

Greenhouse Gas Verification Opinion

The inventory of Greenhouse Gas emissions in year 2024 of

Phison Electronics Corporation

No. 1, Qunyi Road, Zhunan Township, Miaoli County, Taiwan

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

ISO 14064-1 : 2018

➤ **Reasonable assurance:**

.Category 1: Direct GHG emissions: **344.3885** tonnes of CO₂e

.Category 2: Indirect GHG emissions from imported energy: **16,441.4106** tonnes of CO₂e

➤ **Limited assurance:**

.Category 3: Indirect GHG emissions from transportation: **1,975.6410** tonnes of CO₂e

.Category 4: Indirect GHG emissions from products used by organization: **3,386.8338** tonnes of CO₂e

.Category 5: Indirect GHG emissions associated with the use of products from the organization: **4.3547** tonnes of CO₂e

.Category 6: Indirect GHG emissions from other sources: **N.A.** tonnes of CO₂e

➤ **Total GHG emissions: 22,152.629** tonnes of CO₂e

Authorized by

CEO



Max, Hsiao

Date of issue: 2025/04/11

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【Greenhouse Gas Emissions by Category for Zhunan Factory】Unit: tonnes of CO₂e

➤ No. 1, 1-1, 1-2, 1-5, 28, Qunyi Road, Zhunan Township, Miaoli County, Taiwan

EMISSIONS		tonnes CO ₂ e (tCO ₂ e)		Notes
Category 1: Direct GHG emissions and removals				
1.1	Stationary combustion	15.2160	327.3402	
1.2	Mobile combustion	9.7107		
1.3	Industrial processes (anthropogenic systems)	N/A		
1.4	Fugitive (anthropogenic systems)	302.4135		
1.5	Land use, land use change and forestry	N/A		
Category 2: Indirect GHG emissions from imported energy				
2.1	Indirect emissions from imported electricity	14,992.3317	14,992.3317	
2.2	Indirect emissions from imported energy	N/A		
Category 3: Indirect GHG emissions from transportation				
3.1	Emissions from upstream transport and distribution for goods	N.S	1,796.2412	
3.2	Emissions from downstream transport and distribution for goods	N.S		
3.3	Emissions from employee commuting	1,663.3880		
3.4	Emissions from client and visitor transport	N.S		
3.5	Emissions from business travels	127.9022		
3.6	Others transportation	4.9510		
Category 4: Indirect GHG emissions from products used by organization				
4.1	Emissions from purchased goods	34.5794	3,094.7450	
4.2	Emissions from capital goods	N.S		
4.3	Emissions from the disposal of solid and liquid waste	85.7276		
4.4	Emissions from the use of assets	N.S		
4.5	Emissions from the use of services that are not described in the above subcategories	2,974.4380		
Category 5: Indirect GHG emissions associated with the use of products from the organization				
5.1	Emissions or removals from the use stage of the product	N.S	N/A	
5.2	Emissions from downstream leased assets	N/A		
5.3	Emissions from end of life stage of the product	N.S		
5.4	Emissions from investments	N.S		
Category 6: Indirect GHG emissions from other sources				
	Nil	N/A	N/A	N/A

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【Greenhouse Gas Emissions by Category for Banqiao Office】Unit: tonnes of CO₂e

➤ No. 3 (6, 7, 12, 17, 18 FLs), Section 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan

EMISSIONS		tonnes CO ₂ e (tCO ₂ e)		Notes
Category 1: Direct GHG emissions and removals				
1.1	Stationary combustion	N/A	7.5846	
1.2	Mobile combustion	N/A		
1.3	Industrial processes (anthropogenic systems)	N/A		
1.4	Fugitive (anthropogenic systems)	7.5846		
1.5	Land use, land use change and forestry	N/A		
Category 2: Indirect GHG emissions from imported energy				
2.1	Indirect emissions from imported electricity	1,067.6448	1,067.6448	
2.2	Indirect emissions from imported energy	N/A		
Category 3: Indirect GHG emissions from transportation				
3.1	Emissions from upstream transport and distribution for goods	N.S	34.8817	
3.2	Emissions from downstream transport and distribution for goods	N.S		
3.3	Emissions from employee commuting	27.5517		
3.4	Emissions from client and visitor transport	N.S		
3.5	Emissions from business travels	7.3300		
3.6	Others transportation	N/A		
Category 4: Indirect GHG emissions from products used by organization				
4.1	Emissions from purchased goods	4.6058	216.4258	
4.2	Emissions from capital goods	N.S		
4.3	Emissions from the disposal of solid and liquid waste	N/A		
4.4	Emissions from the use of assets	N.S		
4.5	Emissions from the use of services that are not described in the above subcategories	211.8200		
Category 5: Indirect GHG emissions associated with the use of products from the organization				
5.1	Emissions or removals from the use stage of the product	N.S	N/A	
5.2	Emissions from downstream leased assets	N/A		
5.3	Emissions from end of life stage of the product	N.S		
5.4	Emissions from investments	N.S		
Category 6: Indirect GHG emissions from other sources				
	Nil	N/A	N/A	N/A

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【Greenhouse Gas Emissions by Category for Zhubei Office】Unit: tonnes of CO₂e

➤ No. 251 (3-5, 9-1, 9-2, 10-6, 15FL-1), Fuxing 1st Street, Zhubei City, Hsinchu County and No. 36 and 38, High-Speed Rail 1st Road (13 FL), Taiwan

EMISSIONS		tonnes CO ₂ e (tCO ₂ e)	Notes	
Category 1: Direct GHG emissions and removals				
1.1	Stationary combustion	N/A	7.1560	
1.2	Mobile combustion	N/A		
1.3	Industrial processes (anthropogenic systems)	N/A		
1.4	Fugitive (anthropogenic systems)	7.1560		
1.5	Land use, land use change and forestry	N/A		
Category 2: Indirect GHG emissions from imported energy				
2.1	Indirect emissions from imported electricity	158.7984	158.7984	
2.2	Indirect emissions from imported energy	N/A		
Category 3: Indirect GHG emissions from transportation				
3.1	Emissions from upstream transport and distribution for goods	N.S	26.6970	
3.2	Emissions from downstream transport and distribution for goods	N.S		
3.3	Emissions from employee commuting	25.0470		
3.4	Emissions from client and visitor transport	N.S		
3.5	Emissions from business travels	1.6500		
3.6	Others transportation	N/A		
Category 4: Indirect GHG emissions from products used by organization				
4.1	Emissions from purchased goods	0.1190	31.6453	
4.2	Emissions from capital goods	N.S		
4.3	Emissions from the disposal of solid and liquid waste	N/A		
4.4	Emissions from the use of assets	N.S		
4.5	Emissions from the use of services that are not described in the above subcategories	31.5263		
Category 5: Indirect GHG emissions associated with the use of products from the organization				
5.1	Emissions or removals from the use stage of the product	N.S	N/A	
5.2	Emissions from downstream leased assets	N/A		
5.3	Emissions from end of life stage of the product	N.S		
5.4	Emissions from investments	N.S		
Category 6: Indirect GHG emissions from other sources				
	Nil	N/A	N/A	N/A

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【 Greenhouse Gas Emissions by Category for Xiangshan Warehouse 】Unit: tonnes of CO₂e

➤ No. 620, Section 6, Zhonghua Road, Xiangshan District, Hsinchu City, Taiwan

EMISSIONS		tonnes CO ₂ e (tCO ₂ e)		Notes
Category 1: Direct GHG emissions and removals				
1.1	Stationary combustion	N/A	N/A	
1.2	Mobile combustion	N/A		
1.3	Industrial processes (anthropogenic systems)	N/A		
1.4	Fugitive (anthropogenic systems)	N/A		
1.5	Land use, land use change and forestry	N/A		
Category 2: Indirect GHG emissions from imported energy				
2.1	Indirect emissions from imported electricity	N/A	N/A	
2.2	Indirect emissions from imported energy	N/A		
Category 3: Indirect GHG emissions from transportation				
3.1	Emissions from upstream transport and distribution for goods	N.S	N/A	
3.2	Emissions from downstream transport and distribution for goods	N.S		
3.3	Emissions from employee commuting	N/A		
3.4	Emissions from client and visitor transport	N.S		
3.5	Emissions from business travels	N/A		
3.6	Others transportation	N/A		
Category 4: Indirect GHG emissions from products used by organization				
4.1	Emissions from purchased goods	N/A	N/A	
4.2	Emissions from capital goods	N.S		
4.3	Emissions from the disposal of solid and liquid waste	N/A		
4.4	Emissions from the use of assets	N.S		
4.5	Emissions from the use of services that are not described in the above subcategories	N/A		
Category 5: Indirect GHG emissions associated with the use of products from the organization				
5.1	Emissions or removals from the use stage of the product	N.S	4.3547	
5.2	Emissions from downstream leased assets	4.3547		
5.3	Emissions from end of life stage of the product	N.S		
5.4	Emissions from investments	N.S		
Category 6: Indirect GHG emissions from other sources				
	Nil	N/A	N/A	N/A

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【Greenhouse Gas Emissions by Category for Tainan Office】.

Unit: tonnes of CO₂e

➤ No. 160 (2FL, 5FL-6, 5FL-7), Section 1, Guiren 13th Road, Guiren District, Tainan City, Taiwan

EMISSIONS		tonnes CO ₂ e (tCO ₂ e)		Notes
Category 1: Direct GHG emissions and removals				
1.1	Stationary combustion	N/A	2.3077	
1.2	Mobile combustion	N/A		
1.3	Industrial processes (anthropogenic systems)	N/A		
1.4	Fugitive (anthropogenic systems)	2.3077		
1.5	Land use, land use change and forestry	N/A		
Category 2: Indirect GHG emissions from imported energy				
2.1	Indirect emissions from imported electricity	222.6357	222.6357	
2.2	Indirect emissions from imported energy	N/A		
Category 3: Indirect GHG emissions from transportation				
3.1	Emissions from upstream transport and distribution for goods	N.S	117.8211	
3.2	Emissions from downstream transport and distribution for goods	N.S		
3.3	Emissions from employee commuting	111.3311		
3.4	Emissions from client and visitor transport	N.S		
3.5	Emissions from business travels	6.4900		
3.6	Others transportation	N/A		
Category 4: Indirect GHG emissions from products used by organization				
4.1	Emissions from purchased goods	0.0510	44.0177	
4.2	Emissions from capital goods	N.S		
4.3	Emissions from the disposal of solid and liquid waste	N/A		
4.4	Emissions from the use of assets	N.S		
4.5	Emissions from the use of services that are not described in the above subcategories	43.9667		
Category 5: Indirect GHG emissions associated with the use of products from the organization				
5.1	Emissions or removals from the use stage of the product	N.S	N/A	
5.2	Emissions from downstream leased assets	N/A		
5.3	Emissions from end of life stage of the product	N.S		
5.4	Emissions from investments	N.S		
Category 6: Indirect GHG emissions from other sources				
	Nil	N/A	N/A	

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UCS has reached a bilateral agreement with Phison Electronics Corporation - No. 1, Qunyi Road, Zhunan Township, Miaoli County, Taiwan to conduct verification of greenhouse gas emissions for Categories 1 to 6 in accordance with ISO 14064-3:2019. The verification statement is as follows:

Scope

- Zhunan Factory: No. 1, 1-1, 1-2, 1-5, 28, Qunyi Road, Zhunan Township, Miaoli County, Taiwan
- Banqiao Office: No. 3 (6, 7, 12, 17, 18 FLs), Section 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan
- Zhubei Office: No. 251 (3FL-5, 9FL-1, 9FL-2, 10FL-6, 15FL-1), Fuxing 1st Street, Zhubei City, Hsinchu County and No. 36 and 38, High-Speed Rail 1st Road (13 FL), Taiwan
- Xiangshan Warehouse: No. 620, Section 6, Zhonghua Road, Xiangshan District, Hsinchu City, Taiwan
- Tainan Office: No. 160 (2FL, 5FL-6, 5FL-7), Section 1, Guiren 13th Road, Guiren District, Tainan City, Taiwan

Roles and Responsibilities

The organization's management ensures that the development, record maintenance, and documentation procedures of the organization's greenhouse gas information system meet the standard requirements. They are responsible for evaluating, determining, and reporting greenhouse gas emission information and providing other information necessary to support greenhouse gas claims to UCS.

UCS, adhering to the principles of a third-party verification unit, conducted verification activities from February 26, 2025, to March 26, 2025, in accordance with the bilateral agreement signed on June 6, 2024, ISO 14064-1:2018, and ISO 14064-3:2019. Based on the applicable scope, objectives, criteria, and the greenhouse gas emission coverage period from January 1, 2024 to December 31, 2024 UCS issued this greenhouse gas verification statement.

Objective

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the GHG emissions are as declared by the organization's GHG assertion
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

Materiality

The materiality required of the verification was considered by UCS to 5%, based on the needs of the intended user of the GHG Assertion.

Level of Assurance

The level of assurance for category 1 and category 2 agreed is that of reasonable assurance. Category 3 till category 6 agreed is that of limited assurance.

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GHG Verification Methodology

- Interviews with relevant personnel of Phison Electronics Corporation.
- Review of documentary evidence produced by Phison Electronics Corporation..
- Review of Phison Electronics Corporation data and information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions at Phison Electronics Corporation.
- Audit of sample of data used by Phison Electronics Corporation to determine GHG emissions.

GHG Verification Protocols used to Conduct the Verification

Phison Electronics Corporation commissioned UCS to conduct an independent verification based on ISO 14064-3:2019 to ensure that the organization's GHG emissions meet the requirements of ISO 14064-1:2018 within the scope of the following verification. The data and information supporting the organization's GHG assertion are historical.

- ISO 14064-3: 2019/CNS 14064-3: 2022
- Period covered by GHG emissions verification: January 01, 2024 to December 31, 2024
- GHG covered: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur hexafluoride (SF₆) and Nitrogen trifluoride (NF₃)
- Global warming potential (GWP): 2021 IPCC Sixth Assessment Report (AR6)
- Electricity Emission Factor: 2023 Electricity Retailing Utility Enterprise Electricity Carbon Emission Factor (0.494kgCO₂e/kWh) published by Bureau of Energy, Ministry of Economic Affairs, R.O.C.
- Approach for consolidating GHG emissions: Operational Control
- GHG Report: 2025-03-26/ V5
- GHG Inventory: 2025-03-26/ V5

Verification implementation date

- Interview date at client's site: 2025-Feb-26
- S-1 verification date: 2025-Mar-12 to Mar-14
- S-2 verification date: 2025-Mar-26

Verification Team

- Lead Verifier: Hsu Shih Pin 

Statement of independence, impartiality and competence

No member of the verification team has a business relationship with HWA SHU ENTERPRISE CO.,LTD., its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest. UCS has implemented **impartiality regulations** across the business to maintain high ethical standards among staff in their day-to-day business activities. This verification opinion, including the opinion expressed herein, is provided to HWA SHU ENTERPRISE CO.,LTD. and is solely for the benefit of HWA SHU ENTERPRISE CO.,LTD. in accordance with the terms of our agreement. UCS consent to the release of this statement by you to others interest party in order to satisfy the terms of disclosure requirements but without accepting or assuming any responsibility or liability on our part to any other party who may have access to this statement.

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