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泰鼎國際股份有限公司

APEX INTERNATIONAL CO.,LTD.

2023



**TCFD AND
RISK
MANAGEMENT**

2023 TCFD and Risk Management

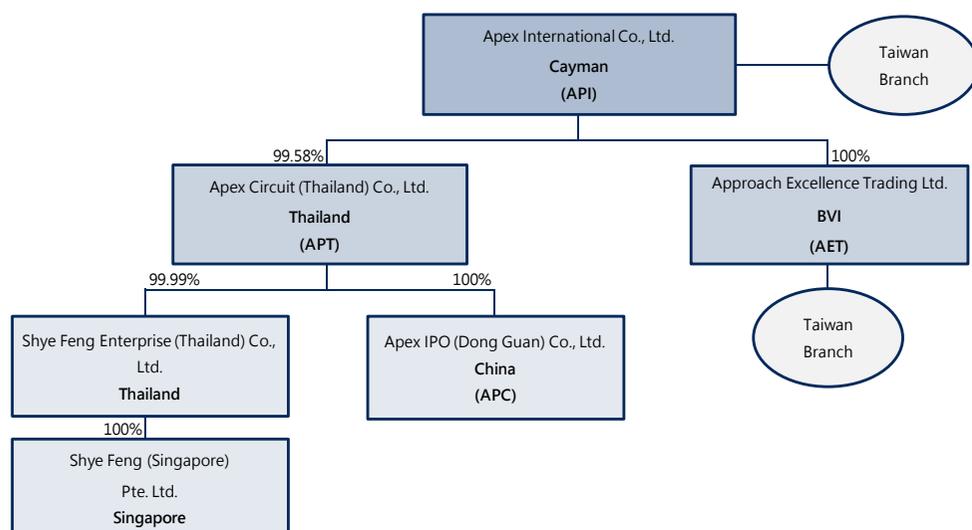
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1. Company Overview

1.1 About Apex

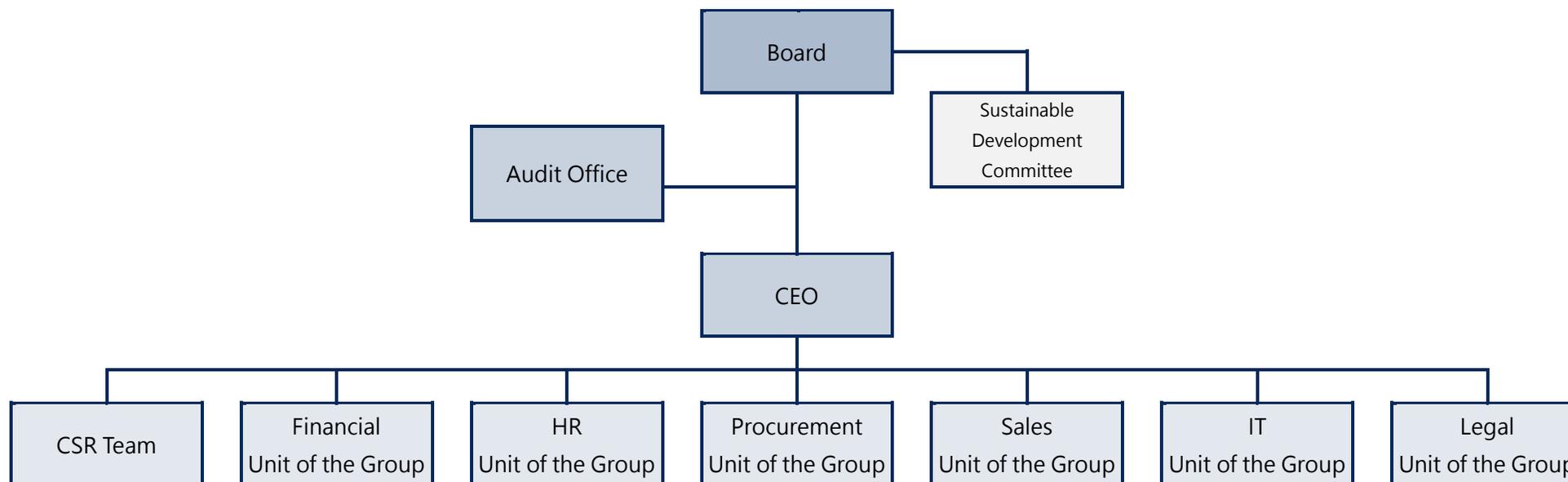
Apex was established on October 28, 2009, and is registered in the Cayman Islands. The company and subsidiaries are primarily engaged in the manufacturing and sale of single-sided, double-sided, and multi-layer Printed Circuit Boards (PCBs), which are used in applications such as LCD TVs, Set-Top Boxes (STBs), hard drives, printers, satellite communication equipment, and in-car multimedia devices. The products are sold locally in Thailand and exported to approximately 23 countries, including north America, middle and south America, east Asia, south and eastern Asia, middle Asia and north Africa etc. Consumer electronics makers that are clients of the group include Samsung, Arris, Technicolor, Hewlett-Packard (HP), Canon, Toshiba and Western digital. In addition to joining the Taiwan Printed Circuit Association (TPCA), Apex actively participates in various external courses and activities, gaining insights from multiple sources to understand risks and using them as policy references for future development and operations.



Type	Country	Company Name	Acronym	Address
Headquarter	Taiwan	Apex International Co., Ltd.	API	Rm. 503, 5F., No. 205, Dunhua N. Rd., Songshan Dist., Taipei City 105, Taiwan
Subsidiary	Taiwan	Approach Excellence Trading Ltd.	AET	1F., No. 21, Ln. 1314, Chunri Rd., Taoyuan Dist., Taoyuan City 330, Taiwan
Operating Headquarters and Plants	Thailand	Apex Circuit (Thailand) Co., Ltd.	APT	APEX 1 : 39/234-236 Moo2, Rama 2 Rd., Bangkrachao, Amphur Muang, Samutsakhon 74000, Thailand APEX 2 · APEX3 : 30/101,102 Moo 1, Sinsakhon Industrial Estate Chetsadawithi Rd., Khok Kham, Muang, Samutsakhon 74000, Thailand
Subsidiary	China	Apex IPO (Dong Guan) Ltd.	APC	Room 103, Building 6, No. 5, Er Road, Shuixinwei Industry District, Hanxi, Chashan Town, Dongwan City, Guangdong Province
Subsidiary	Thailand	Shye Feng Enterprise (Thailand) Co., Ltd.	APS	88/1 MOO 2, Watphanthuwong Sethakij 1 Rd, Nadee, Amphur Muang, Samutsakhon, 74000, Thailand
Subsidiary	Singapore	Shye Feng (Singapore) PTE. LTD.	APSS	18 Mandai Estate #05-07 Multi-Wide Industrial Building Singapore (729910)

2. Risk management promotion and management

2.1. Organization and functions



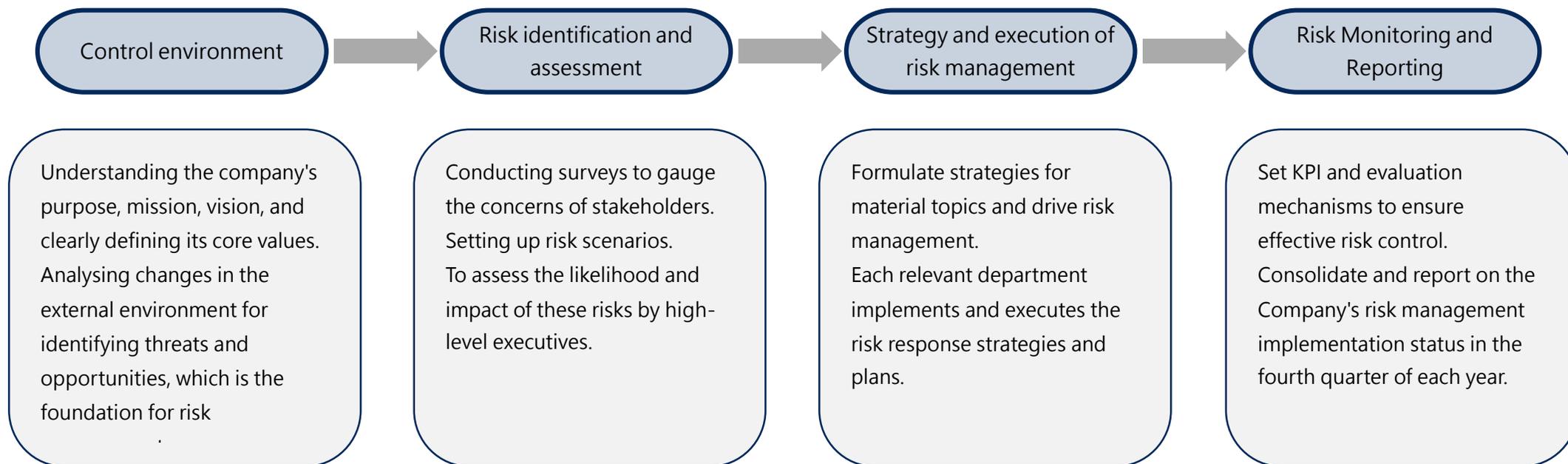
The company established the Sustainable Development Committee, composed of directors, as the highest driving unit for risk management. The convener is the executive director, and the company's management assesses relevant risks and opportunities. They formulate strategies and objectives and continually analyse and control the situation. At the operational level, the audit unit executes the effectiveness of risk control and management based on the audit plan. The company also conducts internal self-inspections annually. The review of the implementation of risk management is the responsibility of the Sustainable Development Committee, which presents necessary improvement recommendations. The committee reports the audit results to the Board of Directors annually, submitting them for review by the Audit Committee and the Board of Directors.

2.2. Risk management operations

Comprising members from various departments, the Sustainable Development Committee holds monthly meetings with the following key focuses:

- Formulating strategies and objectives for significant risks
- Monitoring risk management indicators
- Reviewing and adjusting implementation plans
- Executing risk assessments
- Reporting to the Sustainable Development Committee

2.3. Risk management process



2.4. Achievements in 2023

- Apex ranked in 6% to 20% for the eight consecutive years among listed companies. Besides, in the electronics category with a market capitalization of over NTD 10 billion, Apex has moved up to the 11% to 20% range for the first time.
- Received the Asia Responsible Enterprise Awards (AREA) in "Social Empowerment Category"
- Successfully obtained ISO/IEC 27001 certification for information security.
- Apex won the Bronze Award in the Corporate Sustainability Reports category
- Attained a "Low Risk" rating in ESG risk assessment by Sustainalytics.

3. Identification and evaluation process

3.1 Risk identification

(1) Understand the organizational context

Item	Thought	Content	Definition
Tenet	Core value perspective	By choosing only "one" concept, can help us identify the purpose that best suits us. Apex culture is people-oriented, emphasizing the integration of Western management disciplines and Eastern philosophical spirit, balancing "emotion" and "reason". Facing changes in the internal and external environment, the Middle Way is our code of conduct. We operate according to the "Middle Way" and respond to all changes.	Integrity & Reciprocity
Mission	The commercial value would like to create	Key source of profit creation: Manufacture single side~20-layer PCB and HDI To plan the best plan of production and sales to satisfy customers' requirement of price and quality and control risks simultaneously.	Provide products with best C/P ratio
Vision	Ideals expected to be achieved	We emphasize the values of Team Work and Family. In the business operations, we also hope to create value for stakeholders and create mutually beneficial and win-win relationships, such as employees, customers, suppliers, government, society, shareholders, and banks. Therefore Sustainability and tenacity are our long-term goals.	Sustainability & Happiness

(2) Analyse the organization

External environmental changes can impact business operation strategies and models. Therefore, paying attention to and analysing the external environment is helpful in understanding the opportunities and challenges faced. This, in conjunction with an assessment of one's own strengths and weaknesses, forms the basis for formulating business strategies.

Analyse the external environment: **PESTEL**

P olitical
E conomic
S ocial
T echnological
E nvironmental
L egal

Analyse the internal situation: **SWOT**

S trength
W eakness
O pportunity
T hreat

3.2 Assessment of stakeholder concerns

(1) Identify stakeholder

Each department, based on its business responsibilities, identifies frequently engaged stakeholders and presents the following table with the logic and results.

(2) Stakeholder Questionnaire Response Statistics

Identity	Quantity	Identity	Quantity	Identity	Quantity
Supplier	24	Customer	12	Investor	2
Employee	24	Financial Institution	8	Other Or Not Remarkd	3
Total					73

3.3 Risk sources and categories

In identifying enterprise-level risks (the appropriateness of related risk controls at the operational level), the reference basis during execution is as follows:

- Self-own business model and operating content
- Analysis result of PESTEL and SWOT previously described
- Regulations of FSC
- ESG regulations (e.g., GRI, TCFD, COSO, ISSB, etc.)
- Comments from stakeholder communication previously described

The above-mentioned units gained insights from their usual communication with stakeholders. After review and discussion, participants summarized 37 identified enterprise-level risks, and listed risk factors 27-37 and opportunities 38-42 based on the climate change scenario (TCFD), as follows:

Risk Factors	Type	Material Topic (GRI)	TCFD	ESG
1. Effectiveness of Board and corporate governance	Strategy	Board and corporate governance	-	G
2. Integrity	Integrity	Integrity	-	G
3. Remuneration and appraisal system	Strategy	Remuneration and performance	-	G
4. Vision and core value positioning	Strategy	Vision and mission	-	G
5. Change of political and social environment	Strategy	Risk management	-	G
6. Sustainability risk	Strategy	Sustainability risk	-	G

(3) Stakeholder- Employees

Communicate through employee satisfaction questionnaires to understand employee needs. Statistics end on 31 October 2023. Statistics cut-off: Number of employees: 7,145, number of responses: 3989.

(4) Refer to the opinions obtained from daily interactions with stakeholders.

Risk Factors	Type	Material Topic (GRI)	TCFD	ESG
7. Fail of digital transformation	Operation	Digital transformation	-	G
8. Research development and innovation	Operation	Research development and innovation	-	G
9. Invalid control of information safety	Information	Information safety	-	G
10. Inappropriate management of patent and intelligent property and customer privacy	Operation	Patent and intelligence management	-	G

Risk Factors	Type	Material Topic (GRI)	TCFD	ESG
11. Violation of waste management	Operation	Pollution and waste management	-	E
12. Violation of pollution emission	Operation	Pollution and waste management	-	E
13. Sustainability management of suppliers	Operation	Supply chain sustainable management	-	G
14. Hazard of occupational safety and health	Operation	Occupational safety and health	-	S
15. Employee development and attraction to talents	Operation	Employee development and attraction to talents	-	S
16. Labour rights, diversity and equality	Operation	Labour rights, diversity and equality	-	S
17. Social communication	Integrity	Social communication	-	S
18. Customer relationship management	Operation	Customer relationship management	-	G
19. Product quality management	Operation	Quality management	-	G
20. Product labelling management	Operation	Product labelling	-	G
21. Uncertainty of market information	Operation	Risk management	-	G
22. Against laws and regulations	Compliance	Compliance level	-	G

Risk Factors	Type	Material Topic (GRI)	TCFD	ESG
23. Capital management	Finance	-	-	G
24. Exchange rate management	Finance	-	-	G
25. Credit management	Finance	-	-	G
26. Tax management	Finance	-	-	G
27. Rising price of GHG emission	Operation	CO2 emission and energy management	Transition- - Policy & Legal	E
28. Strengthening of reporting obligation	Compliance	Reporting obligation	Transition- - Policy & Legal	G
29. Regulatory specifications enhancement	Compliance	Green supervisory	Transition- - Policy & Legal	G
30. Investment in new technologies	Operation	Research development and innovation	Transition- - Technology	E
31. Customer behaviour changes	Operation	Customer relationship management	Transition- -Market	E
32. Rising sea level	Operation	Climate change	Physical- Chronic	E
33. Water resource management	Operation	Water resource management	Physical- Acute & Chronic	E
34. Temperature rise	Operation	Climate change	Physical- Chronic	E

Risk Factors	Type	Material Topic (GRI)	TCFD	ESG
35. Supply chain disruption and cost fluctuation	Operation	Supply chain sustainable management	Transition- -Market	G
36. Harmed reputation	Integrity	Impact on goodwill	Transition- - Reputation	G
37. Energy management	Operation	CO2 emission and energy management	Transition- - Policy & Legal	E
38. Sustainable finance	-	-	Opportunity	G
39. Industry collaboration	-	-	Opportunity	G
40. Transition to decentralized energy sources	-	-	Opportunity	E
41. Improvement in resource efficiency	-	-	Opportunity	E
42. Enhancement of climate governance and carbon management capabilities	-	-	Opportunity	S

Climate Change Scenario for Risk Factors 27-36 and Opportunities 37-41 (TCFD)

This assessment uses a scenario that combines Shared Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs). Through scenario modelling, the assessment evaluates the impact of policy implementation on social and economic aspects. It also incorporates RCPs, focusing on future GHG concentrations and radiative forcing inputs for different global warming scenarios.

The scenario SSP2-4.5 this report adopts falls into the moderate category. In this scenario, there is regional competition, and countries are concerned about sustainability issues but prioritize regional economic and security concerns, often at the expense of broader development. Development among countries is uneven, resulting in limited policy effectiveness. Despite efforts from global and national institutions, progress towards sustainable development goals remains slow. RCP 4.5 is a moderate emissions scenario where CO2 emissions begin to decline only by mid-century, and achieving net-zero emissions before 2100 is unlikely. This scenario aligns more closely with current development pathways.

Climate change risks and opportunities impact the Company's strategies and financial planning. Therefore, the Company is using this analysis to assess the resilience of its climate strategies in the face of a moderate scenario for both transition and physical risks and climate opportunities, as recommended by the TCFD.

The scenario is set as follows:

1.5°C Scenario, Thailand's Climate Change Master Plan (2015-2050), Taiwan's 2050 Net-Zero Emissions Pathway and Strategy, Taiwan "Climate Change Response Act" scenario estimation description etc.	
Carbon tax collection	The Taiwanese government levies carbon taxes on businesses in accordance with the Climate Change Response Act. The estimated carbon tax rates are as follows: Short-term 300NTD/ t CO ₂ e, Mid-term 500NTD/ t CO ₂ e, Long-term 750~1500NTD/ t CO ₂ e.
Implementation of the Thai V-ETS	Since 2013, Thailand has been promoting the voluntary carbon emissions trading system (V-ETS). This system targets high-carbon emission industries and sets limits on both direct carbon emissions and energy-related indirect carbon emissions. It also outlines policies for the future implementation of a nationwide mandatory Emission Trading System (ETS).
Enhanced regulatory standards	The "Climate Change Master Plan (2015-2050)" of Thailand outlines the goal of simultaneously limiting GHG emissions and achieving economic expansion. To accomplish this, it focuses on enhancing green building standards, building energy efficiency standards, lighting and air conditioning standards, and promoting high-efficiency transportation systems.
Energy shortages	The National Economic and Social Development Board (NESDB) of Thailand has conducted an analysis indicating that the available regional energy resources in Thailand can only provide a 20-year supply reserve.
Changes in customer behaviour	Customers are requesting the provision of carbon reduction strategies and actions. In the medium to long term, they may also require proof of carbon neutrality.
Government provides relevant subsidies	The Taiwanese government provides various subsidies to businesses for carbon reduction, renewable energy, energy storage systems, carbon capture, and related initiatives under the Climate Change Response Act.

The Intergovernmental Panel on Climate Change (IPCC) in its Sixth Assessment Report (AR6) describes a moderate global warming scenario known as SSP2-4.5. This scenario envisions a future in which there is moderate climate change mitigation action. In this scenario	
Temperature	In the moderate global warming scenario (SSP2-4.5), it is predicted that global temperatures will continue to rise, leading to an increase in global average temperatures relative to the period between 1850 and 1900. In the 21st century, the projected increase in global temperatures may exceed 2°C and potentially trend towards a 3°C rise. Furthermore, based on these forecasts, Thailand's average temperature is expected to rise by approximately 1.6°C in the mid-century and 2.4°C by the end of the century. Such climate change trends could have significant impacts on Thailand's environment, economy, and society, necessitating climate adaptation and mitigation measures.
Extreme High Temperatures	Future temperature changes will be more significant and pronounced. In 1995, the median number of days in Thailand with temperatures exceeding 35°C was 44 days. In the moderate global warming scenario (SSP2-4.5), by the end of this century, it is projected that the median number of days with high temperatures exceeding 35°C in Thailand will reach 195 days.
Intense Rainfall	In the moderate global warming scenario (SSP2-4.5), Thailand's average daily maximum rainfall is projected to increase by approximately 4.99% by the middle of the century and 11.01% by the end of the century.
Sea Level Rise	In the moderate global warming scenario (SSP2-4.5), the global average sea level is projected to continue rising throughout the 21st century. By the end of the century, the possible range for global average sea level rise is 0.66 to 1.33 meters.

• Abstract

a. Risk Types

	Compliance Risk	Financial Risk	Strategic Risk	Integrity Risk	Information Risk	Operational Risk
Quantity	3	4	5	3	1	21
Total						37

b. TCFD Category (Climate Change Category)

Climate-Change Risk Type	Risk Factor
Transition-Policy & Legal	Rising price of GHG emission
	Strengthening of reporting obligation
	Regulatory specifications enhancement
	Energy management
Transition-Technology	Investment in new technologies
Transition-Market	Customer behaviour changes
	Supply chain disruption and cost fluctuation
Transition-Reputation	Harmed reputation
Physical-Acute & Chronic	Water resource management
Physical-Chronic	Rising sea level
	Temperature rise

Climate-Change Risk Type	Opportunity Factor
Opportunity	Sustainable finance
	Industry collaboration
	Transition to decentralized energy sources
	Improvement in resource efficiency
	Enhancement of climate governance and carbon management capabilities

The sum is 11 Climate-change risk factors and 5 opportunity factors

3.4 Risk Analysis

(1) Analyse and identify positive and negative impacts

To analyse the identified enterprise-level risks and to understand the nature and characteristics, then to know positive and negative impacts that could be helpful to do qualitative and quantitative evaluation.

(2) Define evaluation index: possibility and impact

Reference:

- Participants’ management experience and professional knowledge
- Balance of depth and efficiency of risk management implementation
- Consider and design qualitative and quantitative standard

a. Frequency or probability

Situation		Definition of Possibility	Score
Occurred	Not Occurred		
Occurs 4 times or more per year	Possibly happen within 3 years	Very Big	4
Occurs no more than 3 times a year.	Possibly happen within 4-6 years	Big	3
Occurs no more than 2 times a year.	Possibly happen after 7 years	Small	2
Occurs no more than 1 time a year.	Not occurred and unlikely to occur in the future.	Very Small	1

b. Impact level

Negative Impact: refers to the potential harm or adverse effects that may result from the occurrence of a risk.

Reference Indicators						Definition Of Impact	Impact Score
Definition and Principle	Financial Impact	Regulatory Impact	Production Capacity Impact	Business Impact	Occupational Safety Hazards		
Impact survival ability	More than 300 million baht	Collapse	impact capacity >50%	Over 50%	More than 1 person dead or injured.	Very Big	4
Significant loss	50 million - 300 million baht	Work stoppage; lawsuit losses of 1 million baht or more.	impact capacity 20%~50%	20~50%	1 fatality or injury.	Big	3
Harm profitability	10 million - 50 million baht	Lawsuit losses from 300 thousand - 1 million baht.	impact capacity 5%~20%	5~20%	Employee slightly injured	Small	2
Normal loss	Less than 10 million baht	No lawsuits; fines up to 300 thousand baht or less.	impact capacity <5%	Less than 5%	No injury occur	Very Small	1

Positive Impact: refers to the potential positive effects or benefits that may result from the occurrence of a relative opportunity.

Reference Indicators					Definition Of Impact	Impact Score
Definition and Principle	Profit Impact	Capacity Impact	Business Impact	Overall Efficiency Improvement		
Impact on survivability, impact on business model	More than 300 million baht	Over 50%	Over 50%	Over 20%	Very Big	4
Significant impact on competitiveness, profitability, sustainability	50 million - 300 million baht	20~50%	20~50%	10-20%	Big	3
Significantly enhances competitiveness, profitability, sustainability	10 million - 50 million baht	5~20%	5~20%	3-10%	Small	2
General improvement/opportunity	Less than 10 million baht	Less than 5%	Less than 5%	0-3%	Very Small	1

3.5 Risk Appetite

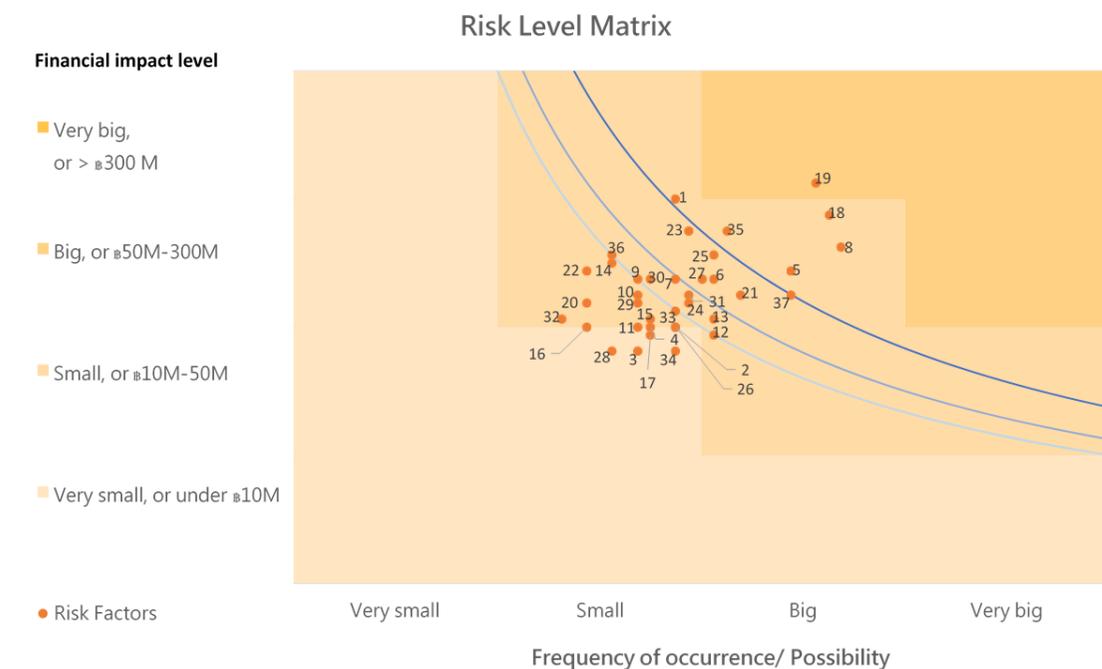
Upon reviewing the actual scoring and considering the size of financial impacts in both qualitative and quantitative indicators, risks are categorized based on the product of risk possibility and impact with classification as follows: A for a product which is greater or equal to 5.5, indicating the highest risk; B for a product which is greater or equal to 4.5 but not reaching 5.5, indicating a high risk; C for a product which is greater or equal to 4.0 but not reaching 4.5, indicating a moderate risk; and D for a product with a product below 4.0, indicating a low risk. Using 4.5 as the risk appetite, risks with a product greater or equal to 4.5 are considered significant and defined as material topics in the ESG report.

The probability and the impact score are multiplied together to produce a product. The corresponding risk matrix is as follows:

Financial impact level	Frequency of occurrence/ Possibility			
	Very small	Small	Big	Very big
Very big, or > ₪300 M	4	8	12	16
Big, or ₪50M-300M	3	6	9	12
Small, or ₪10M-50M	2	4	6	8
Very small, or under ₪10M	1	2	3	4

(1) Risk Factors

After 37 risk factors were sorted according to the assessment results, a total of 12 major risks related to sustainable operations were discussed and defined: effectiveness of board and corporate governance, changes in the political and social environment, sustainability risk, research development and innovation, customer relationships management, product quality management, uncertainty of market information, capital management, credit management, rising price of GHG emission, supply chain disruptions and cost fluctuations, and energy management.



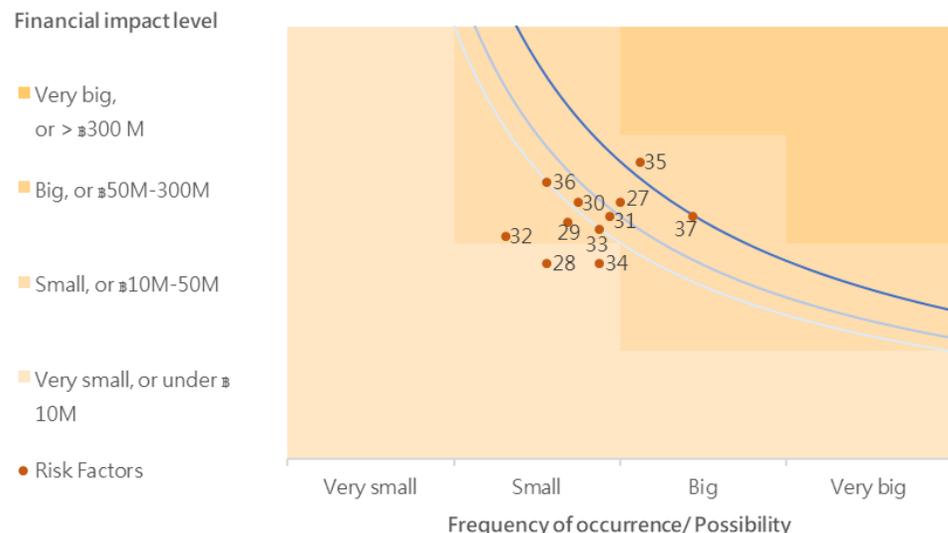
Risk level	Classification	Amount
A	Highest risk	≥ 5.5
B	High risk	≥ 4.5, but < 5.5
C	Moderate risk	≥ 4.0, but < 4.5
D	Low risk	<4.0

1. Effectiveness of Board and corporate governance	20. Product labelling management
2. Integrity	21. Uncertainty of market information
3. Remuneration and appraisal system	22. Against laws and regulations
4. Vision and core value positioning	23. Capital management
5. Change of political and social environment	24. Exchange rate management
6. Sustainability risk	25. Credit management
7. Fail of digital transformation	26. Tax management
8. Research development and innovation	27. Rising price of GHG emission
9. Invalid control of information safety	28. Strengthening of reporting obligation
10. Inappropriate management of patent and intelligent property and customer privacy	29. Regulatory specifications enhancement
11. Violation of waste management	30. Investment in new technologies
12. Violation of pollution emission	31. Customer behaviour changes
13. Sustainability management of suppliers	32. Rising sea level
14. Hazard of occupational safety and health	33. Water resource management
15. Employee development and attraction to talents	34. Temperature rise
16. Labour rights, diversity and equality	35. Supply chain disruption and cost fluctuation
17. Social communication	36. Harmed reputation
18. Customer relationship management	37. Energy management
19. Product quality management	

(2) TCFD Risk Factors

There are 11 risk factors related to climate change. Based on statistics and analysis, a total of 3 material risks are listed: rising price of GHG emission, supply chain disruption and cost fluctuations, and energy management.

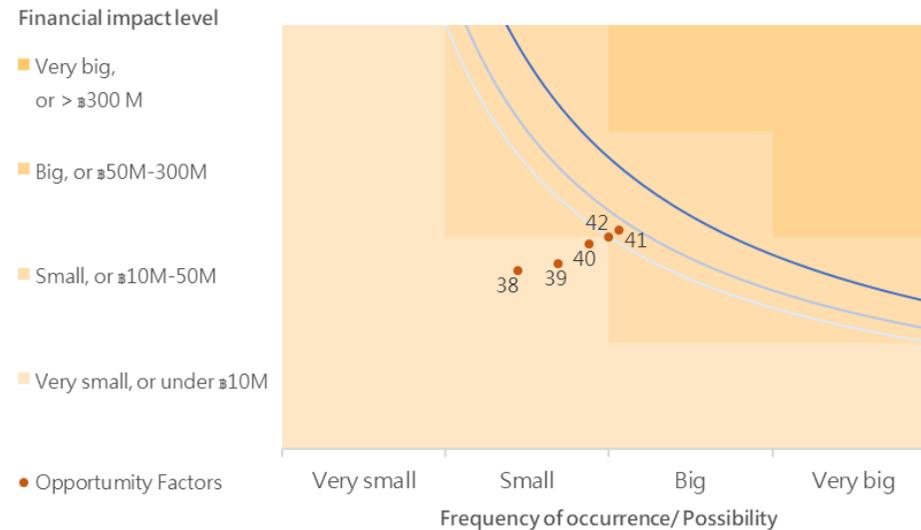
TCFD Risk Factors



(3) TCFD Opportunity Factors

There are 5 opportunities related to climate change. Considering the frequency of occurrence and degree of impact, none of them bring significant opportunities.

TCFD Opportunity Factors



Risk level		Classification	Amount
A	Highest risk	≥ 5.5	1
B	High risk	≥ 4.5, but < 5.5	2
C	Moderate risk	≥ 4.0, but < 4.5	3
D	Low risk	<4.0	5

Opportunity level		Classification	Amount
A	Highest Opp.	≥ 5.5	0
B	High Opp.	≥ 4.5, but < 5.5	0
C	Moderate Opp.	≥ 4.0, but < 4.5	2
D	Low Opp.	<4.0	3

27. Rising price of GHG emission	33. Water resource management
28. Strengthening of reporting obligation	34. Temperature rise
29. Regulatory specifications enhancement	35. Supply chain disruption and cost fluctuation
30. Investment in new technologies	36. Harmed reputation
31. Customer behaviour changes	37. Energy management
32. Rising sea level	

38. Industry collaboration
39. Transition to decentralized energy sources
40. Improvement in resource efficiency
41. Enhancement of climate governance and carbon management capabilities
42. Opportunity Factors

4. Risk assessment and response

4.1 Risk response (including climate-related risks)

Rank	Risk factors	Risk response		Monitor index	Climate Related	Risk score	Risk level
		Short-term	Mid—tern/ Long-term				
1.	19. Product quality management	Promote implementation of quality concept (14Q project) Regularly conduct ISO9001 quality management system certification	Improve quality management system innovate management method (method for handling different quality spec in a same factory)	customer complaint and defect rate, internal defect rate		8.01	A
2.	18. Customer relationship management	Periodically review information of market demand, frequently interact with customers and agents to ensure credibility; periodically review customer complaint and progress to manage core problems of defect.	To supplement training of communication and negotiation, customer relationship management and marketing analysis; to build up channel of summary of political and economic situations.	customer satisfactory score, defect rate, order allocation percentage		7.55	A
3.	8. Research development and innovation	We' ve set up a laboratory and relative management standards; keep review manufacturing ability and quality management practice then find improvement opportunity; improve factory ability through develop new product with customers.	Study proper educational cooperation plan with schools to raise talents; study feasibility of far-distance working pattern to reduce geography limit.	quantity of patents, percentage of overhead to revenue		7.05	A
4.	35. Supply chain disruption and cost fluctuation	Raise management intensity of present process of production plan, purchase and business work, logistic management, adjust management organization to increase flexible options of digesting materials corresponding to sales plan.	Observe industry movement status; increase choice and audit of local vendors and think of innovative collaboration model.	percentage of material to price; turnover rate of each type of inventory; efficiency of production plan	V	5.94	A

Rank	Risk factors	Risk response		Monitor index	Climate Related	Risk score	Risk level
		Short-term	Mid—tern/ Long-term				
5.	5. Change of political and social environment	Through interaction with external counter parties by PUR, BIZ, F&A to collect market information and cross check then feedback understanding to management team to plan operation.	Set up channel of summarizing political and economic information; study mature educational operation plan with schools; to improve qualitative system of employee career skills.	recruit percentage, qualitative index of skill		5.84	A
6.	1. Effectiveness of Board and corporate governance	Based on existed good governance environment, introduce external evaluation.	Mid-term: Observe industry dynamics, continuously update performance systems, risk management systems, and establish appropriate nomination systems. Long-term: Continuously improve management systems.	ESG rating score		5.63	A
7.	37. Energy management	Installing solar energy equipment for self-generated power and implementing ISO 50001 certification.	Gradually expanding the scale of solar power generation. Long-term: Planning the knowledge, talent, and funding required for the self-construction of a small power plant.	generated electricity of solar cell, ratio of output to energy used.	V	5.48	B
8.	23. Capital management	Periodically review long-term/short-term capital arrangement, manage financing channels and financial tools.		financial ratios		5.33	B
9.	25. Credit management	Periodically analyze AR and review overdue with BIZ in order to early control customer status; periodically review credit status of customers; F&A keeps monitoring macroeconomic and industrial change.	Keep interacting with professional institutions (ex: banks, accounting firms) to improve credit management system.	bad debt occurrence		5.29	B

Rank	Risk factors	Risk response		Monitor index	Climate Related	Risk score	Risk level
		Short-term	Mid—tern/ Long-term				
10.	21. Uncertainty of market information	Raise management intensity on present market analysis, management of customers, agents and logistic vendors in order to strengthen judge ability to market change.	To supplement training of communication and negotiation, customer relationship management and marketing analysis; to build up channel of summary of political and economic situations.	capacity utilization rate, monthly production value, turnover rate of each type of inventory		4.92	B
11.	6. Sustainability risk	We' ve set up corporate governance relative internal control system and complied with it to make process of decision-making diversified; major investment projects have been executed by following internal control rules with managers' appropriate managing and discussion; we have multiple channels for employees to comment and complain.	Keep promoting risk management system.	ESG rating score		4.90	B
12.	27. Rising price of GHG emission	We have proceeded GHG inventory count and been installing ISO 14064-1; keep promoting energy-saving projects.	Study schedule of installing carbon footprint and carbon pricing; adjust carbon strategy during the instalment.	performance of energy-saving, unit CO ₂ emission.	V	4.75	B

4.2 Response to climate-related opportunities

Rank	Opportunity factors	Management measures	Climate-related	Opp. score
1.	41. Improvement in resource efficiency	Through internal and external projects, plan adjustments to production equipment and replacement of components, actively improve equipment operational efficiency, and reduce energy usage. Enhance the efficiency of the wastewater recovery system to increase water recovery rates. °	V	4.25
2.	42. Enhancement of climate governance and carbon management capabilities	Organize promotional events periodically. Provide relevant education and training to employees at all levels.	V	4.00
3.	40. Transition to decentralized energy sources	Continue to monitor the development of new energy sources.	V	3.63
4.	39. Industry collaboration	Participate in association courses to learn sustainable improvement methods. Promote sustainable supply chain management and actively respond to customer expectations.	V	2.43
5.	38. Sustainable finance	Invest in ESG, CDP, and other disclosures, management, and ratings to enhance the company's access to financial market credit, low-interest loans, financing, and other financial opportunities.	V	2.95

5. GREEN Project

Through the Sustainable Development Committee, Apex guides the company's sustainable development and leads the GREEN Team in implementing various aspects of sustainable development. Among them, the GREEN Project is dedicated to contributing to global climate change and related risks.

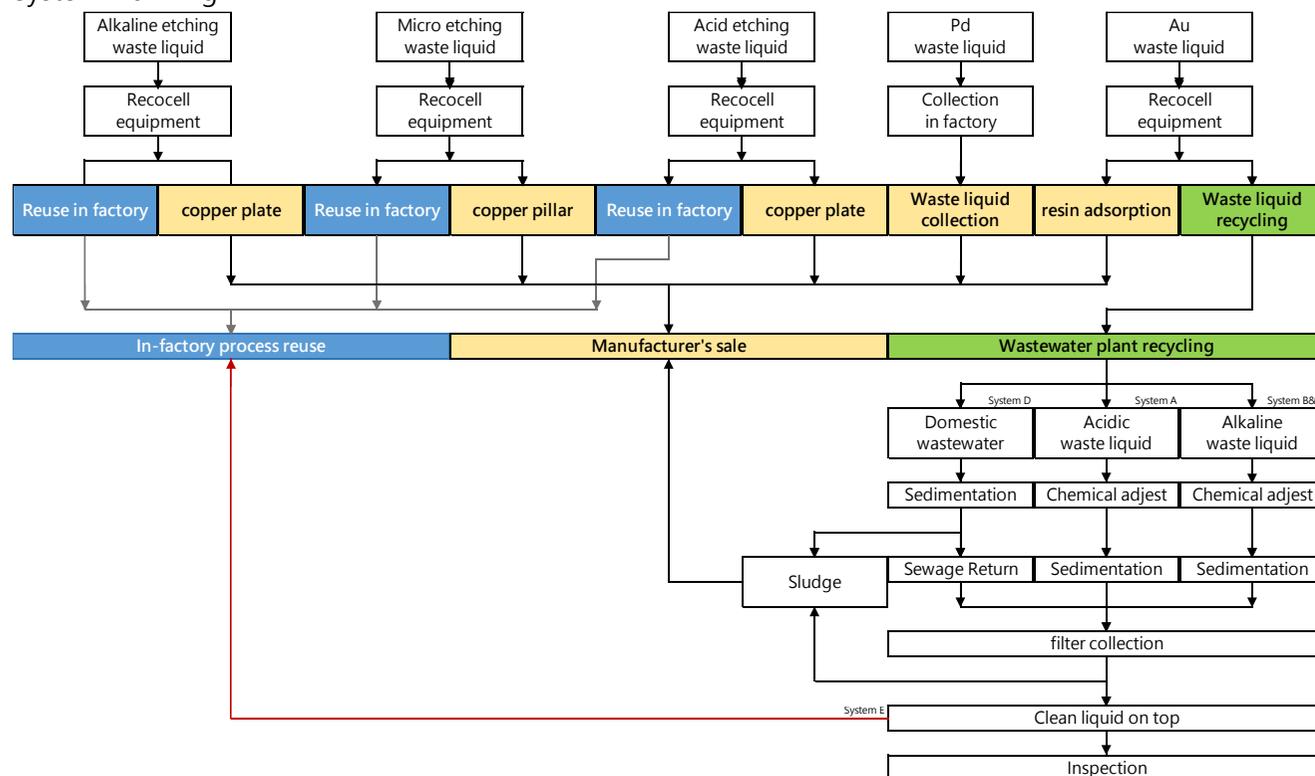
The GREEN Project has invested efforts in issues such as energy conservation, carbon reduction, and water resource management. Concrete goals have been set, motivating the implementation of the project.

5.1 AQUA Project

Apex has officially launched the AQUA Project in 2022. It has set up a water resources task force to work with suppliers to discuss three aspects: physical treatment, chemical treatment and biochemical treatment. It plans to separate the factory wastewater and use wastewater treatment technology to let the water flow. Resource recycling, more detailed classification and treatment of substances in wastewater, clean discharge and reduction of water resources.

(1) Execution Goal: Y 2025 30%, Y2030 40%, Y2035 50%

(2) System Planning



(3) Performance in 2023: The average monthly recovery rate in 2023 is 24.64%. To improve the stability of recycling, the system is still being adjusted. Hope to increase the recycling rate of water.

5.2 Solar Project

The Solar Project is planned to be implemented in three phases from 2021 to 2027 at various factory locations in Thailand. It is expected to be completed in 2027, with a total installed capacity of the company's solar photovoltaic system exceeding 21,000 kWh. It is anticipated to reduce annual carbon dioxide emissions by over 15,000 tonnes, based on the greenhouse gas inventory data for the year 2021. This reduction represents more than 8% compared to the baseline year. In addition to the commitment to sustainability, safety is prioritized in the solar panel installation process. Professional vendors provide guidance and relevant training courses, open for employee participation. Through collaborative efforts in sustainable energy construction, a sense of unity and pride is fostered among the Apex Family.

(1) Execution Goal

- | | |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <p>a. renewable energy usage ratio
Y2025 5%, Y2035 10%, Y2045 30%, Y2060 50%</p> | <p>b. Reduce GHG emissions
Reduce GHG emissions by 5% by 2027 (base year 2022)</p> |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|

(2) Solar Installation Plan

Solar Plant	2022	2023 (Completed)	2023 (In Progress)	2024	2025	2026-2027
Canteen	291.60					
CPP+Drill Shop	622.08					
Warehouse	1,536.35					
Head Office	321.05					
New Warehouse & FG		908.60				
New Water Plant (Phase1)		651.75				
New Water Plant (Phase2)		305.80				
AQUA Plant		485.10				
Apex 2 Factory Rooftop			3,174.60			
New Chemical & Hazardous Waste Plants				370.60		
Apex 1 Factory Rooftop				3,461.10		
New Area					4,500.00	
Apex 3 Factory Rooftop					1,800.00	
Apex 4 Factory Rooftop						3,000.00
Solar Capacity (kWp)	2,771.08	2,351.25	3,174.60	3,831.70	6,300.00	3,000.00
Accumulate Solar Capacity (kWp)	2,771.08	5,122.33	8,296.93	12,128.63	18,428.63	21,428.63
Estimated cumulative annual GHG reduction (tons) <small>(1,000*4*365*0.4999)/1,000=729.85 tons CO₂</small>	2,022.47	3,738.53	6,055.51	8,852.08	13,450.14	15,639.69

Note: Average of the Time That Can Receive Solar Radiation In 2022: 1,000 kWp = 4 Unit

SGS Thailand suggested the emission factor for a carbon footprint for Organization (CFO) : 0.4999 kgCO₂e

- (3) Performance in 2023: From January 1 to October 31, 2023, the devices have been installed, generating a total of 4471.02MWp of solar energy and reducing carbon dioxide by approximately 2,235.06 tons.

5.3 LEAN Project

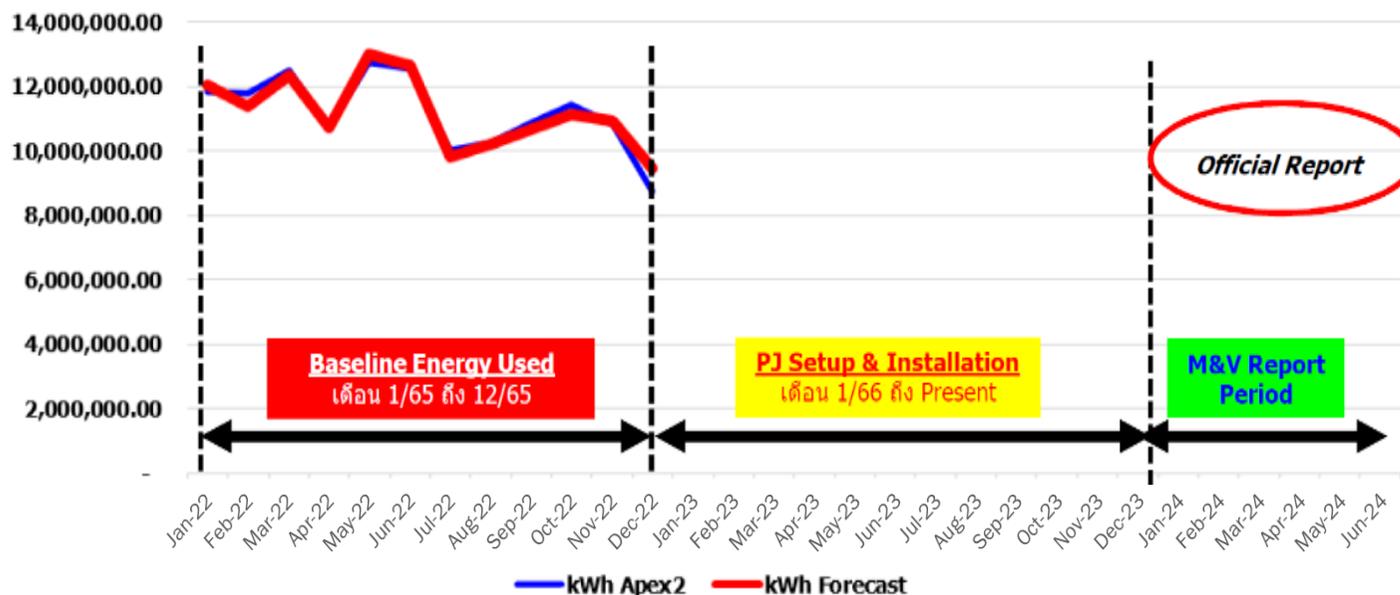
The implementation of this plan is implemented from 2022 to 2023. With the guidance of external experts, six measures have been proposed to improve equipment operational efficiency. These measures include:

- Utilizing current optimization technology to reduce power system energy consumption.
- Addressing the unloading issues of the turbine compressor.
- Installing high-efficiency vacuum blowers and implementing control systems.
- Using temperature difference sensors to monitor and control hot water loads to modify the heating approach.
- Implementing high-efficiency cooling systems while monitoring operations through a system control.

(1) Execution Goal

Expected to reduce the energy consumption of related equipment operations by 8%.

(2) System Planning

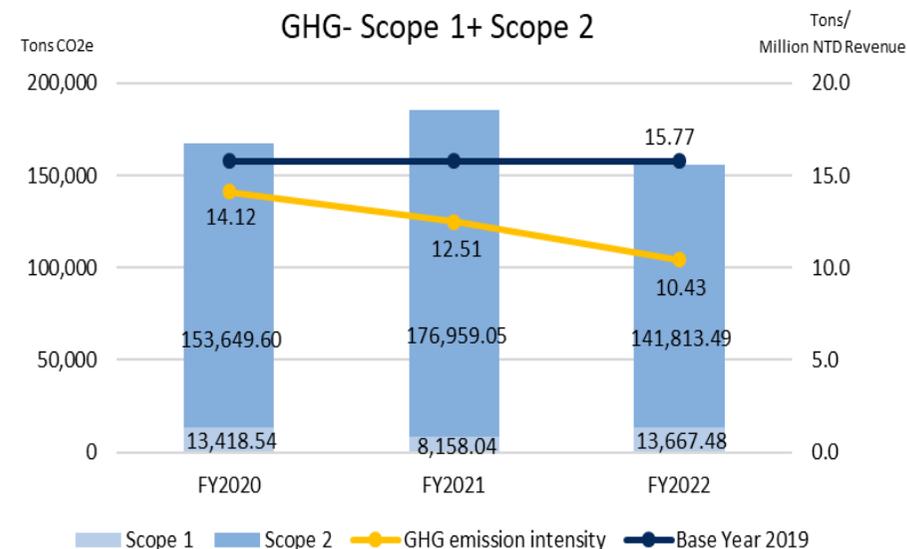


(3) Performance in 2023

From January 1 to October 31, 2023, various improvement measures have resulted in a cumulative reduction of 5,960 MWp.

Note: GHG Emission

Year \ Scope	FY2020		FY2021		FY2022	
	GHG	Scope ratio	GHG	Scope ratio	GHG	Scope ratio
Scope 1	13,418.54	7.41%	8,158.04	3.95%	13,667.48	7.86%
Scope 2	153,649.60	84.89%	176,959.05	85.73%	141,813.49	81.60%
Scope 3	13,932.89	7.70%	21,288.93	10.32%	18,312.04	10.54%
Biomass Fuel	5.89	0.00%	4.75	0.00%	4.99	0.00%
Total	181,006.92	1.00	206,410.77	1.00	173,798.00	100.00%
GHG emission intensity	14.12 Tons/ Million NTD Revenue		12.51 Tons/ Million NTD Revenue		10.43 Tons/ Million NTD Revenue	



6. Supervisory and Inspection

Implementation is:

- At the corporate level, after the risk management process is executed by participating personnel and their departments, discussions and reviews are conducted with the CSO.
- The current effectiveness of various risk responses, ongoing control implementation, plans in progress, and future exploration directions are reported to the CSO in the fourth quarter of this year, in addition to the regular work carried out by each unit and responsibility manager during routine operations.
- This execution report will also be submitted to the Sustainability Development Committee and the Board of Directors for review and discussion.
- The effectiveness of control and management of operational-level risks is audited by the audit unit according to the audit plan. The company also conducts self-checks internally annually. The audit results are submitted to the Audit Committee and the Board of Directors for review, and no significant deficiencies have been found this year.

7. Appendix-TCFD indicator comparison table

Disclosure Item	Chapter	Page Number
Governance		
Describe the board' s oversight of climate-related risks and opportunities.	2. Risk management promotion and management	3-4
	6. Supervisory and Inspection	22
Describe management' s role in assessing and managing climate-related risks and opportunities.	2. Risk management promotion and management	3-4
	6. Supervisory and Inspection	22
Strategy		
Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	3. Identification and evaluation process	5-6
Describe the impact of climate-related risks and opportunities on the organization' s businesses, strategy, and financial planning.	3. Identification and evaluation process	8-11
Describe the resilience of the organization' s strategy, taking into consideration different climate-related scenarios.	3. Identification and evaluation process	7
Risk Management		
Describe the organization' s processes for identifying and assessing climate-related risks.	4. Risk assessment and response	12-13
Describe the organization' s processes for managing climate-related risks.	4. Risk assessment and response	12-13
Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization' s overall risk management.	4. Risk assessment and response	12-13
Metrics and Targets		
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	2. Risk management promotion and management	4
	5. GREEN Project	14-16
Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	4. Risk assessment and response	15-18
	5. GREEN Project	20-22
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	5. GREEN Project	19-22