

Greenhouse gas, water usage and waste management performance and verification

1. Management Principles, Policy and Commitment

- (1) Yearly reduction of 2% in greenhouse gas intensity compared with the baseline year.
- (2) Targeting over 90% in total volume of recyclable industrial waste by 2025.
- (3) Completing organization-wide greenhouse gas inventory by 2027.

2. Principles of Performance Assessment and Management

- (1) Actively promoting energy replacement projects within the Company.
- (2) Implementing organization-wide greenhouse gas inventory according to planned schedules.
- (3) Reviewing and improving carbon emissions, waste, and other indicators annually.

3. Actual Implementation

- (1) Regarding the organizational greenhouse gas inventory, the third-party verification and statement for the year 2023 were finalized in accordance with ISO 14064-1: 2018 in the first quarter of 2024. The scope of inventory includes direct (Scope 1), indirect (Scope 2), and other indirect (Scope 3, 4, 5, and 6) GHG emissions in the Zhonghe factory, Taoyuan factory, offices in Taiwan, and subsidiaries. The Company has also planned to initiate the organizational greenhouse gas inventory for overseas offices in the second half of 2024.
- (2) Promoting water conservation and responsible water use in office environments; installing water-saving devices to reduce water consumption and minimize waste.
- (3) The percentage of recyclable industrial waste reached 98.84% in 2023, which significantly surpassed the target set in 2019, i.e. over 90% in total volume of recyclable industrial waste. The recycling rate has significantly increased, demonstrating remarkable progress and achieving Company goals.
- (4) The significant increase in recyclable waste was attributable to the effective breakdown, classification, and recycling of pallet trays and mechanisms.
- (5) Responding to the global challenge of climate change, integrating the aspects of smart factory evaluation, reinforcing the results of renewable energy utilization,

aligning with the RE100 initiatives and the UN SDG13 Climate Action, and demonstrating our commitment to aggressive climate change adaptation.

4. Environmental Care Objectives

Using 2023 as the baseline year, VIVOTEK responds to various policies regarding environmental care, sets energy-saving, carbon-reducing, and waste management goals, and acts accordingly. The achievements are periodically discussed with the Sustainability Committee whereas the progress in greenhouse gas inventory is reported quarterly to the Board of Directors for oversight.

● Table of Environmental Management Objectives

Environmental Care	Policy and Objective	Measures Taken for the Next 2 Years	Remarks
Energy Conservation and Carbon Reduction	To reduce 1% every 2 years	<ul style="list-style-type: none"> ◆ Replace light fixture in office areas with energy-efficient lighting (T8/T5/LED). ◆ Adjust lighting in work areas to reasonable levels as needed. ◆ Promote production line automation. ◆ Implement scheduled equipment shutdown to save electricity. ◆ Regularly maintain air conditioning to ensure operational efficiency. ◆ Educate employees about the importance of turning off lights when not in use, especially during lunch breaks and after work hours. ◆ Regularly disconnect refrigerators. ◆ Encourage employees to use the stairs and public transportation. ◆ Promote a vegetarian and eco-friendly lifestyle. ◆ Purchase renewable energy beginning 2022 to increase usage rate year by year. 	Given the nature of the industry, energy-saving, efficient energy use, and greenhouse gas reduction strategies are focused within the factory.
Waste Management	To attain over 90% in total volume of recyclable industrial waste by 2025.	<ul style="list-style-type: none"> ◆ Continuously promote the recycling of pallet trays throughout the production line. ◆ Breaking down waste into the smallest possible units for recycling. ◆ Collaborate with qualified recycling vendors specializing in plastics and metals. 	

Note: Water consumption goals are not set as there is no water usage during the process.

5. GHG Emissions Disclosure

Issues related to greenhouse gases have gained increasing attention and prompted discussions among businesses and the international community. VIVOTEK has prioritized sustainability and recognizes the potential impact and risks brought by greenhouse gases. We are committed to reducing such impact and contributing to climate change mitigation efforts.

The third-party verification statement for 2023 was obtained in the first quarter of 2024. The third-party verification statement for 2024 is scheduled to be obtained in the first quarter of 2025.

- Baseline Year: 2023
- Inventory Boundary: Zhonghe factory, Taoyuan factory, Taiwan offices, and subsidiaries.

Item	2021	2022	2023
Category 1 (tCO ₂ e)	87.3350	121.8840	116.7871
Category 2 (tCO ₂ e)	1035.4215	1832.6397	2029.1416
Total Weight of Category 1 and 2 (tCO ₂ e)	1122.7565	1954.5237	2145.9287
Category 1 and 2 GHG Emissions Intensity.	0.2059	0.1965	0.2342
Category 3 – Category 6 (tCO ₂ e)	195.6384	836.5235	747.1864

Note 1: The 2021 and 2022 data were verified by a third party, AFNOR Asia, Ltd. The 2023 data was verified by BSI with a corresponding statement issued. The verification scope is the same as the inventory scope.

Note 2: The 2023 coefficients are derived from the GWP ratios of IPCC 2021 AR6.

Note 3: VIVOTEK has complete authority over the disclosure of all emission sources within its organization, and therefore adopts an operational control approach for disclosure.

Note 4: If the change in GHG emission data exceeds 3% (significant threshold), the established baseline inventory list will be recalculated and updated according to actual conditions.

Note 5: Greenhouse Gas Intensity = tCO₂ / revenue in million (NT\$). The revenue was 5,452,000 (NT\$) in 2021, 9,948,000 (NT\$) in 2022, and 9,162,000 (NT\$) in 2023.

Note 6: The gas categories included in the calculation are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and nitrogen trifluoride (NF₃).

Note 7: Category 3: Indirect GHG emissions associated with transportation. The inventory includes emissions associated with employee commuting and business travel.

Category 4: Indirect GHG emissions associated with products used by the organization. The inventory includes emissions associated with product procurement and waste disposal.

Categories 5 and 6 are owned or controlled by other parties; therefore, these are not quantified.

- VIVOTEK Electricity Consumption and Energy Consumption Data from 2021 to 2023
- Inventory Boundary: Zhonghe factory, Taoyuan factory, Taiwan offices, and subsidiaries.

年度	2021	2022	2023
Electricity Consumption (Unit: KWH)	2,034,227	3,600,471	4,099,276
Energy Consumption (Unit: MJ)	7,323,217	12,961,696	14,757,394
Renewable Electricity Consumption (Unit: KWH)		1,101,176	2,446,376
Renewable Energy Consumption (Unit: MJ)		3,964,234	8,806,954
Energy Intensity (Unit: MJ Revenue-per million)	1,343	1,701.4	2572

Note 1: Formula to calculate purchased electricity: 1 kwh = 3.6 Mega Joules (MJ)

Note 2: Electricity carbon emission factor: 0.495 CO₂e/kWh for 2023; 0.509 CO₂e/kWh for 2022 and 2021; 0.502 CO₂e/kWh for 2020

Note 3: Electricity consumption scope: The organizational boundary for 2023 includes the head office, subsidiaries (Aetek/Lidlight), Zhonghe factory, Taoyuan No.2 factory, Taoyuan No.5 factory, Tsingpu warehouses, offices (Hsinchu, Taichung, and Tainan); for 2022 includes Zhonghe factory, Taoyuan factory, Taiwan offices, and subsidiaries, for 2021 and 2020 includes Zhonghe factory.

Note 4: The denominator of the energy intensity value is the revenue for the current year.

6. Water Usage Disclosure

VIVOTEK's production process does not use process water, ensuring that the volume of incoming water is equal to the effluent volume. The factory and offices are leased while water expenses are shared among the building management committee and rental companies, resulting in minimal water consumption.

To promote water conservation, we implement water-saving measures in our office environment. We have installed sensor-equipped faucets and urinals in restrooms to reduce water consumption.

In 2023, water consumption at our offices in Taiwan, Taoyuan, and affiliates increased by 1.7487 megaliter compared with 2022. This increase was primarily attributed to rising demand within these locations.

- Water Consumption Over the Past Two Years.

Year	2023	2022
Water Consumption (Megaliter)	37.6094	35.8607

Note 1: The subsidiary, Aetek Inc., has been added to the boundary of water consumption for the year 2023 since April.

Note 2: VIVOTEK does not reuse water; therefore, the water intake equals the water consumption.

7. Waste Disclosure

VIVOTEK implements robust waste management measures, promotes reuse of waste, and collaborates with suppliers to recycle packaging materials and cardboard to promote the development of a green economy. These efforts help delay material disposal and reduce waste. The waste disclosure statistics are as follows:

1. Industrial waste such as plastics, packaging materials, and metal components generated during VIVOTEK's assembly, testing, and packaging processes does not contain hazardous industrial waste. In 2023, a total of 30.55 tons of waste was processed by qualified clearance and disposal organizations, with priority given to recycling and reuse, followed by incineration and landfill disposal.
2. The Company has dedicated personnel in place to manage and audit waste. Waste is weighed by qualified clearance and disposal organizations, from which the data is transmitted back to the Company and is handled in accordance with local laws and regulations. The handling methods are recycling, reusing, incineration, and landfill which abide by strict auditing mechanisms to avoid damage to the environment. In 2023, a total of 30.55 tons of waste was processed by qualified clearance and disposal organizations, with priority given to recycling and reuse, followed by incineration and landfill disposal.
3. Reducing waste starts from within. VIVOTEK collaborates with the supply chain to recycle packaging materials such as cardboard and pallet trays.
4. The percentage of recyclable industrial waste was 98.85%, which is a substantial growth compared to the target set in 2019, i.e. over 90%, indicating a high-level of efficiency.
5. The quantity of recycled trays in 2023 was 5.655 tons; the quantity of classified recycled materials, including components, was 24.5425 tons, resulting in a total of 30.1975 tons of recyclable waste.
6. No environmental violations or fines reported against the Company in 2023.

Year		2023		2022		2021	
Classification	Disposal Method	Output	Percentage	Output	Percentage	Output	Percentage
General Industrial Waste (Non-hazardous Waste)	Reusing	0	-	0	-	0	-
	Recycling	30.2	98.85	31.95	98.71	23.22	97.6-
	Incineration and Landfill	0.352	1.15	0.42	1.29	0.57	2.4
Hazardous Waste	None	None	None	None	None	None	None
Recycled Quantity/Total Waste Quantity	Total Waste Quantity	30.55		32.37		23.8	
	Proportion of Recycled Waste	98.85%		98.69%		97%	