



**Voltronic Power Technology Corp.**

## **2023 TCFD Report**

**Task Force on Climate-Related Financial Disclosures**

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# Core Elements of Recommended Climate-Related Financial Disclosures

## Governance

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

### Core Disclosures

- Describe the board's oversight of climate-related risks and opportunities.
- Describe management's role in assessing and managing climate-related risks and opportunities.

### Declaration from the Chairperson



**Hsieh, Juor-Ming**

Chairperson and ESG  
Executive Committee  
Chairperson

We pursue the United Nations SDGs and follow the Paris Agreement's global GHG net-zero emission by 2050 initiative as our highest guiding principle for business sustainability operations.

The global value chain we are in has determined that the intensity of GHG emissions from our Self-Operating in Scope 1 and Scope 2 companies must be reduced by 30%, 40%, and 50% respectively in 2023, 2024, and 2025, based on 2020 as the baseline year .

In 2023, we introduced the ISO GHG inventory standard and completed assurance , that the intensity of GHG emissions was 18 tCO<sub>2</sub>e/MUSD, a decrease of 46% compared to 2020, an estimated decrease of 48% in 2024, and 53% in 2025, respectively. It should be possible to achieve the aforementioned goals.

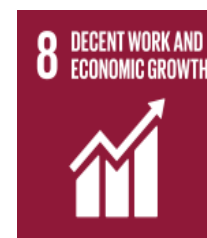
We are also actively investing in environmentally friendly and sustainable machinery and equipment related to energy conservation or green energy. Currently, when all investment projects are completed, we can reduce GHG emissions by annual 898 t CO<sub>2</sub> e , equivalent to the planting benefits of 6285 trees.

The UPS and PV Inverter we sold in 2023 contribute annual 723,784 tCO<sub>2</sub>e to reducing GHG emissions for consumers, which is 64.6 times the our Self-Operating GHG emissions in Scope 1 and Scope 2 companies , our goal for 2050 is to grow to 96 times.

## Climate Change

NET-ZERO  
EMISSIONS  
2050

### Climate change related SDGs



## Sustainability Organization in response to Climate Change

### Climate Change Governance and Management Framework

#### Board of Directors

Supervise overall climate change actions (SDG13) and related risks and opportunities actions (SDGs12, 7 and 8)

#### Sustainability Committee

Responsible for the related matters of sustainability (including Environment · Social and Governance), consists of three independent directors, and regularly report the relevant necessary matters (including climate change actions) to board of directors.

#### ESG Executive Committee

Highest decision-making and implementation center for climate change actions, chaired by the chairperson and regularly reports to the board of directors.

#### Climate Change Management Committee

Chaired by CEO, leads all management teams to manage climate change risks and opportunities actions.

#### Climate Risk Management Committee

Responsible for the identification and implementation of risk control proposals for climate change and continue to enhance relevant risk management.

### The Key Points of the Board of Directors' Climate Change Supervision

#### Board of Directors

Supervise the Company's ESG Governance Strategies and Actions

Review the 2023 ESG report and the 2023 TCFD report

#### Audit Committee

Supervise the Company's overall operational risks (including climate change risks)

Review the prioritization of risk controls against climate change risks (including but not limited to electricity shortage, natural disaster), and build software / hardware control measures.

#### Compensation Committee

Evaluate and implement performance-based compensation plan for management related to ESG (including climate change) achievements

Review and plan on the issuance of employee Restricted Stock Awards (RSAs), in order to attract and retain employee and to link their compensation with ESG achievements (including climate change management).  
The RSAs was approved at Board on February 24, 2022, and had been adopted at Annual Shareholder's Meeting in June 2022.

### Provide incentives for climate change actions

#### Chief Executive Officer (CEO)

Recognition

Emissions reduction  
Energy reduction  
Supply chain engagement  
R&D and Manufacture and Sale of Sustainability Products

#### Other Named Executive Officers

Monetary  
Recognition

Emissions reduction  
Energy reduction  
Supply chain engagement  
R&D and Manufacture of Sustainability Products

#### Business Unit Managers Business Unit Employees

Monetary  
Recognition

Sale of Sustainability Products

#### R&D Unit Employees

Monetary  
Recognition

R&D of Sustainability Products

#### Manufacture Unit Employees

Monetary  
Recognition

Manufacture of Sustainability Products



## Sustainability Organization in response to Climate Change

The board's oversight of climate-related risks and opportunities.

### Board of Directors

- The Board reviews the annual ESG report and TCFD report regularly every year.
- The Board regularly approves the annual climate related risk and opportunity management strategy and plan objectives formulated by the ESG Executive Committee every year (including but not limited to major plans of action, risk management policies, annual budgets and business plans as well as setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures , all consider climate-related issues )
- The Climate Change Management Committee will implement the annual climate related risk and opportunity management strategy and plan, and the annual performance results shall be reported to the Board of Directors by the ESG Executive Committee.
- The report of the Climate Risk Management Committee on the ever-changing risk environment, the focus of the Company's enterprise risk management, and risk assessment and mitigation efforts faced by the company, shall be reported to the board of directors by the Audit Committee.
- The Board regularly approves the performance-based compensation plan proposed by the Compensation Committee for management related to ESG (including climate change) achievements.

### ESG Executive Committee

- Be responsible for formulating and implementing the company's short, medium and long-term climate change Governance Strategies and plans.
- Formulate the annual climate related risk and opportunity management strategy and plan objectives according to the climate change governance strategy and plan, and submit them to the Climate Change Management Committee for implementation after being approved by the Board of Directors, is also responsible for supervising the implementation performance of the Climate Change Management Committee .

Management's role in assessing and managing climate-related risks and opportunities

### Climate Change Management Committee

- The Company has assigned climate-related responsibilities to management-level :
  - Set up a Climate Change Management Committee, chaired by CEO, leads all management teams to manage climate change risks and opportunities actions. All management teams include business department, management department, finance department, R & D department, marketing department, procurement department, information department, production and manufacturing department of each plant, audit office, corporate governance etc. unit directors.
  - The Climate Change Management Committee is responsible for implementing the annual climate-related risk and opportunity management strategy and plan objectives which formulated ESG Executive Committee and approved by the Board of Directors.
  - The Climate Change Management Committee meets quarterly to review the implementation progress of the annual climate-related risk and opportunity management strategy and plan objectives. In case of difficulties or other suggestions, it will immediately report to the ESG Executive Committee for assistance.
  - The annual performance results of Climate Change Management Committee in implementing the annual climate-related risk and opportunity management strategy and plan objectives shall prepare an annual report and submit it to the ESG Executive Committee to report to the Board of Directors.



# Core Elements of Recommended Climate-Related Financial Disclosures

## Strategy

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

## Core Disclosures

- Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

## Comprehensive Strategic Objectives in response to the Special Report on Global Warming of 1.5°C

The **Special Report on Global Warming of 1.5°C** (Global Warming of 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.), since it is an important research report of [the Paris Agreement](#), its goal of "reaching 'net zero' around 2050" is also the goal of global international enterprises including VPT.

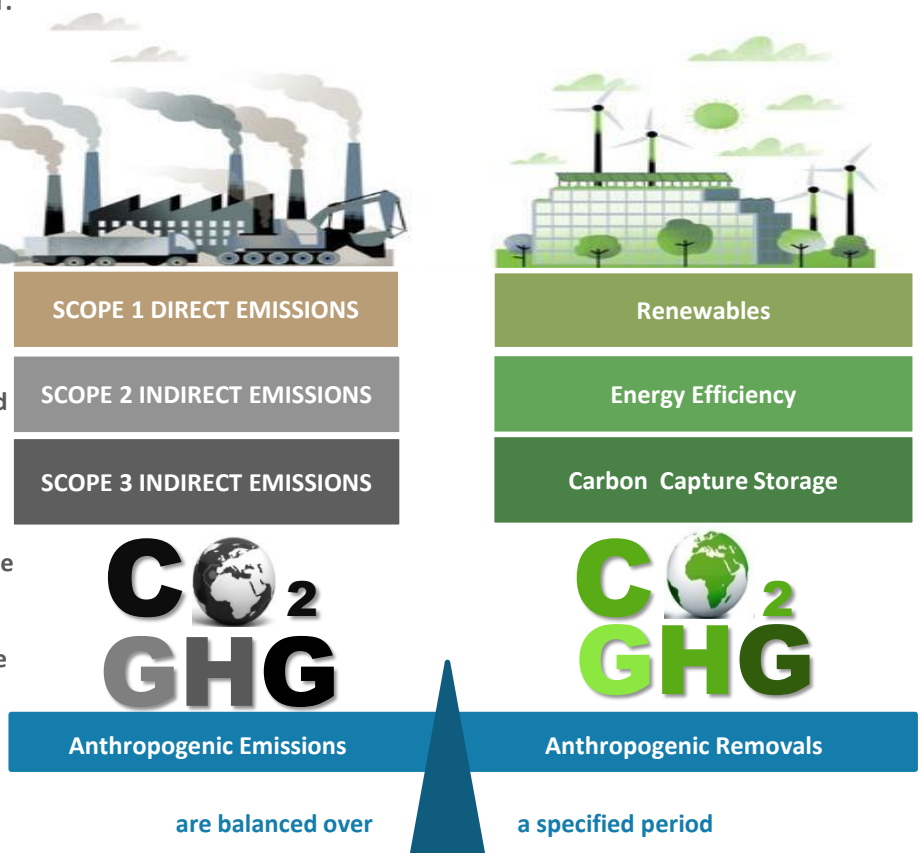


### Net zero CO<sub>2</sub> emissions = carbon neutrality

Net zero carbon dioxide (CO<sub>2</sub>) emissions are achieved when anthropogenic CO<sub>2</sub> emissions are balanced globally by anthropogenic CO<sub>2</sub> removals over a specified period. Net zero CO<sub>2</sub> emissions are also referred to as carbon neutrality.

### Net zero emissions

Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. Where multiple greenhouse gases are involved, the quantification of net zero emissions depends on the climate metric chosen to compare emissions of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon).



VPT committed to reaching the objectives of responding to climate change :

Net Zero Emissions in our own operation by 2035.

Net Zero Emissions in the value chain by 2050.

#### Climate change related SDGs



### Using climate-related scenario analysis

#### Strategy

Refers to an organization's desired future state. An organization's strategy establishes a foundation against which it can monitor and measure its progress in reaching that desired state. Strategy formulation generally involves establishing the purpose and scope of the organization's activities and the nature of its businesses, taking into account the risks and opportunities it faces and the environment in which it operates.

#### Financial planning

Refers to an organization's consideration of how it will achieve and fund its objectives and strategic goals. Financial planning allows organizations to assess future financial positions and determine how resources can be utilized in pursuit of short- and long-term objectives. As part of financial planning, organizations often create "financial plans" that outline the specific actions, assets, and resources (including capital) necessary to achieve these objectives over a 1- 5 year period. However, financial planning is broader than the development of a financial plan as it includes long-term capital allocation and other considerations that may extend beyond the typical 3-5 year financial plan (e.g., investment, research and development, manufacturing, and markets).

#### Low-carbon transition plan

A plan on how to transition the company to a business model compatible with a net-zero carbon economy. The Oxford Martin Net Zero Carbon Investment Initiative proposes a set of principles to facilitate engagement between investors and companies on long-term climate strategies. According to these principles, companies should: (1) Commit to a timeframe to reach net-zero emissions in line with the Paris goals; (2) Demonstrate that they will be able to continue to be profitable once they reach net-zero emissions; and (3) Set quantitative mid-term targets to be able to demonstrate progress against their long-term goals.

#### Transition plan

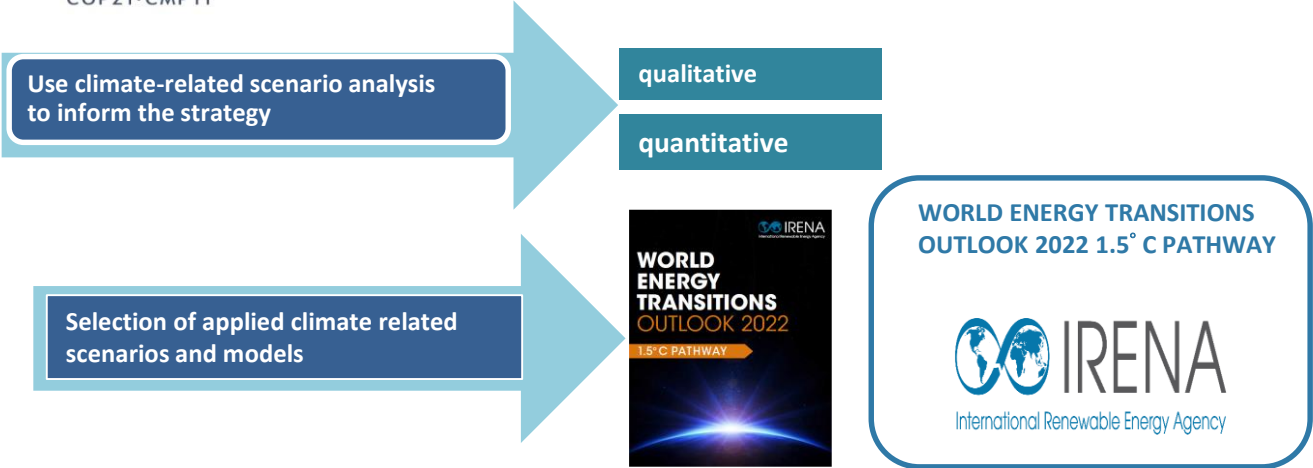
Defines how the business model, its associated products and production methods, growth strategy and capital investments need to develop over time to respond to climate-related risks and to capitalize on opportunities. A transition plan is therefore a plan that outlines how a company will transition from where it is now to where it needs to get to in order to thrive in a net-zero carbon world in the future.

Developed a low-carbon transition plan

A plan on how to transition the company to a business model compatible with a net-zero carbon economy



- Commit to a timeframe to reach net-zero emissions in line with the Paris goals
- Demonstrate that will be able to continue to be profitable once they reach net-zero emissions
- Set quantitative mid-term targets to be able to demonstrate progress against the long-term goals



**Towards the 2050 goal**

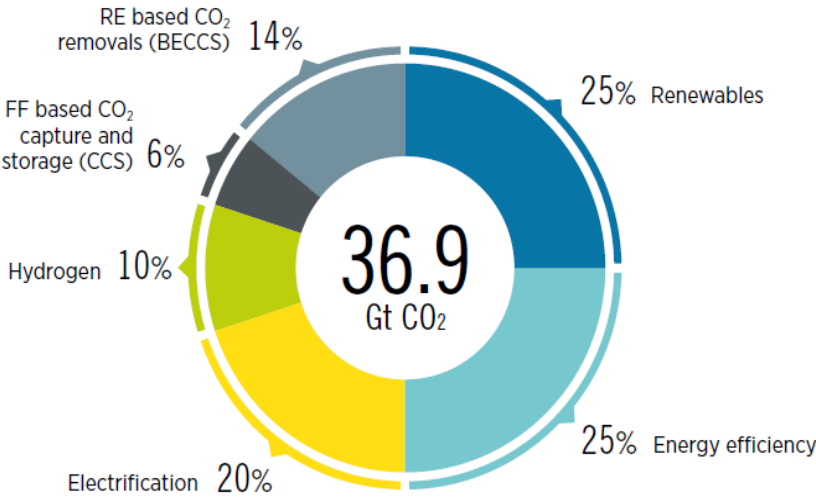
IRENA's 1.5°C pathway positions electrification and efficiency as key drivers of the energy transition, enabled by renewables, hydrogen, and sustainable biomass.

This pathway, which requires a massive change in how societies produce and consume energy, would result in a cut of nearly 37 gigatonnes of annual CO<sub>2</sub> emissions by 2050.

These reductions can be achieved through 1) significant increases in generation and direct uses of renewables-based electricity; 2) substantial improvements in energy efficiency; 3) the electrification of end-use sectors (e.g. electric vehicles and heat pumps); 4) clean hydrogen and its derivatives; 5) bioenergy coupled with carbon capture and storage; and 6) last-mile use of carbon capture and storage.

#### Reducing emissions by 2050 through six technological avenues

CCS = carbon capture and storage; BECCS = bioenergy with carbon capture and storage; GtCO<sub>2</sub> = gigatonnes of carbon dioxide; RE = renewable energy; FF = fossil fuel.



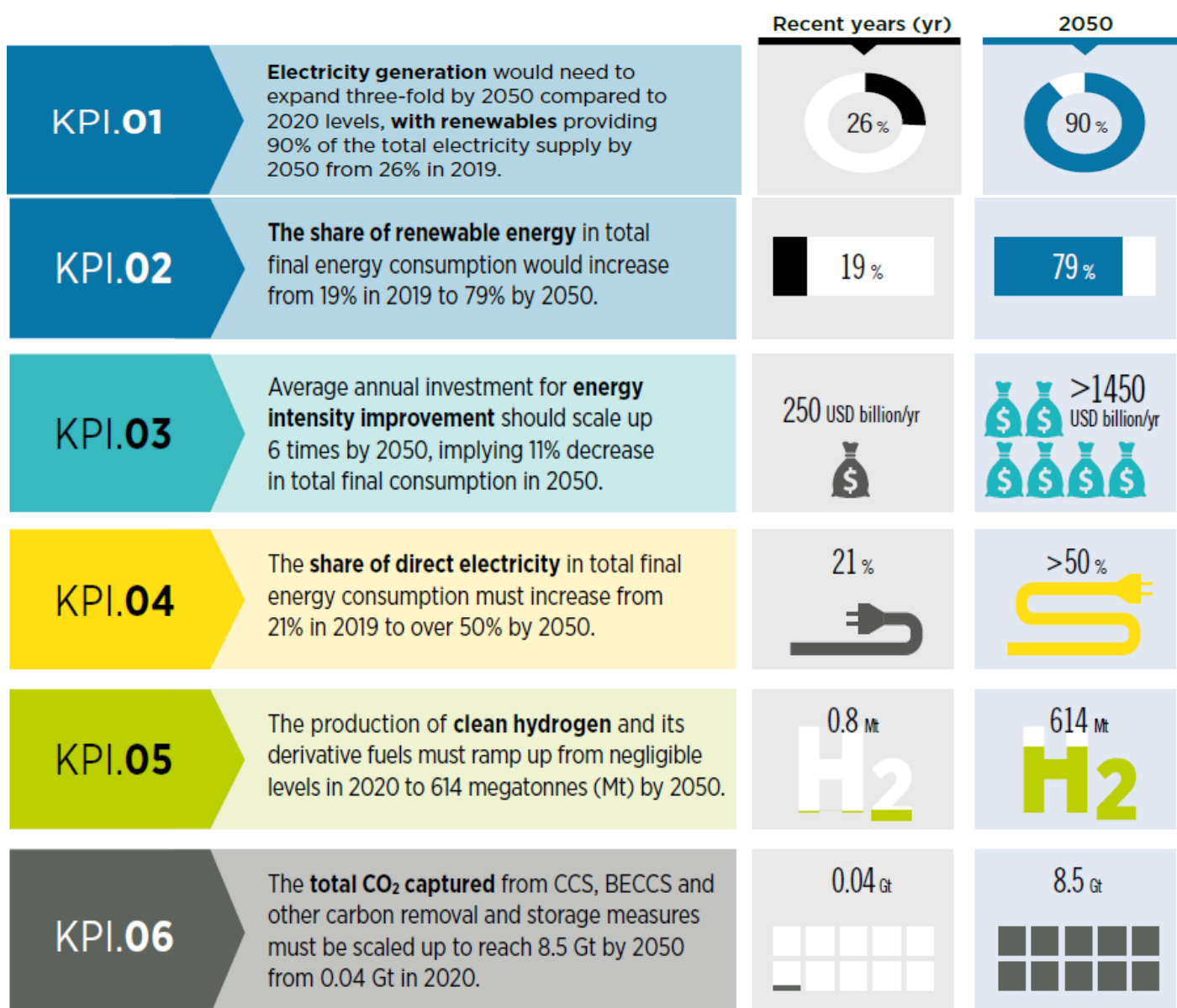
By 2050, annual abatement of 36.9 gigatonnes (Gt) of carbon dioxide (CO<sub>2</sub>) is achievable, compared to a reference case based on planned targets and policies. The 1.5°C Scenario outlined in the 2021 WETO envisions six technological avenues of an energy transition compatible with meeting the 1.5°C Paris climate goal (IRENA, 2021a):



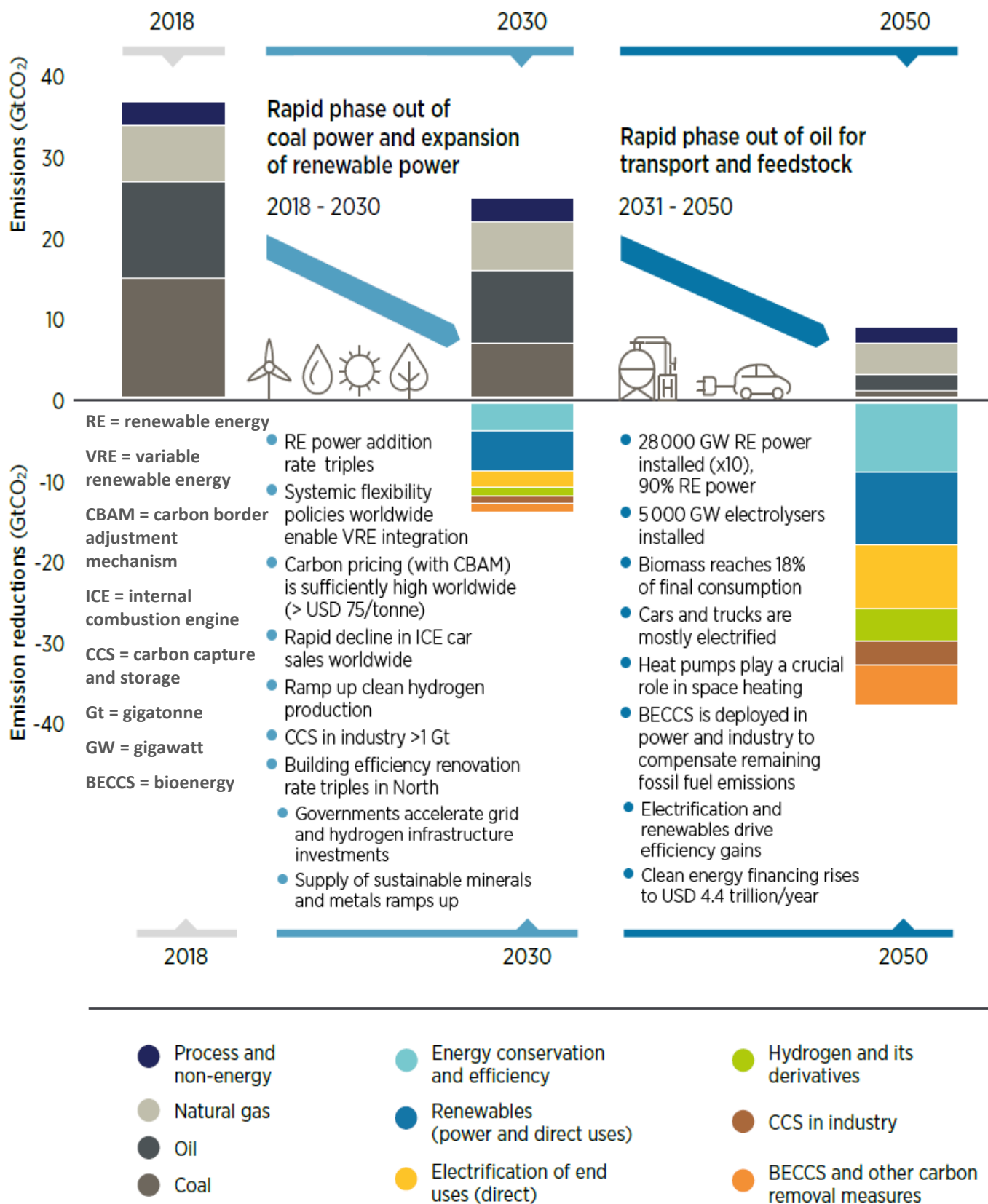
1. **Renewables:** Renewable electricity generation sources such as solar PV, wind etc., and the direct use of renewable energy, such as solar thermal and biomass.
2. **Energy conservation and efficiency:** Measures to reduce energy demand and increase the energy efficiency of end-use applications, including structural changes (e.g. relocation of steel production with direct reduced iron, a modal shift in transport) and circular economy practices (e.g. alternative cement materials).
3. **Electrification of end-use sectors:** Direct use of clean electricity in transport and heat applications.
4. **Hydrogen and its derivatives:** Direct use of clean hydrogen (predominantly green hydrogen) along with synthetic fuels (green ammonia and methanol) and clean hydrogen-based feedstocks.
5. **Carbon capture and storage (CCS):** The carbon captured and stored from point-source fossil fuel based and other emitting processes, mainly in industry.
6. **Bioenergy coupled with carbon capture and storage (BECCS) and other carbon removal measures:** Bioenergy coupled with carbon is captured and stored: in electricity, heat generation and industrial process (e.g. cement kilns and chemical production).

Pursuing these six technological avenues at a rapid pace would result in significant emission reductions between today and 2050, paving the way to a net zero carbon world by mid-century.

























#### Key performance indicators for achieving the 1.5°C Scenario by 2050



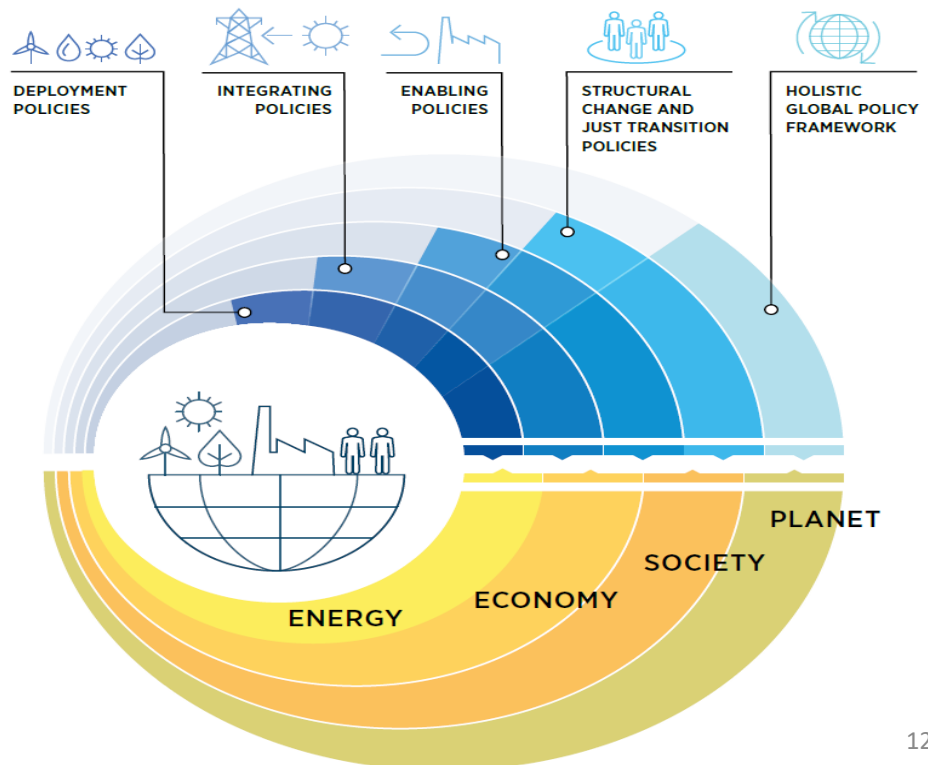
# Evolution of emissions in accordance with the deployment of technological avenues, 2018–2050



		Indicators	Recent years	2050 <sup>22)</sup>	Off/On track	Required scaling factor (~X times)
RENEWABLES	ELECTRIFICATION WITH RENEWABLES					
		Share of renewables in electricity generation	26% <sup>1)</sup>	90%		3x
		Addition of renewable energy technologies	264 GW/yr <sup>2)</sup>	836 GW/yr		3x
		Annual solar PV additions	126 GW/yr <sup>3)</sup>	444 GW/yr		4x
		Annual wind energy additions	115 GW/yr <sup>4)</sup>	248 GW/yr		2x
		Investment needs for RE generation	0.3 USD trillion/yr <sup>5)</sup>	1 USD trillion/yr		3x
	DIRECT RENEWABLES IN END-USES					
		Share of renewables in final energy consumption	16% <sup>6)</sup>	79%		5x
		Solar thermal collector area	25 million m²/yr <sup>7)</sup>	165 million m²/yr		6x
		Modern bioenergy consumption	18 EJ <sup>8), 23)</sup>	58 EJ		3x
ENERGY EFFICIENCY		Geothermal consumption	0.9 EJ <sup>9)</sup>	4 EJ		4x
		District heat generation - buildings	0.4 EJ <sup>10)</sup>	7.3 EJ		Significant increase
		Energy intensity improvement rate	1.2%/yr <sup>11)</sup>	2.9%/yr		2x
		Investment needs for energy efficiency	0.3 USD trillion/yr <sup>12)</sup>	1.5 USD trillion/yr		5x

ELECTRIFICATION	Share of direct electricity in final energy consumption	21% <sup>13)</sup> 	50% 		3x
	Passenger electric cars on the road	7 million/yr <sup>14)</sup> 	147 million/yr 		Significant increase
	Investments needs for charging infrastructure of EV's	2 USD billion/yr <sup>15)</sup> 	131 USD billion/yr 		Significant increase
HYDROGEN	Clean hydrogen production	0.8 Mt <sup>16), 21)</sup> 	614 Mt 		Significant increase
	Investment needs for clean hydrogen infrastructure	0 <sup>17)</sup> 	116 USD billion/yr 		Significant increase
	Clean hydrogen consumption - industry	0 <sup>18)</sup> 	38 EJ 		Significant increase
CCS AND BECCS	CCS to abate emissions in industry	0.04 GtCO <sub>2</sub> captured/yr <sup>19)</sup> 	3.4 GtCO <sub>2</sub> captured/yr 		Significant increase
	BECCS and others to abate emissions in industry	0.001 GtCO <sub>2</sub> captured/yr <sup>20)</sup> 	5.0 GtCO <sub>2</sub> captured/yr 		Significant increase

A holistic policy framework for energy transition



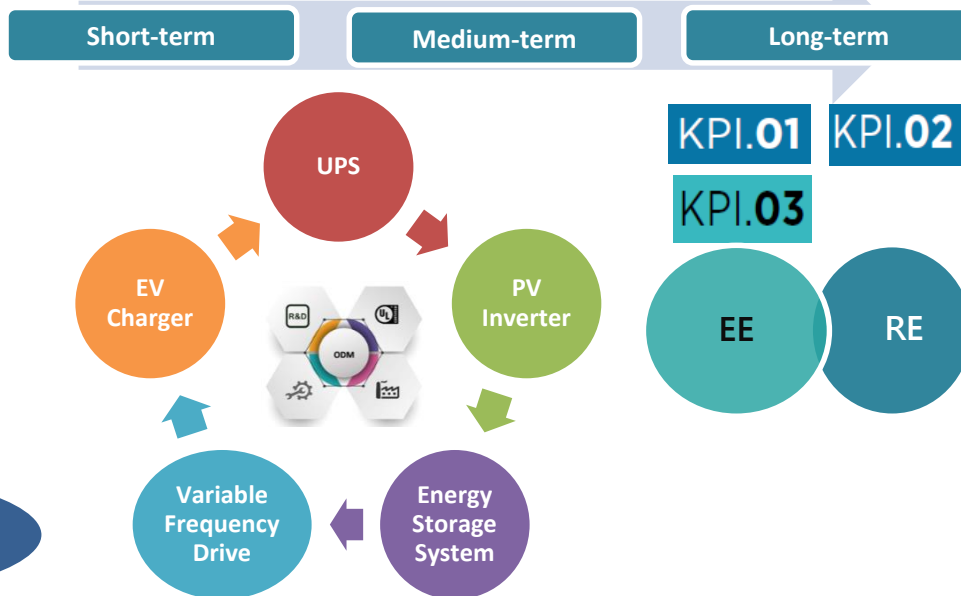
## Identified opportunities Products and Services



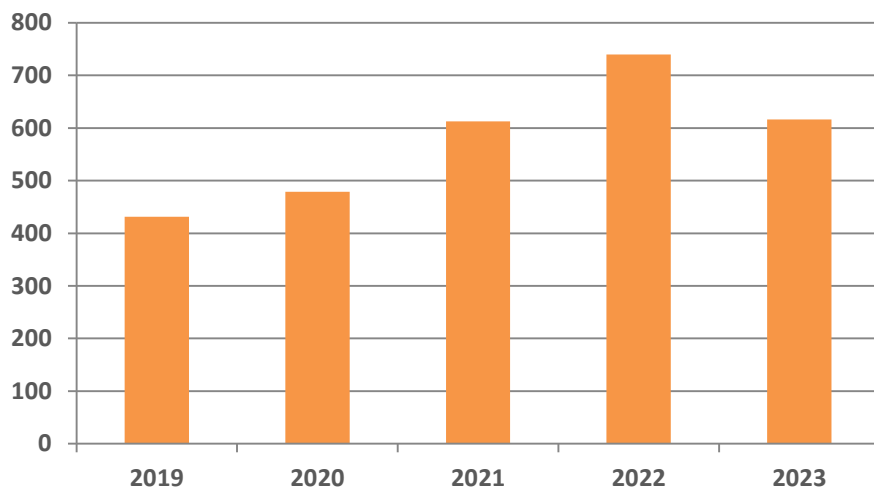
According to IRENA's 1.5°C pathway scenario analysis, by 2050, the Global CO<sub>2</sub> emissions reductions by 25% will depend on Energy Efficiency and 25% on Renewables. All products of VPT have Energy Efficiency benefits, and PV Inverter has both Energy Efficiency and Renewables benefits, called Sustainability products. So, VPT can be called the Sustainability Sector.



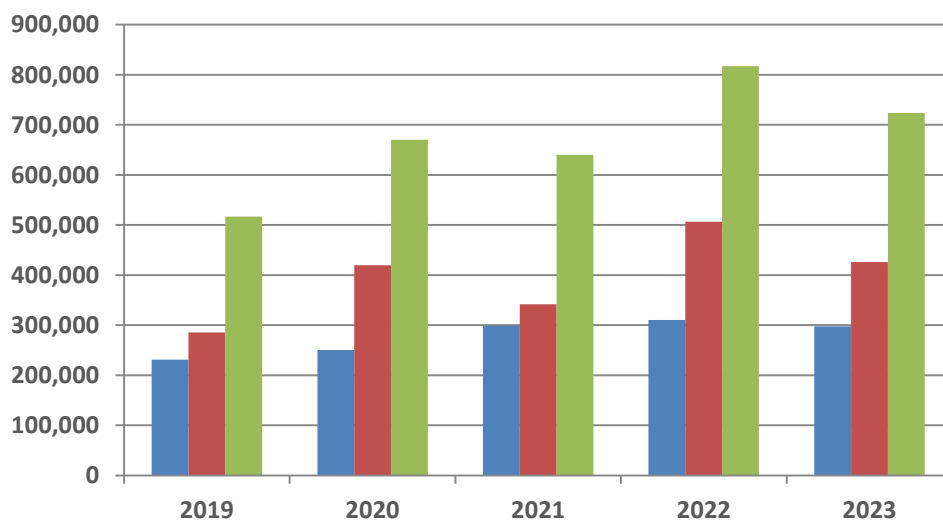
Sustainability Sector



Relationship between VPT's operating revenue and GHG emission reduction benefits provided by sales of products



■ OPERATING REVENUE / Million dollars



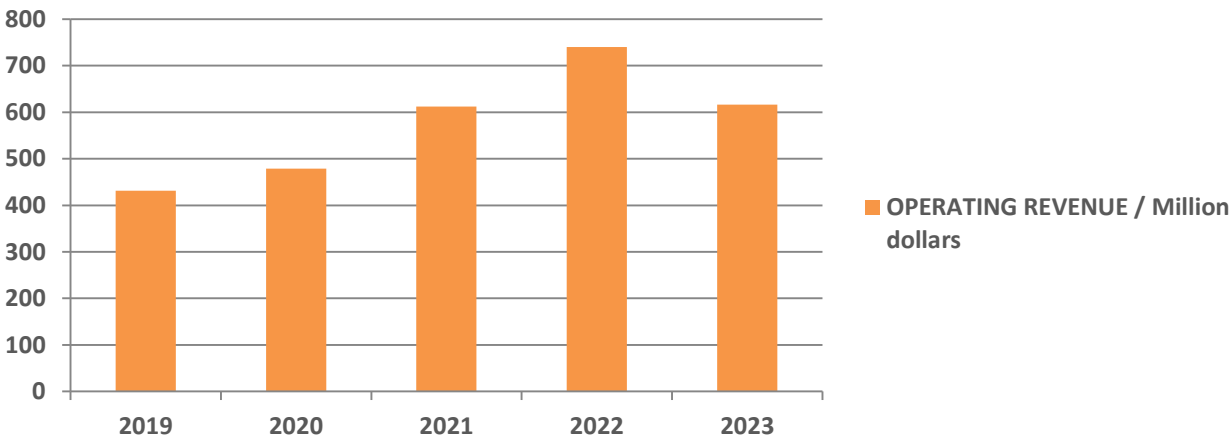
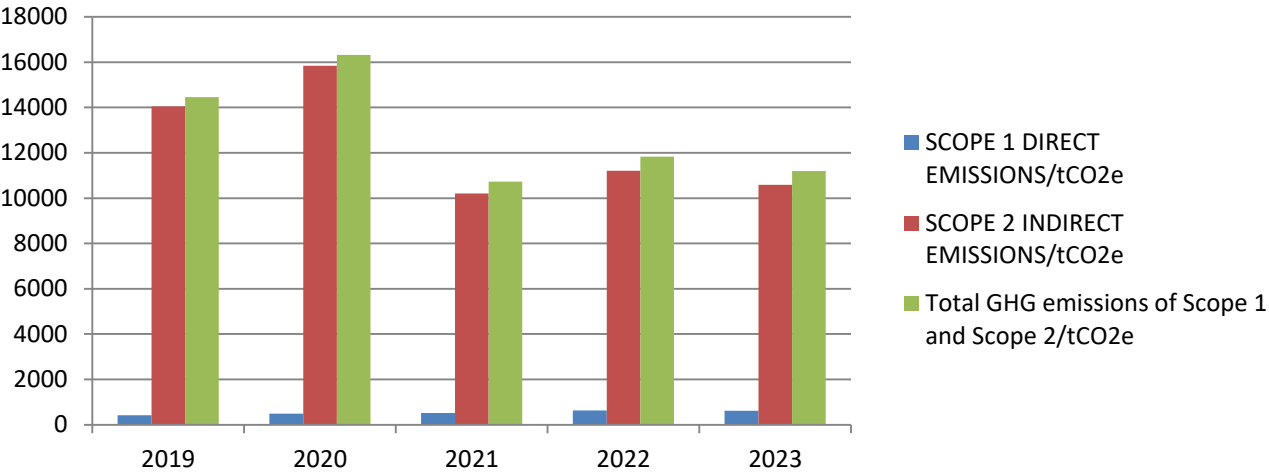
■ UPS / tCO2e

■ PV Inverter / tCO2e

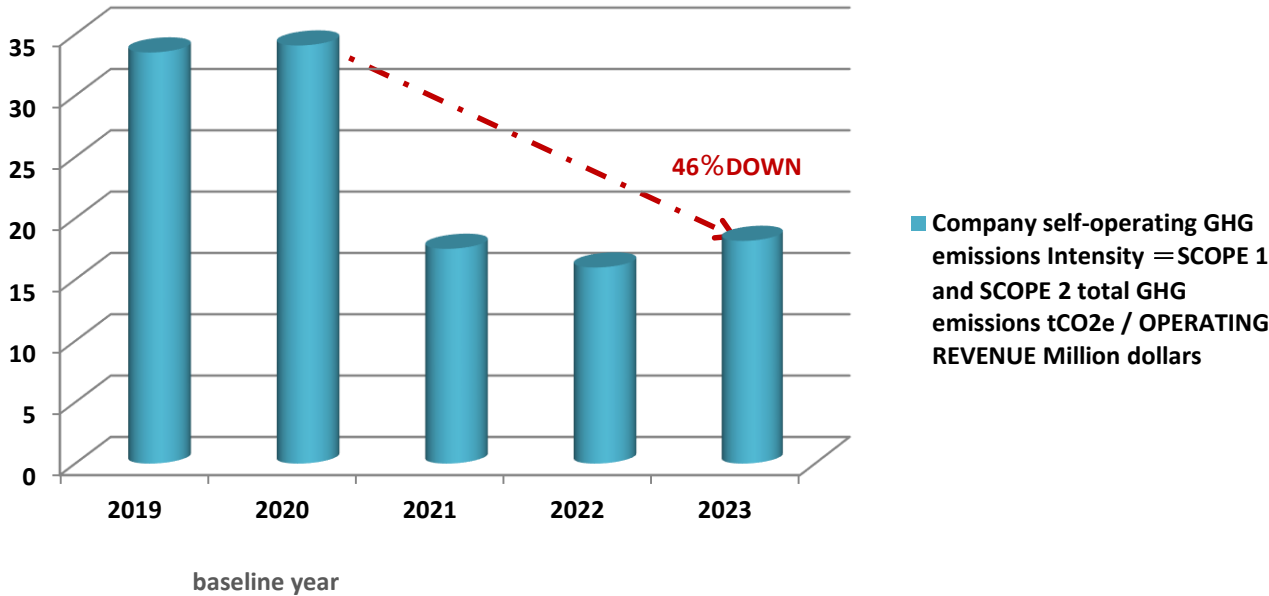
■ Total GHG emission reduction benefits / tCO2e



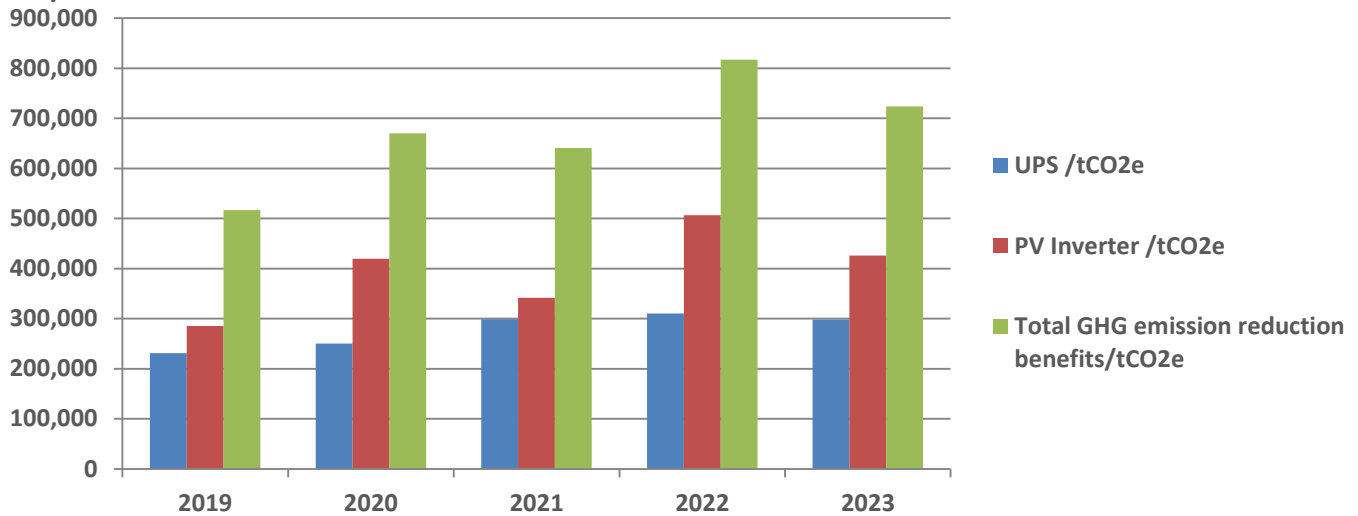
GHG emissions from our Self-Operating in Scope 1 and Scope 2 companies



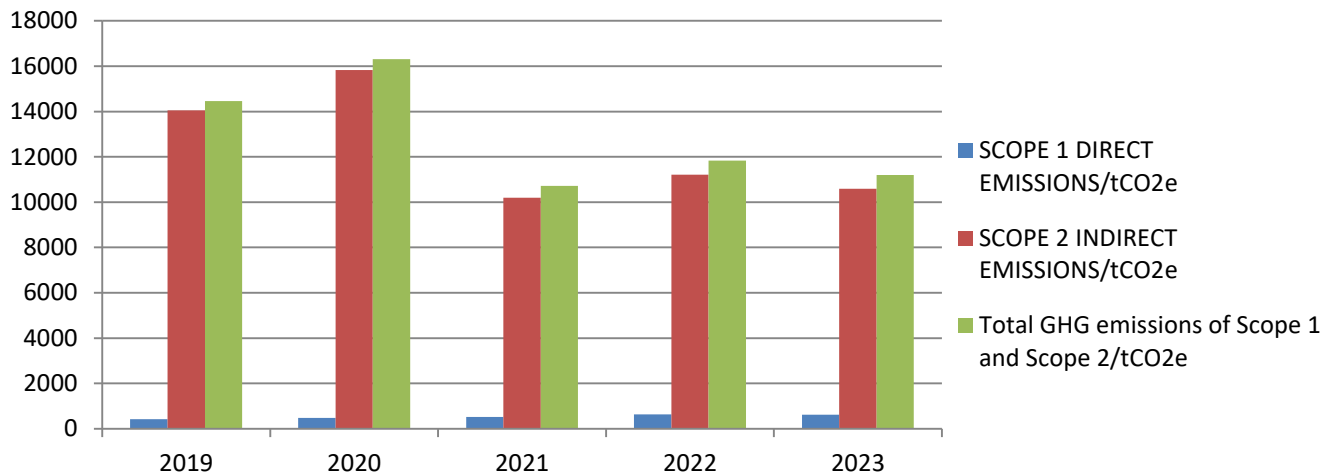
The intensity of GHG emissions from our Self-Operating in Scope 1 and Scope 2 companies



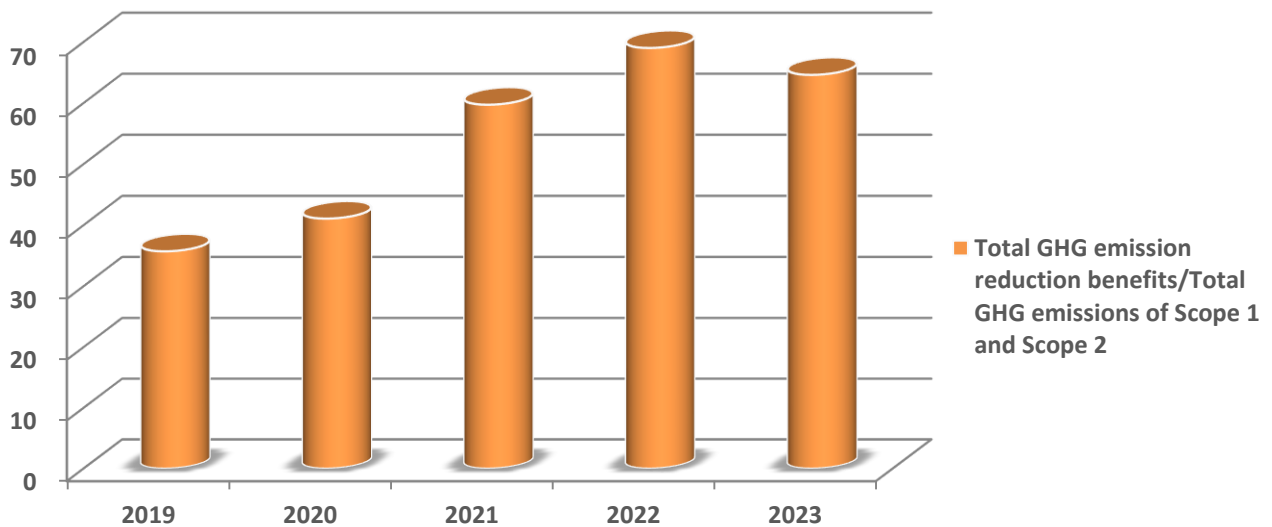
### GHG emissions reduction benefits provided by sales of products



### GHG emissions from our Self-Operating in Scope 1 and Scope 2 companies



### The GHG emission reduction benefits of sales products / Self Operating (Scope 1+Scope 2) GHG emissions — times



#### Strategy 1

Due to the current situation of the local government in Taiwan and the global value chain, **the GHG emissions management for Self-Operating (Scope 1 and Scope 2 companies )** is adopted as follows: **the intensity of GHG emissions from the company's Self-Operating =the total GHG emissions in Scope 1 and Scope 2 tCO<sub>2</sub>e/Operating Revenue in Millions of US dollars.**

Previously, VPT used the intensity of GHG emissions from **Self-Operating** in 2020 as the baseline year, and must to reduce them by 30%, 40%, and 50% respectively in 2023, 2024, and 2025.

In 2023, we introduced the ISO GHG inventory standard and completed assurance , that the intensity of GHG emissions was 18 tCO<sub>2</sub>e/MUSD, a decrease of 46% compared to 2020, an estimated decrease of 48% in 2024, and 53% in 2025, respectively. It should be possible to achieve the aforementioned goals.

#### Strategy 2

All products of VPT have Energy Efficiency benefits, and PV Inverter has both Energy Efficiency and Renewables benefits .Therefore, if **Selling products to provide customers with GHG emission reduction benefits tCO<sub>2</sub>e ≥ Total GHG emissions in the value chain tCO<sub>2</sub>e**, that is to **achieve the goal of net zero carbon emissions in the value chain.**

Therefore, VPT replaces **individual management of absolute figures of all carbon emissions (Scope 1, 2 and 3) in the value chain** with **the above goal of achieving net zero carbon emissions in the value chain.** That is :

**Pursue growth of operating revenue = Growth of GHG emission reduction benefits of all products sold = Realization of the goal of net zero carbon emissions in the value chain.**

The UPS and PV Inverter we sold in 2023 contribute annual 723,784 tCO<sub>2</sub>e to reducing GHG emissions for consumers.

#### Strategy 3

All products of VPT have Energy Efficiency benefits, and PV Inverter has both Energy Efficiency and Renewables benefits .Therefore, the higher the multiple of **GHG emission reduction benefits of all products sold tCO<sub>2</sub>e/ the GHG emissions for Self-Operating (Scope 1 and Scope 2 companies )**, **the closer it is to achieving the goal of net zero carbon emissions in the value chain.**

The UPS and PV Inverter we sold in 2023 contribute annual 723,784 tCO<sub>2</sub>e to reducing GHG emissions for consumers, which is 64.6 times the our Self-Operating GHG emissions in Scope 1 and Scope 2 companies , our goal for 2050 is to grow to 96 times.

#### Strategy 4

We are also actively investing in environmentally friendly and sustainable machinery and equipment related to energy conservation or green energy(such as Stereoscopic Warehouse, Solar Photovoltaic, EV Charger, and Energy Storage). **Currently, when all investment projects are completed, we can reduce GHG emissions by annual 898 t CO<sub>2</sub> e , equivalent to the planting benefits of 6285 trees.**

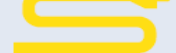
#### KPI.04

The **share of direct electricity** in total final energy consumption must increase from 21% in 2019 to over 50% by 2050.

21 %



>50 %



#### Strategy 5

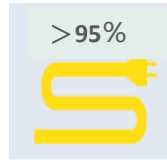
Due to **KPI.04**, which regulates the share of direct electricity in total final energy consumption, the VPT's **self-operating carbon emissions (SCOPE 1 and SCOPE 2 )** are also managed using the share of direct electricity in total final energy consumption.

VPT is not one of the following five industries with the largest final energy consumption in the world, is a Sustainability Industry. Moreover, the energy demand for its own operation mainly is electricity (99%), far exceeding the target of

KPI.04



Therefore, VPT has set its own operational target of KPI.04 as



Chemicals and  
petrochemicals

Iron and steel

Pulp and paper

Cement

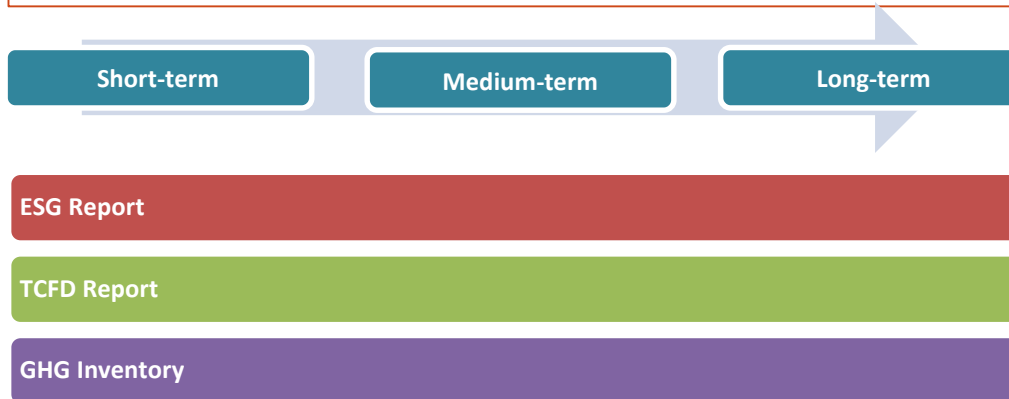
Aluminium



## Risk Disclosure

### Transition Risks - Emerging regulation

Net zero emissions are the trend issue faced by global enterprises. The inventory, certification and / or assurance, reporting of GHG emissions, and the preparation, certification and / or assurance, announce and register of ESG Report and Climate-related Financial Disclosure report are the obligations of global enterprises. The net zero emissions of the value chain involves the risk driving of upstream, direct operation and downstream. Therefore, the complete inventory of GHG emissions and low-carbon intensity products of the value chain are the trend of regulatory requirements from now to the future.



#### Using climate-related scenario analysis

##### Climate Risk Assessment - Physical Risk Scenario Analysis

- ☐ we have completed an assessment of material physical climate risks for our company.
- ☐ We publicly report on our scenario analysis
- ☐ We use qualitative and quantitative climate-related scenario analysis
- ☐ RCP Scenario: (The Representative Concentration Pathways, RCPs)

The difference in radiative forcing between 2100 and 1750 is used as an indicator to analyze future temperature and rainfall changes. It serves as the specification for numerical simulation (future climate estimation) as a climate model, is a description of the 21st century scenario under four different greenhouse gas emissions, air pollution emissions and land use conditions :

- ☐ rcp2.6 (The radiative forcing per square meter has increased by 2.6 watts) is a very low radiation forcing mitigation scenario;
- ☐ rcp4.5 and ☐ rcp6.0 are medium stable situations;
- ☐ rcp8.5 is a scenario of high greenhouse gas emissions.

In the absence of additional restrictions on emissions, it will be a scenario that is interposed to rcp6.0 and rcp8.5. Rcp2.6 represents a situation where global warming may be maintained within 2 degrees Celsius above the pre industrial revolution.

The simulation of future situation is consistent with the conclusion that the more carbon dioxide is emitted by human, the higher the degree of warming.

Compared with 1986-2005, the average temperature in the middle of this century (2046-2065) may rise by 0.4-2.6 degrees Celsius, and the average sea level height may rise by 0.17-0.38 m.

Our company's Physical Risk Scenario Analysis adopts

- ☐ RCP 2.6 , a very low radiation forcing mitigation scenario

- ☐ According to the scenario analysis of "Taiwan Climate Change Estimation Information and Adaptation Knowledge Platform " (TCCIP) and Network for Greening the Financial System (NGFS) climate scenario simulation model, the temperature and rainfall in the operational areas of various countries of VPT in RCP2.6 scenario is :



	RCP 2.6 Carbon dioxide concentration 421 ppm	
	Temperature	Rainfall
Taiwan	Rise by 0.92 °C	An increase of 4.36 millimeters per day in rainfall, with an average rainfall of 6.0 millimeters per day in Taiwan, equivalent to a 73% increase in rainfall
Mainland	Rise by 1.3 °C	3.6% increase in rainfall Comparison with data from 1986 to 2006
Vietnam	Rise by 1.0 °C	0.2% increase in rainfall Comparison with data from 1986 to 2006
Weather potential impact events	1.Fire prone 2. Shutdown due to flooding 3.Equipment/Tank Damage 4. Water quality deterioration (increased turbidity of raw water) affects process water use	

- Our company's operating headquarters and factory location in Taiwan, factory location in Mainland, and factory location in Vietnam have been carefully evaluated and selected; Historical data shows that these areas have not experienced any "weather potential impact events" under the RCP2.6 scenario in the past 15 years, and our current assessment does not have clear evidence that such "weather potential impact events" will occur within the next 15 years.
- Therefore, although we have performed a climate risk assessment for physical risks, but do not consider our company's assets and operations to be exposed to any material physical risks: Acute risks ( risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods ) or Chronic risks ( longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause sea level rise or chronic heat waves ) .

# Core Elements of Recommended Climate-Related Financial Disclosures

## Risk Management

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

## Core Disclosures

a) Describe the organization's processes for identifying and assessing climate-related risks.



b) Describe the organization's processes for managing climate-related risks.



c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

## Management Processes

### Explanation of terms

#### Climate-related Risk

Understand the contents of various international initiatives, reports and evaluation criteria related to climate change, and construct the implementation plan of the company to identify, assess and respond to climate related risks and opportunities.

#### Climate-related Opportunity

Refers to the potential positive impacts on an organization resulting from efforts to mitigate and adapt to climate change, such as through resource efficiency and cost savings, the adoption and utilization of low-emission energy sources, the development of new products and services, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market, and industry in which an organization operates.

#### Climate Risk Management

Climate risk management involves identifying, assessing and responding to risk to make sure organizations achieve their objectives. It must be proportionate to the complexity and type of organization involved.

## Process for identifying, assessing, and responding to climate-related risks and opportunities

### Climate Risk Management Committee



Refers to the potential negative impacts of climate change on an organization. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation, temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations.



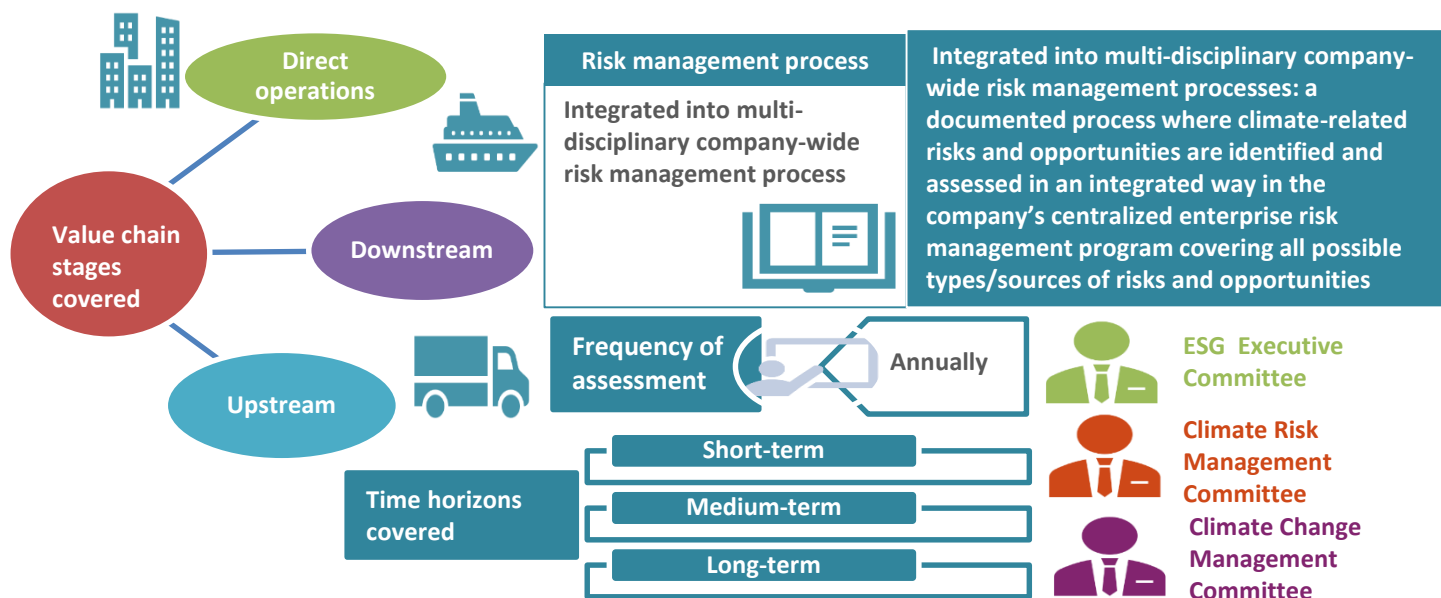
Operate an Enterprise Risk Management program to integrate and manage the Transition Risks and Physical Risks of climate change that represent potential negative consequences to operations and financial results. Adopt a risk map for assessing the the possibility, frequency, vulnerability and impact of major climate change risk events on operations, and defines the risk level and prioritization of risk controls as well as implementing risk management strategies that corresponds to the risk levels.



According to the implementation plan and the identified transformation risks, entity risks and risk management strategies of climate change proposed by **Climate Risk Management Committee**, invite **Climate Risk Management Committee** and **Climate Change Management Committee** to hold a cross-committee "**Climate Change Risk and Opportunity identifying meeting**" to identify the main short-term, medium-term and long-term risks and opportunities, and conduct corresponding strategies and financial impact assessment.



According to the contents of the "**Climate Change Risk and Opportunity identifying meeting**" to formulate and implement the company's short-term, medium-term and long-term climate change governance strategies and plans. Formulate the annual climate related risk and opportunity management strategy and plan objectives according to the climate change governance strategy and plan, and submit them to **Climate Change Management Committee** for implementation after being approved by **the Board of Directors**, is also responsible for supervising the implementation performance of the Climate Change Management Committee .



#### Define short-term, medium-term and long-term time horizons

Time horizon	From	To	
Short-term	1 year	2 years	If it is only Short-term, Medium-term or Long-term, only list Short-term, Medium-term or Long-term; If it is Short-term to Medium-term, list Short-term and Medium-term; If it is Short-term to Long-term, list Short-term and Medium-term and Long-term.
Medium-term	2 years	8years	
Long-term	8 years	27 years	



Although all climate related risks seem to be "long-term", arising in 10+ years; however, transitional risks such as policies, technology, and markets are emerging earlier than this, and physical risks including the frequency and intensity of storms, floods, and droughts are recognized risks today. Evaluating exposure to climate-related risks over a range of time horizons allows for a strategy for the transition to a low-carbon economy as recognized in the Paris Agreement and UN SDGs. Therefore, the company defines the timeframes according to the life of the assets, the profile of the climate-related risks faced, and the sectors and geographies in which it operates, and in assessing climate-related issues is sensitive to the timeframes used to conduct the assessments.

The company conducts operational and financial planning over a 1-2 year timeframe is defined as short-term, strategic and capital planning over a 2-8 year timeframe is defined as medium-term, other climate-related risks may have implications over a longer period are defined as long-term.



#### Define substantive financial or strategic impact on the business.



**Substantive impact:** an impact that has a considerable or relatively significant effect on an organization at the corporate level. This could include operational, financial or strategic effects that undermine the entire business or part of the business.



Analyze the company's financial statements for the last five years:

Item	2019	2020	2021	2022	2023
OPERATING REVENUE	NT12,936 Million	NT13,652 Million	NT16,957 Million	NT22,725 Million	NT18,951 Million
OPERATING COSTS	NT9,151 Million	NT9,634 Million	NT12,646 Million	NT15,588 Million	NT12,982 Million
GROSS PROFIT ( % )	NT3,785 Million ( 29% )	NT4,018 Million ( 29% )	NT4,311 Million ( 25% )	NT7,137 Million ( 31% )	NT5,969 Million ( 32% )
PROFIT FROM OPERATIONS ( % )	NT2,557 Million ( 20% )	NT2,730 Million ( 20% )	NT2,925 Million ( 17% )	NT5,288 Million ( 23% )	NT4,138 Million ( 22% )
NET PROFIT FOR THE YEAR	NT2,197 Million	NT2,197 Million	NT2,359 Million	NT4,433 Million	NT3,621 Million
EPS	NT25.73	NT25.14	NT26.97	NT50.71	NT41.31
TOTAL ASSETS	NT10,340 Million	NT11,921 Million	NT13,384 Million	NT16,041 Million	NT14,756 Million
TOTAL EQUITY	NT4,880 Million	NT5,339 Million	NT5,708 Million	NT8,343 Million	NT8,359 Million

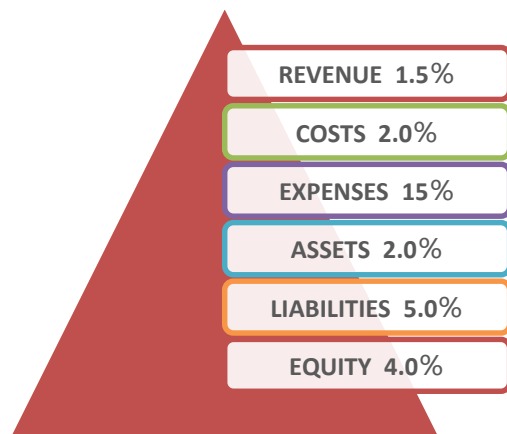


Define substantive financial or strategic impact on the business.

The GROSS PROFIT rate of the company falls between 25% and 32%, and the PROFIT FROM OPERATIONS rate falls between 17% and 23%. The most relevant to the company's operational, financial or strategic effects should be the PROFIT FROM OPERATIONS rate. Therefore, the impact value of 10% of the PROFIT FROM OPERATIONS is selected as the quantitative index of the company's substantive impact, that is, 10% of the PROFIT FROM OPERATIONS of NT3,621million in 2023, NT362 million.

The ratio of the substantive impact of the following adjustments to each item shall be taken as the substantive financial or strategic impact standard defined by the company.

Item	REVENUE	COSTS	EXPENSES	ASSETS	LIABILITIES	EQUITY
actual substantive impact	1.910%	2.788%	19.77%	2.453%	5.659%	4.331%
adjusted substantive impact	1.5%	2.0%	15%	2.0%	5.0%	4.0%





## Climate change Risk and Opportunity Assessment and Management

### 1. The Future Faced

#### 1.1 Climate Environment

In the Comprehensive Report of the 5th Assessment Report on Climate Change (AR5) issued by the Intergovernmental Panel of Experts on Climate Change (IPCC) in November 2014, the United Nations clearly asserts that human activities are the culprits of climate warming. If carbon emissions continue, the worst scenario is that the sea level will rise by 82 centimeters at the end of this century when the temperature rises by 4.8 degrees C, which is even less optimistic than the 2007 assessment that the temperature rises by up to 4 degrees C and the sea level rises by up to 60 centimeters. If the global temperature rises over 1.5-2.5 degrees C, the ecosystem structure and species distribution will face significant changes, and some animals and plants may face extinction risk; the average temperature rise will affect farming and food production potential; extreme weather events will also lead to increased deaths, diseases and injuries; and more people will be affected by floods due to rising sea levels, the low-lying deltas with dense populations in Asia and Africa are the most affected, while small islands are more vulnerable.

The types of impacts of global climate change are:

1) water shortage and drought;

2) sea level rise;

3) aggravating the gap between rich and poor;

4) intense high temperature;

5) more frequent and severe storms and floods;

6) agricultural productivity decline and food security issues;

7) public health issues.

#### 1.2 Possible impacts

In addition to direct disastrous shocks, climate change also includes many indirect hidden economic cost shocks, such as declining productivity, emergency shelter, more complex management procedures, and non-market impacts such as disease spread and ecosystem destruction. For manufacturing industry, there are three kinds of operation and revenue impacts, including: 1) facing resource shortage and higher input costs (such as energy, water and raw materials); 2) accelerated damage to materials, equipment and infrastructure; 3) facing more extreme weather events.

Under the climate change, enterprises are faced with the following topics: 1) flooding; 2) declining market purchasing power; 3) water supply interruption; 4) unstable power supply; 5) supply chain interruption; 6) rising raw material costs.

The direct and indirect impacts of climate change on manufacturing are as follows:

Climate change	Climate impact	Disaster pattern	Direct impacts	Indirect impacts
Temperature rise	Average temperature rise	Seasonal climate change (ecosystem change)	—	Change in source of raw materials (e.g. from domestic raw materials to imports)
	Continuous high temperature in summer	heat wave	1. Fire prone 2. Equipment heat dissipation is not easy to reduce yield 3. Employees suffer heatstroke and even die	1. Increasing energy consumption of cooling equipment 2. Cooling water temperature is too high 3. Oil and electricity prices are feared to rise 4. Increased demand for air conditioning 5. Power Limitation Crisis



Typhoon/Wind Disaster	Uneven distribution of rainfall	Drought	1. Fire prone 2. Water shortage causes shutdown	Water prices are feared to rise
	Increased heavy rainfall Typhoon intensity and frequency increase	The Flood	1. Shutdown due to flooding 2. Equipment/Tank Damage 3. Water quality deterioration (increased turbidity of raw water) affects process water use	Shortage of raw materials due to road interruption
		Windstorm	Equipment/Tank Damage	1. Shortage of raw materials due to road interruption 2. Power and water blackouts caused by damage to public equipment
		Debris flow	1. The factory was submerged by debris flow. 2. Equipment/Tank Damage	1. Shortage of raw materials due to road interruption 2. Power and water blackouts caused by damage to public equipment
Sea Level Rise	1. Violent flood tide (combined with typhoon) 2. Violent flood tide (combined with low-lying areas)	The Flood	1. Shutdown due to flooding	Shortage of raw materials due to road interruption
		Inundation of coastal areas	2. Equipment/Tank Damage	Neighborhood avoidance makes it difficult for factories to move inward

Therefore, must grasp the impact and vulnerability of the company to the impact of climate change, and strengthen the company's ability to adjust to avoid major losses caused by the impact of climate change (including equipment repair and renewal, supply chain interruption, order transfer loss, delivery delay compensation, rush cost, etc.).

### 1.3 Various types of risks

Among the impacts caused by climate change, the most concerned risks are concentrated in the environment and operation, including raw materials, water resources, energy, extreme climate, etc., which will directly impact and damage the operation of enterprises, among which the most serious threats are the increase of the cost of natural resources and raw materials and the shortage of water resources. In addition to the direct impact of environment and operation, there are many indirect derivative risks, which impact management, law, market, finance and even corporate reputation.

The risk types of enterprises under climate change are as follows:

Risk types	Examples
External Environment and Operational Risks	<ul style="list-style-type: none"> <li>Changes in temperature and precipitation patterns have led to reduced supply of key raw materials and higher prices.</li> <li>Increased uncertainty in water and energy supply.</li> <li>Extreme weather can lead to traffic or building damage, supply chain problems, reduced productivity, or increased insurance expenses.</li> </ul>
Supervision , Management and Legal Risks	In order to adapt to climate change, countries and regions have established a series of regulatory tools to facilitate more effective management of natural resources and disaster risk reduction. For example, new land planning methods, building laws and regulations, etc.

Financial Risks	For enterprises that cannot effectively analyze climate risks or take positive adjustment actions, investors' confidence declines and their investment in the enterprise is reduced.
Market Risks	With the increase of climate change or consumers' awareness of climate change, the demand for certain goods decreases and the market shrinks.
Political Risks	When developing countries confront natural resources, food security and health and economic challenges, they face more domestic political conflicts, which in turn affect market stability.
Corporate Image Risks	Enterprises that have not joined the ranks of mitigating climate change are regarded by consumers as the victims of climate change and affect the corporate image. For example, companies refuse to disclose their carbon footprints or do not disclose carbon, which is resisted by consumers.

#### **1.4 Opportunities for Climate Change**

When adapting to climate change, enterprises should also consider how to maintain competitiveness and grasp business opportunities, including the following directions:

- (1) When formulating long-term operational strategies, climate change factors should be taken into account and climate risks assessed.
- (2) Climate risk management needs to be integrated with business management strategies.
- (3) When developing new markets and products, we should take climate change into account and establish product characteristics.
- (4) Develop market products with life cycle considerations.
- (5) To conduct market observation and survey on new goods or services that may derive from future climate change.
- (6) Early response to climate change can enhance corporate image and attract customers.

### **2. Enterprises' Strategies in Response to Climate Change**

#### **2.1 Improving Cognition**

##### **Understanding the range of possible impacts of climate change**

A study of future climate prediction and impacts of climate change in the region where the enterprise is located can help to assess the expected impacts of climate change on the operation of the enterprise and its suppliers.

##### **Improving the Knowledge of Climate Change within Enterprise**

Climate change adjustment requires the participation of employees of the entire organization, including business, legal, financial and other units. Because of the wide range of risks that climate change may bring, enterprises need to pool knowledge and share knowledge, so that they can better understand the impact of climate change on the company as a whole.

##### **Collect Business Adjustment Cases**

Find out the vulnerability of enterprises facing the impact of climate change, and focus on loopholes, early prevention and improvement. In addition, enterprises in other related fields or facing the same problems can be collected to refer to their adjustment methods facing the impact of climate change.

#### **2.2 Assessment and management of risks and opportunities**

There are three key steps in assessing and managing climate change risks and opportunities:

##### **Identifying business Risks and Opportunities**

By means of assessment methods and tools, we can find out the vulnerabilities of enterprises facing climate change, and consider the business opportunities they can derive when assessing risks. Risks and business opportunities encompass many areas, possibly assets and infrastructure, human resources, supply chains and markets.

##### **Management of Priority Risks and Opportunities**

Priority depends on the likelihood, frequency and magnitude of the consequences of climate change. Once risks are known, immediate responses to risks are needed to find potential solutions and build long-term resilience. Opportunities derived from climate change should be well captured and new markets, services and business opportunities developed.

##### **Implementation and Monitoring**

Climate change is a state of continuity, and it does not end only once. Therefore, enterprises need to continue to pay attention to climate change and track the impact of climate change, and incorporate climate change and adjustment management into their future strategic planning and decision-making processes.

#### **2.3 Establishing Enterprise's Response to Climate Change**

In order to enable enterprises to respond well to climate change, there are three key steps to be taken:

### Responsibility Allocation of Management

Climate change may affect all levels of enterprises. Therefore, it is essential for managers to attach importance to climate change issues and formulate management policies and commitments. Managers should declare the importance of enhancing climate change adaptability and take action, and publish the information to the whole company so that all departments of enterprises can cooperate with the implementation.

### Revising the existing management process of enterprises

Enterprises are accustomed to using established management processes, such as risk management, quality assurance and business continuity planning. New management processes should be re-examined and revised or established to cope with the impact of climate change, so that the overall business operation can adapt to the impact of climate change.

### Exposing Climate Change Risks to Investors

Investors should be regularly reported on the risks of climate change and related management actions faced by the company, improve the information disclosure procedures, and actively participate in the progress and information related to climate adjustment.

## **3. Action Plan of Enterprises in Response to Climate Change**

### **3.1 Establishment of Climate Change Management Committee**

Organizational division of work	Job duties
Top Management	<ol style="list-style-type: none"><li>1. Implement and maintain climate change risk assessment and adjustment management policies.</li><li>2. Appoint a risk management representative and approve the establishment of an adjustment management team.</li><li>3. Provide the resources needed to establish, implement, maintain and implement risk assessment and adjustment management.</li><li>4. The importance of communicating risk management to all parties in the organization.</li><li>5. Identify the scope and boundaries of high-risk projects.</li><li>6. Adjusting the implementation schedule of the action plan and improving performance recognition.</li><li>7. Follow-up operational planning should include climate change risk considerations.</li></ol>
Risk Management Representative	<ol style="list-style-type: none"><li>1. Establish a risk assessment system and plan and implement the adjustment action plan.</li><li>2. Appoint risk management commissioners in various departments of the plant for risk management</li><li>3. Report risk assessment and management performance adjustment to top management.</li></ol>
Executive Secretary	<ol style="list-style-type: none"><li>1. Assist risk management representative to promote risk management related affairs.</li><li>2. Assist in convening risk assessment and adjustment management meetings, and be responsible for pre-conference preparations.</li><li>3. Collect the impact records of annual climate shocks.</li><li>4. Collect and update the impact information of future climate change.</li><li>5. Identification, assessment and analysis of climate impact risk.</li><li>6. Planning and review of adjustment action plans.</li><li>7. Discuss the opportunity of climate change impact derivation.</li></ol>
Departmental Risk Management Commissioner	<ol style="list-style-type: none"><li>1. Provide relevant information for risk assessment to assist the assessment department in formulating risk and adjustment action plans.</li><li>2. Handling and managing the risk management communication of the department.</li><li>3. Attend risk assessment and adjustment management meeting.</li><li>4. To carry out the assignment in accordance with the resolutions of the meeting.</li></ol>
Departmental Undertakers	<ol style="list-style-type: none"><li>1. Assist the Executive Secretary in promoting climate change adjustment and management.</li><li>2. To collect records of past operations affected by natural disasters within the unit.</li><li>3. Provide information about the potential future impact of natural disasters on production processes or facilities within the unit.</li><li>4. Participate in the planning of the adjustment action plan.</li><li>5. Assist in planning possible opportunities for climate change.</li></ol>

## **3.2 Risk Identification**

### **3.2.1 Survey of Current Adjustment Ability**

Firstly, according to the internal situation of enterprises, the impact and status of climate change impact on five aspects of organization and operation are preliminarily investigated, including Assets (building structure, plant location), Manufacturing Process (resource consumption, equipment location etc.), Personnel (employee education and training, emergency response plan, etc.), Supply Chains (supplier vulnerability to climate change) and Financial (climate disaster insurance, etc.), through the inventory of adjustment capacity, investigate all aspects of the project that have not yet been completed, and understand the current situation of adjustment capacity.

#### **3.2.2 Basic Information and Production Facilities Inventory**

The investigation contents of the environmental area of the plant area include the geographical environment (the location and surrounding topography of the plant area, sea level height, hydrology and transportation situation, etc.), the establishment of drainage system, the distribution of lightning protection equipment, the transportation route of raw materials and products supply chain. Based on the survey of the whole plant area, as the basis for defining the evaluation category, the production equipment in the category is checked to find out whether the plant area equipment is in a risk-prone location.

#### **3.2.3 Historic Climate Shock Survey**

The extreme climate phenomena caused by climate change are becoming more and more serious and frequent. Natural disasters that occurred in the past in the factory area are likely to occur again in the future. With the increase of the intensity of natural disasters, the impact of the operation of the factory area will be greater. Therefore, it is necessary to collect, collect and analyze the past climate impacts first, and prioritize them as risk identification items. The collected items include disaster types, occurrence time, description of occurrence events, direct/indirect impacts, actions and responses, etc.

#### **3.2.4 Climate Factors and Identification of Affected Equipment**

By means of cross-sectorial meetings and discussions, investigate the key equipment or activities of various units and the climate impact events that have occurred in the past. Based on the urgency and severity of impacts, we preliminarily assess the importance of key equipment or activities to the operation of enterprises, and complete the identification of climate impact risk. Further in-depth evaluation of projects that have an impact on the results of risk identification will be carried out in the follow-up estimate.

## **3.3 Risk Analysis**

Risk assessment is calculated by referring to the definitions of the Specific Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adjustment (SREX) and IPCC Fifth Assessment Report (IPCC AR5) published by the Intergovernmental Panel on Climate Change (IPCC) in 2012: Risk = Hazard \* Vulnerability \* Exposure.

**Hazard:** The natural variation factors and degree of disaster occurrence, such as the frequency or frequency of strong rainfall and typhoon.

**Vulnerability:** The degree to which a system is vulnerable to specific hazards, such as flooding or slope collapse, occurs in the area.

**Exposure:** The nature of the objects that may be affected by disasters.

## **3.4 Risk Assessment**

After hazard-vulnerability and exposure assessment, each risk value can be obtained according to the risk assessment formula, and presented in the form of 6 \*6 two-dimensional matrixes. The more to the upper right block, the greater the risk faced. The advantage of risk matrix presentation is that it makes it easy for business managers to understand and rank the degree of risk of various climate shocks. It does not need to spend time to understand various assessment processes and too much information. Under limited time and resources, priority is given to adjusting action plans for high-risk projects to reduce future losses in the face of climate shocks.

## **3.5 Risk Management**

According to the above-mentioned risk assessment process, enterprises can formulate adjustment action plans for high-risk impact projects. For different risks, managers can use different treatment methods, including risk avoidance, risk loss control, risk transfer and risk retention. These four countermeasures can be used as the existing time and resource limits. Adjust relevant decision-making under the system. In addition, the risks brought by climate change shocks may also be the business opportunities, which can be another direction for enterprises to think about.

**Risk Avoidance:** Interruption of the source of risk may result in potential losses or uncertainties.

Such risks usually have a great impact and need to be dealt with immediately to reduce hazards.

**Risk loss control:** To reduce the probability of occurrence or mitigate the impact by adjusting management methods or systems. Its purpose is not to make the risk no longer occur, but to control the risk in its own acceptable level.

**Risk Transfer:** Transfer the liability for loss and its cost to other organizations through engineering contracts, insurance or other means. Although it can transfer existing risks, it is necessary to consider whether other risks will arise (such as management inconvenience, financial burden).

**Risk retention:** Risk loss is within the scope of self-acceptance, or action is quite limited, and it is possible to assess that the cost of adjustment action plans is far greater than the benefits of improvement. Therefore, it is necessary to retain the status quo and adjust such risks if new management systems/engineering technologies are developed in the future.

### **3.5.1 Assessment of priorities for implementation of adjustment action plans**

For high-risk impact projects, we can list the adjustment action plans for future planning and implementation, and analyze them according to five aspects: urgency, derivative benefits, economic benefits, technical feasibility and institutional feasibility. First, we discuss the priority levels of each aspect in the current situation by referring to the criteria defined by priority level, and compare the importance of the five aspects to enterprises. Combined with the above considerations, prioritize the implementation of various adjustment plans.

### **3.5.2 Climate Shock Derivative Opportunities**

Enterprises can consider possible derivative opportunities in terms of reducing operating costs, increasing product demand, developing new products or technologies, and increasing social image. While implementing adaptation plans to mitigate impacts in response to climate change, can grasp the opportunities and business opportunities derived from them. Through the Corporate Social Responsibility Report (CSR) and the Dow Jones Sustainability Index (DJSI), etc., can reveal in detail the relevant climate change of enterprises. In order to enhance the competitiveness and sustainable development of enterprises under the future climate change, should increase the willingness of external investors and obtain the support of stakeholders by relocating risks and opportunities, objectives, outcomes, commitments and planning of sustainable operation and social responsibility.

## **3.6 Inspection and Improvement**

Adjustment action plan can reduce risk impact, but the risk may not be fully mitigated, there are still some residual risks, should be periodically inspected for affordability or need to be further improved. In addition, regular inspection is carried out annually in the general direction of climate and environmental change trends and adaptation program implementation. First, in the climate and environmental change trend section, the risk assessment information that needs to be updated in the risk management process is inspected. Specific inspection items include disaster information updating and internal and external organizational changes. Secondly, in the implementation part of adaptation program, the adaptation action plan is tracked. Implementing the effectiveness, reviewing and improving the adjustment action plan which has not achieved good results or lagged behind schedule.

### **3.6.1 Confirmation of climate and environmental change trend**

Annual management review is required to check whether a risk assessment needs to be re-conducted. The review project includes the following items.

- (1) Projects that have suffered disasters in the past need to be reviewed annually. If IPCC and other research institutes publish new research results or simulated drawings, the Executive Secretary needs to call an adjustment management team to confirm them.
- (2) If the scope of the original assessment changes (e.g. plant expansion or relocation), the external geographical environment of the company has changed significantly, and the internal process equipment has been improved, the Executive Secretary needs to recruit an adjustment management team to re-evaluate the risk.

### **3.6.2 Review the Effectiveness of the Implementation of Adjustment Programs**

Departmental risk management commissioners shall regularly review the progress and results of the implementation of the adjustment action plan and review it according to its completion:

- (1) Improvement completion: Departmental risk management committees need to carry out implementation results after the completion of the adjustment action plan, and submit supporting information to the Executive Secretary for review. The Executive Secretary needs to reanalyze the climate impact, assess its residual risks, and complete the closing process after the completion of the adjustment action plan by the risk management representative.



2) Failure to improve completion: If for some reason it is not completed within the scheduled completion date, the departmental risk management committee shall explain the reasons and propose extension, alteration or termination to the risk management representative.

#### 4. Possible adjustment actions

Enterprises should consider when formulating adjustment actions: education, resource efficiency, accident planning, regular maintenance/inspection, design standards, upgrading/replacement facilities, demand management, market opportunities, monitoring, available support, stakeholder support and sponsorship, specify possible climate change shocks and adjustment actions, provide enterprise planning direction, and formulate appropriate adjustment actions. Actions to effectively reduce risk shocks.



#### Risk 1 : Current regulation ( all climate-related litigation claims )

Primary climate-related risk driver : – Exposure to litigation		Primary potential financial impact : – Increased costs and/or reduced demand for products and services resulting from fines and judgments		
In the value chain the risk driver occurs : – Direct operations – Downstream	Time horizon : – Short-term – Medium-term – Long-term	Likelihood : – Very unlikely ( 0-10% )	Magnitude of impact : – Low	Relevance & inclusion – Relevant, always included
Company - specific description : The company's primary business is the professional DMS (Design & Manufacturing Service) of UPS (Uninterruptible Power System), PV Inverter, Energy Storage System, Variable Frequency Drive, EV Charger which all are manufactured in accordance with the product specifications and quality laws and regulations of each customer's location, and most ( > 95%) of the greenhouse gas emissions from direct operations are from scope 2 (all are municipal power supply) , therefore, not happened neither found there is risk of climate-related litigation claims under the current laws and regulations.				
Is able to provide a potential financial impact figure? – No, does not have this figure		Potential financial impact figure (currency) – No	Type of financial impact – No	
Explanation of financial impact figure : No - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :				
Cost of response to risk : No				
Description of response and explanation of cost calculation : No				

#### Risk 2 : Emerging regulation ( policy developments that attempt to constrain actions that contribute to the adverse effects of climate change or policy developments that seek to promote adaptation to climate change )

Primary climate-related risk driver : – Increased pricing of GHG emissions – Enhanced emissions-reporting obligations – Mandates on and regulation of existing products and services		Primary potential financial impact : – Increased operating costs (e.g., higher compliance costs, increased insurance premiums) – Write-offs, asset impairment, and early retirement of existing assets due to policy changes		
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In the value chain the risk driver occurs : – Direct operations – Upstream – Downstream	Time horizon : – Short-term – Medium-term – Long-term	Likelihood : – Virtually certain ( 99–100% )	Magnitude of impact : – Low	Relevance & inclusion – Relevant, always included
Company - specific description : Net zero emissions are the trend issue faced by global enterprises. The inventory, certification and / or assurance, reporting of GHG emissions, and the preparation, certification and / or assurance, announce and register of ESG Report and Climate-related Financial Disclosure report are the obligations of global enterprises. The net zero emissions of the value chain involves the risk driving of upstream, direct operation and downstream. Therefore, the complete inventory of GHG emissions and low-carbon intensity products of the value chain are the trend of regulatory requirements from now to the future.				
Is able to provide a potential financial impact figure? – Yes, an estimated range	Potential financial impact figure (currency) – NT10 million to NT 20 million		Type of financial impact – Increased indirect (operating) costs	
Explanation of financial impact figure : – he approach was employed to calculate the figure : see the following "Description of response and explanation of cost calculation" – The figures used in calculation : Statistics of the actual expenses incurred in the year and be calculated according to the following assumptions. – Any assumption the figure is dependent on : Assumed that the development trend of emerging regulation fees in the future is twice of the current.				
Cost of response to risk : NT10 million to NT 20 million				
Description of response and explanation of cost calculation : Not happened neither found there is of any event that may lead to the write-offs, asset impairment, and early retirement of existing assets due to the current and future emerging regulation, so there is no such financial impact. In addition, the company’s primary business is professional DMS (Design & Manufacturing Service) , and its operating income is DMS income, there not happened neither found operating costs due to increased pricing of GHG emissions in the current and future emerging regulation. The possible costs are the above listed "Company - specific description" to enhance emissions-reporting obligations and the mandates on and regulation of existing products and services, which are summary statistics.				

**Risk 3 : Technology ( all risks associated with technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system )**

Primary climate-related risk driver : – Substitution of existing products and services with lower emissions options		Primary potential financial impact : – Write-offs and early retirement of existing assets – Reduced demand for products and services		
– Unsuccessful investment in new technologies – Costs to transition to lower emissions technology		– Research and development (R&D) expenditures in new and alternative technologies – Capital investments in technology development – Costs to adopt/deploy new practices and processes		
In the value chain the risk driver occurs : – Direct operations – Downstream	Time horizon : – Short-term – Medium-term – Long-term	Likelihood : – Very unlikely ( 0-10% )	Magnitude of impact : – Low	Relevance & inclusion – Relevant, always included
Company - specific description : All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs, called Sustainability products. Energy Storage System and EV Charger are emerging Sustainability products, therefore, the transition risk in Technology is not identified.				
Is able to provide a potential financial impact figure? – No, does not have this figure		Potential financial impact figure (currency) – No		

<b>Explanation of financial impact figure : No</b> - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :
<b>Cost of response to risk : No</b>
<b>Description of response and explanation of cost calculation : No</b>

#### **Risk 4 : Market ( all shifts in supply and demand for certain commodities, products, and services )**

Primary climate-related risk driver : – Changing customer behavior – Uncertainty in market signals – Increased cost of raw materials		Primary potential financial impact : – Reduced demand for goods and services due to shift in consumer preferences – Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment) – Abrupt and unexpected shifts in energy costs – Change in revenue mix and sources, resulting in decreased revenues – Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations)		
In the value chain the risk driver occurs : – Direct operations – Downstream	Time horizon : – Short-term – Medium-term – Long-term	Likelihood : – Very unlikely ( 0-10% )	Magnitude of impact : – Low	Relevance & inclusion – Relevant, always included
Company - specific description : All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs, called Sustainability products. Energy Storage System and EV Charger are emerging Sustainability products, therefore, the transition risk in Market is not identified.				
Is able to provide a potential financial impact figure? – No, does not have this figure		Potential financial impact figure (currency) – No		
Explanation of financial impact figure : No – The approach was employed to calculate the figure : – The figures used in calculation : – Any assumption the figure is dependent on :				
Cost of response to risk : No				
Description of response and explanation of cost calculation : No				

#### **Risk 5 : Reputation ( all risks tied to changing customer or community perceptions of an organization's contribution to or detraction from the transition to a lower-carbon economy )**

<b>Primary climate-related risk driver :</b> - Shifts in consumer preferences - Stigmatization of sector - Increased stakeholder concern or negative stakeholder feedback		<b>Primary potential financial impact :</b> - Reduced revenue from decreased demand for goods/services - Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions) - Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention) - Reduction in capital availability		
<b>In the value chain the risk driver occurs :</b> - Direct operations - Downstream	<b>Time horizon :</b> - Short-term - Medium-term - Long-term	<b>Likelihood :</b> - Very unlikely ( 0-10% )	<b>Magnitude of impact :</b> - Low	<b>Relevance &amp; inclusion</b> - Relevant, always included
<b>Company - specific description : All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs, called Sustainability products. Energy Storage System and EV Charger are emerging Sustainability products, therefore, the transition risk in Reputation is not identified.</b>				

Is able to provide a potential financial impact figure? - No, does not have this figure	Potential financial impact figure (currency) - No
Explanation of financial impact figure : No - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :	
Cost of response to risk : No	
Description of response and explanation of cost calculation : No	



## Risk Disclosure



The risk types which are considered in organization's climate-related risk assessments



Have identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on business

### Physical Risks

<b>Risk 6 : Acute ( risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods )</b>		<b>Primary potential financial impact :</b> – Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions) – Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism) – Write-offs and early retirement of existing assets (e.g., damage to property and assets in “high-risk” locations) – Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants) – Increased capital costs (e.g., damage to facilities) – Reduced revenues from lower sales/output – Increased insurance premiums and potential for reduced availability of insurance on assets in “high-risk” locations		
<b>Primary climate-related risk driver :</b> – Increased severity of extreme weather events such as cyclones and floods				
<b>Risk 7 : Chronic ( longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause sea level rise or chronic heat waves )</b>				
<b>Primary climate-related risk driver :</b> – Changes in precipitation patterns and extreme variability in weather patterns – Rising mean temperatures – Rising sea levels				
<b>In the value chain the risk driver occurs :</b> – Direct operations – Downstream	<b>Time horizon :</b> – Short-term – Medium-term – Long-term	<b>Likelihood :</b> – Very unlikely ( 0-10% )	<b>Magnitude of impact :</b> – Low	<b>Relevance &amp; inclusion</b> Relevant, sometimes included
<b>Company - specific description : No physical Risks have been identified.</b>				
<b>Is able to provide a potential financial impact figure?</b> – No, does not have this figure		<b>Potential financial impact figure (currency)</b> – No		

Explanation of financial impact figure : No - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :	
Cost of response to risk : No	
Description of response and explanation of cost calculation : No	



## Opportunity Disclosure



Identified climate-related opportunities with the potential to have a substantive financial or strategic impact on business



Details of opportunities identified with the potential to have a substantive financial or strategic impact on business

### Opportunity 1 : Resource Efficiency ( opportunities related to improving resource efficiency across production and distribution processes, buildings, machinery/appliances, and transport/mobility )

#### Primary climate-related opportunity driver :

- Use of more efficient modes of transport
- Use of more efficient production and distribution processes
- Use of recycling
- Move to more efficient buildings
- Reduced water usage and consumption

#### Primary potential financial impact :

- Reduced operating costs (e.g., through efficiency gains and cost reductions)
- Increased production capacity, resulting in increased revenues
- Increased value of fixed assets (e.g., highly rated energy-efficient buildings)
- Benefits to workforce management and planning (e.g., improved health and safety, employee satisfaction) resulting in lower costs

In the value chain the opportunity driver occurs :  
– Direct operations

Time horizon :  
– Short-term  
– Medium-term  
– Long-term

Likelihood :  
– Virtually certain ( 99–100% )

Magnitude of impact :  
– Low

Relevance & inclusion  
– Relevant, always included

Company - specific description : **Incorporate into Opportunity 2: Energy Source ( opportunities related to shifting energy usage toward low emission energy sources )**

Is able to provide a potential financial impact figure?

–

Potential financial impact figure (currency)

–

Explanation of financial impact figure : - The approach was employed to calculate the figure :

- The figures used in calculation :
- Any assumption the figure is dependent on :

Cost to realize opportunity :

Strategy to realize opportunity and explanation of cost calculation : Construction of Energy Storage System and its estimated construction cost.

### Opportunity 2 : Energy Source ( opportunities related to shifting energy usage toward low emission energy sources )

#### Primary climate-related opportunity driver :

- Use of lower-emission sources of energy
- Use of supportive policy incentives
- Use of new technologies
- Participation in carbon market
- Shift toward decentralized energy generation

#### Primary potential financial impact :

- Reduced operational costs (e.g., through use of lowest cost abatement)
- Reduced exposure to future fossil fuel price increases
- Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon
- Returns on investment in low-emission technology
- Increased capital availability (e.g., as more investors favor lower-emissions producers)
- Reputational benefits resulting in increased demand for goods/services

In the value chain the opportunity driver occurs :  
– Direct operations

Time horizon :  
– Short-term  
– Medium-term  
– Long-term

Likelihood :  
– Virtually certain ( 99–100% )

Magnitude of impact :  
– Medium

Relevance & inclusion  
– Relevant, always included

Company - specific description : **We are also actively investing in environmentally friendly and sustainable machinery and equipment related to energy conservation or green energy(such as Stereoscopic Warehouse, Solar Photovoltaic, EV Charger, and Energy Storage). Currently, when all investment projects are completed, we can reduce GHG emissions by annual 898 t CO<sub>2</sub> e , equivalent to the planting benefits of 6285 trees.**

Is able to provide a potential financial impact figure?

– Yes

Potential financial impact figure (currency)

– Annual cost savings of 23.2million (NT)

Explanation of financial impact figure : Please refer to” Specific section for climate-related information of parent company and all subsidiaries in the 2023 consolidated financial statements” of the Sustainability Annual Report. - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :				
Cost to realize opportunity : 197.6million (NT)				
Strategy to realize opportunity and explanation of cost calculation : Please refer to” Specific section for climate-related information of parent company and all subsidiaries in the 2023 consolidated financial statements” of the Sustainability Annual Report.				
Opportunity 3 : Products and Services ( opportunities related to innovation and development of new low-emission and climate adaptation products and services. )				
Primary climate-related opportunity driver : – Development and/or expansion of low emission goods and services – Development of climate adaptation and insurance risk solutions – Development of new products or services through R&D and innovation – Ability to diversify business activities – Shift in consumer preferences		Primary potential financial impact : – Increased revenue through demand for lower emissions products and services – Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services) – Better competitive position to reflect shifting consumer preferences, resulting in increased revenues		
In the value chain the opportunity driver occurs : – Direct operations – Downstream	Time horizon : – Short-term – Medium-term – Long-term	Likelihood : – Virtually certain ( 99–100% )	Magnitude of impact : – high	Relevance & inclusion – Relevant, always included
Company - specific description : All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs, called Sustainability products. Energy Storage System and EV Charger are emerging Sustainability products. Expanding the innovative R&D, production and sale of these products is our most important goal.				
Is able to provide a potential financial impact figure? - Yes		Potential financial impact figure (currency) - annual OPERATING REVENUE will increase by 1,048 million (NT) in the future - annual PROFIT FROM OPERATIONS will increase by 178 million (NT) in the future		
Explanation of financial impact figure (The approach was employed to calculate the figure, The figures used in calculation, Any assumption the figure is dependent on) : The growth rate of OPERATING REVENUE in each of the past four years was 5.53% , 24.20% , 34.02 and - 16.61% respectively, of which the 5.53% was taken as the growth rate of annual OPERATING REVENUE in the future. It is estimated that the annual OPERATING REVENUE will increase by 1,048million (NT) in the future(This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)				
The PROFIT FROM OPERATIONS rate of each year in the past five years was 20%, 20% ,17% ,23% and 22% respectively, of which the minimum 17% was taken as the net PROFIT FROM OPERATIONS rate for the future years, multiplied by the estimated increase annual OPERATING REVENUE for the future years, the annual PROFIT FROM OPERATIONS will increase by 178 million (NT) in the future (This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)				
Cost to realize opportunity : The total annual OPERATING COSTS and OPERATING EXPENSES will increase by 870 million (NT) in the future (This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)				
Strategy to realize opportunity and explanation of cost calculation : The increase annual OPERATING COSTS and OPERATING EXPENSES in the future are calculated by deducting the increase annual PROFIT FROM OPERATIONS in the future from the increase annual OPERATING REVENUE in the future.				



Analyze the company's financial statements for the last five years:

Item	2019	2020	2021	2022	2023
<b>OPERATING REVENUE</b>	NT12,936 Million	NT13,652 Million	NT16,957 Million	NT22,725 Million	NT18,951 Million
<b>OPERATING COSTS</b>	NT9,151 Million	NT9,634 Million	NT12,646 Million	NT15,588 Million	NT12,982 Million
<b>GROSS PROFIT ( % )</b>	NT3,785 Million ( 29% )	NT4,018 Million ( 29% )	NT4,311 Million ( 25% )	NT7,137 Million ( 31% )	NT5,969 Million ( 32% )
<b>PROFIT FROM OPERATIONS ( % )</b>	NT2,557 Million ( 20% )	NT2,730 Million ( 20% )	NT2,925 Million ( 17% )	NT5,288 Million ( 23% )	NT4,138 Million ( 22% )

**Opportunity 4 : Markets ( opportunities in new markets or types of assets that may help organizations to diversify their activities and better position themselves for the transition to a lower-carbon economy. )**

**Primary climate-related opportunity driver :**

- Access to new markets
- Use of public-sector incentives
- Access to new assets and locations needing insurance coverage

**Primary potential financial impact :**

- Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)
- Increased diversification of financial assets (e.g., green bonds and infrastructure)

**In the value chain the opportunity driver occurs :**

- Direct operations
- Downstream

**Time horizon :**

- Short-term
- Medium-term
- Long-term

**Likelihood :**

- Virtually certain ( 99–100% )

**Magnitude of impact :**

- high

**Relevance & inclusion**

- Relevant, always included

**Company - specific description : Incorporate into Opportunity 3: Products and Services**

**Is able to provide a potential financial impact figure?**

- Incorporate into Opportunity 3: Products and Services

**Potential financial impact figure (currency)**

- Incorporate into Opportunity 3: Products and Services

**Explanation of financial impact figure : Incorporate into Opportunity 3: Products and Services**

- The approach was employed to calculate the figure :
- The figures used in calculation :
- Any assumption the figure is dependent on :

**Cost to realize opportunity : Incorporate into Opportunity 3: Products and Services**

**Strategy to realize opportunity and explanation of cost calculation : Incorporate into Opportunity 3: Products and Services**

**Opportunity5 : Resilience ( opportunities related to the development of adaptive capacity to respond to climate change. They may be especially relevant for organizations with long-lived fixed assets or extensive supply or distribution networks; those that depend critically on utility and infrastructure networks or natural resources in their value chain; and those that may require longer-term financing and investment. )**

**Primary climate-related opportunity driver :**

- Participation in renewable energy programs and adoption of energy-efficiency measures
- Resource substitutes/diversification

**Primary potential financial impact :**

- Increased market valuation through resilience planning (e.g., infrastructure, land, buildings)
- Increased reliability of supply chain and ability to operate under various conditions
- Increased revenue through new products and services related to ensuring resiliency

**In the value chain the opportunity driver occurs :**

- Direct operations
- Downstream

**Time horizon :**

- Short-term
- Medium-term
- Long-term

**Likelihood :**

- Very unlikely ( 0-10% )

**Magnitude of impact :**

- Low

**Relevance & inclusion**

- Relevant, always included

Company - specific description : No Resilience Opportunity have been identified.	
Is able to provide a potential financial impact figure? - No, does not have this figure	Potential financial impact figure (currency) - No
Explanation of financial impact figure : No - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :	
Cost to realize opportunity : No	
Strategy to realize opportunity and explanation of cost calculation : No	



# Core Elements of Recommended Climate-Related Financial Disclosures

## Metrics and Targets

**Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.**

## Core Disclosures

a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.

b) Disclose Scope 1, Scope 2 GHG emissions, and the related risks.

c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.



## 1 Recent annual greenhouse gas inventory and assurance status of the group

### 1-1 Greenhouse Gas Inventory Information

Item	Data	Unit
Voltronic Group Scope 1 Total CO <sub>2</sub> e Emission 2023	616.9552	tCO <sub>2</sub> e
Voltronic Group Scope 2 Total CO <sub>2</sub> e Emission 2023	10,582.8884	tCO <sub>2</sub> e
Voltronic Group Scope 1 + Scope 2 Total CO <sub>2</sub> e Emission 2023	11,199.8437	tCO <sub>2</sub> e
Voltronic Group Operating Revenue for 2023 (Million NTD)	18,950.8430	M/NTD
Voltronic Group Scope 1 + Scope 2 Emission Intensity 2023 ( Million NTD )	0.5910	tCO <sub>2</sub> e/MNTD
Voltronic Group Operating Revenue for 2023 (Million USD) @2023/12/29 exchange rate 30.735	616.5707	M/USD
Voltronic Group Scope 1 + Scope 2 Emission Intensity 2023 ( Million USD )	18.1647	tCO <sub>2</sub> e/MUSD

Note 1: Direct emissions (Scope 1, directly from emission sources owned or controlled by the company), indirect energy emissions (Scope 2, indirectly from GHG emissions caused by input of electricity, heat or steam).

Note 2: The scope of data coverage for direct emissions and indirect energy emissions shall be handled in accordance with Article 4-1, Paragraph 2 of the "Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies".

Note 3: GHG inventory standards: International Organization for Standardization, ISO 14064-1 2018.

Note 4: The intensity of GHG emissions is calculated based on Operating Revenue (in millions of NTD), also calculated based on Operating Revenue (in millions of USD).

## 1-2 GHG Assurance Information




### Explanation of Assurance Situation for 2023:

1. Scope of Assurance: Voltronic Power Technology Corp. and Subsidiaries (Voltronic Group) conducted an inventory and disclosure of GHG Scope 1 and Scope 2 data and climate-related information of parent company and all subsidiaries in the 2023 consolidated financial statements.
2. Assurance Institution: HangSeng Sustainability CPAs Firm (approved by the Corporate Governance Center of Taiwan Stock Exchange Corporation "TWSE" as a Sustainability Metrics / Greenhouse Gas Assurance Institution; Approval Number: April 16, 2024, TSG No. 11300006531)
3. Assurance Standard: International Standard on Assurance Engagements (ISAE) 3410, Assurance Engagements on Greenhouse Gas Statements.
4. Assurance Statement: Reasonable Assurance.

## 2 Identified opportunities — Products and Services

According to IRENA's 1.5°C pathway scenario analysis, by 2050, the Global CO<sub>2</sub> emissions reductions by 25% will depend on Energy Efficiency and 25% on Renewables. All products of VPT have Energy Efficiency benefits, and PV Inverter has both Energy Efficiency and Renewables benefits, called Sustainability products. So, VPT can be called the Sustainability Sector.

### GHG emissions reduction benefits provided by sales of products

Product		Calculation basis for GHG emissions reduction benefits	
UPS		 <b>Energy Technology List</b>	 <b>Department for Energy Security &amp; Net Zero</b>
PV Inverter		 <b>Department for Energy Security &amp; Net Zero</b>	<b>Uninterruptible Power Supply</b>
FY2023	UPS	297,905 tCO <sub>2</sub> e	<b>Explanation of Assurance Situation:</b> 1. Assurance Institution: HangSeng Sustainability CPAs Firm (approved by the Corporate Governance Center of TWSE as a Sustainability Metrics / Greenhouse Gas Assurance Institution; Approval Number: April 16, 2024, TSG No. 11300006531) 2. Assurance Standard: ISAE 3410, Assurance Engagements on Greenhouse Gas Statements. 3. Assurance Statement: Reasonable Assurance.
	PV Inverter	425,879tCO <sub>2</sub> e	
	Total	723,784 tCO <sub>2</sub> e	

### 3 Investing in environmentally friendly and sustainable machinery and equipment related to energy conservation or green energy

Device Name	GHG emissions reduction benefits t CO <sub>2</sub> e /Annual	Explanation of the Impact of GHG emissions Benefits t CO <sub>2</sub> e / Annual	The impact on Scope 1 and Scope 2 t CO <sub>2</sub> e / Annual
Stereoscopic Warehouse	102.3810	Scope 3 favorable influence 118.8208 Scope 2 adverse influence 31.7240 Scope 3 favorable influence 13.3345 Scope 1 favorable influence 1.9497	adverse influence 29.7743
Solar Photovoltaic	735.5065	Scope 2 favorable influence 735.5065	favorable influence 735.5065
EV Charger	31.3284	Scope 3 favorable influence 54.7973 Scope 2 adverse influence 23.4689	adverse influence 23.4689
Energy Storage	28.3989	Scope 2 favorable influence 28.3989	favorable influence 28.3989
Total	897.6148	Scope 3 favorable influence 186.9526	favorable influence 710.6622

#### Explanation of Assurance Situation:

1. Assurance Institution: HangSeng Sustainability CPAs Firm (approved by the Corporate Governance Center of TWSE as a Sustainability Metrics / Greenhouse Gas Assurance Institution; Approval Number: April 16, 2024, TSG No. 11300006531)
2. Assurance Standard: ISAE 3410, Assurance Engagements on Greenhouse Gas Statements.
3. Assurance Statement: Reasonable Assurance.

### 4 Greenhouse gas reduction targets, strategies, and specific action plans

#### Greenhouse gas reduction baseline year and its data, reduction targets:

The Emission Intensity of Scope 1 and Scope 2 greenhouse gas (GHG) emissions decreases by 1.5% annually, it is expected that 2050 will be 66.49% of the baseline year 2023.

The GHG emission reduction benefits of sales products in 2023 are 723,784 tCO<sub>2</sub>e / Self Operating (Scope 1+Scope 2) GHG emissions of 11,200 tCO<sub>2</sub>e=64.6 times: the target is to grow by 1.5% annually, and it is expected to grow by 49.48% in 2050, that is 96 times, compared to the baseline year of 2023, which is 64.6times.

#### Strategies, and specific action plans :

Please refer to 2 Identified opportunities—Products and Services and 3 Investing in environmentally friendly and sustainable machinery and equipment related to energy conservation or green energy.

Achievement status of reduction targets: Not applicable to the baseline year.

#### 2.5.4 Climate Governance

Is your company's board of directors and/or executive management responsible for the oversight and management of climate-related issues?

- ☐ Yes, there is board-level oversight and/or management-level responsibility of climate-related issues

##### Board Oversight

- ☐ Yes, there is a board level committee with oversight of climate-related issues

- ☐ Climate/Sustainability/ESG Committee

- ☐ Climate issues are on the agenda of the board of directors.

- ☐ At least annually

##### Management Responsibility

- ☐ Yes, there is a management position or committee with responsibility for climate-related issues.

- ☐ Executive level climate or sustainability-specific committee

→ Please refer to pages 4 to 5 of this report.

#### 2.5.5 TCFD Disclosure

Does your organization apply the TCFD framework in the management of climate-related risks and opportunities?

- ☐ Yes, we integrate the TCFD or are in the process of integrating it and publicly address the following requirements:

##### Governance

- ☐ a) Describe the board's oversight of climate related risks and opportunities.
- ☐ b) Describe management's role in assessing and managing climate-related risks and opportunities.

##### Strategy

- ☐ a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- ☐ b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- ☐ c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

##### Risk Management

- ☐ a) Describe the organization's processes for identifying and assessing climate-related risks.
- ☐ b) Describe the organization's processes for managing climate-related risks.
- ☐ c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

##### Metrics & Targets

- ☐ a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- ☐ b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
- ☐ c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

→ Please refer to this report

## 2.5.6 Climate-Related Management Incentives

Does your company provide incentives for the management of climate change issues, including the attainment of targets?

☐ Yes, we provide details on the climate change-related incentives starting from the highest management level and the information is publicly available.

Who is entitled to benefit from this incentive?	Type of incentive	Incentivized KPIs:
<input type="radio"/> Chief Executive Officer (CEO)	<input type="radio"/> Recognition	<input type="radio"/> Emissions reduction <input type="radio"/> Energy reduction <input type="radio"/> Supply chain engagement <input type="radio"/> R&D and Manufacture and Sale of Sustainability Products
<input type="radio"/> Other Named Executive Officers	<input type="radio"/> Monetary <input type="radio"/> Recognition	<input type="radio"/> Emissions reduction <input type="radio"/> Energy reduction <input type="radio"/> Supply chain engagement <input type="radio"/> R&D and Manufacture of Sustainability Products
<input type="radio"/> Business Unit Managers	<input type="radio"/> Monetary <input type="radio"/> Recognition	<input type="radio"/> Sale of Sustainability Products
<input type="radio"/> Employees(Business Unit )	<input type="radio"/> Monetary <input type="radio"/> Recognition	<input type="radio"/> Sale of Sustainability Products
<input type="radio"/> Employees(R&D Unit )	<input type="radio"/> Monetary <input type="radio"/> Recognition	<input type="radio"/> R&D of Sustainability Products
<input type="radio"/> Employees(Manufacture Unit )	<input type="radio"/> Monetary <input type="radio"/> Recognition	<input type="radio"/> Manufacture and Sale of Sustainability Products

→ Please refer to pages 4 of this report.

## 2.5.7 Climate Risk Management

Does your company have a Climate Risk Management process?

☐ Yes, we publicly report on our Climate Risk Management process

### Climate Risk Management

☐ Integrated into multi-disciplinary company-wide risk management processes, i.e. a documented process where climate change risks and opportunities are integrated into the company's centralized enterprise risk management program covering all types/sources of risks and opportunities

☐ A specific climate change risk management process, i.e. a documented process which considers climate change risks and opportunities separate from other business risks and opportunities

### Types of climate-related risk included in risk assessment

- ☐ Current Regulation
- ☐ Emerging Regulation
- ☐ Technology Risk
- ☐ Legal Risk
- ☐ Market Risk
- ☐ Reputational Risk
- ☐ Acute Physical Risk
- ☐ Chronic Physical Risk

### Value chain stages covered by climate risk assessment

- ☐ The assessment includes our own operations
- ☐ The assessment includes our upstream activities

- ☐ The assessment includes our downstream activities and/ or clients

#### Time horizon(s) covered by climate risk assessment

- ☐ Short-term  
☐ Medium-term  
☐ Long-term

→Please refer to pages 20 to 36 of this report.

#### 2.5.8 Financial Risks of Climate Change

Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditures?

- ☐ We have conducted an analysis of our climate change risk, but our company is not exposed to climate change risks that have the potential to generate a substantive change in business operations, revenue, or expenditure.

We only found Transition Risks 2: Emerging regulation (Net zero emissions are the trend issue faced by global enterprises. The inventory, certification and / or assurance, reporting of GHG emissions, and the preparation, certification and / or assurance, announce and register of ESG Report and Climate-related Financial Disclosure report are the obligations of global enterprises. The net zero emissions of the value chain involves the risk driving of upstream, direct operation and downstream. Therefore, the complete inventory of GHG emissions and low-carbon intensity products of the value chain are the trend of regulatory requirements from now to the future. Cost of response to risk : NT10 million to NT 20 million. ) There is no “Risks driven by changes in regulation”, nor “Risks driven by change in physical climate parameters or other climate-change related developments”.

→Please refer to pages 29to 32 of this report.

#### 2.5.9 Financial Opportunities Arising from Climate Change

Have you identified any climate change-related opportunities (current or future) that have the potential to generate a substantive positive change in your business operations, revenue, expenditure (i.e. opportunities driven by changes in regulation, physical, or other climate change-related developments)?

- ☐ Yes, we have identified climate change-related opportunities.  
☐ Please provide description below:

Opportunity 3 : Products and Services. All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs, called Sustainability products. Energy Storage System and EV Charger are emerging Sustainability products. . Expanding the production and sale of these products is our most important goal.

- ☐ Please estimate the annual financial positive implications of this opportunity:

- annual OPERATING REVENUE will increase by 1,048 million (NT) in the future
- annual PROFIT FROM OPERATIONS will increase by 178million (NT) in the future

Estimated time frame (in number of years) for positive financial implications of this opportunity:

Explanation of financial impact figure (The approach was employed to calculate the figure, The figures used in calculation, Any assumption the figure is dependent on) :

The growth rate of OPERATING REVENUE in each of the past four years was 5.53% , 24.20% , 34.02 and - 16.61% respectively, of which 5.53% was taken as the growth rate of annual OPERATING REVENUE in the future. It is estimated that the annual OPERATING REVENUE will increase by 1,048million (NT) in the future(This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)

The PROFIT FROM OPERATIONS rate of each year in the past five years was 20%, 20% ,17% ,23% and 22% respectively, of which the minimum 17% was taken as the net PROFIT FROM OPERATIONS rate for the future years, multiplied by the estimated increase annual OPERATING REVENUE for the future years, the annual PROFIT FROM OPERATIONS will increase by 178 million (NT) in the future (This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)

❏ Please estimate the current annual costs associated with developing this opportunity:

Cost to realize opportunity : The total annual OPERATING COSTS and OPERATING EXPENSES will increase by 870million (NT) in the future **(This figure is only for the purpose of “TCFD Report information” and not for the purpose of “Publication of Financial Forecasts information”, please read it carefully.)**

Strategy to realize opportunity and explanation of cost calculation : The increase annual OPERATING COSTS and OPERATING EXPENSES in the future are calculated by deducting the increase annual PROFIT FROM OPERATIONS in the future from the increase annual OPERATING REVENUE in the future.

→Please refer to pages 32 to 35 of this report.

#### 2.5.10Climate-Related Scenario Analysis

Has your company conducted climate-related scenario analysis?

- ☐ Yes, we have conducted climate-related scenario analysis  
☐ We use qualitative and quantitative climate-related scenario analysis

Please select any climate-related scenarios your organization has used in their climate-related scenario analysis

ScenarioType	2°C or below 2°C	Above 2°C
TransitionScenario	<input type="checkbox"/> IRENA	
PhysicalScenario	<input type="checkbox"/> RCP2.6(orSSP12.6)	

→Please refer to pages 7 to 19 of this report.

#### 2.5.11Physical Climate Risk Adaptation

Based on your climate risk assessment, has your company set up a plan to adapt to the identified physical climate risks?

- ☐ Not applicable. We have performed a climate risk assessment for physical risks, but do not consider our company's assets and operations to be exposed to any material physical risks.

Our company's operating headquarters and factory location in Taiwan, factory location in Mainland, and factory location in Vietnam have been carefully evaluated and selected; Historical data shows that these areas have not experienced any "weather potential impact events" under the RCP2.6 scenario in the past 15 years, and our current assessment does not have clear evidence that such "weather potential impact events" will occur within the next 15 years.

Therefore, although we have performed a climate risk assessment for physical risks, but do not consider our company's assets and operations to be exposed to any material physical risks: Acute risks ( risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods ) or Chronic risks ( longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause sea level rise or chronic heat waves ) .

→Please refer to pages 18 to 19 of this report.

#### 2.5.12 Emissions Reduction Targets

Does your company have any corporate-level emissions reduction targets publicly available?

If your company also answers the question Net-Zero Commitment, please do not provide your Net-Zero target in this question, but provide details of your related near-term emissions reduction target.

- ☐ Yes, we have a company-wide absolute emissions target and/or an emissions intensity target publicly available that covers Scope 1, Scope 2 emissions. ( Scope 3 Please refer to the Sustainability Report )

Target Type and Metric

- ☐ Intensity targets

Intensity Metric

- ☐ Metric tons CO<sub>2</sub>e per unit revenue

Scopecoveredby the target	TargetTimeframe	Baselineyear emissionscovered andasa%oftotal baseyear emissions	%reductiontarget frombaseyear	Isthistarget validated bythe Science-based TargetsInitiative?
<input type="radio"/> Scope 1+2 combined	BaseYear : 2023 Target Year : 2050	Baseyearemissions : 18 tCO <sub>2</sub> e / OPERATING REVENUE Million dollars Percentageoftotal baseyear emissions : 100%	33.5%	<input type="radio"/> No,thetarget is notscience-based

→Please refer to pages 37 and 39 of this report.

### 2.5.13 Low-Carbon Products

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions. You may provide information on either low carbon products, avoided emission products or both, depending on the relevance of the product types to your business.

Type & Description of product(s)	Public Reporting	Level of aggregation	% of total revenues from "climate change" product(s) in FY 2023	Estimated total avoided emissions per year	Comment
Avoided emissions for third-parties	<input checked="" type="checkbox"/> Description publicly available	<input type="radio"/> Company-wide	100%	Based on the sales volume in 2023 is 723,784tCO <sub>2</sub> e	
<input checked="" type="checkbox"/> Please specify a relevant example: According to IRENA's 1.5°C pathway scenario analysis , by 2050, the Global CO <sub>2</sub> emissions reductions by 25% will depend on Energy Efficiency and 25% on Renewables. All products ( UPS 、 PV Inverter 、 Energy Storage System 、 Variable Frequency Drive 、 EV Charger ) of VPT have Energy Efficiency benefits, and PV Inverter has both Energy Efficiency and Renewables benefits , called Sustainability products. So, VPT can be called the Sustainability Sector.					

→Please refer to pages 38 of this report.

### 2.5.14 Internal Carbon Pricing

Please indicate if your company uses an internal price of carbon.

☐ No, we do not use an internal price of carbon

### 2.5.15 Net-Zero Commitment

Has your company publicly committed to reaching net-zero GHG emissions and set targets and programs to fulfil the commitment? Please note that this question should only be answered if a near-term absolute or relative emission reduction target is reported in the previous question Emissions Reduction Targets.

☐ Yes, we have publicly committed to reaching net-zero emissions across our value chain.

Net-zero Strategy:

The Emission Intensity of Scope 1 and Scope 2 greenhouse gas (GHG) emissions decreases by 1.5% annually, it is expected that 2050 will be 66.49% of the baseline year 2023.

The GHG emission reduction benefits of sales products in 2023 are 723,784 tCO<sub>2</sub>e / Self Operating (Scope 1+Scope 2) GHG emissions of 11,200 tCO<sub>2</sub>e=64.6times: the target is to grow by 1.5% annually, and it is expected to grow by 49.48% in 2050, that is 96 times, compared to the baseline year of 2023, which is 64.6 times.

→Please refer to page 39 of this report.