

Environmental Performance

Item		Unit	2018	2019	2020	2021	2021 Objective	Achievement Rate
Category 1 GHG Emissions	Flight operations	Tons CO ₂ e	7,229,903	7,059,083	5,787,751	5,875,531	6,004,454	102%
	Ground Operations	Tons CO ₂ e	3,511	4,981	3,051	2,897		
Category 2 GHG Emissions	Ground Operations	Tons CO ₂ e	19,949	18,169	17,572	16,697	17,545	105%
Category 3-6 GHG Emissions (Note 1)	Ground Operations	Tons CO ₂ e	1,644,656	1,607,690	3,109,822	3,174,662	Expanded the scope of inventory in accordance with new ISO standards	100%
Aviation Fuel Efficiency	All Aircrafts (non-renewable energy)	Tons	2,284,937	2,230,971	1,829,328	1,857,073	Whole Fleet Fuel Efficiency 0.2349 Ton / Thousand RTK	100%
	Sustainable Aviation / Alternative Fuel	Tons (%)	20.4 (8.93e-4)	0	0	7.7 (4.15e-4)	Use of new aircraft (ferry flight) back to Taiwan 10% SAF	100%
Aviation Fuel Efficiency	Passenger Aircraft	L / RPK*100	4.2187	4.2859	15.2246	18.9433	14.996	79%
	Cargo Aircraft	L / FRTK	0.2142	0.2285	0.2252	0.1830	0.2218	121%
	All Aircrafts (Note 2)	Tons / thousand RTK	0.2394	0.2459	0.2586	0.2442	0.2547	104%
Energy Consumption	Fossil Fuels	MWh	29,815,419	29,114,586	23,873,099	24,234,273	Energy consumption 24,747,398	102%
	Electricity Purchased	MWh	36,009	34,088	34,523	33,260		
	Elevator Power Regeneration	kWh	1,061	1,423	1,177	889	Full operation	100%
	Renewable Energy (Solar)	MWh	NA	90	117	127	120	106%
Water Resources	Tap Water Use Volume	Kilotons	148.22	146.49	126.77	112.77	Total Water Consumption: 144.955 thousand tons	109%
	Rainwater Use Volume	Kilotons	11.48	15.34	8.05	5.65		
	Recycled Water Use Volume	Kilotons	31.94	17.41	8.64	14.23		
	Total Water Consumption	kilotons	191.64	179.24	143.46	132.65		
	Recycling Ratio (Note 3)	%	21.55%	11.88%	6.8%	12.62%		
	Heavy Metal Wastewater	Tons	10,014	9,620	6,750	7,715		
	Organic Wastewater	Tons	10,443	11,638	12,593	9,224		



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Cabin Waste (Note 4)	Output	kg	3,669,703	4,168,857	1,677,658	920,924	Air and ground waste (kg): 1. Recycle amount: 809,952 2. The amount of incineration (including power generation): 859,264 3. Other disposal volumes: 154,117	1. 117% 2. 107% 3. 199%
	Amount Recycled	kg	995,369	1,116,396	733,706	504,226		
	Recycling Ratio	%	27.12%	26.78%	43.73%	54.75%		
	Incineration (including power generation)	kg	2,674,334	3,052,460	943,952	416,697		
Ground Waste (Note 5)	Hazardous Industrial Waste	kg	14,785	17,717	12,657	12,091		
	Chromium-containing Batteries	kg	1,649	1,098	820	1,069		
	General Industrial / Domestic Waste	kg	998,518	935,984	647,317	636,400		
	Amount Recycled	kg	456,803	434,648	229,971	188,790		
	Recycling Ratio	%	45.01%	45.52%	35.53%	29.67%		
	Incineration (including power generation)	kg	399,266	381,626	332,577	383,180		
NOx	Passenger Aircraft	g / RPK	0.0150	0.0149	0.0400	0.0538	0.0500	92%
	Cargo Aircraft	g / RTK	0.0301	0.0321	0.0317	0.0290	0.0315	107%
Plastic Packaging (plastic packaging related to passenger /cargo transport) (Note 6)	Weight of Plastic Packaging	Tons	432	479	353	411	422	103%
	Percentage of Purchase of Plastic Packaging (Note 7)	%	0.15%	0.15%	0.06%	0.02%	0.02%	100%
	Percentage of Recyclable Plastic Packaging	%	42.2%	32.5%	81.3%	91.2%	84%	109%
	Percentage of Recycled Plastic Packaging (Note 8)	%	10.27%	21.62%	9.83%	3.4%	2.16%	157%

Item	Total Weight of Package (ton)	Percentage of Purchase (Note 7)	Percentage of Recycled Materials and Certified Materials (Note 8)
Wood or Paper Packaging	65	1.14%	52.83%
Metal Packaging	55	0.02%	100%
Glass Packaging	0.1	0.1%	100%

Note 1: Scope 3 emissions from 2017 to 2019 include energy-related activities, employee commuting, etc. In 2020, according to the ISO14064-1:2018 standard, expand the calculation items in category 3 to 6. All data have passed external verification.

Note 2: The total aviation fuel consumption of all aircraft fuel efficiency includes training aircraft and maintenance. The fuel consumption of passenger and freight aircraft only includes passenger and freight aircraft fuel.

Note 3: Recycling ratio = Total amount of recycled rainwater, intermediate water, wastewater / total consumption of water resources.

Note 4: The scope includes passenger and cargo services since 2020.

Note 5: The scope of statistics includes EMO, CAL Park, Kaohsiung Branch, and VIP rooms of four stations (Taoyuan, Songshan, Kaohsiung, and Tainan).

Note 6: As in-flight supplies (e.g., tableware) are required to comply with relevant food sanitation regulations to ensure that they are fireproof and legal, biodegradable plastic packaging has not been used.

Note 7: The percentage of purchase is calculated as Purchase amount / cost of goods sold.

Note 8: The percentage of recycled materials and certified materials is calculated as follows: Weight of recyclable packaging (including certified materials) / Total weight of packaging. The weight of recyclable packaging refers to the weight of packaging that has been recycled upon CAL's confirmation.