

Independent Verification Opinion

Verification Opinion No.:
C679945-2023-AG-TWN-DNV

Issued Place:
Taipei

Issued Date:
22 May, 2024

This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2023) of

CHENBRO MICOM CO., LTD.

Scope of Verification

DNV Business Assurance (DNV) has been commissioned by CHENBRO MICOM CO., LTD. ('the Organization') to perform a verification of the greenhouse gas statements of Greenhouse Gas Inventory Management Report (2023) (hereafter the "Inventory Report") in Taiwan, R.O.C. with respect to the sites listed in Appendix A.

The Reporting Boundary for the verification including direct GHG emissions and removals, indirect GHG emissions from imported energy, indirect GHG emissions from transportation and indirect GHG emissions from products used by the Organization. The further descriptions for the Reporting Boundary listed in Appendix B.

Verification Criteria and GHG Programme

The verification was performed on the basis of ISO 14064-1:2018 as well as criteria given to provide for consistent GHG emission identification, calculation, monitoring and reporting. The verification was conducted in accordance with ISO 14066:2011, ISO 14065:2020, ISO14064-3:2019

Verification Opinion

It is DNV's opinion that the Inventory Report (2023), which was published on May 02, 2024, is free from material discrepancies in accordance with the verification criteria identified as stated above. The opinion is decided based on the following approaches,

- For the Direct (Category 1) and Indirect GHG emissions from imported energy (Category 2), the reliability of the information within the Inventory Report (2023) were verified with reasonable level of assurance.
- For the other indirect GHG emissions, the involved information was verified and tested using agreed-upon procedures, AUP, defined in Inventory Report.

Also, the GHG information as stated in Appendix B has been verified during the process.

Alvin Chen
GHG Verifier



Place and date:

Taipei, 22 May, 2024

For the issuing office:

DNV Business Assurance Co., Ltd.
29Fl., No. 293, Sec. 2, Wenhua Rd.,
Banqiao District, New Taipei City
220, Taiwan



Management Representative



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Supplement to Verification Opinion

Process and Methodology

The reviews of the Inventory Report and relevant documents, and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

Quantification of Greenhouse Gas Emission

The Inventory Report covering the period 1 January, 2023 to 31 December, 2023, it is DNV's opinion that GHG emissions and removals identified within the Reporting Boundary has been included in the Inventory Report as claimed in accordance with the verification criteria identified as stated above, and results in quantification of GHG emissions that are real, transparent and measurable.

Organizational Boundary of Verification

☐ Financial Control ☒ Operational Control ☐ Equity Share

GHGs Verified

☒ CO₂ ☒ CH₄ ☒ N₂O ☒ HFCs ☒ PFCs ☒ SF₆ ☒ NF₃

The Quantification of GHG emissions:

Category		Total Emission (ton CO ₂ e)
Category 1	Direct GHG emissions and removals	370.8109
1.1	Stationary combustion emissions	1.3541
1.2	Mobile emissions	17.5759
1.3	Industry process	0.0000
1.4	Fugitive emissions	351.8809
Category 2	Indirect GHG emissions from imported energy	1721.5447
2.1	Indirect emissions from imported electricity	1721.5447
Category 3	Indirect GHG emissions from transportation	28.1344
3.5	Emissions from business travel	28.1344
Category 4	Indirect GHG emissions from products used by an organization	5869.8968
4.1	Purchased goods and services (including purchased energy)	5839.4774
4.3	Emissions from the disposal of solid and liquid waste	30.4194
Total		7990.387

(The Imported Energy Indirect Emissions was calculated based on 2023 electricity emission factor of 0.494 kg CO₂-e/kwh, which was announced by Energy Administration, Ministry of Economic Affairs. The Global Warming Potential (GWP) defined in IPCC AR6 (2021) has been chosen and correctly referred by the Organization.)

Verification Opinion

☒ unmodified ☐ modified ☐ adverse

Appendix to Verification Opinion No. C679945-2023-AG-TWN-DNV

APENDIX A

The greenhouse gas statements of Chenbro Micom Co., Ltd.s Greenhouse Gas Inventory Management Report (2023) with respect to the following sites:

Factory abbreviation	Site	Address
CBM	Chenbro Micom Co., Ltd	Representative address: 19F., No. 558, Zhongyuan Rd., Xinzhuang Dist., New Taipei City 242, Taiwan (R.O.C.) Reporting boundary includes: 18F., No. 560, Zhongyuan Rd., Xinzhuang Dist. 18F., No. 552, Zhongyuan Rd., Xinzhuang Dist. 18F-21F., No. 556, Zhongyuan Rd., Xinzhuang Dist. 18F-21F., No. 558, Zhongyuan Rd., Xinzhuang Dist.
CTC	Chenbro Micom Co., Ltd - Chiayi Factory	No. 2, Machouhouyuanqu 1st Rd., Lucao Township, Chiayi County 611001, Taiwan (R.O.C.)
CTW	Chen-Feng Precision Co., Ltd	No. 107, Wugong 2nd Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C.)

The Quantification of GHG emissions in Direct Emission Source::

Category	Emissions Category	CBM (Ton CO ₂ e)	CTC (Ton CO ₂ e)	CTW (Ton CO ₂ e)	Total (Ton CO ₂ e)
1	Direct Emissions	36.5664	319.5077	14.7368	370.8109
2	Imported Energy Indirect Emissions	237.1308	1279.6031	204.8108	1721.5447

APENDIX B

The Reporting Boundary of Chenbro Micom Co., Ltd. Greenhouse Gas Inventory Management Report (2023)

Indirect emissions verification procedures:

Category	Subcategory	Verification Procedures
Category 2	2.1 Imported electricity	The amount of greenhouse gas emissions produced by the input of electricity. -Bill and invoice from suppliers (TPC).
Category 3	3.5 Business travel.	Transportation of employees for business-related activities, includes THSR and air transportation. -Flight distances quoted from World-Airport-Codes.com. -THSR emission factor quoted from the Taiwan High-Speed Rail Carbon Footprint Information.
Category 4	4.1 Upstream purchased goods	In 2023, calculations centred on the main product, the server chassis, were carried out for six primary metal raw materials and one packaging material. -Weight of in-coming goods and raw material report. -emission factor quoted from EPA carbon footprint database emission factor.
	4.1 Purchase Fuel and Energy Emission (Indirect emissions not included in Cat.1 & Cat.2)	Includes emissions associated with the production of energy purchased (i.e. upstream emissions associated with fuels and electricity production) -Bill and invoice from suppliers
	4.3 Waste treatment and transportation	Emissions from the disposal treatment and transportation of solid and liquid waste. -Weights of solid and liquid wastes from contractors contract and bills. - Distance of transportation from each site to treatment sites.
Category 5*	Indirect GHG emissions associated with the use of products from the organization	Not Significant Emissions.
Category 6*	Indirect GHG emissions from other sources	Not Significant Emissions.

NOTE: Category 5 & Category 6 were evaluated as Not Significant Emissions base on Chenbro Micom Co., Ltd.'s significant emission identification process reported in GHG inventory report.

APPENDIX C

For direct emissions and removals, quantified separately for each GHG as below:

GHG Type	CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	NF ₃	Total
Emissions (ton CO ₂ e)	18.2649	0.1580	0.5082	351.8798	0.0000	0.0000	0.0000	370.8109
Proportion (%)	4.926%	0.043%	0.137%	94.895%	0.000%	0.000%	0.000%	100.000%

