2022 Environmental Sustainability Implementation Report

Environmental Policy

In order to meet the requirements of environmental management and recognize that environmental management is an indispensable factor for the sustainable operation of enterprises, the Company will be committed to improving education and training, enhancing employees' knowledge and awareness of environmental management, and establishing an environmental management system to provide clarity and comfort, safe working environment. Our environmental stewardship declaration is:

『Fulfilling obligations, High quality and environmental protection, Continuous improvement, and Customer satisfaction』

In order to meet the requirements of environmental management, we are committed to:

1. Understand the impact of sales and maintenance services on the environment, and formulate environmental goals and plans to continuously improve environmental performance.
2. Comply with the requirements of environmental protection laws and regulations, and formulate independent standards when technically and economically feasible.
3. Implement waste classification and recycling, and improve resource recycling and reuse.
4. Publicly promote our environmental management system, measures and performance to gain the trust of our employees, customers, owners, social groups, government agencies and stakeholders.

Water Resource Management

Continue to promote the saving of domestic water to employees, and vigorously promote the recycling and reuse of water resources and cooling water in production units. In the management of discharge water quality, in addition to reducing the water consumption during aircraft maintenance and reducing the domestic water consumption of employees, each plant has set up a waste water treatment plant, and qualified full-time personnel are responsible for the operation and maintenance of waste and sewage treatment equipment, and entrust the testing approved by the Environmental Protection Administration. The organization uses raw wastewater and discharge water for testing, effectively supervises the control of discharge water discharge, and makes the treatment equipment operate normally. Wastewater treatment plants in each plant area have obtained discharge permits from local competent authorities to meet regulatory requirements.

Air Pollution Control

Reduce the use of organic solvents, chemical substances and dust pollution in aircraft maintenance procedures, set up air pollution control equipment, achieve effective control of environmental pollution factors, reduce pollutant emissions, and set up air pollution control personnel responsible for air pollution management.

Waste Management

In line with the entrepreneurial spirit of “cherishing natural resources”, combining the core business of environmental protection with the trust of customers, jointly creating the concepts of “sustainable operation” and “giving back to the society”, continuing to implement waste reduction work, and allocate qualified waste professionals carry out waste management work, and consider factors such as the interaction between industry characteristics and the environment of the entire company. In the spirit of “cradle to grave”, in the process of aircraft maintenance, from the procurement of raw materials to the final aircraft delivery, business waste is eliminated. All can improve the management, removal, treatment and reuse, and effectively prevent the negative impact on the environment. The waste disposal is as shown in Table 1:

Table 1. Waste disposal situation

2022	General industrial waste		Hazardous industrial waste	
	On site	Leave	On site	Leave
Weight (metric tons)	0	286.347	0	50.453

Climate Change Assessment and Response Measures and Financial Impact Analysis

The Company has been evaluating the potential risks and opportunities that climate change could bring to the Company and had considered such factors when making our operation strategies and relevant decisions. We have established climate change risk management procedure and mechanism by incorporating overall risk management policies and actively promoting eco-friendly and energy-conserving measures. We are devoted to reducing greenhouse gas emission and promoting eco-friendly services to mitigate the impact that climate change had on our operation. We keep ourselves informed with international policies related to climate change to improve our eco-friendly practices. We have been disclosing information related climate change and improving relevant strategies and management measures in response to changes in the surroundings. The core of our reactive measures to climate change is to figure out risk management strategies according to our analysis on the current situation and to evaluate the cost of management and its impact on our finance accordingly. With the above mentioned information, we could effectively improve our

governance measures related to climate change and systematically evaluate our finance to reduce risk and enhance business: Our measures are as show in Table 2:

Table 2. Climate-related financial disclosure (TCFD) framework

Aspect	TCFD Proposes Disclosure Project	Climate-related financial disclosure (TCFD) response
Governance	Board oversight of climate-related risks and opportunities	The Board of Director is mainly responsible for reviewing and guiding the climate strategy, and reviews the Company's climate issues from time to time
	How management assesses and manages climate-related risks and opportunities	The Company's management team continues to pay attention to responding to global sustainable development issues, and expects to fulfill corporate social responsibility through various environmental impact reduction actions and social care mechanisms while taking into account the business's operational development
Strategy	Short-, medium-, and long-term climate-related risks and opportunities identified by company	Short-term: Earthquake increases insurance premiums Mid-term: Extreme weather such as typhoons and floods will increase operating costs Long-term: Changes in rainfall patterns and climate change lead to higher operating costs
	The impact of climate-related risks and opportunities on business, strategy and financial planning	Capital expenditure: The plant area must improve the energy efficiency of equipment and introduce energy-saving equipment. The purchase or repair of plant equipment will increase the Company's capital expenditure
	Scenario analysis (including 2℃ or more severe scenarios)	Affected by climate change, the frequency of extreme weather is increasing, and equipment may be flooded due to heavy rains and typhoons, which will affect the delivery schedule of aircraft and cause property losses Considering the probability of future flooding and assessing the risk of flooding, various flood control measures will be planned, waterproof gates have been installed, and water pumps have been purchased to prevent asset losses caused by flooding
Risk Management	Processes for identifying and assessing climate-related risks	Observing the sustainable development trend of the aircraft maintenance industry for a long time, collecting global carbon management trends, government regulations, and potential customer requirements/needs through multiple communication channels. And according to the above needs, through the internal information platform, quickly reflect to each unit. Formulate response strategies and action plans for factors that may affect operations.
	Processes for managing climate-related risks	Incorporate climate-related risks into the existing emerging risk management mechanism, identify and measure the possible losses caused by climate risks, and incorporate control of emerging risk management situations for comprehensive management
	Explain how the above-mentioned risk identification and management process is integrated into the Company's overall risk management system	The Company's risk management mechanism is based on the "PDCA" framework, effectively exerting risk management and promoting the diversification of aircraft maintenance

Aspect	TCFD Proposes Disclosure Project	Climate-related financial disclosure (TCFD) response
Metrics and Targets	Assess whether the indicators are consistent with the Company's strategy and risk management	Using greenhouse gas emissions, water consumption and waste generation as management indicators, set various reduction targets and increase the amount of green purchases. In addition, in order to achieve the goal of a sustainable environment, through various energy-saving and carbon-reduction actions, regular review of environmental protection issues, and continuous promotion of improvement measures to achieve the goal of greenhouse gas reduction
	Disclose Scope 1, Scope 2 and Scope 3 (if applicable) GHG emissions and associated risks	The Company has carried out greenhouse gas inventory for many years, through the changes in greenhouse gas emissions over the years, to confirm the effectiveness of energy saving and carbon reduction, and actively seek opportunities for reduction
	Management objectives and related performance	The estimated capacity of the solar photovoltaic system is about 1,910.09 kWh Greenhouse gas emissions totaled 3,858.60 metric tons of carbon dioxide equivalent (CO_2e) The total weight of waste is 336.80 metric tons

Greenhouse Gas Management

In order to meet the requirements of customers and clients and respond to government laws and regulations as soon as possible, the Company has introduced a greenhouse gas inventory system. In order to obtain the recognition of the expected users, all inventory standards are implemented in accordance with international standards. The greenhouse gas inventory time has been from Jan. 1, 2022 to Dec. 31, 2022. The greenhouse gas inventory boundary includes Songshang Plant, Taichung Plant, Tainan Plant (including Gue-Jen station), Pingtung Plant, 3 NASC out-stations (Kaohsiung, Hualien, Taitung Airport) and Line Maintenance (Taoyuan, Taichung, Tainan, Kaohsiung Airport).

According to the statistics of the inventory and calculation results, the total greenhouse gas emissions in 2021 are 3,957.570 metric tons of carbon dioxide equivalents (CO_2e) (Including 117.390 metric tons of carbon dioxide equivalent (CO_2e) in scope 1 and 3,840.180 metric tons of carbon dioxide equivalent (CO_2e) in scope 2). In terms of the contribution ratio of emission sources, as shown in Figure 1, purchased electricity is the main source of contribution, accounting for 97% of the total emissions. In 2022, the total amount of greenhouse gas emissions was 3,858.600 metric tons of carbon dioxide equivalents (CO_2e) (Including 199.611 metric tons of carbon dioxide equivalent (CO_2e) in scope 1 and 3,658.989 metric tons of carbon dioxide equivalent (CO_2e) in scope 2), and purchased electricity was the main source of contribution, accounting for 95% of the total emissions. The contribution ratio of emission sources is shown in Figure 2. Therefore, implementing energy saving and improving equipment efficiency are the main directions for the Company to achieve the goal of reducing greenhouse gas emissions, and at the same time, it can also reduce long-term operating costs.

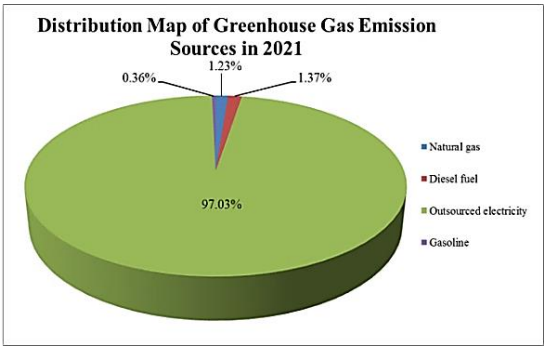

Figure 1. Distribution of greenhouse gas emission sources in 2021

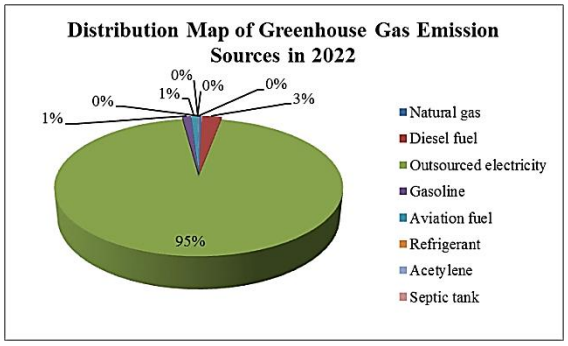

Figure 2. Distribution of greenhouse gas emission sources in 2022

Energy Saving and Carbon Reduction Measures

In order to mitigate the environmental impact caused by greenhouse gas emissions from the Company's operations, the Company continues to promote energy conservation and carbon reduction strategies to effectively reduce greenhouse gas emissions. The energy conservation and carbon reduction measures are summarized as follows:

1. Post a "Please turn off the light when you leave" sign.
2. The security guards patrol the factory at any time and turn off unnecessary lights.
3. Replace T5 energy saving lamps with T8 lamps in each factory area.
4. Replacement of LED lamps in the office area.
5. Reduce boiler natural gas usage.
6. Dosing the cooling water system.
7. Replacement of cooling material of air conditioning water tower.
8. The factory street lights adjust the switching time according to seasonal changes.
9. The ice water host adjusts the number of operating units according to seasonal changes.
10. The temperature setting of the ice water main unit is increased by 2℃.
11. The air conditioner in the public area of the factory is set to the energy saving mode.
12. Regularly clean the water tank of the air-conditioning water tower.
13. The air conditioner in the office area is turned on from 0700 to 1800, and it is closed at other times and holidays.

14. Year by year, the old air conditioners are replaced with energy saving models.
15. Set up solar green power generation equipment.
16. Control the application of raw materials and reduce the generation of expired products to reduce the amount of waste.
17. Implement resource recycling and reuse to reduce waste generation.

Display of results

The use of energy not only consumes the earth's resources, but also produces carbon dioxide and causes the greenhouse effect. In order to effectively reduce the environmental impact of the greenhouse effect, reducing energy consumption is the key issue of the company's sustainable operation. At present, energy conservation is mainly aimed at the reduction of electricity, water, waste and natural gas. The implementation results of the past years are shown in Table 3, and the promotion and implementation of energy conservation management plans in offices, public areas and maintenance lines, supplemented by publicity activities and education and training to improve colleagues' concepts and habits in energy saving and greenhouse gas reduction. In 2022, due to the increase in the number of scrapped aircraft materials, the amount of waste has shown a slight upward trend, while other greenhouse gas emissions and electricity consumption have shown a slight downward trend. (as shown in Figure 3 and Figure 4). The Company will continue to promote energy conservation and carbon reduction measures.

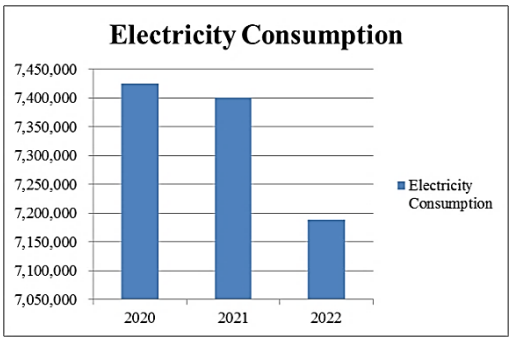

Figure 3. Distribution of electricity consumption over the years

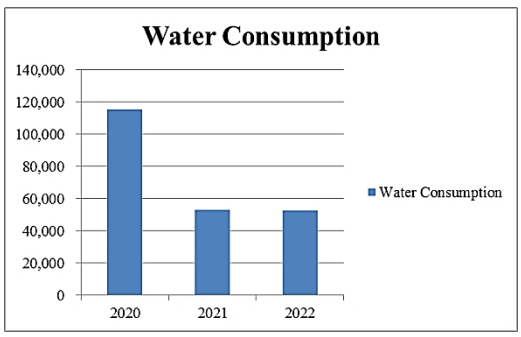

Figure 4. Distribution of water consumption over the years

Table 3. Emissions implementation status

Items \ Year	2020 actual (metric tons)	2021 actual (metric tons)	2022 actual (metric tons)	2023 goals (metric tons)
Electricity consumption (kWh)	7,424,643	7,400,186	7,188,584	7,200,000
Water consumption (metric tons)	115,272	53,252	54,142	55,000
Waste volume (metric tons)	110.27	304.40	336.80	350.00
Greenhouse gas emissions (metric tons CO_2e)	2,397.930	3,957.570	3,858.600	3,900.000

In recent years, climate change and extreme climate phenomena caused by man-made greenhouse gases have become more and more prominent, making the issue of climate change management more and more attention from all walks of life. The impact of climate change brings many risks and challenges to business operations. The Company is optimistic about the development of renewable energy, and in line with the government's green energy policy, actively invests in solar power generation to implement green energy and environmental protection policies. The Company has built solar power generation systems on the hangar roofs of the Aircraft Maintenance Division and Engine & Component Shops Division to reduce pollution and reduce carbon emissions. In 2021, the power generation amounted to 2,010.63 kilowatt-hours, saving 1,009,337 kilograms of carbon emissions. In 2022, the power generation amounted to 1,910.09 kilowatt-hours, saving 972,237 kilograms of carbon emissions. Please refer to Table 4 and Figure 5 for the benefits of the solar power system.

Table 4. Solar power generation

Items \ Year	2020	2021	2022
Power generation (kwh)	1,446.20	2,010.63	1,910.09
Energy saving and carbon reduction (kg)	736,117	1,009,337	972,237

Figure 5. Building solar panels