2023 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

The Company has been paying attention to the issue of water conservation and environmental protection for many years. Starting from the comprehensive implementation of water conservation in daily life, the available water resources can be used to maximize the benefits. We 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

2023	General industrial waste		Hazardous industrial waste	
	On site	Leave	On site	Leave
Weight (metric tons)	0	254.897	0	22.419

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 Company has established a "Sustainability Implementation Committee", with the Chairman of the Board as the convener. The Committee implements activities based on actual work, including economic performance/customer relations/market position/waste management/carbon emission management/energy management/training and education/ labor-employer relations/occupational safety and health/information security protection/social participation, etc. The "Sustainability Implementation Committee" reports implementation results to the "Board of Directors" every year
	How management assesses and manages climate-related risks and opportunities	Under the supervision of the Company's "Sustainability Implementation Committee" and "Risk Management Committee", we manage action plans on climate-related issues
Strategy	Short-, medium-, and long-term climate-related risks and opportunities identified by company	The Company's service mechanism will not be affected in the short term, and necessary adjustments will be made based on customer needs in the medium and long term. Strategic and financial implications: -Risks and opportunities -Short term: insurance premiums increase due to earthquake -Medium term: Increase in operating costs due to extreme weather such as typhoons and floods -Long term: higher operating costs due to changing rainfall patterns and climate change -Countermeasures: 1. Capital expenditure: The factory must improve the energy efficiency of equipment and introduce energy-saving equipment. The purchase or repair of factory equipment will increase the company's capital expenditure. 2. Cooperate with customers to strengthen green procurement activities of raw materials
	The impact of climate-related risks and opportunities on business, strategy and financial planning	Extreme weather events: situations that may lead to supply chain disruptions Transformation response actions: develop new suppliers/require customers to supply materials/adjust material preparation in a timely manner
	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

Aspect	TCFD Proposes Disclosure Project	Climate-related financial disclosure (TCFD) response
Risk Management	Processes for identifying and assessing climate-related risks	The Company has assessed the possible risks and opportunities that climate change may bring to the enterprise. Incorporate climate change factors into the operational strategy planning and decision-making process, incorporate them into the overall risk management policy, and actively promote various environmental protection, energy saving and carbon reduction measures, reduce greenhouse gas emissions, and promote green services. In order to mitigate and adapt to the operational impacts caused by climate change, we are more in line with the international climate change framework, continue to improve climate change management, disclose climate-related information, and continue to improve climate-related strategies and management to respond to changes in the general environment. Based on the analysis results, a risk management strategy plan is established as the core of climate change actions to estimate management costs and financial impacts. Through the collection of the aforementioned data, we can strengthen the Company's climate change governance and systematically evaluate financial relationships to reduce risks and seize business opportunities
	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
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 installation capacity of the solar photovoltaic system is approximately 1,910.01 kWh Electricity intensity: 1,409.7627 kWh/million turnover Water intensity 9.1879 metric tons/million turnover Waste intensity 0.0570 metric tons/million turnover Greenhouse gas emission intensity: 1.8766 metric tons CO_2e/million turnover

Greenhouse Gas Management

The earth's climate and environment are gradually deteriorating due to the influence of greenhouse gases. As a member of the global citizens, we should fulfill our corporate responsibility to protect the environment and care for the earth. AACL's greenhouse gas reduction management policy:

1. Committed to the Company's internal greenhouse gas inventory to truly understand the status of greenhouse gas emissions.
2. Based on the inventory results, further reduce greenhouse gases.
3. Continue to promote energy conservation and carbon reduction measures, maintain sustainable operations, and fulfill corporate responsibilities.

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, 2023 to Dec. 31, 2023. 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 intensity in 2022 are 0.9482 metric tons of carbon dioxide equivalents (CO_2e)/million turnover (Total emissions are 3,858.600 metric tons of carbon dioxide, including 199.611 metric tons of carbon dioxide equivalent (CO_2e) in scope one and 3,658.989 metric tons of carbon dioxide equivalent (CO_2e) in scope two). In terms of the contribution ratio of emission sources, as shown in Figure 1 (category 1 and 2), purchased electricity is the main source of contribution, accounting for 95.78% of the total emissions. In 2023, the total amount of greenhouse gas emissions intensity was 1.8766 metric tons of carbon dioxide equivalents (CO_2e)/million turnover (The total emissions were 9,127.059 metric tons of carbon dioxide, including 333.196 metric tons of carbon dioxide equivalent (CO_2e) in scope one, 3,403.617 metric tons of carbon dioxide equivalent (CO_2e) in scope two, and 5,390.246 metric tons of carbon dioxide equivalent (CO_2e) in scope three (category three)), and purchased electricity was the main source of contribution, accounting for 91.27% of the total emissions. The contribution ratio of emission sources is shown in Figure 2 (category 1 and 2). Therefore, if we want to achieve the international 2050 net-zero carbon emissions target, as many emerging energy-saving technologies are still under research and development, the most feasible way to reduce carbon emissions at this stage is through improvements in energy efficiency. Through factory equipment testing, we can clearly understand the equipment utilization rate, conduct energy analysis, and then replace high-efficiency equipment, digitize operations, or carry out other carbon reduction actions. This is the company's current main direction to achieve greenhouse gas reduction goals. It can also reduce

long-term operating costs.

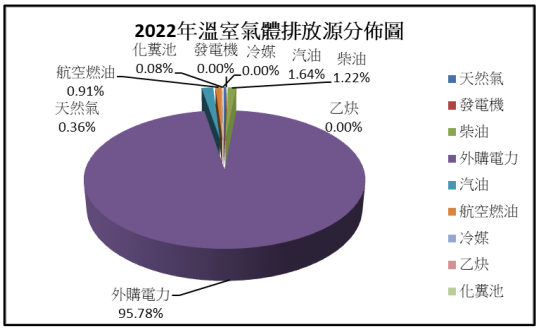

Figure 1. Distribution of greenhouse gas emission sources in 2022

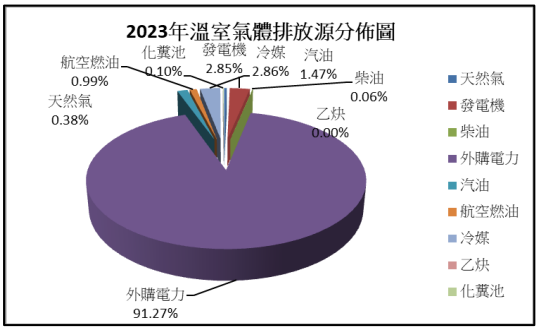

Figure 2. Distribution of greenhouse gas emission sources in 2023

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. When replacing bathroom equipment, use products with water-saving labels announced by the Ministry of Economic Affairs.
17. Control the application of raw materials and reduce the generation of expired products to reduce the amount of waste.
18. 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 greenhouse gas emissions. The implementation results of the past years are shown in Table 3 and Table 4. The electricity intensity, water intensity, waste intensity and greenhouse gas emission intensity all show a downward trend in energy saving results (as shown in Figures 3, 4, 5 and 6). The Company's inventory shows that the electricity intensity in 2022 is 1,766.5715 kWh/million turnover, and the electricity intensity in 2023 is 1,409.7627 kWh/million turnover; the electricity intensity in 2023 is 356.8088 kWh less than in 2022/million turnover (-20.20%); the electricity intensity target in the future (2024~2028) is to be reduced by 0.5% (2028) compared with 2023.

The water intensity in 2022 is 13.3052 metric tons/million turnover, and the water intensity in 2023 is 9.1879 metric tons/million turnover; the water intensity in 2023 is 4.1173 metric tons/million turnover (-30.95%) lower than that in 2022, In the future (2024~2028), the water intensity target is to be reduced by 1% (2028) compared with 2023.

The waste intensity in 2022 is 0.0828 metric tons/million turnover (The total amount of waste is 336.800 metric tons, including 286.347 metric tons of general industrial waste and 50.453 metric tons of hazardous industrial waste), and the waste intensity in 2023 is 0.0570 metric tons/million turnover (The total amount of waste is 277.316 metric tons, including 254.897 metric tons of general industrial waste and 22.419 metric tons of hazardous industrial waste); the annual waste intensity in 2023 is 0.0258 metric tons/million turnover less than in 2022 (-31.11%), the future (2024~2028) waste intensity target is to be reduced by 1% (2028) compared with 2023.

The greenhouse gas emission intensity in 2022 is 0.9482 metric tons of carbon dioxide equivalent (CO_2e)/million turnover, and the greenhouse gas emission intensity in 2023 is 1.8766 metric tons of carbon dioxide equivalent (CO_2e)/million turnover; the greenhouse gas emission intensity in 2023 has increased by 0.9284 metric tons of carbon dioxide equivalent (CO_2e)/million turnover (97.90%) compared with 2022. The reason for the increase in 2023 is to cooperate with the new category 3 greenhouse gas emission statistics in the ESG report. Category 3 has a total increase 5,390.246 metric tons of carbon dioxide equivalent (CO_2e), and the greenhouse gas emission intensity target in the future (2024~2028) will be reduced by 1% compared with 2023 (2028).

The Company will continue to promote the 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 conservation and greenhouse gas reduction, so as to achieve the results of energy conservation and carbon reduction.

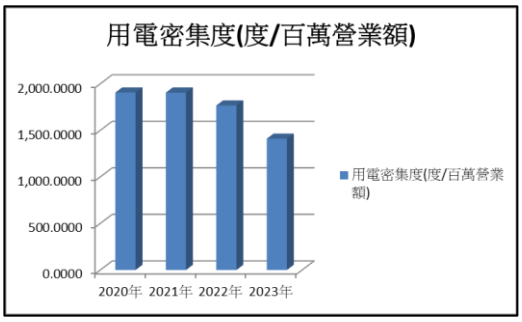

Figure 3. Distribution of electricity intensity over the years

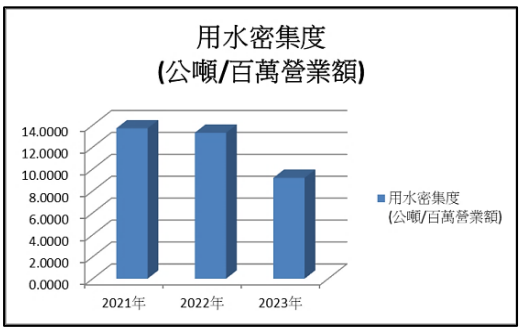

Figure 4. Distribution of water intensity over the years

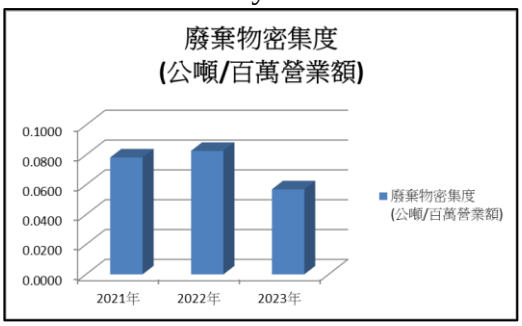

Figure 5. Distribution of waste intensity over the years

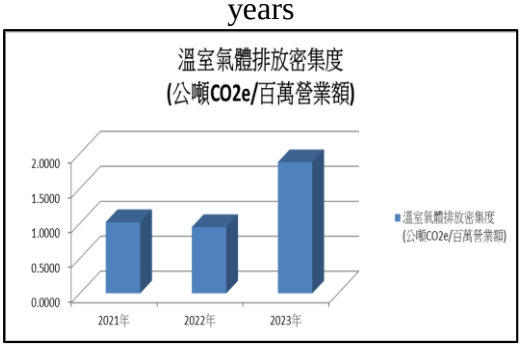

Figure 6. Distribution of greenhouse gas emission intensity over the years

Table 3. Implementation status of energy conservation

Year / Items	2021 actual	2022 actual	2023 actual	2024 goals
Electricity intensity (kWh/million turnover)	1,904.8245	1,766.5715	1,409.7627	1,339.2746
Water intensity (metric tons/million turnover)	13.7072	13.3052	9.1879	8.2691
Waste intensity (metric tons/million turnover)	0.0784	0.0828	0.0570	0.0513
Greenhouse gas emission intensity (metric tons/million turnover)	1.0187	0.9482	1.8766	1.6889

Table 4. Emissions implementation status

Year / Items	2021	2022	2023	2024 goals
Electricity consumption (kWh)	7,400,186	7,188,584	6,856,638	6,513,806
Water consumption (metric tons)	53,252	54,142	44,687	40,218

Items \ Year	2021	2022	2023	2024 goals
Waste volume (metric tons)	304.408	336.800	277.316	249.584
Greenhouse gas emissions (metric tons CO_2e)	3,957.570	3,858.600	9,127.059	8,214.352

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 rents out a solar power plant supplier on the rooftop of its Tainan Plant to build a solar power generation systems to reduce pollution and reduce carbon emissions. In 2022, the power generation amounted to 1,910.09K kilowatt-hours, saving 972,237 kilograms of carbon emissions. In 2023, the power generation amounted to 1,910.01K kilowatt-hours, saving 945,453 kilograms of carbon emissions. The power generation and energy saving and carbon reduction in 2023 will slightly decrease by 0.08K kilowatt-hours of power generation (-0.0042%) and 26,784 metric tons of energy saving and carbon reduction (-2.75%) compared with 2022. The efficiency of renewable energy use will continue to be improved. Please refer to Table 5 and Figure 7 for the benefits of the solar power system.

Table 5. Solar power generation

Items \ Year	2021	2022	2023
Power generation (1,000kWh)	2,010.63	1,910.09	1,910.01
Energy saving and carbon reduction (kg)	1,009,337	972,237	945,453

Figure 7. Building solar panels