

Greenhouse Gas Verification Opinion

The inventory of Greenhouse Gas emissions in year 2023 of

Powertech Technology Inc.

No.10, Datong Rd., Hukou Township,
Hsinchu County, Taiwan (R.O.C.)



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

ISO 14064-1:2018

Direct emissions

14,381.2958 tonnes of CO₂e

Indirect emissions

642,589.1238 tonnes of CO₂e

Direct emissions and indirect emissions

656,970.420 tonnes of CO₂e

Authorized by



Stephen Pao

Business Assurance Director

Date: 15 July 2024

Version 1

TGP56B-15-1 2404

SGS Taiwan Ltd.

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Opinion TW24/00428GG, continued

The emission of each category is described as below:

Unit: tonnes of CO₂e

Reporting Boundaries			GHG Emissions
Inventory categories		Description	
Direct emissions		Direct emissions from stationary combustion	903.3889
		Direct emissions from mobile combustion	120.1792
		Direct process emissions and removals from industrial processes	10,134.8982
		Direct fugitive emissions arise from the release of GHGs in anthropogenic systems	3,222.8295
		Direct emissions and removals from land use, land use change and forestry	0.0000
Indirect emissions	Imported energy	GHG emissions of purchased electricity	328,260.2860
	Transportation	GHG emissions of upstream distribution	348.9714
		GHG emissions of downstream distribution	839.6001
		GHG emissions of employee commuting	11,098.2777
		GHG emissions of business travel	113.3503
	Products used by an organization	GHG emissions of purchased goods	218,730.0820
		Upstream GHG emissions of purchased fuel and energy resources	53,916.2378
		GHG emissions of capital goods	27,023.9073
		GHG emissions of upstream leases	951.2953
		GHG emissions of outsourced waste treatment	1,009.5683
	Associated with the use of products from the organization	GHG emissions of downstream leases	297.5476
	Other sources	Undisclosed	NA
Direct emissions and indirect emissions			656,970.420

Note: In addition to purchased electricity, the Group has self-generated solar power generation with a total power generation of 558,000 kWh, and uses solar green power for transfer, with a total power supply of 4,990,445 kWh.

The emission of each site is described as below:

Unit: tonnes of CO₂e

Site	Direct emissions	Indirect emissions		Total GHG emissions
	Category 1	Category 2	Category 3~6	
3C Factory	2,436.0725	73,957.3032	0.0000	76,393.376
3D Factory	385.2675	7,701.4007	314,328.8378	322,415.506
Datong Factory	1,803.3374	72,624.5425	0.0000	74,427.880
Wenhua 1 st Factory	2,520.4029	42,108.0067	0.0000	44,648.410
Hsinpu 1 st Factory	500.5939	19,023.7424	0.0000	19,524.336
Xinxing Factory	2,141.1330	24,933.1680	0.0000	27,074.301
Hukou Factory	1,233.4237	42,983.8737	0.0000	44,217.297
Hsinchu 3 rd Factory	1,005.5250	15,913.4883	0.0000	16,919.013
Hsinchu 2 nd Factory	361.4047	7,219.1184	0.0000	7,580.525
Hsinchu Branch	1,974.1332	21,795.6421	0.0000	23,769.775

SGS has been contracted by Powertech Technology Inc. (hereinafter referred to as “Powertech”), No.10, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.) for the verification of direct and indirect Greenhouse Gas emissions in accordance with

ISO 14064-3:2019

as provided by Powertech Technology Inc. (hereinafter referred to as “Powertech”), No.10, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.), in the GHG Statement in the form of GHG report.

Roles and responsibilities

- The management of Powertech is responsible for the organization’s GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.
- The verification was based on the verification scope, objectives and criteria as agreed between Powertech and SGS on 08 June 2023.
- Verification Criteria: ISO 14064-1:2018.
- Verification Period: 02 April 2024 to 10 May 2024

Scope

- GHG information for the following period was verified: 01 January 2023 to 31 December 2023
- Location/boundary of the activities:
 - Hsinpu 1st Factory: No.879, Litoushan Sec., Wunshan Rd., Hsinpu, Hsinchu, Taiwan (R.O.C.)
 - Hukou Factory: No.7 & 7-1 Sanmin Rd., Hsinchu Industrial Park Hukou, Hsinchu, Taiwan (R.O.C.)
 - 3C Factory: No.10, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.)
 - Datong Factory: No.26, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.)
 - Hsinchu Branch: No. 15, Lixing 3rd Road, East District, Hsinchu City, Taiwan (R.O.C.)
 - Wenhua 1st Factory: NO.4, Wenhua Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan (R.O.C.)
 - Xinxing Factory: No.458-28, Xinxing Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.)

- Hsinchu 3rd Factory: No. 29, Lixing 4th Road, East District, Hsinchu City, Taiwan (R.O.C.)
- Hsinchu 2nd Factory: No. 9, Lixing 4th Road, East District, Hsinchu City, Taiwan (R.O.C.)
- 3D Factory: No.15, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.)
- Types of GHGs included: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃
- The IPCC 2021 AR6 GWP values are applied in this inventory.
- Emission factor:
 - Direct emissions: Greenhouse Gas Emission Factor Table (6.0.4)
 - Indirect emissions:
 - Electricity emission factor is 0.494 kgCO₂e/kwh (Announced by Energy Administration, Ministry of Economic Affairs in 2024).
 - The secondary database has Carbon Footprint Information Platform
- 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.
- Materiality : 5%
- The version of inventory sheet: 03 June 2024
- The version of GHG statement: 11 June 2024
- Intended user of the verification opinion: Private

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 statement
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

Conclusion

SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions information and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the organization's reported GHG emissions. We planned and performed our work to obtain the information, explanations and evidence that the GHG emissions are free from material misstatement.

- The greenhouse gas emissions is 656,970.420 metric tonnes of CO₂ equivalent
- The emissions from the combustion of biomass is 0.0000 metric tonnes of CO₂ equivalent

Opinion TW24/00428GG, continued

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- The opinion of SGS is modified in accordance with the following described circumstances.
 - The verifier has sufficient and appropriate evidence to support the material emissions, removals, or storage.
 - The verifier applies appropriate criteria for the material emissions, removals, or storage.
 - When the verifier intends to rely on relevant controls, the effectiveness of those controls has been assessed.
 - The verifier, applying the ISO 14064-1:2018 standard, presents the following findings. After adjustments and corrections, no material errors were identified.
 - The numerical values of some emission sources and emission coefficients are incorrect and are substantially incorrect after correction.
 - Organize the use of renewable energy for self-use and green power transfer.
 - The uncertainty analysis and determination of some emission sources were incorrect, but have been adjusted correctly.
- Retention Limitation: NA

Confidentiality

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

Avoidance of Conflict of Interest

The reports and attachments are completely complied with the standards and procedures that related authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

This opinion shall be interpreted with the GHG statement of Powertech as a whole.

Verifier Group

Above opinions coincide with auditing process with fairness and impartiality and aim at the emission of year 2023 of clients.

Lead Verifier: *Kyle Lu.*

Verifier:	<i>William Wu</i>	<i>Mike Huang</i>
	<i>Emma Kao</i>	<i>Chris Hsia</i>
	<i>Vanessa Chen</i>	<i>Lens Lin</i>
	<i>Aiden Tseng</i>	<i>Royal Lo</i>

Note: This opinion is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Greenhouse Gas Verification Services available at http://www.sgs.com/terms_and_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this opinion, the findings and the supporting GHG Assertion may be consulted at Powertech Technology Inc., No.10, Datong Rd., Hukou Township, Hsinchu County, Taiwan (R.O.C.). This opinion does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.