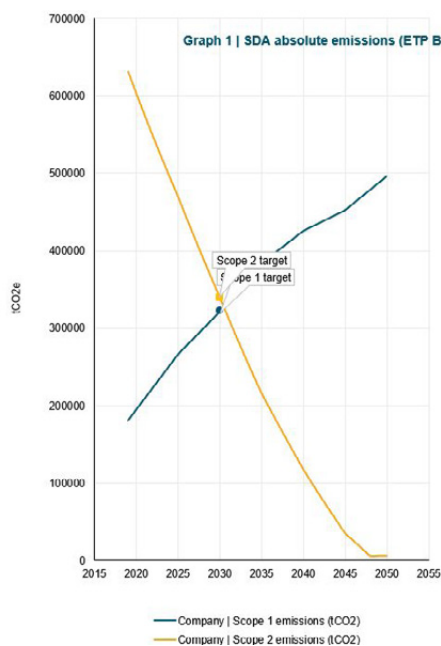
THS Climate Change-Related Science-Based Targets (SBT)



IEA ETP B2DS scenario

[Review all target modelling data](#)

	Base year (2019)	Target year (2030)	% Reduction
Company Scope 1 emissions (tCO ₂)	181,832.00	322,077.06	-77.1%
Company Scope 2 emissions (tCO ₂)	630,931.00	339,224.11	46.2%
Company Scope 1+2 emissions (tCO ₂)	812,763.00	661,301.17	18.6%
Company Scope 1 emissions intensity (tCO ₂ /t)	0.107	0.190	-78.1%
Company Scope 2 emissions intensity (tCO ₂ /t)	0.370	0.200	45.9%
Company Scope 1+2 emissions intensity (tCO ₂ /t)	0.477	0.368	22.8%



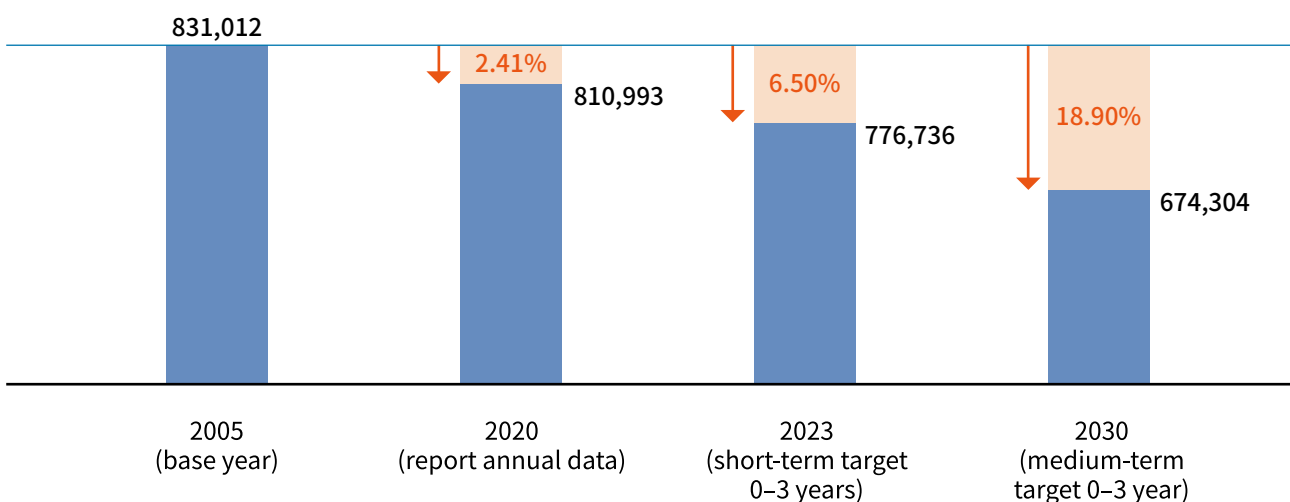
● GHG emission targets

When setting the absolute reduction targets, the Company calculates the reduction target using the SBTi-Tool (sectoral decarbonization approach (SDA) SDA_Tool_v1.2.1) provided by the Science Based Target Initiative as the scientific foundation. With 2005 as the base year, short-term (2023) and medium-term (2030) reduction targets are set similar to those of the GHG reduction pathways of Taiwan's NDC (i.e., the reduction targets are 2% less than in the base year of 2005 for 2020, 10% less than in the base year for 2025, and 20% less than in the base year for 2030).

Year	GHG Emissions (MtCO ₂ e)	Percentage Reduction (%)
2005 (base year)	831,012	-
2020 (report annual data)	810,993	2.41%
2023 (short-term target 0–3 years)	776,736	6.50 %
2030 (medium-term target 3–10 years)	674,304	18.90 %

Note: Emissions cover both scope 1 and scope 2. The total emissions covered by the base year within the selected boundary in the base year total emissions are 100%.

GHG emission targets (MtCO₂e)



● Description of Other Climate Change-Related Targets

Set the short-, medium-, and long-term proportion of renewable energy use, with 2019 as the base year.

Year	Percentage of Renewable Energy Use	Status
2019 (base year)	0%	-
2020 (report annual data)	0%	Besides studying and inventorying all executable renewable energy installation projects within the Company, the government's energy policies have been integrated to predict the development trends of wind power/solar energy technologies and the long-term efficiency of self-use/lease has been compared to prioritize projects and predict the implementation timing.
Short-term Target 2023-2024	2.1%	Based on the heavy electricity user requirements, the Company will complete a 20 MW renewable (solar) energy system by the end of 2023, with a capacity equivalent to 8% of the contract capacity at 250 MW and an output capacity equivalent to 2.1% of the total electricity demand to reduce CO ₂ emissions by 1.6% (compared to the base year of 2019).
Medium-term Target 2025-2031	3.9%	New wind turbines with a capacity of 8.4 MW will be completed by the end of 2024, with a total output capacity equivalent to 3.9% of the total electricity demand to reduce CO ₂ emissions by 2.9% (compared to the base year of 2019). The Company will determine the self-use or wholesale of electricity to TPC or customers with green power demands based on the carbon fee and cap condition.
Long-term Target 2032 and after	6.3%	The wholesale contract with TPC of the existing wind turbines with a capacity of 11.5 MW will end at the end of 2031. The total output of renewable energy will be equivalent to 6.3% of the total electricity demand to reduce CO ₂ emissions by 4.7% (compared to the base year of 2019). The Company will determine the self-use or wholesale of electricity to TPC or customers with green power demands based on the carbon fee and cap condition.

6. Emissions Reduction Operations

The Company began to adjust the EAF production processes in 2021 to avoid the under-temperature of the secondary EAF at cast initiation during single-shift production. The Company also shortened the power transmission time for heating in some processes to reduce EAF electricity consumption by 4.0 kWh/T to reduce emissions by 1,547.360 MtCO₂e in 2021 and conserve energy at the same time. The 13 emissions reduction operations implemented in 2020 are as follows:

Works	Energy Conservation and Carbon Reduction	Estimated Electricity Conserved (GJ)	Estimated Carbon Reduced (tCO ₂ e)
Taoyuan Works	Controlling electricity consumption of the roller motors and inverter cooling systems at Rolling II to reduce electricity consumption	5.52	0.78
	Adjustment of the fan speed of dust collectors to reduce energy consumption	1,003.87	141.94
	Energy conservation of the continuous water pumps: Using timer control to prevent energy waste	160.04	22.63
	High-efficiency compression air system with inverter control: Replacing the original 1250 hp centrifugal air compressors with the 600 hp inverter screw air compressors	5832.06	824.59
	Installing inverters on the water supply pumps in Rolling II	155.52	21.99
	Implementing systematic reduction of electricity consumption during the summer electricity rates period of TPC: Daily 6 Hours Less Plan and Non-Summer Month Demand Price Competition Plan	175,627.00	24,831.70
Miaoli Works	Enhancing the speed of continuous BB billet steel to reduce the refining time after the molten steel furnace	10,920.00	1,616.80
	Replacing the cooling fans for the cooling beds with high-efficiency axial fans for electricity conservation	1,485.60	220.00
	Replacing high-pressure sodium vapor lamps with LED lamps in finished product warehouses 1 and 2	941.90	139.40
	Eliminating five low-efficiency cooling towers, replacing all motors with IE3 high-efficiency motors, replacing fan blades with energy-efficient FRP blades	78.40	11.60
	Installing new demand monitoring equipment to reduce errors from 3% to within 1% to reduce loss from unnecessary power transmission	97.20	14.40
Kaohsiung Works	Saving electricity by 912,395 kWh through the TPC Electricity Demand Price Competition.	3,284.62	464.40
	Replacing inverter air conditioner systems in the computer room to save electricity by 5,702.4 kWh	20.53	2.90
THS Total		186,089.20	28,313.10


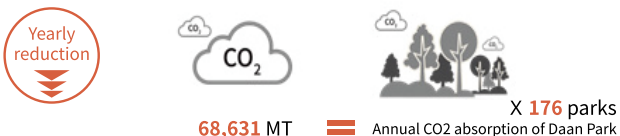
7. Products with Low Emissions

The Company's products are low-carbon products classified by means off emission intensity. The profit from low-carbon products in the reporting year is 100%. We produce products by melting used steel using EAFs. Compared to blast furnace-basic oxygen steelmaking (BOS), our products are more environmentally competitive than BOS products because of their low-carbon characteristics.

EAF steel is a low-carbon, recycled material. Its major material, waste steel, is a valuable recycled resource from what is called the "urban mine". A large quantity of waste steel is collected from different parts of Taiwan for smelting and refining into steel. Compared to BOS steel, EAF crude steel can reduce carbon by up to 1.5 tCO₂e/MT. To achieve the zero-emission goal, besides actively promoting the contributions to society of the expansion of low-carbon steel, the Company will continue to introduce the latest feasible technology to significantly reduce carbon emissions to become the world's leader of EAF steel.

Currently, most re-bar makers need to reheat billet steel for rolling and forming. In 2006, the Company invested a large amount of resources to improve the production process. In 2010, the Taoyuan Works became the first steelmaker in Taiwan to produce steel plates with using EAFs. By integrating refining with the modern rolling process, the Company adopted the direct rolling process without using the reheating furnace to become Taiwan's first re-bar makers without using the reheating furnace.

When no reheating furnace is required, no fuel such as crude oil or natural gas will be consumed for heating. Compared to traditional processes, this process can significantly reduce energy consumption and air pollution. The low-energy consumption and near-zero pollution performance of the Taoyuan Works' production processes is a new milestone in the steelmaking industry. The direct rolling by skipping the reheating furnace was copied and implemented by many steelmakers at home and abroad.

Benefits of Direct Rolling (No-Reheating) Versus Traditional Rolling			
Energy consumption	Reduced by 85%	Particulate matters (PM)	Reduced by 100%
Carbon emissions	Reduced by 60%	NOx and SOx	Reduced by 100%
<p>More energy-efficient!</p>  <p>23,840,000 liter = X 22,495 cars Annual Energy Consumption of Cars</p>		<p>Direct rolling without reheating saves energy consumption by 29.8 (liter-crude oil/MT-re-bar) and 23,840,000 liters of crude oil/year, equivalent to the annual energy consumption of 22,495 cars (15,000km/year at 12km/liter).</p>	
<p>Greater CO₂ reduction!</p>  <p>68,631 MT = X 176 parks Annual CO₂ absorption of Daan Park</p>		<p>The statistics of the Bureau of Energy show, the annual CO₂ absorption of Daan Park is 389 tCO₂e.</p>	

Note: The above calculations are based on the actual performance at an annual output of 800,000 MT of the Taoyuan Works and the Bade Works (former Taoyuan Works).

Appendix: BSI Statement of Assurance



Conformity Statement

Climate related Financial Disclosure

This is to conform that

Tung Ho Steel Enterprise Corporation
6F.
No. 9, Sec. 1, Chang-an E. Rd.
Zhongshan Dist.
Taipei City, 104003
Taiwan

東和鋼鐵企業股份有限公司
臺灣
台北市
中山區
長安東路一段9號
6樓
104003

Holds Statement Number

CFD 742666

As a result of carrying out conformity check process based on TCFD requirement, BSI declares that:

- Tung Ho Steel Enterprise Corporation follows Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to disclose climate-related financial information which is clear, comparable and consistent about the risks and opportunities and its financial impact. The disclosures cover four core elements and have been prepared by seven principles for effective disclosures.
- The maturity model for the Climate-related Financial Disclosures is **Level-5: Excellence** grade.

For and on behalf of BSI

Managing Director BSI Taiwan, Peter Pu

Latest issue: 2021-05-26

Expiry date: 2022-05-25

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Statement number: CFD 742666

Location:

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Conformity Check Overall Result:

The maturity model for the Climate-related Financial Disclosures is **Level-5: Excellence** grade.



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