



# Independent Verification Opinion

**Verification Opinion No.:**  
C680548-2023-AG-TWN-DNV

**Issued Place:**  
Taipei

**Issued Date:**  
20 May, 2024

This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2023) of

## NUVOTON TECHNOLOGY CORPORATION

### Scope of Verification

DNV Business Assurance (DNV) has been commissioned by NUVOTON TECHNOLOGY CORPORATION ('the Organization') to perform a verification of the greenhouse gas statements of Greenhouse Gas Inventory Management Report (2023) (hereafter the "Inventory Report") in Taiwan, R.O.C. with respect to the sites listed in Appendix.

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 ISO 14064-1:2018 as well as CORPORATE VALUE CHAIN (SCOPE 3) ACCOUNTING AND REPORTING STANDARD \_ GREENHOUSE GAS PROTOCOL and THE GREENHOUSE GAS PROTOCOL A CORPORATE ACCOUNTING AND REPORTING STANDARD, REVISED EDITION, given to provide for consistent GHG emission identification, calculation, monitoring and reporting.

The verification was conducted in accordance with ISO 14066:2011, ISO 14065:2020, ISO14064-3:2019

### Verification Opinion

It is DNV's opinion that the Inventory Report (2023), which was published on 1 May 2024 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) and Indirect GHG emissions from imported energy (Category 2), the reliability of the information within the Inventory Report (2023) were verified with reasonable level of assurance.
- For the other indirect GHG emissions, the involved information was verified and tested using agreed-upon procedures, AUP, defined in Inventory Report.

Chun-Nan Lin  
GHG Verifier

Place and date:

**Taipei, 20 May, 2024**

For the issuing office:

**DNV Business Assurance Co., Ltd.**  
**29Fl., No. 293, Sec. 2, Wenhua Rd.,**  
**Banqiao District, New Taipei City**  
**220, Taiwan**

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 1 January, 2023 to 31 December, 2023, 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 Control  Operational Control  Equity Share

### GHGs Verified

CO<sub>2</sub>  CH<sub>4</sub>  N<sub>2</sub>O  HFCs  PFCs  SF<sub>6</sub>  NF<sub>3</sub>

The Quantification of GHG emissions:

unit: Ton CO <sub>2</sub> -e	Nuvoton Technology Corporation	Taipei Sales Office	Zhubei Building	Tainan Sales Office
Direct Emissions (Category 1)	18,725.6754	1.8032	18.0807	2.9870
Imported Energy Indirect Emissions (Category 2)	35,031.3472	85.3614	150.8434	227.6654

The Indirect Emissions was calculated based on 2023 electricity emission factor of 0.494 kg CO<sub>2</sub>-e/kwh, which was announced by Energy Administration.

The Global Warming Potential (GWP) defined in IPCC AR5 (2013) has been chosen and correctly referred by the Organization.

Quantification of other indirect emissions (tonnes CO<sub>2</sub>e):

ISO 14064-1 Category	GHG Protocol Category	Nuvoton Technology Corporation	Taipei Sales Office	Zhubei Building	Tainan Sales Office	Total
Transportation (Category 3)	4 Upstream transportation and distribution	157.9602	0.0000	0.0178	0.0001	157.9781
	6 Business travel	22.0485	34.8946	178.7757	8.1028	243.8216
	7 Employee commuting	383.0788	7.7009	75.8101	28.9228	495.5126
	9 Downstream transportation and distribution	1,068.3679	0.0000	0.0000	0.0000	1,068.3679
Products used by organization (Category 4)	1 Purchased goods and services	85,492.7762	0.0000	0.0000	0.0000	85,492.7762
	2 Capital goods	2,976.7329	0.0000	37.8363	0.0033	3,014.5725
	3 Fuel-and-energy-related activities (not included in Scope 1 or 2)	7,042.7066	16.8134	30.1197	44.8423	7,134.4820
	5 Waste generated in operations	103.3055	0.0000	0.0000	0.0000	103.3055
The use of products from the organization (Category 5)	15 Investment	83,900.5250	0.0000	0.0000	0.0000	83,900.5250
Total		181,147.5016	59.4089	322.5596	81.8713	181,611.3414

### Verification Opinion

unmodified  modified  adverse

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid. This Verification Opinion is based on the information made available to us and the engagement conditions detailed above. Hence, DNV cannot guarantee the accuracy or correctness of the information. DNV cannot be held liable by any party relying or acting upon this Verification Opinion.

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DNV ZNATW-OP-F50, Rev.12, 2024-4

## Appendix A

The greenhouse gas assertion of NUVOTON Greenhouse Gas Inventory Management Report (2023) with respect to the following sites:

Site	Address
<b>Nuvoton Technology Corporation</b>	No. 4, Creation Rd. III, Hsinchu Science Park, Taiwan
<b>Taipei Sales Office</b>	No.192, Jingye 1st Rd., Zhongshan Dist., Taipei City, Taiwan
<b>Zhubei Building</b>	No.539, Sec. 2, Wenxing Rd., zhubei City, Hsinchu County, Taiwan
<b>Tainan Sales Office</b>	No.111, Wudang Rd., Guiren Dist., Tainan City, Taiwan

### Scope of Indirect Emissions

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

Indirect Emissions Category	Subcategory	Boundary
Transportation (Category 3)	4 Upstream transportation and distribution	Transportation of selected purchased goods.
	6 Business travel	Transportation of employees for business-related activities
	7 Employee commuting	Transportation of employees travelling between company and residence place. The factory shuttle buses were included.
	9 Downstream transportation and distribution	Downstream transportation and distribution to next-level customers
Products used by organization (Category 4)	1 Purchased goods and services	The overall emissions from mining and manufacturing of raw material purchase.
	2 Capital goods	Upstream (cradle-to-gate) emissions of purchased capital goods.
	3 Fuel-and-energy-related activities (not included in Scope 1 or 2)	Upstream emissions of purchased fuels (Diesel Oil, Motor Gasoline and Natural Gas) and electricity.
	5 Waste generated in operations	Disposal or treatment of waste.
The use of products from the organization (Category 5)	15 Investment	Scope 1 and 2 emissions generated by subsidiaries over which the Company has substantial control include: -Nuvoton Electronics Technology (Shenzhen) Limited -Nuvoton Electronics Technology (Shanghai) Limited -Nuvoton Electronics Technology (H.K.) Limited -Nuvoton Technology Israel Ltd. -Nuvoton Technology Korea Limited -Nuvoton Technology Corporation America -Nuvoton Technology India Private Limited -Songzhi Electronic Technology (Suzhou) Limited -Nuvoton Technology Corporation Japan