

# Independent Verification Opinion

Verification Opinion No.: C812574-2024-AG-TWN-DNV **Issued Place and Date:** Taipei, 08 October, 2025

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This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2024) of

## **Top Union Electronics Corporation**

#### **Scope of Verification**

DNV Business Assurance (DNV) has been commissioned by Top Union Electronics Corporation (hereafter "the Organization") to perform a verification of the greenhouse gas statements of Greenhouse Gas Inventory Management Report (2024) (hereafter the "Inventory Report") with respect to the sites listed as below.

Site	Address
Hsinchu Factory	NO.480,Niupu E.Rd.,Hsinchu City 3000060,Taiwan(R.O.C.)
Shanghai Factory	168 Meisheng Road,Pudong New Area, Shanghai, China,200137
Suzhou Factory	5 Fuyang Industrial Workshop, Fuyang Road, Xiangcheng District, Suzhou City, Jiangsu Province, China,215133

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

#### **Verification Criteria and GHG Programme**

The verification was performed on the basis of with Financial Supervisory Commission Sustainable Development Roadmap Scheme and ISO 14064-1:2018, CNS 14064-1:2021 as well as criteria given to provide for consistent GHG emission identification, calculation, monitoring and reporting. The verification was conducted in accordance with ISO 14066:2023, ISO 14065:2020, ISO14064-3:2019.

#### **Verification Opinion**

It is DNV's opinion that the Inventory Report (2024), which was published on October 01, 2025 (GM-011, Version B), 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) GHG emissions and Indirect GHG emissions from imported energy (Category 2), the reliability of the information within the Inventory Report (2024) was verified with reasonable level of assurance.
- For the other indirect GHG emissions, the involved information was verified with limited level of assurance.

GHG Verifier : Chen, Zhen Han Jam

Jam Chen

For the issuing office: DNV Business Assurance Co., Ltd.

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 1st January, 2024 to 31st December, 2024, 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 Management Control; ☐ Operational Management Control; ☐ Equity Share

#### **GHGs Verified**

 $\boxtimes CO_2 \boxtimes CH_4 \boxtimes N_2O \boxtimes HFC_S \boxtimes PFC_S \boxtimes SF_6 \boxtimes NF_3$ 

#### **Quantification of Emissions (in tonnes CO2e)**

The Global Warming Potential (GWP) defined in IPCC AR6(2021) has been chosen and correctly referred by the Organization.

Category	Hsinchu Factory	Shanghai Factory	Suzhou Factory	Total
1: Direct emissions	235.7747	48.9090	59.1094	343.7931
2: Imported energy indirect emissions*	2888.3687	847.9576	1724.8652	5461.1915
3: Indirect GHG emissions from transportation	1507.1049	0.3517	316.4384	1823.8950
4: Indirect GHG emissions from products used by organization	644.8555	72.4866	149.6948	867.0368
<ol><li>Indirect GHG emissions associated with the use of products from the organization</li></ol>	60.4801	-		60.4801
6: Other Emission Sources	-	-	/	-

<sup>(\*</sup>The Imported Energy Indirect Emissions was calculated based on 2024 electricity emission factor of 0.474 kg CO2e/kwh, which was announced by Energy Administration, Ministry of Economic Affairs.)

(The Imported Energy Indirect Emissions was calculated based on 2022 average carbon dioxide emission factor for electricity in Jiangsu Province of 0.5978 kg CO2-e/kwh, which was announced by China Products Carbon Footprint Factors Database)

(The Imported Energy Indirect Emissions was calculated based on 2022 average carbon dioxide emission factor for electricity in Shanghai of 0.5849 kg CO2-e/kwh, which was announced by China Products Carbon Footprint Factors Database)

#### Type of Opinion

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#### **APENDIX A**

The Reporting Boundary of Top Union Electronics Corporation Greenhouse Gas Inventory Management Report (2024)

Category	Reporting Boundary			
Direct GHG emissions and removals	Mainly from fuel consumption, other GHG sources or sinks inside organizational boundaries and that are owned or controlled by the organization.			
Indirect GHG emissions from imported energy	The amount of greenhouse gas emissions produced by the imported of electricity and energy.			
Transportation	Downstream transportation and distribution, Business travel			
Products used by organization	Purchased goods, Fuel-and-energy-related activities (not included in Scope 1 or 2), Waste generated in operations			
Indirect GHG emissions	Emissions from downstream leased assets			
associated with the use of	<ul> <li>Electricity Payment Invoice for Telecommunication Base</li> </ul>			
products from the organization	Stations.			

The scope of other indirect emissions (other than Imported Energy with specified/limited list of sources) was defined by the Organization's own pre-determined criteria for significance of indirect emissions, considering the intended use of the GHG inventory.

