Independent Assurance Opinion

Verification Opinion No.:
C594553-2022-AG-TWN-DNV

Issued date:
02 June, 2023

This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2022) of

AUO Corporation

Scope of Verification
DNV Business Assurance (DNV) has been commissioned by AUO Corporation to perform a verification of the greenhouse gas assertion of Greenhouse Gas Inventory Management Report (2022) (hereafter the "Inventory Report") with respect to the sites listed in Appendix.

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

Category	Subcategory	Boundary
Indirect GHG emissions from transportation	Upstream transportation and distribution	Transportation emissions for the procurement of main materials, such as glass substrate、PI spacer、target、gaseous chemical…etc.
	Business travel	Transportation of employees for business-related activities
	Employee commuting	Transportation of employees travelling between company and residence place, factory shuttle bus included (employees located at Mainland and overseas plants were not included)
	Downstream transportation and distribution	Transportation of products sold by the Company
Indirect GHG emissions from products used by organization	Upstream leased assets	Operation of assets (offices) leased by AUO and not included in scope 1 and scope 2 – reported by lessee.
	Purchased goods and services	Upstream (cradle-to-gate) emissions of selected purchased goods, such as glass substrate, metal backplane, liquid crystals, photoresist, developer, etchant, Array stripper and thinner…etc
	Fuel-and-energy-related activities (not included in Scope 1 or 2)	Upstream emissions of purchased fuels (Diesel Oil, Liquefied Petroleum Gases, Motor Gasoline and Natural Gas) and electricity
	Waste generated in operations	Transportation and disposal or treatment of waste (waste generated in Mainland and overseas plants were not included)
Indirect GHG emissions associated with the use of products from the organization	Investments (subsidiary)	100% owned and engaged in manufacturing：AUO Crystal Corp.

Verification Criteria and GHG Programme
The verification was performed on the basis of ISO 14064-1:2018, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, as well as IPCC 2006 Tier 2b and IPCC 2019 Tier 2c methodology for fluorinated GHG emissions inventory, 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 and ISO 14064-3:2019.

Verification Opinion
It is DNV's opinion that the Inventory Report (2022), which was published on May 1, 2023, 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 GHG emissions and Indirect GHG emissions from imported energy, the reliability of the information within the Inventory Report (2022) were verified with reasonable level of assurance.
- For the other indirect GHG emissions and the fluorinated greenhouse gases emission reduction, the involved information were verified and tested using agreed-upon procedures, AUP, defined in Inventory Report.

Celine Wang
GHG Verifier

Place and date:
Taipei, 02 June, 2023

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

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, 2022 to 31st December, 2022, it is DNV's opinion that the Inventory Report 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
☒CO_2 ☒CH_4 ☒N_2O ☒HFCs ☒PFCs ☒SF_6 ☒NF_3

The Quantification of GHG emissions and removals in Direct and Indirect Emission Source:

Category	Subcategory	Tonnes CO2 e	Tonnes CO2 e
1.Direct emissions and removals**		69,745.35	2,466,355.04
2.Indirect GHG emissions from imported energy		2,396,609.69	
3.Indirect GHG emissions from transportation	Upstream transportation and distribution	3,092.71	56,913.02
	Business travel	1,051.32	
	Employee commuting	21,764.02	
	Downstream transportation and distribution	31,004.97	
4.Indirect GHG emissions from products used by organization	Upstream leased assets	242.72	893,744.79
	Purchased goods and services	472,378.32	
	Fuel-and-energy-related activities (not included in Scope 1 or 2)	402,996.91	
	Waste generated in operations	18,126.84	
5.Indirect GHG emissions associated with the use of products from the organization	Investments	53,828.04	53,828.04

**: Unless other indicated, the Indirect Emissions in Taiwan was calculated based on 2021 electricity emission factor of 0.509 kg CO2-e/kwh, which was announced by Bureau of Energy, Ministry of Economic Affairs. Additionally, an electricity emission factor of 0.581 kgCO2e/kWh was used in China, as announced by the Ministry of Ecology and Environment of the People's Republic of China. The Global Warming Potential (GWP) defined in IPCC AR4 (2007) has been choose and correctly referred by the Organization. **:the details subcategory of each category could be refer later in the Report.*

Verification Opinion
☒ unmodified
☐ modified
☐ adverse

Appendix A

The greenhouse gas assertion of AUO Corporation Greenhouse Gas Inventory Management Report (2022) with respect to the following sites:

Site	Fab	Address	Total Emissions (Tonnes CO2-e)	Total Direct Emissions (Tonnes CO2-e)	Total Energy Indirect Emissions (Tonnes CO2-e)
AUHC	Headquarters/ L3B	No. 1, Li-Hsin Rd. 2, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C.	17,000.35	1,501.47	15,498.88
	Global Research Center	No. 1, Gongye E. 3rd Rd., Hsinchu City, Taiwan (R.O.C.)	1,444.92	53.93	1,391.00
	L3C	No. 23, Li-Hsin Rd., Hsinchu Science Park, Hsinchu, Taiwan, R.O.C.	38,729.65	941.9	37,787.75
	Dormitory	Mabuville at Beipu Township, Hsinchu County, Taiwan, R.O.C	1,109.27	184.83	924.45
AULT	L4A/L5A/L5B	No. 1, Xinhe Rd., Aspire Park, Lungtan, Taoyuan, Taiwan, R.O.C.	202,508.36	6,929.95	195,578.41
AULK	L6B	No. 228, Lungke St., Lungtan, Taoyuan, Taiwan, R.O.C. / No. 288, No. 338, No. 338-1, Lungyuan Rd. 1, Lungtan, Taoyuan, Taiwan, R.O.C.	244,890.38	7,163.90	237,726.48
AUHY	L3D/L5D	No. 189, Hwaya Rd. 2, Kueishan, Taoyuan, Taiwan, R.O.C.	237,942.85	7,194.65	230,748.20
AUTC	L5C/L6A/L7A/ L7B/L8A	No. 1, JhongKe Rd., Central Taiwan Science Park, Taichung, Taiwan, R.O.C. / No. 2, No. 3, Keya Rd., Central Taiwan Science Park, Taichung, Taiwan, R.O.C.	873,088.49	17,671.75	855,416.74
AUHL	L8B	No. 1, Machang Rd., Houli Dist., Taichung City, Taiwan, R.O.C.	310,356.20	6,551.76	303,804.43
AUTN	C4A/C5D/C6C	No.36, Keji 1st Rd., Annan Dist., Tainan City, Taiwan, R.O.C.	51,864.32	279.41	51,584.91
AUKH	C6D	No.9, Luke 3rd Rd., Luzhu Dist., Kaohsiung City, Taiwan, R.O.C.	27,489.25	149.37	27,339.89
AUSZ	S01/S02/S06	No. 398, Suhong Zhong Road, Suzhou Industrial Park, 215021, China	83,439.35	2,489.34	80,950.01
AUXM	S11/S13/S17	No. 1689, Xiang An North Road, Xiang An Branch, Torch Hi-tech Industrial Development Zone, Xiamen, 361102, China	70,843.12	1,982.47	68,860.65
AUKS	L6K	No. 6, Longteng Rd., Kunshan Economic-Technological Development Area, China	231,042.69	8,296.83	222,745.86
AUST	L4B	No. 10, Tampines Industrial Avenue 3, Singapore 528798	74,359.97	8,224.16	66,135.81
AUSK	E11/E12	Bratislavska 517, 911 05 Trencin , Slovak Republic	197.37	127.17	70.2
AUSH	Kunshan office	No. 6, Longteng Rd., Kunshan Economic & Technical Development Zone, Kunshan City 215300, China	48.49	2.47	46.02

Appendix B

It is only for AUO Corporation to declare WDICC (World Display Industry Cooperation Committee). According to the " TPSA 溫室氣體減排最佳控制技術實施指引, 2023 年 5 月" published by TPSA (Taiwan Panel & Solution Association) on May 5, 2023*, calculating the "GHG reduction of REC certificate purchase volume" with an emission factor of 0 kgCO2e/kWh, the relevant information of the Green Electricity Certificate purchased from China's "國家可再生能源訊息管理中心" is as follows:

* https://reurl.cc/VLp63R

Site	Scope 2 electricity (MWh) **[A]**	Scope 2 GHG emissions from import electricity (tCO2e) **[A]*0.581**	Green Electricity Certificate information		Scope 2 GHG emissions with the purchased Green Electricity Certificate subtracted (tCO2e) **[A]-[B]*0.581**
			No. of Green Electricity Certificate Purchased	Green Electricity (MWh) **[B]**	
AUSZ	131,904.05	80,950.01	00122040000002724 https://reurl.cc/kXN5pL	13,740	72,967.07
AUXM	118,520.91	68,860.65	00122040000002759 https://reurl.cc/eDv5pK	3,202	62,893.78
			00122040000002744 https://reurl.cc/51kgbq	7,068	
AUKS	383,383.59	222,745.86	00122040000002764 https://reurl.cc/v73nGk	15,990	213,455.67

The Quantification of GHG emissions in Scope 1 and Scope 2 :

Category	Subcategory	Tonnes CO2 e	Tonnes CO2 e
Scope 1：Direct emissions and removals**		69,745.35	2,466,355.04
Scope 2：Indirect GHG emissions from imported energy		2,396,609.69	
Scope 2 GHG emissions subtracted from purchased Green Electricity Certificate			2,373,369.69
Scope 1 + Scope 2 GHG emissions subtracted from purchased Green Electricity Certificate			2,443,115.04