



**Voltronic Power**

*Advancing Power*

**Voltronic Power Technology Corp.**

**2022 TCFD Report**

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

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# Core Elements of Recommended Climate-Related Financial Disclosures



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

## Core Disclosures

- 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.



## Declaration from the Chairperson

### Net Zero Emissions Declaration: Responding to the Climate Change



**Hsieh Juor-Ming**  
Chairperson and ESG Executive Committee Chairperson

<b>Self-made components</b>	In order to effectively control the carbon emission of the value chain and improve the delivery capacity through vertical integration, we are committed to improve the self-made rate of components other than semiconductors and batteries.
<b>Low carbon intensity production</b>	The amount of emissions of CO <sub>2</sub> released per million US dollars of sales amount is taken as the carbon intensity test index , we are committed to the goal of low-carbon intensity production.
<b>Solar panel</b>	Set up solar panels and Energy Storage System in the self built factory in Zhongshan on the mainland to improve the self-made rate of electricity.
<b>Sustainability products</b>	All products produced by the company: Uninterruptible Power Supply, PV Inverter and Energy Storage System etc., which have the benefits of Energy Efficiency or both Energy Efficiency and Renewables . Expanding the production and sale of these products is our most important goal.

# Climate Change

### Climate change related SDGs



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.

# 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 2022 ESG report and the 2022 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)	Other Named Executive Officers	Business Unit Managers Business Unit Employees	R&D Unit Employees
<ul style="list-style-type: none"> <li>Recognition</li> </ul>	<ul style="list-style-type: none"> <li>Monetary</li> <li>Recognition</li> </ul>	<ul style="list-style-type: none"> <li>Monetary</li> <li>Recognition</li> </ul>	<ul style="list-style-type: none"> <li>Monetary</li> <li>Recognition</li> </ul>
<ul style="list-style-type: none"> <li>Emissions reduction</li> <li>Energy reduction</li> <li>Supply chain engagement</li> <li>R&amp;D and Manufacture and Sale of Sustainability Products</li> </ul>	<ul style="list-style-type: none"> <li>Emissions reduction</li> <li>Energy reduction</li> <li>Supply chain engagement</li> <li>R&amp;D and Manufacture of Sustainability Products</li> </ul>	<ul style="list-style-type: none"> <li>Sale of Sustainability Products</li> </ul>	<ul style="list-style-type: none"> <li>R&amp;D of Sustainability Products</li> </ul>
			Manufacture Unit Employees
			<ul style="list-style-type: none"> <li>Monetary</li> <li>Recognition</li> </ul>
			<ul style="list-style-type: none"> <li>Manufacture of Sustainability Products</li> </ul>



## Sustainability Organization in response to Climate Change

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

### Board of Directors

- **İ** Review the annual ESG report and TCFD report regularly every year.
- **İ** Regularly approve 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 )
- **İ** 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.
- **İ** 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.
- **İ** Regularly approve the performance-based compensation plan proposed by the Compensation Committee for management related to ESG (including climate change) ) achievements.

### ESG Executive Committee

- **İ** Be responsible for formulating and implementing the company's short, medium and long-term climate change Governance Strategies and plans.
- **İ** 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

- **İ** 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



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

## Core Disclosures

- 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.

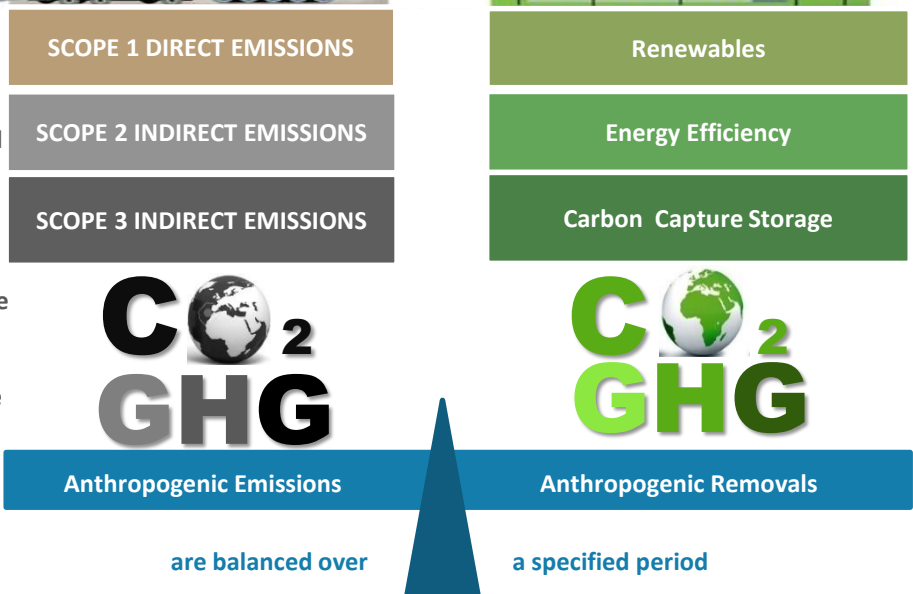
## Comprehensive Strategic Objectives in response to the Special Report on Global Warming of 1.5°C

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).

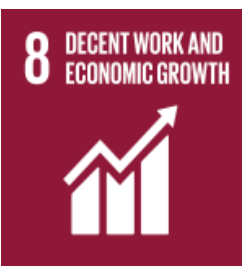


VPT committed to reaching the objectives of responding to climate change :

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

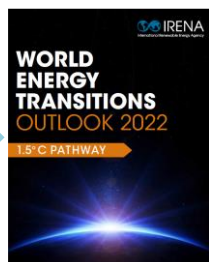
Demonstrate that will be able to continue to be profitable once they reach net-zero emissions

Set quantitative mid-term targets to be able to demonstrate progress against the long-term goals

Use climate-related scenario analysis to inform the strategy

- qualitative
- quantitative

Selection of applied climate related scenarios and models



**Towards the 2050 goal**

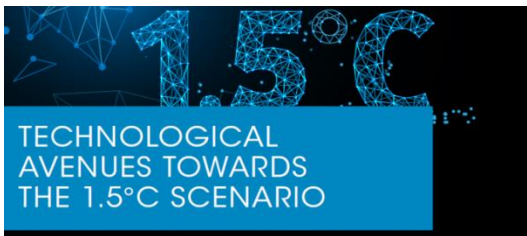
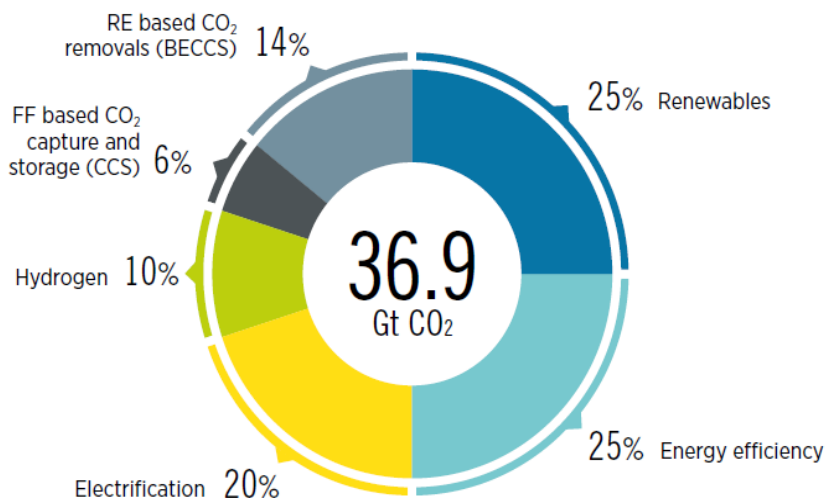
IRENA's 1.5°C pathway positions electrification and efficiency as key drivers of the energy transition, enabled by renewables, hydrogen, and sustainable biomass.

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 CO2 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; GtCO2 = gigatonnes of carbon dioxide; RE = renewable energy; FF = fossil fuel.



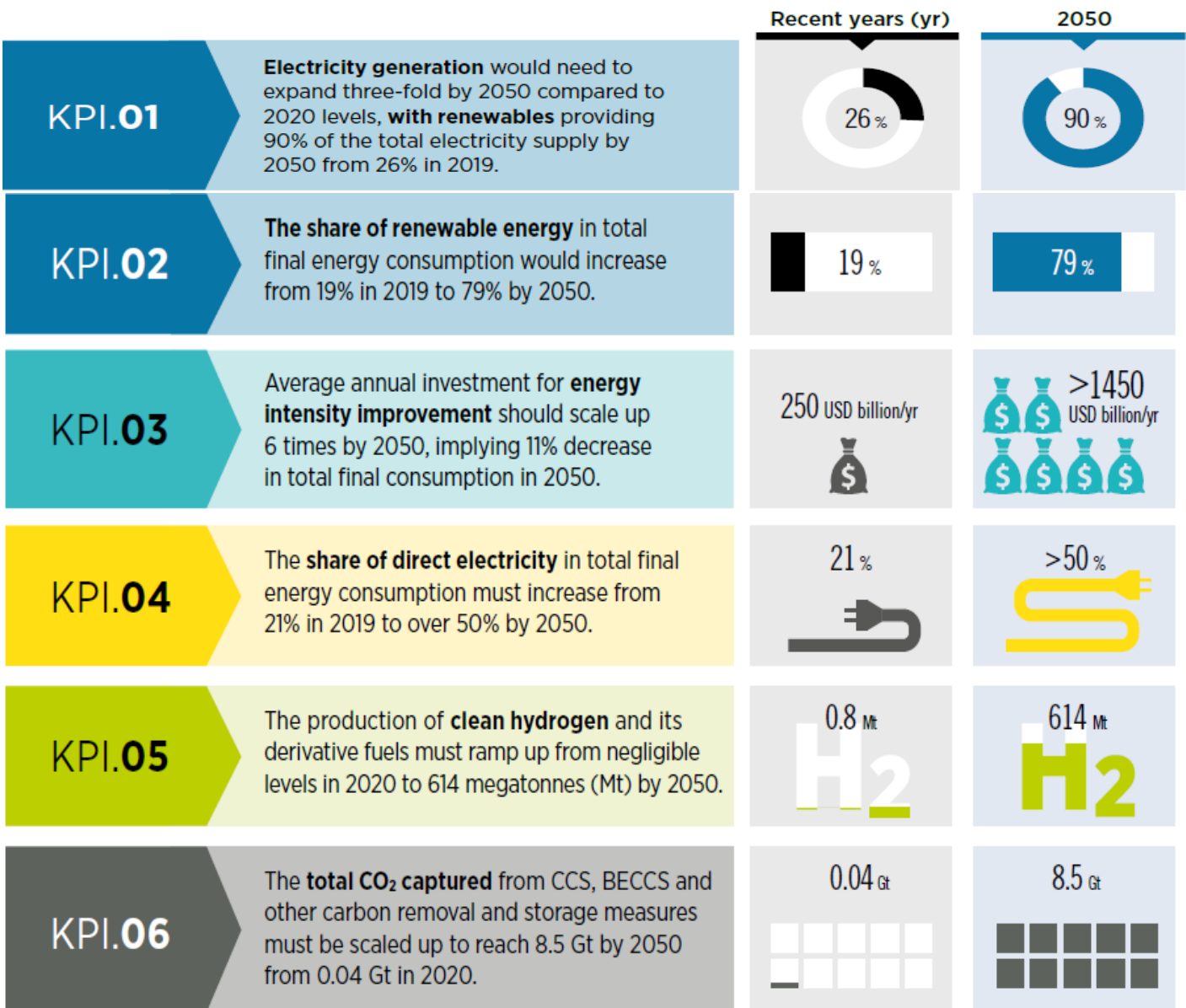
By 2050, annual abatement of 36.9 gigatonnes (Gt) of carbon dioxide (CO2) is achievable, compared to a reference case based on planned targets and policies. The 1.5°C Scenario outlined in the 2021 WETO envisions six technological avenues of an energy transition compatible with meeting the 1.5°C Paris climate goal (IRENA, 2021a):



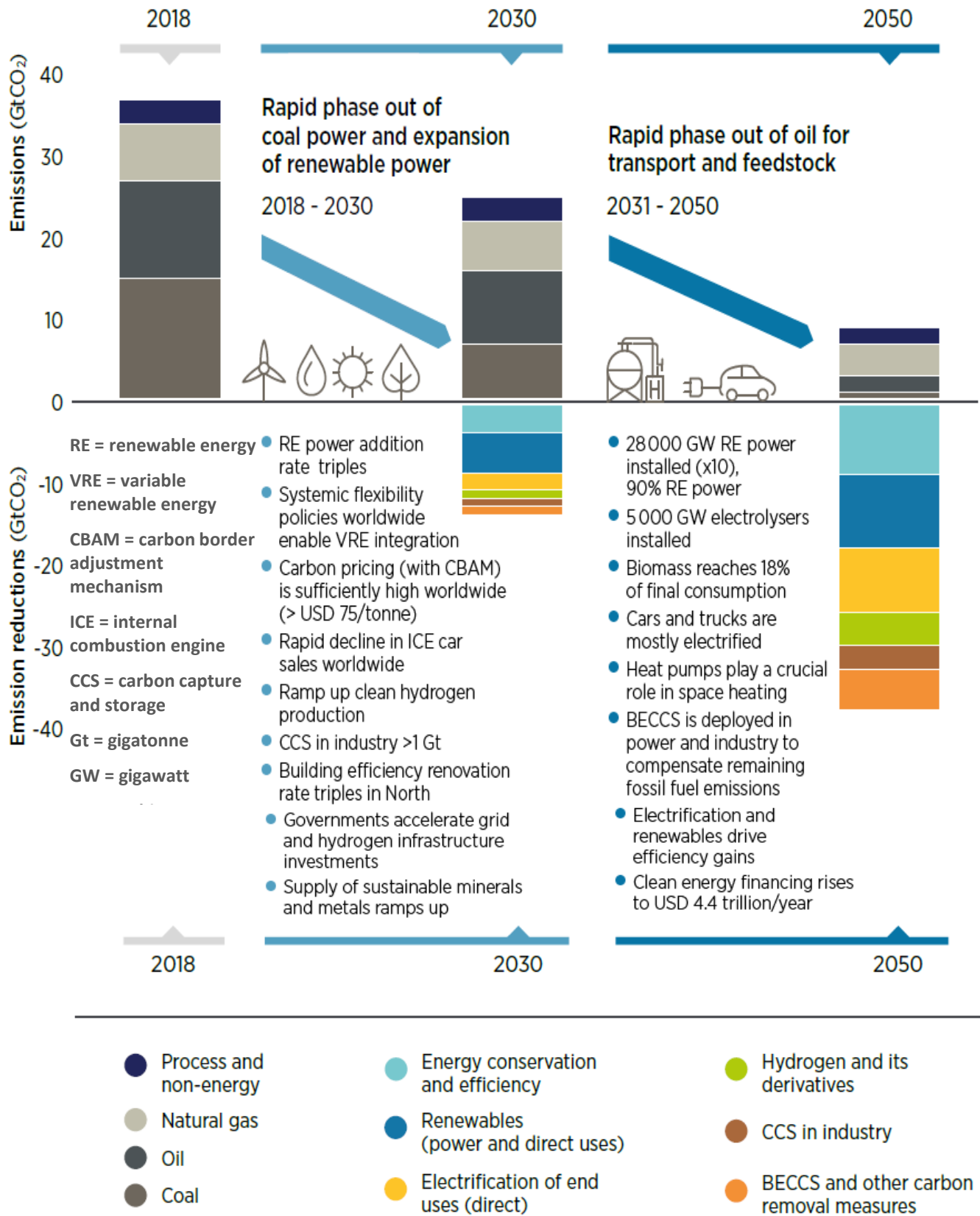
1. **Renewables:** Renewable electricity generation sources such as solar PV, wind etc., and the direct use of renewable energy, such as solar thermal and biomass.
2. **Energy conservation and efficiency:** Measures to reduce energy demand and increase the energy efficiency of end-use applications, including 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

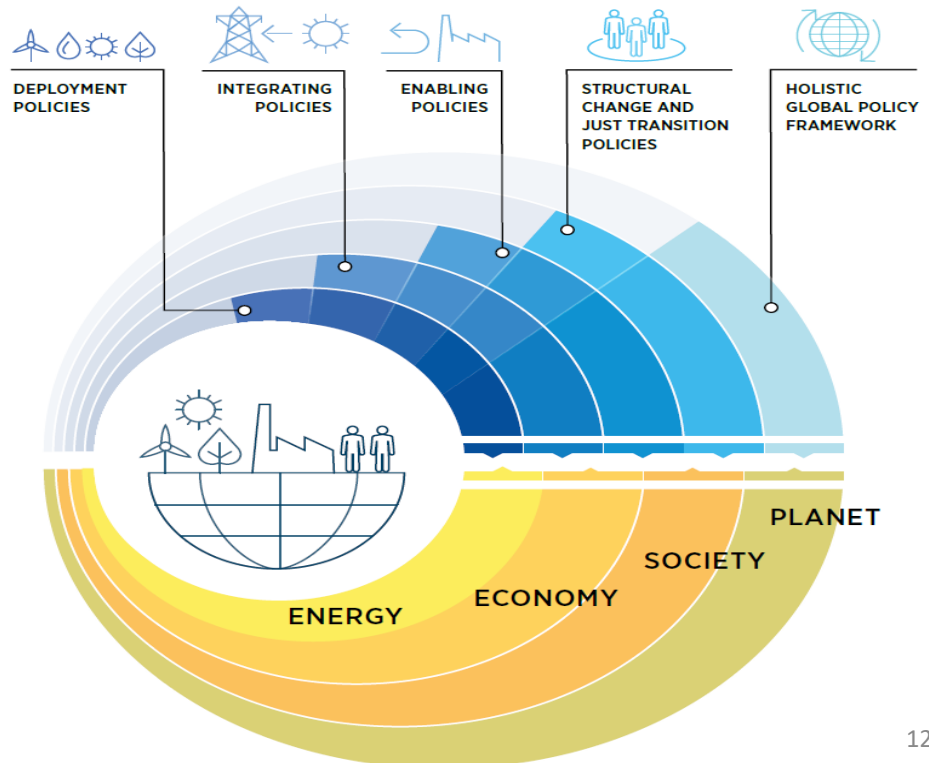


A roadmap to 2050 – tracking progress of key energy system components to achieve the 1.5°C target

	Indicators	Recent years	2050 <sup>22)</sup>	Off/On track	Required scaling factor (~X times)	
RENEWABLES	<b>ELECTRIFICATION WITH RENEWABLES</b>					
	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	
	<b>DIRECT RENEWABLES IN END-USES</b>					
	Share of renewables in final energy consumption	16% <sup>6)</sup>	79%		5x	
	Solar thermal collector area	25 million m <sup>2</sup> /yr <sup>7)</sup>	165 million m <sup>2</sup> /yr		6x	
	Modern bioenergy consumption	18 EJ <sup>8), 23)</sup>	58 EJ		3x	
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 EFFICIENCY	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	

<b>ELECTRIFICATION</b>	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
<b>HYDROGEN</b>	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
<b>CCS AND BECCS</b>	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

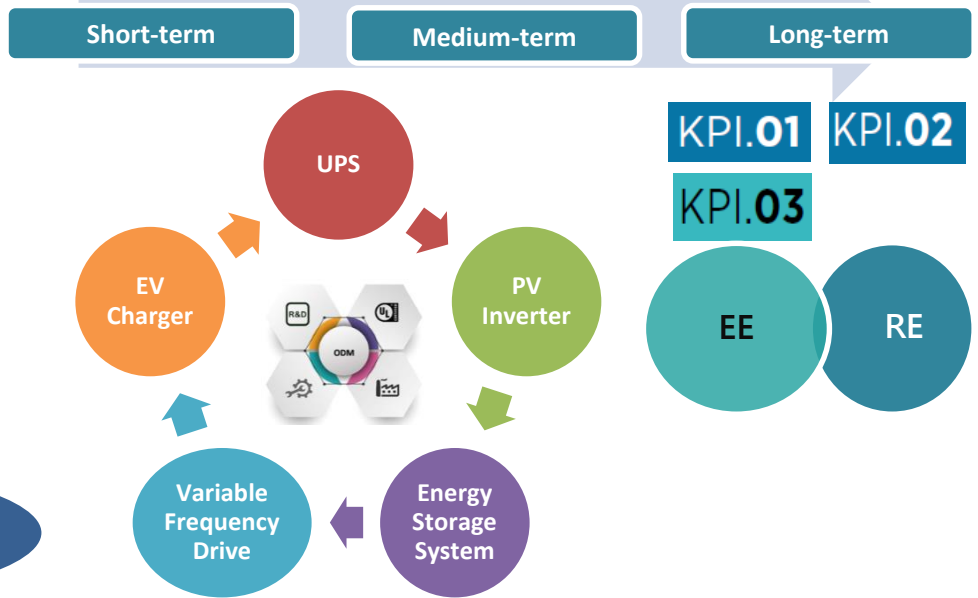
A holistic policy framework for energy transition



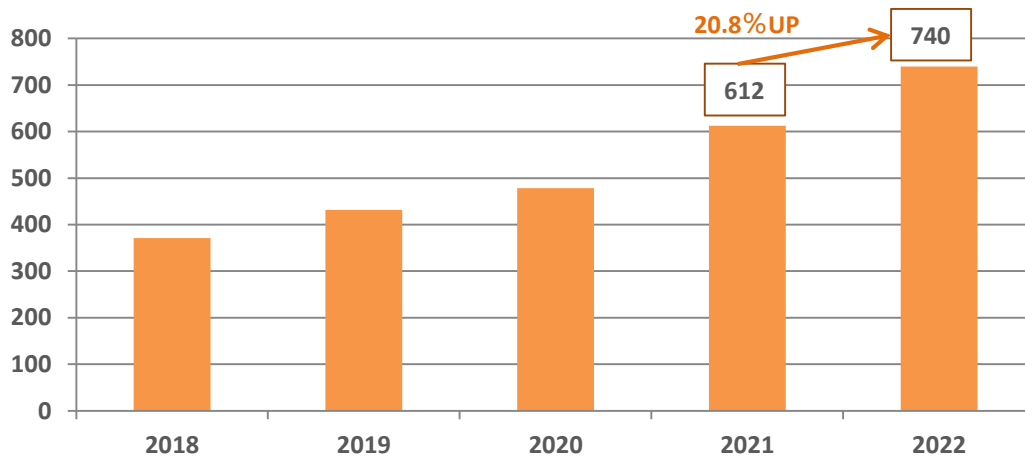
## Identified opportunities Products and Services



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.

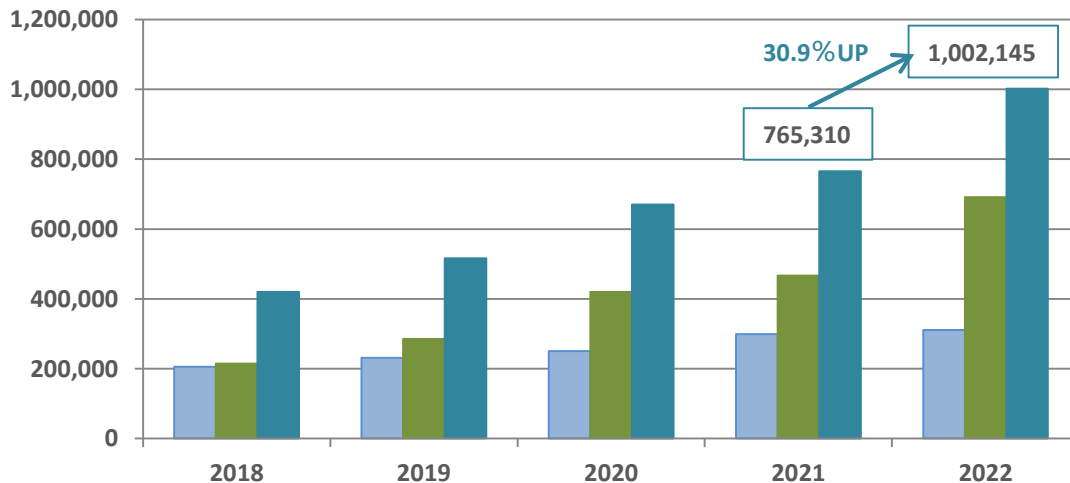


Relationship between VPT's operating revenue and emission reduction benefits provided by sales of products: 2018-2022



OPERATING REVENUE / Million dollars

All emission reduction benefits increase with the growth of operating revenue

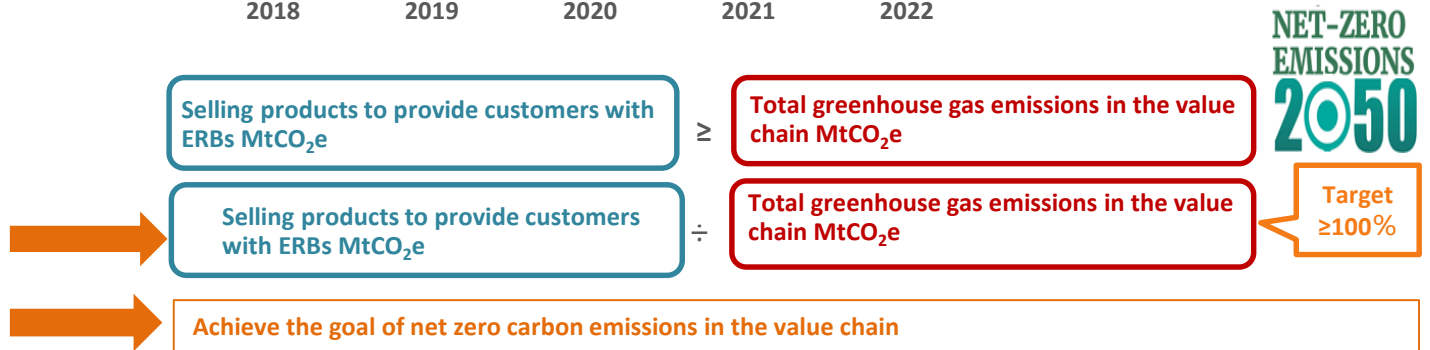
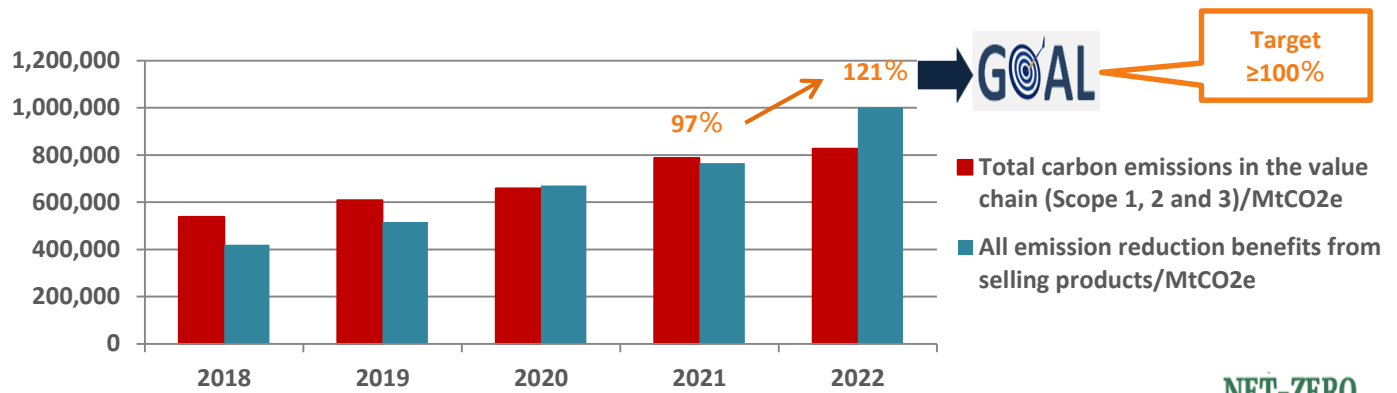


Energy Efficiency / MtCO<sub>2</sub>e

Renewables / MtCO<sub>2</sub>e

Total emission reduction benefits / MtCO<sub>2</sub>e

The relationship chart of all emission reduction benefits from selling products vs. total carbon emissions in the value chain: 2018-2022



**Strategy 1**

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 ERBs MtCO<sub>2</sub>e**  $\geq$  **Total greenhouse gas emissions in the value chain MtCO<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 emission reduction benefits of all products sold = Realization of the goal of net zero carbon emissions in the value chain.**

**Strategy 2**

**Due to Strategy 1:**

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

Therefore, VPT adopts the following indicator **for managing self-operating carbon emissions (SCOPE 1 and SCOPE 2)**: **Company self-operating Carbon Intensity = SCOPE 1 and SCOPE 2 total MtCO<sub>2</sub>e / OPERATING REVENUE Million dollars**

Therefore, VPT adopts the following indicator **for managing value chain carbon emissions (SCOPE 1, SCOPE 2 and SCOPE 3)**: **Company value chain Carbon Intensity = SCOPE 1, SCOPE 2 and SCOPE 3 total MtCO<sub>2</sub>e / OPERATING REVENUE Million dollars**

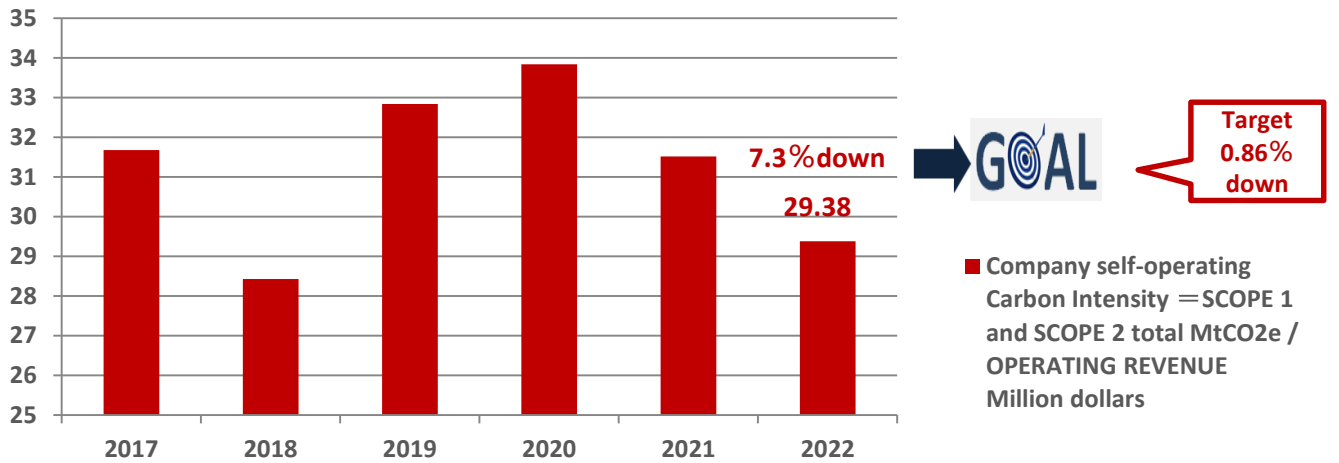
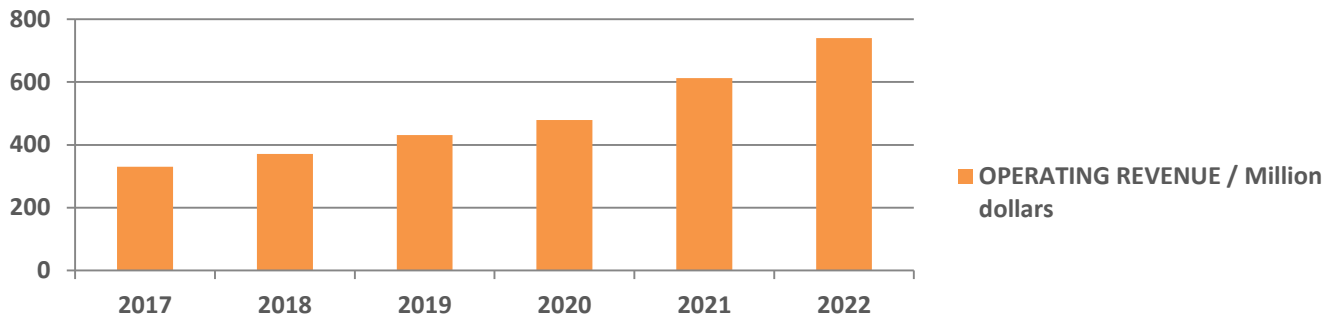
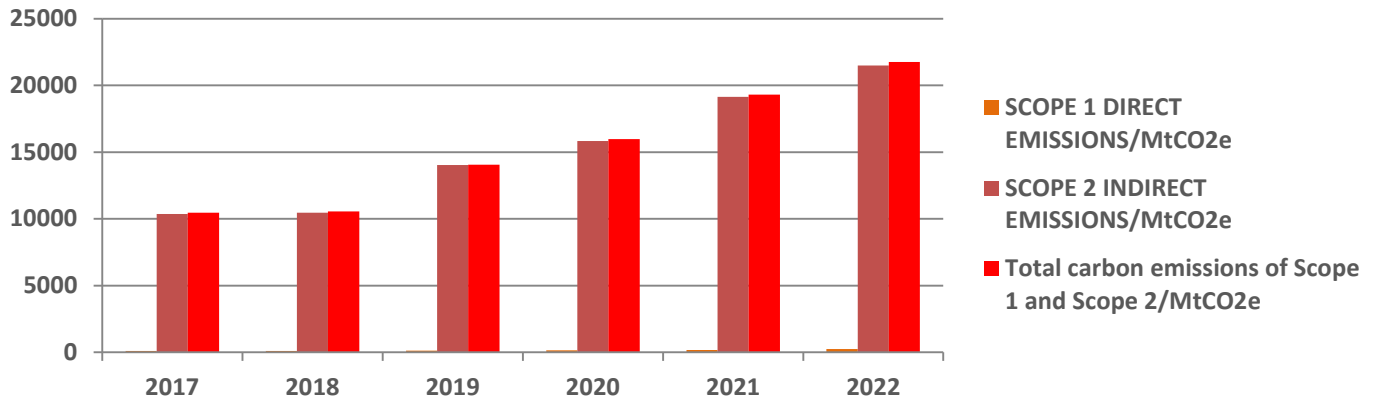
**KPI.04** The **share of direct electricity** in total final energy consumption must increase from 21% in 2019 to over 50% by 2050.

21%

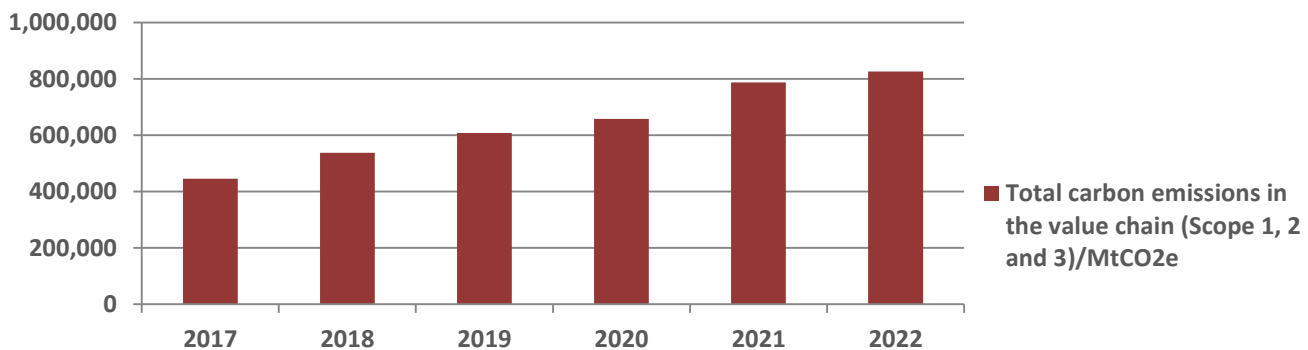
>50%

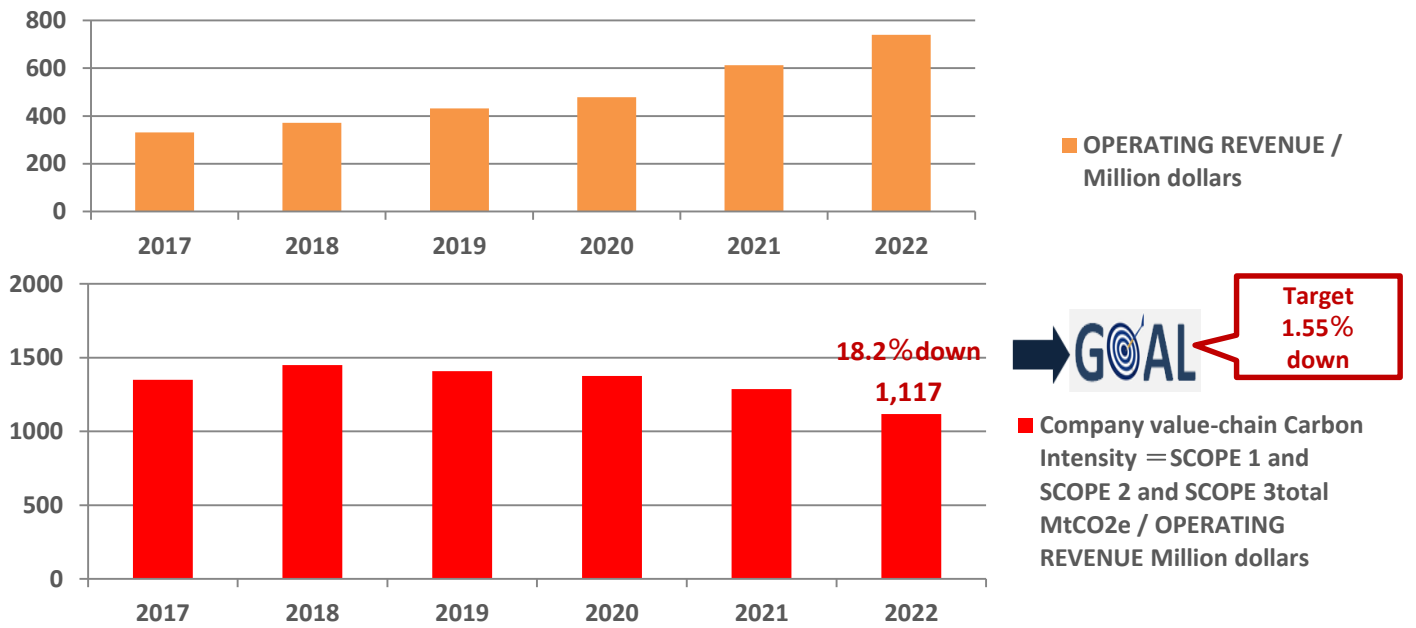
**Strategy 3**

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.



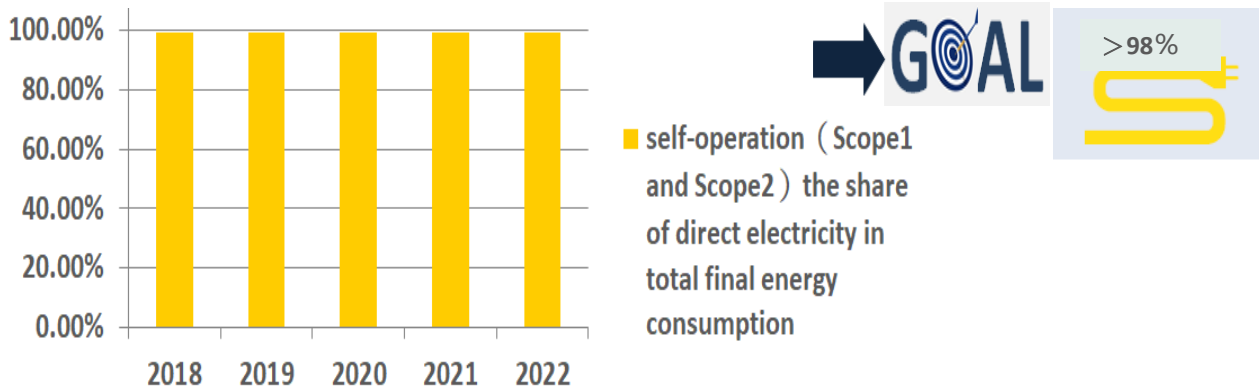
In 2021, VPT sets 31.7 as the Base Year Carbon Intensity, the comprehensive average Carbon Intensity self-operation in the past five years ( 2017 ~ 2021 ) . Its management climate related risks and opportunities target is to reduce to 27.9 by the Target Year of 2035, a decrease of 12%, and a compound annual decrease rate of 0.86%. Target 0.86% down





In 2021, VPT sets **1366 as the Base Year Carbon Intensity**, the comprehensive average Carbon Intensity of value chain in the past five years ( 2017 ~ 2021 ) . Its management climate related risks and opportunities target is **to reduce to 1093 by the Target Year of 2035, a decrease of 20%, and a compound annual decrease rate of 1.55%.**

Target 1.55% down



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** >50%

Therefore, VPT has set its own operational target of **KPI.04** as >98%

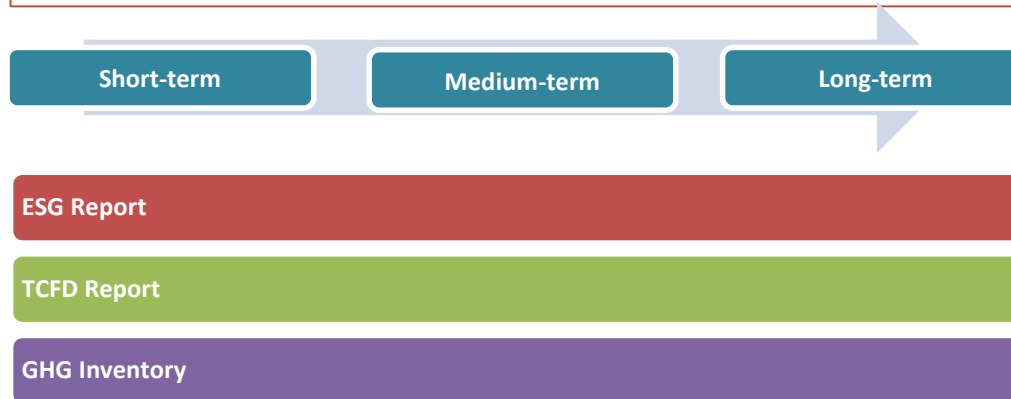
- Chemicals and petrochemicals
- Iron and steel
- Pulp and paper
- Cement
- Aluminium





## 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
China	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 China, 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



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



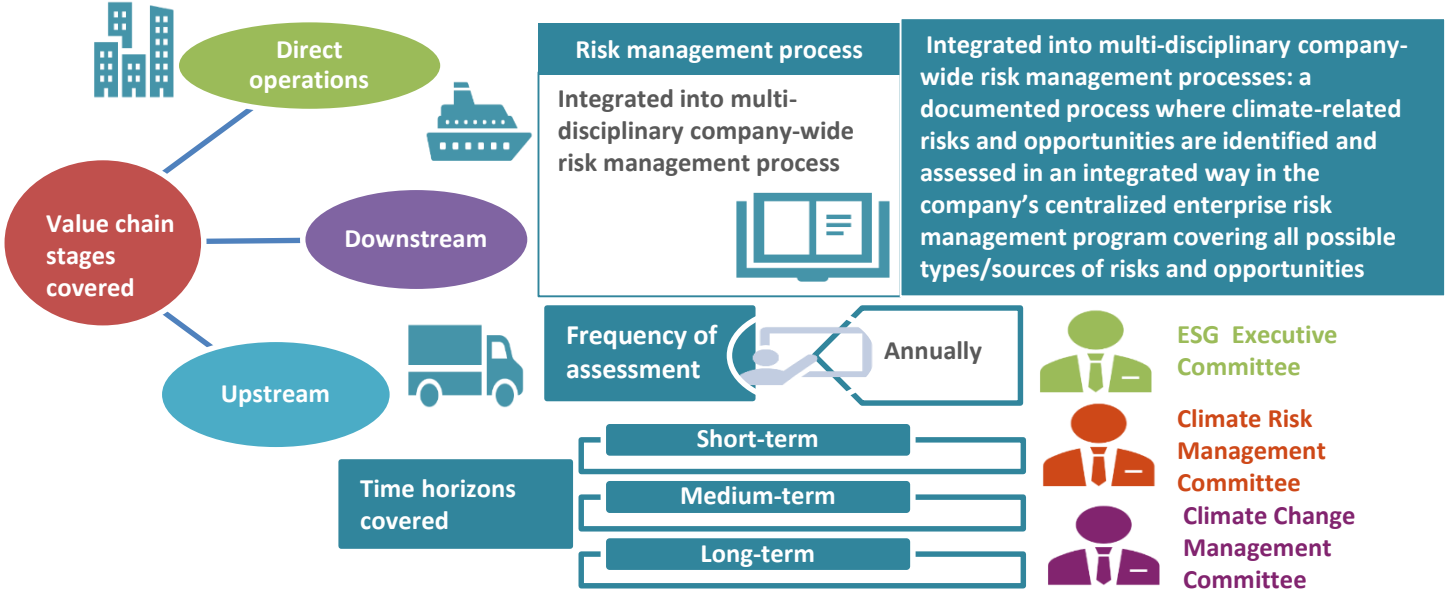
Refers to the potential negative impacts of climate change on an organization. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) 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
Medium-term	2 years	8 years
Long-term	8 years	39 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.

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	2018	2019	2020	2021	2022
<b>OPERATING REVENUE</b>	NT11,408 Million	NT12,936 Million	NT13,652 Million	NT16,957 Million	NT22,725 Million
<b>OPERATING COSTS</b>	NT8,303 Million	NT9,151 Million	NT9,634 Million	NT12,646 Million	NT15,588 Million
<b>GROSS PROFIT ( % )</b>	NT3,105 Million ( 27% )	NT3,785 Million ( 29% )	NT4,018 Million ( 29% )	NT4,311 Million ( 25% )	NT7,137 Million ( 31% )
<b>PROFIT FROM OPERATIONS ( % )</b>	NT2,117 Million ( 19% )	NT2,557 Million ( 20% )	NT2,730 Million ( 20% )	NT2,925 Million ( 17% )	NT5,288 Million ( 23% )
<b>NET PROFIT FOR THE YEAR</b>	NT2,131 Million	NT2,197 Million	NT2,197 Million	NT2,359 Million	NT4,433 Million
<b>EPS</b>	NT21.94	NT25.73	NT25.14	NT26.97	NT50.71
<b>TOTAL ASSETS</b>	NT8,286 Million	NT10,340 Million	NT11,921 Million	NT13,384 Million	NT16,041 Million
<b>TOTAL EQUITY</b>	NT4,450 Million	NT4,880 Million	NT5,339 Million	NT5,708 Million	NT8,343 Million

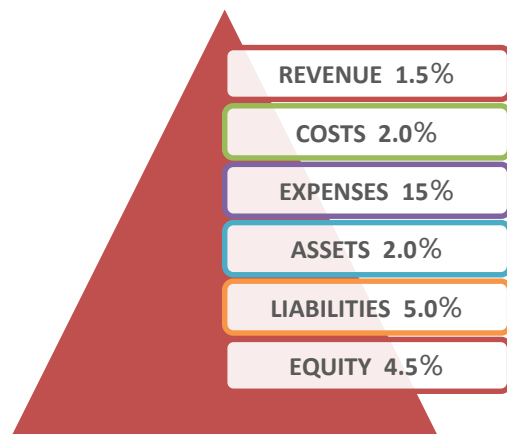


Define substantive financial or strategic impact on the business.

The GROSS PROFIT rate of the company falls between 25% and 31%, 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 NT4,433million in 2022, NT443 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	1.949%	2.842%	16.383%	2.762%	5.755%	5.310%
adjusted substantive impact	1.5%	2.0%	15%	2.0%	5.0%	4.5%





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**

<b>Organizational division of work</b>	<b>Job duties</b>
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**

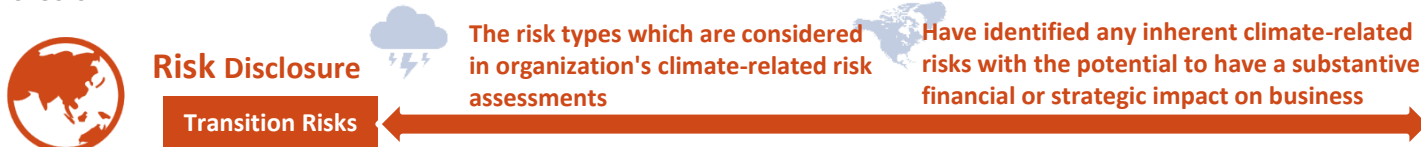
Departmental risk management commissioners shall regularly review the progress and results of the implementation of the adjustment action plan and review it according to its completion:

- (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 )				
<b>Primary climate-related risk driver :</b> – Exposure to litigation		<b>Primary potential financial impact :</b> – Increased costs and/or reduced demand for products and services resulting from fines and judgments		
<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 :</b> 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 (99%) 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.				
<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		<b>Type of financial impact</b> – 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 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 )	
<b>Primary climate-related risk driver :</b> – Increased pricing of GHG emissions – Enhanced emissions-reporting obligations – Mandates on and regulation of existing products and services	<b>Primary potential financial impact :</b> – 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

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			

<p>Explanation of financial impact figure : No</p> <ul style="list-style-type: none"> <li>- The approach was employed to calculate the figure :</li> <li>- The figures used in calculation :</li> <li>- Any assumption the figure is dependent on :</li> </ul>
Cost of response to risk : No
Description of response and explanation of cost calculation : No

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

<p>Primary climate-related risk driver :</p> <ul style="list-style-type: none"> <li>- Changing customer behavior</li> <li>- Uncertainty in market signals</li> <li>- Increased cost of raw materials</li> </ul>	<p>Primary potential financial impact :</p> <ul style="list-style-type: none"> <li>- Reduced demand for goods and services due to shift in consumer preferences</li> <li>- Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)</li> <li>- Abrupt and unexpected shifts in energy costs</li> <li>- Change in revenue mix and sources, resulting in decreased revenues</li> <li>- Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations)</li> </ul>			
<p>In the value chain the risk driver occurs :</p> <ul style="list-style-type: none"> <li>- Direct operations</li> <li>- Downstream</li> </ul>	<p>Time horizon :</p> <ul style="list-style-type: none"> <li>- Short-term</li> <li>- Medium-term</li> <li>- Long-term</li> </ul>	<p>Likelihood :</p> <ul style="list-style-type: none"> <li>- Very unlikely ( 0-10% )</li> </ul>	<p>Magnitude of impact :</p> <ul style="list-style-type: none"> <li>- Low</li> </ul>	<p>Relevance &amp; inclusion</p> <ul style="list-style-type: none"> <li>- Relevant, always included</li> </ul>
<p>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.</p>				
<p>Is able to provide a potential financial impact figure?</p> <ul style="list-style-type: none"> <li>- No, does not have this figure</li> </ul>		<p>Potential financial impact figure (currency)</p> <ul style="list-style-type: none"> <li>- No</li> </ul>		
<p>Explanation of financial impact figure : No</p> <ul style="list-style-type: none"> <li>- The approach was employed to calculate the figure :</li> <li>- The figures used in calculation :</li> <li>- Any assumption the figure is dependent on :</li> </ul>				
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 )**

<p>Primary climate-related risk driver :</p> <ul style="list-style-type: none"> <li>- Shifts in consumer preferences</li> <li>- Stigmatization of sector</li> <li>- Increased stakeholder concern or negative stakeholder feedback</li> </ul>	<p>Primary potential financial impact :</p> <ul style="list-style-type: none"> <li>- Reduced revenue from decreased demand for goods/services</li> <li>- Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)</li> <li>- Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)</li> <li>- Reduction in capital availability</li> </ul>			
<p>In the value chain the risk driver occurs :</p> <ul style="list-style-type: none"> <li>- Direct operations</li> <li>- Downstream</li> </ul>	<p>Time horizon :</p> <ul style="list-style-type: none"> <li>- Short-term</li> <li>- Medium-term</li> <li>- Long-term</li> </ul>	<p>Likelihood :</p> <ul style="list-style-type: none"> <li>- Very unlikely ( 0-10% )</li> </ul>	<p>Magnitude of impact :</p> <ul style="list-style-type: none"> <li>- Low</li> </ul>	<p>Relevance &amp; inclusion</p> <ul style="list-style-type: none"> <li>- Relevant, always included</li> </ul>
<p>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.</p>				

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 climate-related risk driver :</b> - Increased severity of extreme weather events such as cyclones and floods			<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>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 :</b> No physical Risks 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 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 )				
<b>Primary climate-related opportunity driver :</b> – 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		<b>Primary potential financial impact :</b> – 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		
<b>In the value chain the opportunity driver occurs :</b> – Direct operations	<b>Time horizon :</b> – Short-term – Medium-term – Long-term	<b>Likelihood :</b> – Virtually certain ( 99–100% )	<b>Magnitude of impact :</b> – Low	<b>Relevance &amp; inclusion</b> – Relevant, always included
<b>Company - specific description :</b> Set up Energy Storage System in the self built factory in Zhongshan on the mainland to improve the Energy Efficiency .				
<b>Is able to provide a potential financial impact figure?</b> – No, does not have this figure		<b>Potential financial impact figure (currency)</b> -		
<b>Explanation of financial impact figure :</b> It has been set up since 2022, and its potential financial impact data can only be evaluated after the actual construction and use. - The approach was employed to calculate the figure : - The figures used in calculation : - Any assumption the figure is dependent on :				
<b>Cost to realize opportunity :</b> 40million to 80 million (NT)				
<b>Strategy to realize opportunity and explanation of cost calculation :</b> 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 )				
<b>Primary climate-related opportunity driver :</b> – 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		<b>Primary potential financial impact :</b> – 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		
<b>In the value chain the opportunity driver occurs :</b> – Direct operations	<b>Time horizon :</b> – Short-term – Medium-term – Long-term	<b>Likelihood :</b> – Virtually certain ( 99–100% )	<b>Magnitude of impact :</b> – Low	<b>Relevance &amp; inclusion</b> – Relevant, always included
<b>Company - specific description :</b> Set up solar panels in the self built factory in Zhongshan on the mainland to improve the self-made rate of electricity.				
<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		



<p>Explanation of financial impact figure : It has been set up since 2022, and its potential financial impact data can only be evaluated after the actual construction and use.</p> <ul style="list-style-type: none"> <li>- The approach was employed to calculate the figure :</li> <li>- The figures used in calculation :</li> <li>- Any assumption the figure is dependent on :</li> </ul>
<p>Cost to realize opportunity : 10million to 20 million (NT)</p>
<p>Strategy to realize opportunity and explanation of cost calculation : Construction of solar panels and its estimated construction cost.</p>

**Opportunity 3 : Products and Services ( opportunities related to innovation and development of new low-emission and climate adaptation products and services. )**

<p>Primary climate-related opportunity driver :</p> <ul style="list-style-type: none"> <li>- Development and/or expansion of low emission goods and services</li> <li>- Development of climate adaptation and insurance risk solutions</li> <li>- Development of new products or services through R&amp;D and innovation</li> <li>- Ability to diversify business activities</li> <li>- Shift in consumer preferences</li> </ul>	<p>Primary potential financial impact :</p> <ul style="list-style-type: none"> <li>- Increased revenue through demand for lower emissions products and services</li> <li>- Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)</li> <li>- Better competitive position to reflect shifting consumer preferences, resulting in increased revenues</li> </ul>
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<p>In the value chain the opportunity driver occurs :</p> <ul style="list-style-type: none"> <li>- Direct operations</li> <li>- Downstream</li> </ul>	<p>Time horizon :</p> <ul style="list-style-type: none"> <li>- Short-term</li> <li>- Medium-term</li> <li>- Long-term</li> </ul>	<p>Likelihood :</p> <ul style="list-style-type: none"> <li>- Virtually certain (99-100%)</li> </ul>	<p>Magnitude of impact :</p> <ul style="list-style-type: none"> <li>- high</li> </ul>	<p>Relevance &amp; inclusion</p> <ul style="list-style-type: none"> <li>- Relevant, always included</li> </ul>
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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.

<p>Is able to provide a potential financial impact figure? - Yes</p>	<p>Potential financial impact figure (currency)</p> <ul style="list-style-type: none"> <li>- annual OPERATING REVENUE will increase by 1,257 million (NT) in the future</li> <li>- annual PROFIT FROM OPERATIONS will increase by 214million (NT) in the future</li> </ul>
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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 13.39%, 5.53% , 24.20% and 34.02% respectively, of which the minimum 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 1,257million (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 19%, 20%, 20% ,17% and 23% 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 214 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 1,043 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	2018	2019	2020	2021	2022
<b>OPERATING REVENUE</b>	NT11,408 Million	NT12,936 Million	NT13,652 Million	NT16,957 Million	NT22,725 Million
<b>OPERATING COSTS</b>	NT8,303 Million	NT9,151 Million	NT9,634 Million	NT12,646 Million	NT15,588 Million
<b>GROSS PROFIT ( % )</b>	NT3,105 Million ( 27% )	NT3,785 Million ( 29% )	NT4,018 Million ( 29% )	NT4,311 Million ( 25% )	NT7,137 Million ( 31% )
<b>PROFIT FROM OPERATIONS ( % )</b>	NT2,117 Million ( 19% )	NT2,557 Million ( 20% )	NT2,730 Million ( 20% )	NT2,925 Million ( 17% )	NT5,288 Million ( 23% )

**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, 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.

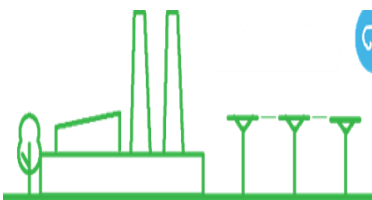
#### Anthropogenic Greenhouse Gases Emissions



VPT has no direct greenhouse gas emissions in the manufacturing process. The direct emission in Scope 1 of VPT is only the CO<sub>2</sub> emission from the use of refrigerant in cooling equipment, the use of the company-owned vehicles and the use of generators in case of power failure, which accounts for a fairly small proportion of the overall greenhouse gas emission.

- Refrigerant emission from cooling equipment: emission equivalent 34.78 (Mt CO<sub>2</sub>e/ year)
- Using the company's own vehicles: emission equivalent 215.51 (Mt CO<sub>2</sub>e/ year)
- Generator startup in case of power failure: emission equivalent 8.07 (Mt CO<sub>2</sub>e/ year)
- SCOPE 1 Total: emission equivalent 258.36 (Mt CO<sub>2</sub>e/ year)**

**SCOPE 1 DIRECT EMISSIONS**  
EMISSION SOURCE : All direct emissions within the operational control of VPT



Scope 2 greenhouse gas emission source of VPT is only the CO<sub>2</sub> emission generated by the purchased power (municipal power supply) required by the company's operation and production. The greenhouse gas emission in Scope 2 is the main greenhouse gas emission source of VPT's .

- FY 2020 Purchased power (municipal power supply): emission equivalent 15,835( Mt CO<sub>2</sub>e/ year)
- FY 2021 Purchased power (municipal power supply): emission equivalent 19,129( Mt CO<sub>2</sub>e/ year)
- FY 2022 Purchased power (municipal power supply): emission equivalent 21,486 ( Mt CO<sub>2</sub>e/ year)

**SCOPE 2 INDIRECT EMISSIONS**  
EMISSION SOURCE : Indirect emissions generated from purchased electricity, heat, steam or cooling.

#### PUBLIC REPORTING

Our data is publicly available.

#### THIRD-PARTY VERIFICATION

Our data has been third-party verified in the most recent financial year reported.

Please see Appendix II

Company self-operating Carbon Intensity test : SCOPE 1 DIRECT EMISSIONS and SCOPE 2 INDIRECT EMISSIONS

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>SCOPE 1 DIRECT EMISSIONS</b>	94* MtCO <sub>2</sub> e	126* MtCO <sub>2</sub> e	143 MtCO <sub>2</sub> e	175 MtCO <sub>2</sub> e	258 MtCO <sub>2</sub> e
<b>SCOPE 2 INDIRECT EMISSIONS</b>	10,461 MtCO <sub>2</sub> e	14,043 MtCO <sub>2</sub> e	15,835 MtCO <sub>2</sub> e	19,129 MtCO <sub>2</sub> e	21,486 MtCO <sub>2</sub> e
<b>SCOPE 1 and SCOPE 2 total</b>	<b>10,555</b> <b>MtCO<sub>2</sub>e</b>	<b>14,169</b> <b>MtCO<sub>2</sub>e</b>	<b>15,978</b> <b>MtCO<sub>2</sub>e</b>	<b>19,304</b> <b>MtCO<sub>2</sub>e</b>	<b>21,744</b> <b>MtCO<sub>2</sub>e</b>
<b>OPERATING REVENUE</b>	371.2 Million dollars	431.5 Million dollars	478.6 Million dollars	612.4 Million dollars	740 Million dollars
<b>Company self-operating Carbon Intensity **</b>	<b>28.43</b>	<b>32.84</b>	<b>33.84</b>	<b>31.52</b>	<b>29.38</b>

7.3% down

\*Has not been third-party verified

\*\*Company self-operating Carbon Intensity = SCOPE 1 and SCOPE 2 total MtCO<sub>2</sub>e / OPERATING REVENUE Million dollars

In 2021, VPT sets **31.7 as the Base Year Carbon Intensity**, the comprehensive average Carbon Intensity self-operation in the past five years ( 2017 ~ 2021 ) . Its management climate related risks and opportunities target is **to reduce to 27.9 by the Target Year of 2035, a decrease of 12%, and a compound annual decrease rate of 0.86%.**

Target  
0.86% down



**SCOPE 3 INDIRECT EMISSIONS**

**EMISSION SOURCE :**

All other indirect emissions from sources such as business travel, waste management, and the value chain.

V : VPT has the Emission  
X : VPT has no the Emission

Purchased goods and services	V
Capital goods	V
Fuel and energy-related activities	X
Upstream transportation and distribution	V
Waste generated in operations	V
Business travel	V
Employee commuting	V
Upstream leased assets	X
Downstream transportation and distribution	V
Processing of sold products	X
Use of sold products	V
End-of-life treatment of sold products	V
Downstream leased assets	X
Franchises	X
Investments	X

Mt CO<sub>2</sub>e

Category	Category description	FY2022
1.Purchased goods and services	Includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased or acquired by the reporting company in the reporting year. Products include both goods (tangible products) and services (intangible products).	21,879
2.Capital goods	Includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Emissions from the use of capital goods by the reporting company are accounted for in either scope 1 (e.g., for fuel use) or scope 2 (e.g., for electricity use), rather than in scope 3.	4,658
4. Upstream transportation and distribution	Emissions from transportation and distribution of products when purchasing components and raw materials from tier 1 suppliers.	148

<b>5.Waste generated in operations</b>	Includes emissions from third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations in the reporting year. This category includes emissions from disposal of both solid waste and wastewater.	11
<b>6.Business travel</b>	Includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars.	44
<b>7. Employee commuting</b>	Includes emissions from the transportation of employees between their homes and their worksites. Emissions from employee commuting may arise from: <ul style="list-style-type: none"> <li>• Automobile travel</li> <li>• Bus travel</li> <li>• Rail travel</li> <li>• Air travel</li> <li>• Other modes of transportation (e.g., subway, bicycling, walking).</li> </ul>	710
<b>9.Downstream transportation and distribution</b>	Includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities not owned or controlled by the reporting company.	125
<b>11. Use of sold products</b>	Includes emissions from the use of goods and services sold by the reporting company in the reporting year. A reporting company's scope 3 emissions from use of sold products include the scope 1 and scope 2 emissions of end users. End users include both consumers and business customers that use final products.	776,592
<b>12.End-of-life treatment of sold products</b>	Includes emissions from the waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life. This category includes the total expected end-of-life emissions from all products sold in the reporting year.	500
<b>Total</b>		<b>804,667</b>



**PUBLIC REPORTING**  Our data is publicly available. **THIRD-PARTY VERIFICATION**  Our data has been third-party verified in the most recent financial year reported. Please see Appendix II

Source	Explanation for relevance	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners
<input type="radio"/> Purchased goods and services (upstream)	Major components of the company's product costs and some operating expenses	21,879	Spend-based method – estimates emissions for goods and services by collecting data on the economic value of goods and services purchased and multiplying it by relevant secondary (industry average) emission factors (average emissions per monetary value of goods).	
<input type="radio"/> Capital goods	Constituting part of the company's product cost and part of the operating expenses	4,658	Average spend-based method, which involves estimating emissions for goods by collecting data on the economic value of goods purchased and multiplying by relevant secondary (e.g., industry average) emission factors (e.g., average emissions per monetary value of goods).	
<input type="radio"/> Employee commuting	Constituting part of the company's product cost and part of the operating expenses	710	Average-data method, which estimating emissions from employee commuting based on average data on commuting patterns.	

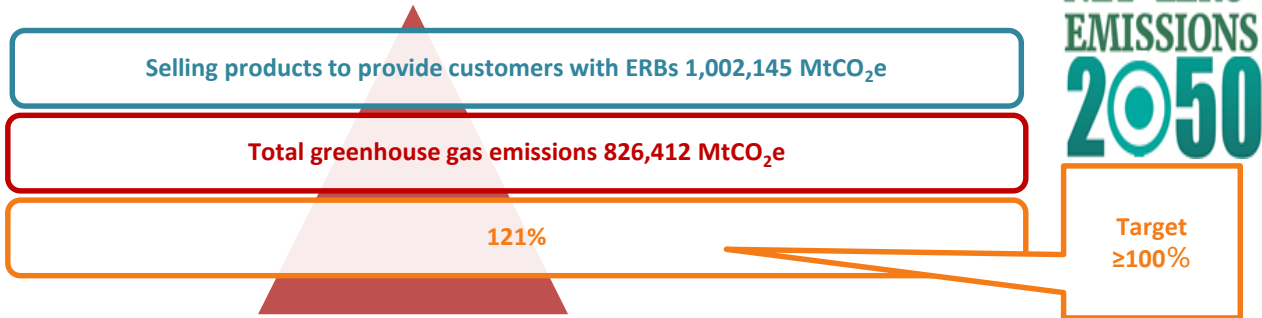
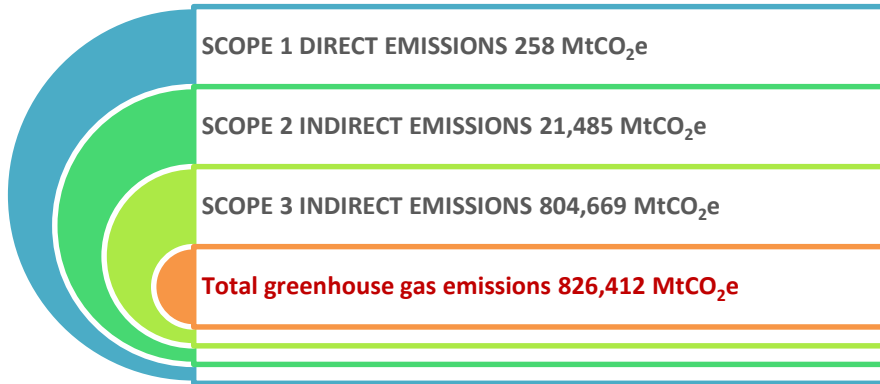
Company Value Chain Carbon Intensity test : SCOPE 1 DIRECT EMISSIONS and SCOPE 2 INDIRECT EMISSIONS and SCOPE 3 INDIRECT EMISSIONS

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>SCOPE 1 DIRECT EMISSIONS</b>	94* MtCO <sub>2</sub> e	126* MtCO <sub>2</sub> e	143 MtCO <sub>2</sub> e	175 MtCO <sub>2</sub> e	258 MtCO <sub>2</sub> e
<b>SCOPE 2 INDIRECT EMISSIONS</b>	10,461 MtCO <sub>2</sub> e	14,043 MtCO <sub>2</sub> e	15,835 MtCO <sub>2</sub> e	19,129 MtCO <sub>2</sub> e	21,486 MtCO <sub>2</sub> e
<b>SCOPE 3 INDIRECT EMISSIONS</b>	527,479 MtCO <sub>2</sub> e	593,899 MtCO <sub>2</sub> e	642,383 MtCO <sub>2</sub> e	768,882 MtCO <sub>2</sub> e	804,667 MtCO <sub>2</sub> e
<b>SCOPE 1 and SCOPE 2 and SCOPE 3 total</b>	<b>538,034</b> <b>MtCO<sub>2</sub>e</b>	<b>608,068</b> <b>MtCO<sub>2</sub>e</b>	<b>658,361</b> <b>MtCO<sub>2</sub>e</b>	<b>788,186</b> <b>MtCO<sub>2</sub>e</b>	<b>826,411</b> <b>MtCO<sub>2</sub>e</b>
<b>OPERATING REVENUE</b>	<b>371.2</b> Million dollars	<b>431.5</b> Million dollars	<b>478.6</b> Million dollars	<b>612.4</b> Million dollars	<b>740</b> Million dollars
<b>Company Value Chain Carbon Intensity **</b>	<b>1,449</b>	<b>1,409</b>	<b>1,376</b>	<b>1,287</b>	<b>1,117</b>
<p>*Has not been third-party verified</p> <p>**Company Value Chain Carbon Intensity = SCOPE 1 and SCOPE 2 and SCOPE 3 total MtCO<sub>2</sub>e / OPERATING REVENUE Million dollars</p>					
<p>In 2021, VPT sets <b>1366 as the Base Year Carbon Intensity</b>, the comprehensive average Carbon Intensity of value chain in the past five years ( 2017 ~ 2021 ) . Its management climate related risks and opportunities target is <b>to reduce to 1093 by the Target Year of 2035, a decrease of 20%, and a compound annual decrease rate of 1.55%.</b></p>					

18.2% down  
Target 1.55% down

Product Name	Explanation for Calculation of emission reduction benefits
UPS	 <p>By comparing the EE of EU Code of Conduct for UPS, the energy savings are calculated according to the number of UPS shipped in 2022, and then converted into ERBs.</p>
PV Inver	 <p>By comparing the EE of the minimum average EE 97.5% of the ENERGY STAR Market and Industry Scoping Report, the energy savings are calculated according to the number of PV Inver shipped in 2022, and then converted into ERBs.</p>
Energy Storage System	By comparing the minimum required of EE by customer's specifications, , the energy savings are calculated according to the number of Energy Storage System shipped in 2022, and then converted into ERBs.
Variable Frequency Drive	By comparing the minimum required of EE by customer's specifications, , the energy savings are calculated according to the number of Energy Storage System shipped in 2022, and then converted into ERBs.
EV Charger	By comparing the minimum required of EE by customer's specifications, , the energy savings are calculated according to the number of Energy Storage System shipped in 2022, and then converted into ERBs.
FY 2022	Energy Efficiency 310,637 MtCO <sub>2</sub> e · Renewables 691,508 MtCO <sub>2</sub> e
	Total 1,002,145 MtCO <sub>2</sub> e

**PUBLIC REPORTING**  Our data is publicly available. **THIRD-PARTY VERIFICATION**  Our data has been third-party verified in the most recent financial year reported. Please see Appendix 2





**2.6 Climate Strategy****2.6.1 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.

**2.6.2 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

### 2.6.3 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.

### 2.6.4 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 19 to 35 of this report.

#### 2.6.5 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 28 to 31 of this report.

#### 2.6.6 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 1,257 million (NT) in the future
- annual PROFIT FROM OPERATIONS will increase by 214million (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 13.39%, 5.53% , 24.20% and 34.02% respectively, of which the minimum 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 1,257million (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 19%, 20%, 20% ,17% and 23% 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 214 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 1,043 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.

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

### 2.6.7 Climate-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 18 of this report.

### 2.6.8 Physical 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 China, 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 ) .

### 2.6.9 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, and/or Scope 3 emissions.

#### Target Type and Metric

- Intensity targets

Intensity Metric

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

Scope covered by the target	Target Timeframe	Baseline year emissions covered and as a % of total base year emissions	% reduction target from base year	Is this target validated by the Science-based Targets Initiative?
<input type="radio"/> Scope 1 + 2 + 3 combined	Base Year : the comprehensive average of 2017-2021 Target Year : 2035	Base year emissions : 1366 MtCO <sub>2</sub> e / OPERATING REVENUE Million dollars Percentage of total base year emissions : 100%	20%	<input type="radio"/> No, the target is not science-based

→Please refer to pages 36 to 40 of this report.

### 2.6.10 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 2022	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%	The average for the past five years (2018-2022) is 674,913 MtCO <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 39 to 40 of this report.

### 2.6.11 Internal Carbon Pricing

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

No, we do not use an internal price of carbon

### 2.6.12 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:

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 ERBs MtCO<sub>2</sub>e ≥ Total greenhouse gas emissions in the value chain ( Scope 1 + 2 + 3 combined ) MtCO<sub>2</sub>e**, that is to **achieve the goal of net zero carbon emissions in the value chain.**

→Please refer to page 14 of this report.

## Appendix II Independent auditor's assurance report on identified sustainability performance and climate change information reported



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**Independent auditor's assurance report on identified sustainability performance and climate change information reported in Voltronic Power Technology Corp.'s Sustainability report and TCFD report for the year ended 31 December 2022.**

**To: The Directors of Voltronic Power Technology Corp.**

### **Reasonable Assurance Opinion and Limited Assurance Conclusion on Identified Sustainability and Climate Change Information**

We have undertaken an assurance engagement on identified sustainability performance and climate change information, as described below, and presented in the 2022 Voltronic Power Technology Corp.'s (VPT's) Sustainability Report and TCFD (Task Force on Climate-Related Financial Disclosures) Report for the year ended 31 December 2022. This engagement was conducted by a multidisciplinary team with experience in sustainability performance, carbon emissions and climate change.

#### **a. Reasonable assurance opinion**

**In our opinion (and subject to the inherent limitations outlined elsewhere in this report):**

- **The identified sustainability performance and climate change information and related disclosures for the year ended 31 December 2022 identified below in Appendix A (reasonable assurance sustainability performance and climate change information) are prepared in all material respects, in accordance with VPT management's measurement and reporting criteria applied for preparing that information.**
- **In relation to the VPT's Sustainability Report and TCFD Report for the year ended 31 December 2022, VPT has in all material respects, implemented systems and approaches to manage its material sustainability risks and opportunities in respect of the sustainability performance and climate change information.**

#### **b. Limited assurance conclusion**

**Based on the procedures we have performed and the evidence we have obtained (and subject to the inherent limitations outlined elsewhere in this report), nothing has come to our attention that causes us to believe:**

- **In relation to the identified sustainability performance and climate change information for the year ended 31 December 2022 identified below in Appendix A (limited assurance sustainability performance and climate change information), that the information presented in those Reports is not prepared, in all material respects, in accordance with VPT management's measurement and reporting criteria applied for preparing that information.**

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- In relation to VPT’s statement of use of the 2022 Sustainability Report : Voltronic Power Technology Corp. has reported the information cited in this GRI content index for the period from 1 January 2022 to 31 December 2022 with reference to the GRI Standards, which VPT has not complied in all material respects with the relevant GRI Standard requirements for making that statement.

#### Specific subject matter

We have been engaged to provide a reasonable assurance opinion and a limited assurance conclusion on the following information presented in the Report.


##### a. Reasonable assurance opinion

Our reasonable assurance engagement was performed in respect of the following sustainability performance information, in our opinion (and subject to the inherent limitations outlined elsewhere in this report):

- The identified sustainability performance and climate change information and related disclosures for the year ended 31 December 2022 identified below in Appendix A (reasonable assurance sustainability performance and climate change information) are prepared in all material respects, in accordance with the requirements of  **SASB STANDARDS** Electrical & Electronic Equipment Sustainability Accounting Standard and **S&P Global** Corporate Sustainability Assessment ( CSA ) 2023.

##### b. Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained (and subject to the inherent limitations outlined elsewhere in this report), nothing has come to our attention that causes us to believe:

- In relation to the identified sustainability performance and climate change information for the year ended 31 December 2022 identified below in Appendix A (limited assurance sustainability performance and climate change information), that the information presented in those Reports is not prepared, in all material respects, in accordance with the requirements of  **SASB STANDARDS** Electrical & Electronic Equipment Sustainability Accounting Standard or **S&P Global** Corporate Sustainability Assessment ( CSA ) 2023.

#### VPT’s responsibilities

VPT’s board of directors is responsible for the selection, preparation and presentation of



the identified sustainability performance and climate change information in accordance with management’s criteria. This responsibility includes the identification of stakeholders and stakeholder requirements, key issues, commitments with respect to sustainability performance and climate change, and design, implementation and maintenance of internal control and maintaining adequate records and making estimates that are relevant to the preparation of the Report and the GRI statement, such that it is free from material misstatement, whether due to fraud or error. In addition, VPT’s board of directors is responsible for, in relation to application of the GRI Standards to preparation of the Report, ensuring the Report is prepared in accordance with the GRI Reporting Principles and GRI Standards. The board of directors is also responsible for determining the appropriateness of the measurement and reporting criteria in view of the intended users of the identified sustainability performance information and for ensuring that those criteria are publicly available to the Report users.

#### **Inherent limitations**

Where VPT’s reporting of the identified sustainability performance and climate change information relies on factors derived by independent third parties, our assurance work has not included examination of the derivation of those factors and other third-party information.

Our assurance report does not extend to any disclosures or assertions relating to management’s future performance plans, forward-looking statements or strategies disclosed in the Report.

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities.

In addition, greenhouse gas (“GHG”) quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

#### **Limitation**

Due to the influence of the new coronal pneumonia virus (covid-19), the assurance engagement was limited to carry out at the headquarter and factory of VPT in Taipei, Taiwan. We also conducted remote meetings on the major manufacturing unit located at Shenzhen and ZhongShan, China and Vietnam. We have not observed any significant





situations to limit our assurance engagement. The assurance engagement is carried out based on the data and information provided by VPT, assuming they are complete and true.

### **Independence and Quality Control**

We have complied with the independence and other ethical requirements of the Code of Professional Conduct for Registered Auditors issued by the Independent Regulatory Board for Auditors (IRBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. The IRBA Code is consistent with the corresponding sections of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards).

Our firm also applies International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and other Assurance and Related Service Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### **Our responsibilities**

Our responsibility is to express either a reasonable assurance opinion or limited assurance conclusion on the identified sustainability performance information and climate change as set out in the Reasonable Assurance and Limited Assurance sections of the Subject Matter paragraph, based on the procedures we have performed and the evidence we have obtained. We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information, and, in respect of the greenhouse gas emissions, in accordance with ISAE 3410, Assurance Engagements on Greenhouse Gas Statements, issued by the International Auditing and Assurance Standards Board. Those Standards require that we plan and perform our engagement to obtain the appropriate level of assurance about whether the identified sustainability performance and climate change information is free from material misstatement.

The procedures performed in a limited assurance engagement vary in nature and timing and are less in extent than for a reasonable assurance engagement. As a result, the level



of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

#### **Summary of work performed**

##### **a. Reasonable assurance opinion**

A reasonable assurance engagement in accordance with ISAE 3000 (Revised) and ISAE 3410 involves performing procedures to obtain evidence about the measurement of the identified sustainability performance information and climate change in the Report. The nature, timing and extent of procedures identified depend on the auditor's professional judgment, including the assessment of the risks of material misstatement of the identified sustainability performance and climate change information, whether due to fraud or error. In making those risk assessments, we have considered internal control relevant to VPT's preparation of the identified sustainability performance and climate change information.

- For the relevant sustainability performance and climate change information (listed in Appendix A), we:
  - Tested the suitability and application of management's criteria to the reported information on a sample basis;
  - Performed analytical procedures to evaluate the relevant data generation and reporting processes against management's criteria;
  - Inspected supporting documentation on a sample basis to corroborate the statements of management and senior executives in our interviews;
  - Evaluated the reasonableness and appropriateness of significant estimates and judgments made by the directors in preparing the sustainability performance and climate change information;
- Established and documented the existence and status of the implementation of systems and approaches that VPT uses to manage identified risks and opportunities related to its sustainability performance and climate change.
- We also performed such other procedures as we considered necessary in the circumstances

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our reasonable assurance opinion.



**b. Limited assurance conclusion**

A limited assurance engagement undertaken in accordance with ISAE 3000 (Revised) and ISAE 3410 involves assessing the suitability in the circumstances of VPT's use of its reporting criteria as the basis of preparation for the identified sustainability performance and climate change information, assessing the risks of material misstatement of the identified sustainability performance and climate change information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the identified sustainability performance and climate change information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. The procedures we performed were based on our professional judgment. A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the subject matter and related information, and applying analytical and other appropriate procedures.

- For the identified sustainability performance and climate change information (listed in Appendix A), we:
  - Interviewed management and senior executives to obtain an understanding of the internal control environment, risk assessment process and information systems relevant to reporting sustainability performance and climate change information and identified material sustainability and climate change risks and opportunities;
  - Performing limited tests of detail on the identified sustainability performance and climate change information, on a selective basis, as part of assessing whether (i) the data has been appropriately measured, recorded, collated and reported; and (ii) activities set out by management are appropriately evidenced and reported; and
  - Performing analytical procedures to evaluate the relevant data generation and reporting processes against management's criteria.
- We examined the GRI content index prepared by management to assess whether management has made disclosures in accordance with all the GRI Standards requirements for presenting the Report in accordance with the GRI Standards, to obtain limited assurance about management's assertion to that effect.
- We also performed such other procedures as we considered necessary in the circumstances.



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We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

#### **Restriction of Liability**

Our report, including our opinion/conclusions, has been prepared solely for the Board of Directors of VPT in accordance with the agreement between us and for no other purpose. We permit this report to be published in VPT's FY 2022 Sustainability Report and FY2022 TCFD Report, to assist the Board of Directors in responding to their governance responsibilities by obtaining an independent assurance report in connection with the identified sustainability performance information.

To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Board of Directors and VPT for our work or for our report and the conclusion contained therein. We agree to publication of our assurance report within VPT's Reports provided it is clearly understood by recipients or readers of the Reports that they enjoy such receipt for information only and that we accept no duty of care to them whatsoever in respect of our assurance report.

Maintenance and integrity of VPT's website is the responsibility of VPT's management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to either the identified sustainability performance and climate change information as reported, or our independent assurance report that may occur subsequent to the initial date of publication of the Report on VPT's website.

**HangSeng Sustainability**

Wu, Shin

Certified Public Accountant

Taiwan, 1st June 2023

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**APPENDIX A :**

**List of the identified sustainability performance and climate change information (KPIs) in the scope of the assurance engagement**

Category	Selected KPIs	Management's Measurement and Reporting Criteria	Category	GRI CSA SASB disclosure	Level of assurance
Number of units produced by product category	product category	Number ( units )	RT-EE-000.A	Reasonable	
	UPS	6,749 thousand			
	PV Inverter	539 thousand			
	Energy Storage System	5 thousand			
	Variable Frequency Drive	224 thousand			
	EV Charger	2 thousand			
Number of employees		3,238	RT-EE-000.B	Reasonable	
Business Ethics	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behavior		Discussion and Analysis Anti-Bribery & Corruption (ABC) Compliance Policy Anti-competitive behavior topic management disclosures	GRI 205-1 GRI 205-2 RT-EE-510a.1	Reasonable
	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption :		Quantitative 0	GRI 205-3 RT-EE-510a.2	Reasonable
	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations :		Quantitative 0	GRI 206-1 RT-EE-510a.3	Reasonable
Energy Management	ACCOUNTING METRIC		Quantitative	GRI 302-1 CSA 2.3.1 RT-EE-130a.1	Reasonable
	(1) Total energy consumed :		89,538GJ ( 24,822MWh )		
	(2) percentage grid electricity :		98.8%		
Water and Effluents	(3) percentage renewable :		0%	GRI 303-3 GRI 303-4 GRI 303-5 CSA 2.5.1	Reasonable
	Water Consumption	Water withdrawal 、 discharge 、 Consumption	Quantitative 0.192330 Million cubic meters		
Emissions	Direct (Scope 1) GHG emissions	All direct emissions within the operational control	Quantitative 258.36 (Mt CO <sub>2</sub> e/ year)	GRI 305-1 CSA 2.2.1	Reasonable
	Indirect (Scope 2) GHG emissions	Indirect emissions generated from purchased electricity, heat, steam or cooling.	Quantitative 21,486 (Mt CO <sub>2</sub> e/ year)	GRI 305-2 CSA 2.2.2	Reasonable
	Other indirect (Scope 3) GHG emissions	All other indirect emissions from sources such as business travel, waste management, and the value chain.	Quantitative 804,667 (Mt CO <sub>2</sub> e/ year)	GRI 305-3 CSA 2.2.3	Limited



Emission Reduction Benefits	Emission reduction benefits of selling goods	All products have Energy Efficiency ERBs, PV Inverter has Energy Efficiency and Renewables ERBs.	Quantitative metric tones 1,002,145		Limited
Waste Waste			Quantitative metric tones		
	Waste Disposal	a) Total waste generated	3,798	GRI 306-3 GRI 306-4 GRI 306-5 CSA 2.4.1	Limited
		b) Total waste used/recycled/ sold	3,225		
		TOTAL WASTE DISPOSED (A -B) - Waste landfilled	573		
	Hazardous Waste Management	Amount of hazardous waste generated :	2.95	RT-EE-150a.1 CSA2.4.2	Reasonable
percentage recycled :		0%			
	Quantitative Number and aggregate quantity of reportable spills, quantity recovered :	0	RT-EE-150a.2	Reasonable	
Product Lifecycle Management	ACCOUNTING METRIC		Quantitative		
	Percentage of products by revenue that contain IEC 62474 declarable substances :		100%	RT-EE-410a.1	Reasonable
	Percentage of eligible products, by revenue, that meet ENERGY STAR® criteria :		100%	RT-EE-410a.2	Reasonable
	Revenue from renewable energy-related and energy efficiency-related products :		NT 22,725Million	RT-EE-410a.3	Reasonable
Product Safety	ACCOUNTING METRIC		Quantitative		
	Number of recalls issued, total units recalled :		0	RT-EE-250a.1	Reasonable
	Total amount of monetary losses as a result of legal proceedings associated with product safety :		0	RT-EE-250a.2	Reasonable
Materials Sourcing	Description of the management of risks associated with the use of critical materials		Discussion and Analysis VPT Supplier (Supply Chain) Management Policy	RT-EE-440a.1	Reasonable
Occupational Health and Safety			Quantitative		
	Fatalities	Work-related fatalities	0	CSA3.5.3	Reasonable
	Lost-Time Injury Frequency Rate (LTIFR) - Employees	Company's lost-time injury frequency rate for employees (per one million hours worked)	0.93	CSA3.5.4	Reasonable
	Lost-Time Injury Frequency Rate (LTIFR) - Contractors	Contractors' lost-time injury frequency rate for employees (per one million hours worked)	Not applicable	CSA3.5.5	Reasonable
	Occupational Illness Frequency Rate (OIFR) - Employees	Company's occupational illness frequency rate for employees (per one million hours worked)	0.62	GRI403-10	Reasonable