

# Greenhouse Gas Verification Opinion

The inventory of Greenhouse Gas emissions in year 2023 of  
**Primax Electronics (Thailand) Co., Ltd.**

888/8 Moo.7 Klongkiew sub-district, Banbueng District,  
Chonburi Province. 20220, Thailand



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

## ISO 14064-1:2018

Direct emissions

**243.89747** tonnes of CO<sub>2</sub>e

Indirect emissions

**145,623.7081** tonnes of CO<sub>2</sub>e

Direct emissions and indirect emissions

**145,867.606** tonnes of CO<sub>2</sub>e

Authorized by

Stephen Pao

Business Assurance Director

Date: 20 May 2024

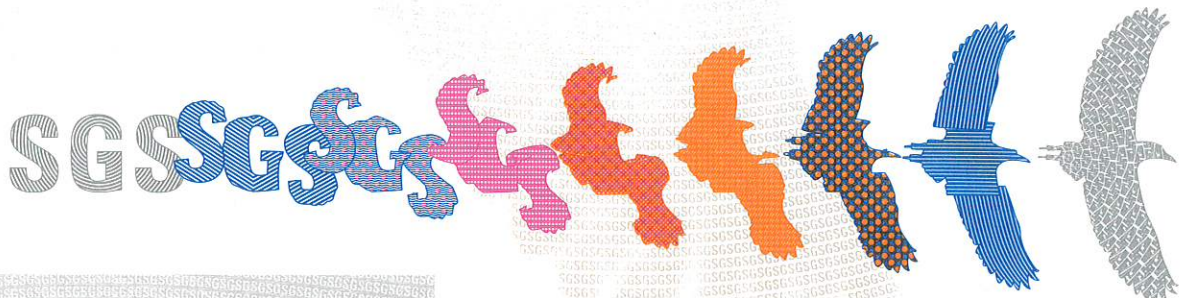
Version 1

TGP56B-15-1 2401

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The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

Reporting Boundaries			GHG Emissions		
Inventory categories	Description		Location-based	Market-based	
Direct emissions	Direct emissions from stationary combustion		1.2686		
	Direct emissions from mobile combustion		0.0000		
	Direct process emissions and removals from industrial processes		0.0000		
	Direct fugitive emissions arise from the release of GHGs in anthropogenic systems		242.6288		
	Direct emissions and removals from land use, land use change and forestry		0.0000		
Indirect emissions	Imported energy	Indirect emissions from imported electricity	4,271.3792	2,467.3792	
	Transportation	Indirect emissions from upstream transport and distribution of material		352.8031	
		Indirect emissions from downstream transport and distribution of goods		20.5296	
		Indirect emissions from employee commuting		397.3547	
		Indirect emissions from Business Travel		655.5888	
	Products used by an organization	Indirect emissions of raw materials and consumables related to production and purchase in the factory		116,241.1176	
		Indirect emissions from waste outsourcing treatment and transportation		2.0084	
	Associated with the use of products from the organization	Indirect emissions from product use		23,682.9268	
	Other sources	No significant emissions		NA	
	Direct emissions and indirect emissions			145,867.606	144,063.606
Purchased Renewable Energy Certificate(s) Information					
Site/Location	Type	Renewable Energy Source/Location	Imported energy emissions		
			Location-based	Market-based	
Primax_TH	I-REC	Solar/Thailand	4,271.3792	2,467.3792	

SGS, No. 136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District, New Taipei City 24803, Taiwan, has been contracted by Primax Electronics Ltd. (hereinafter referred to as “Primax” ), No. 669, Ruey Kuang Road, Neihu, Taipei, Taiwan, R.O.C. for the verification of direct and indirect Greenhouse Gas emissions in accordance with

**ISO 14064-3:2019**

as provided by Primax Electronics (Thailand) Corp., Ltd. (hereinafter referred to as “Primax\_TH” ), 888/8 Moo.7 Klongkiew sub-district, Banbueng District, Chonburi Province 20220, Thailand, in the GHG Statement in the form of GHG report.

**Roles and responsibilities**

- The management of Primax\_TH 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 Primax and SGS on 19 June 2023.
- Verification Criteria: ISO 14064-1:2018, ISO 14064-3:2019
- Verification Period: 16 February 2024 to 27 March 2024.

**Scope**

- GHG information for the following period was verified: 01 January 2023 to 31 December 2023
- Location/boundary of the activities:
  - 888/8 Moo.7 Klongkiew sub-district, Banbueng District, Chonburi Province 20220, Thailand
- Types of GHGs included: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>
- The IPCC 2021 AR6 GWP values are applied in this inventory.
- Emission factor:
  - Direct emissions:
    - IPCC Guideline 2006
  - Indirect emissions:
    - Electricity emission factor: is 0.44 tCO<sub>2</sub>e/Mwh (Announced by Thailand in 2023).
    - The secondary database has Ecoinvent 2.2 , Ecoinvent 3.9.1 and ICAO Carbon Emissions Calculator.

- 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: 0327
- The version of GHG statement: 0401
- 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 145,867.606 metric tonnes of CO<sub>2</sub> equivalent
- The emissions from the combustion of biomass is 0.0000 metric tonnes of CO<sub>2</sub> equivalent

The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

Reporting Boundaries		GHG Emissions	
Inventory categories	Description	Location-based	Market-based
Direct emissions	Direct emissions from stationary combustion	1.2686	
	Direct emissions from mobile combustion	0.0000	
	Direct process emissions and removals from industrial processes	0.0000	
	Direct fugitive emissions arise from the release of GHGs in anthropogenic systems	242.6288	

Reporting Boundaries		GHG Emissions		
Inventory categories	Description	Location-based	Market-based	
	Direct emissions and removals from land use, land use change and forestry	0.0000		
Indirect emissions	Imported energy	4,271.3792	2,467.3792	
	Transportation	Indirect emissions from upstream transport and distribution of material	352.8031	
		Indirect emissions from downstream transport and distribution of goods	20.5296	
		Indirect emissions from employee commuting	397.3547	
		Indirect emissions from Business Travel	655.5888	
	Products used by an organization	Indirect emissions of raw materials and consumables related to production and purchase in the factory	116,241.1176	
		Indirect emissions from waste outsourcing treatment and transportation	2.0084	
	Associated with the use of products from the organization	Indirect emissions from product use	23,682.9268	
Other sources	No significant emissions	NA		
Direct emissions and indirect emissions		145,867.606	144,063.606	

Primax\_TH purchased 4,100 Renewable Energy Certificate(s) in 2023. The imported energy emissions by location-based and market-based approach shown as the following table :

Unit: tonnes of CO<sub>2e</sub>

Purchased Renewable Energy Certificate(s) Information				
Site/Location	Type	Renewable Energy Source/Location	Imported energy emissions	
			Location-based	Market-based
Primax_TH	I-REC	Solar/Thailand	4,271.3792	2,467.3792

The opinion of SGS is unmodified 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 auditor intends to rely on relevant controls, the effectiveness of those controls has been assessed.
- The verifier applies the ISO 14064-1:2018 standard to fairly present greenhouse gas data and information, and SGS obtains appropriate supporting evidence for material emissions and removals.

### 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 Primax\_TH 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:

*Channing Chen*

Verifier:

*Chris Hsieh*

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](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 Primax Electronics (Thailand) Corp., Ltd., 888/8 Moo.7 Klongkiew sub-district, Banbueng District, Chonburi Province 20220, Thailand, 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.