



# LRQA Independent Assurance Statement

## Relating to Phoenix Silicon International Corporation's GHG Report for the calendar year 2024

### 服務條件

本保證聲明書乃為昇陽國際半導體股份有限公司所準備。

英商勞盛股份有限公司台灣分公司(以下簡稱 LRQA)受昇陽國際半導體股份有限公司(以下簡稱昇陽國際半導體)之委託以查證其 2024 年日曆年度(2024 年 1 月 1 日~12 月 31 日)期間溫室氣體盤查報告(發行日期:2025 年 03 月 11 日,第二版),以下簡稱為”溫室氣體盤查報告”。

此溫室氣體盤查報告包含直接、能源間接以及其他間接之溫室氣體排放,昇陽國際半導體股份有限公司包含下列的地址範圍內的提供半導體基材及相關產品晶片加工服務相關活動,與其他相關設施設備活動,如溫室氣體盤查報告中所描述,溫室氣體排放使用營運控制權。

溫室氣體報告:昇陽國際半導體股份有限公司溫室氣體報告書

總公司:新竹市東區力行路 6 號 & 8 號 3-4 樓

中港廠:台中市梧棲區建七路 2 號

### Terms of Engagement

This Assurance Statement has been prepared for PHOENIX SILICON Electronics Corporation.

LRQA was commissioned by Phoenix Silicon International Corporation (hereafter referred to as the “PSI”) to assure its GHG Report<sup>1</sup> for the calendar year 2024 (01 January 2024 ~31 December 2024) (hereafter referred to as “the Report”).

The Report relates to direct GHG emissions, energy indirect GHG emissions and other indirect GHG emissions. The GHG emissions have been consolidated using ‘Operational’ control approach.

The main activities of the organization includes the operations and activities relevant with the “Provision of wafering service for semiconductor substrate and products”, and the associated facilities & equipment as set out in the GHG Inventory Report<sup>1</sup>.

PSI’s geographical boundary includes its operations and site as mentioned below (as referred in the GHG Inventory Report):

Headquarters:

- 3-4 Floors No. 8 and No. 6, Lixing Rd., East Dist., Hsinchu City 300094, Taiwan.

Chung Kang Branch:

- No. 2, Jian 7th Rd., Wuqi Dist, Taichung City 435059, Taiwan.

### 管理責任

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<sup>1</sup> Final\_GHG report\_ISO14064-1-2018\_Calendar year (2024)\_PHOENIX SILICON, dated 11 March 2025, 2<sup>nd</sup> edition.



昇陽國際半導體股份有限公司的管理階層對本溫室氣體盤查報告之準備及維持有效的內部控管，包含溫室氣體盤查報告中揭露之資料負責。LRQA 的責任為依據我們與昇陽國際半導體股份有限公司間的合約執行查證。

最終的，溫室氣體盤查報告由昇陽國際半導體股份有限公司所核准並負有責任。

### Management Responsibility

PSI's management was responsible for preparing the GHG Inventory Report and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the GHG Inventory Report in accordance with our contract with PSI.

Ultimately, the GHG Inventory Report has been approved by, and remains the responsibility of PSI.

### LRQA 的方法

LRQA 查證已依循 ISO 14064-3:2019 (溫室氣體主張之確証與查証附指引之規範)，以提供對昇陽國際半導體股份有限公司符合 ISO 14064-1:2018 (組織層級溫室氣體溫室氣體排放與移除之量化及報告附指引之規範)規定所準備的溫室氣體盤查報告之類別一與二之合理保證查證以及類別三~五有限保證等級查證。

為作成結論，本保證以抽樣方式執行並涵蓋下列的活動：

- 依溫室氣體盤查報告中所界定的設施設備，進行現場查訪；同時審查與溫室氣體排放數據及資料管理相關的過程；
- 訪談組織中對於相關溫室氣體排放數據與紀錄管理與維持之權責人員；
- 查核來自於行政院環境部之相關係數與 IPCC 2021 年第六次評估報告之 GWP 值；
- 查證類別一與類別二的歷史數據及資料來源；
- 查證類別三在上游依據年度採購金額新竹廠佔比 52.94%以及中港廠佔比 60.17%之供應商所採購物料的國內運輸、下游由外車運送至客戶地點之各起迄站國內運輸與配送產品、廢棄物清運與商務旅行之整合層級溫室氣體排放與活動數據收集彙整；
- 查證類別四依據年度採購金額新竹廠佔比 52.94%以及中港廠佔比 60.17%之物料使用、自來水、能源等使用、汙水處理以及環境部「事業廢棄物申報及管理資訊系統」申報資料之廢棄物焚化處置之整合層級溫室氣體排放與活動數據收集彙整；
- 查證類別五在承租戶用電-基地台用電分攤之整合層級溫室氣體排放與活動數據收集彙整；以及
- 查證報告排放類別之重大性原則。

### LRQA's Approach

Our verification has been conducted in accordance with ISO 14064 – 3:2019, ‘Specification with guidance for verification and validation of greenhouse gas statements’ to provide reasonable assurance for Categories 1 and 2 and limited assurance for Category 3~5, that GHG data as presented in the Report have been prepared in conformance with ISO 14064 – 1:2018, ‘Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals’.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Conducted site tour of the facilities and reviewed processes related to the control of GHG emissions data and records;
- Interviewed relevant staff of the organization responsible for managing GHG emissions data and records; and
- Verified emission factors sourced from MOENV and the Global Warming Potentials (GWPs) from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 2021 (AR6).



- Verified the historical GHG emissions data and records back to source for Categories 1 and 2 emissions.
- Verified an aggregated level GHG emissions data and records for Category 3 of domestic transportation from upstream materials purchased that account for the annual purchase amount of Headquarters:52.94% & Chung Kang site:60.17%, downstream distribution products shipped from external vehicles to customer locations at each origin & destination, waste transportation, and business travel;
- Verified an aggregated level GHG emissions data and records for Category 4 from the use of materials that account for the annual purchase amount of Headquarters:52.94% & Chung Kang site:60.17%, city water, energy, wastewater treatment and waste incineration treatment (waste data from the MOENV's "Business Waste Declaration and Management Information System");
- Verified at an aggregated level GHG emissions data and records for Category 5 of tenant electricity consumption (Telecommunication base station electricity consumption allocation); and
- Confirmed significance criteria on reporting of emission categories.

#### **查證等級及實質性**

本查證聲明書的查證意見基於合理保證等級(類別一與二) 及 5%的實質性，有限保證等級(類別三~類別五)及 5%的實質性。

#### **Level of Assurance & Materiality**

In accordance with our contract agreement, the assurance was conducted at a reasonable level of assurance at a materiality of 5% for Categories 1 and 2 and at a limited level of assurance at a materiality of 5% for Category 3 ~ 5. The opinion expressed in this Assurance Statement has been accordingly formed.

#### **LRQA意見**

基於 LRQA 的方法，依溫室氣體盤查報告中揭露日曆年西元 2024 年度之全部直接及能源間接的溫室氣體(類別一與類別二)排放總量實質正確，其他間接溫室氣體排放(類別三~類別五)沒有任何情形引起我們注意到計算沒有實質正確；溫室氣體盤查報告之準備也符合 ISO 14064-1:2018 (組織層級溫室氣體溫室氣體排放與移除之量化及報告附指引之規範)相關要求。

#### **LRQA' s Opinion**

Based on LRQA' s approach,

- The GHG emissions for Categories 1 and 2 disclosed in the Report as summarized in Table 1 below are materially correct.
- Nothing has come to our attention that would cause us to believe that the GHG emissions for Category 3 ~ 5 disclosed in the Report as summarized in Table 1 below is not materially correct
- and that the Report has been prepared in conformance with ISO 14064-1:2018.



Signed

*Gary Chen*

**Gary Chen**

Lead Verifier 主導查驗員

On behalf of LRQA Group Limited Taiwan  
CIT, No. 1, Yumen St.,  
Zhongshan Dist., Taipei City, Taiwan.  
台北市中山區玉門街 1 號 台北創新中心(CIT)

LRQA reference number: TWN00000325 /O\_2024/Date Issued: 26 March 2025

日期 Dated: 11 March 2025

*Chiang-shan Chen*

**Chiang-shan Chen**

General Manager 總經理





**Table 1. Summary of Phoenix Silicon International Corporation, GHG Report for the calendar year 2024 (01 January ~31 December 2024)**

**昇陽國際半導體股份有限公司竹科廠 2024 年度溫室氣體清冊**  
**Phoenix Silicon International Corporation -Headquarters**

<b>Scope of GHG emissions(溫室氣體排放之範疇)</b>	<b>Tonnes CO<sub>2</sub>e 當量噸</b>
Direct GHG emissions (Category 1) 直接溫室氣體排放	1488.9087
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	0.000
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	17548.1521
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	94.1586
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	6717.1304
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	81.2143
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified
Location based and Market based are terminologies from Annex E of ISO 14064-1:2018	

**昇陽國際半導體股份有限公司中港廠 2024 年度溫室氣體清冊**  
**Phoenix Silicon International Corporation -Chung Kang Branch**

<b>Scope of GHG emissions(溫室氣體排放之範疇)</b>	<b>Tonnes CO<sub>2</sub>e 當量噸</b>
Direct GHG emissions (Category 1) 直接溫室氣體排放	3190.8087
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	0.000
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	6418.8167
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	30.7709
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	3571.6194
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not significant



Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not significant
Location based and Market based are terminologies from Annex E of ISO 14064-1:2018	

Note 1: The national electricity emission carbon factor of year 2023 was quoted, the factor was taken from Taiwan Energy Administration as published on 26 April 2024.

Note 2: GHG emission figures above are being reported with four decimal places as required by Taiwan Ministry of Environment.

備註 1：國家電力溫室氣體排放係數引用能源署在 2024 年 4 月 26 日公佈之民國 112 年度電力排碳係數作為外購電力之排碳係數。

備註 2：溫室氣體盤放數據相關小數點規定依據行政院環境部規定執行。

This Assurance Statement is subject to the provisions of this legal section:

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