

Greenhouse Gas Verification Opinion

The inventory of Greenhouse Gas emissions in year 2024 of

Powertech Technology Inc.

No.10, Datong Rd.,
Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan

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

ISO 14064-1:2018

Opinion Type: Modified

Direct emissions

7,455.9654 tonnes of CO₂e

Indirect emissions

602,921.0170 tonnes of CO₂e

Direct emissions and indirect emissions

610,376.982 tonnes of CO₂e

Authorized by



Stephen Pao

Business Assurance Director

Date: 11 July 2025

Version 1

TGP56B-15-1 2501
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Validation and Verification

VB002

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	838.8770
		Direct emissions from mobile combustion	124.9038
		Direct process emissions and removals from industrial processes	636.9853
		Direct fugitive emissions arise from the release of GHGs in anthropogenic systems	5,855.1993
		Direct emissions and removals from land use, land use change and forestry	-
Indirect emissions	Imported energy	Indirect emissions from imported electricity	339,416.9766
	Transportation	<ul style="list-style-type: none"> Emissions from upstream transport and distribution for goods Emissions from downstream transport and distribution for goods Emissions from employee commuting (personal car, traffic car) Emissions from business travel (aircraft transportation) 	11,843.2796
	Products used by an organization	<ul style="list-style-type: none"> Emissions from purchased goods (fuel, imported electricity) Emissions from capital goods Emissions from the disposal of solid and liquid waste Emissions from upstream leased assets Emissions from purchased goods (main raw materials) 	251,268.5685
	Associated with the use of products from the organization	Emissions from downstream leased assets	392.1923

	Other sources	-	-
Direct emissions and indirect emissions			610,376.982

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	
Hsinpu Plant (P1)	472.0829	14,506.9878	0.0000	14,979.071
Hukou Plant (P2)	458.8086	46,607.1646	0.0000	47,065.973
Datong Plant (3AB)	1,169.8954	73,240.1164	0.0000	74,410.012
Datong Plant (3C)	853.6291	74,433.7266	0.0000	75,287.356
Datong Plant (3D)	580.9931	6,506.4276	263,504.0404	270,591.461
HSP Plant 1 (P8)	777.1587	18,409.5176	0.0000	19,186.676
Wenhua Plant 1 (P9)	803.6977	41,167.4208	0.0000	41,971.119
Xinxing Plant (P10)	940.4237	36,446.9248	0.0000	37,387.349
HSP Plant 2 (P11A)	413.2097	7,252.5128	0.0000	7,665.723
HSP Plant 3 (P11B)	986.0665	20,846.1776	0.0000	21,832.244

SGS has been contracted 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., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 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 on 25 June 2024.
- Verification Criteria: ISO 14064-1:2018
- Verification Period: 14 January 2025 to 11 March 2025

Scope

- GHG information for the following period was verified: 01 January 2024 to 31 December 2024
- Location/boundary of the activities:
 - Hsinpu Plant (P1) : No.879, Litoushan Sec., Wunshan Rd., Hsinpu, Hsinchu, Taiwan
 - Hukou Plant (P2) : No.7&7-1, Sanmin Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan
 - Datong Plant (3AB) : No.26, Datong Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan
 - Datong Plant (3C) : No.10, Datong Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan
 - Datong Plant (3D) : No.15,15-1&15-2, Datong Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan
 - HSP Plant 1 (P8) : No.15, Lixing 3rd Rd., Hsinchu Science Park, Hsinchu City, Taiwan
 - Wenhua Plant 1 (P9) : No.4, Wenhua Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan
 - Xinxing Plant (P10) : No.458-28, Xinxing Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan

- HSP Plant 2(P11A) : No.9, Lixing 4th Rd., Hsinchu Science Park, Hsinchu City, Taiwan
- HSP Plant 3(P11B) : No.29, Lixing 4th Rd., Hsinchu Science Park, Hsinchu City, Taiwan
- 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, MOENV(2024.02.05)
 - 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, Ecoinvent 3.9.1, Ecoinvent 3.10, Ecoinvent 3.11 database.
- 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: 0421
- The version of GHG statement: 0421
- 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 610,376.982 metric tonnes of CO₂ equivalent
- The emissions from the combustion of biomass is 0.0000 metric tonnes of CO₂ equivalent

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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.
 - Some supporting information is incomplete.
 - The identification of emission sources is incomplete.
 - Some of activity data is incorrect.
 - Some emission factors are calculated incorrectly.
 - Some of emission factors are referenced incorrectly

- 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 2024 of clients.

Lead Verifier:

Belinda Shih

Verifier:

Sophia Chai

Mike Huang

Elwin Kuo

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 Statement may be consulted at Powertech Technology Inc., No.10, Datong Rd., Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan. 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.