



Independent Verification Opinion

Verification Opinion No.:
C693390-2023-AG-TWN-DNV

Issued Place:
Taipei

Issued Date:
22 October, 2024

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

EVERLIGHT CHEMICAL INDUSTRIAL CORPORATION

Scope of Verification

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

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. The further descriptions for the Reporting Boundary listed in Appendix B.

Verification Criteria and GHG Programme

The verification was performed on the basis of ISO 14064-1:2018 as well as criteria given to provide for consistent GHG emission identification, calculation, monitoring and reporting. The verification was conducted in accordance with ISO 14066:2011, ISO 14065:2020, ISO14064-3:2019

Verification Opinion

It is DNV's opinion that the Inventory Report (2023), which was published on October 14, 2024 (Ver. 8), 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 with a limited level of assurance.

Celine Wang
GHG Verifier

Place and date:
Taipei, 22 October, 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

CO₂ CH₄ N₂O HFC₅ PFC₅ SF₆ NF₃

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

Direct Emissions: 17,215.7977 tons CO₂e

Imported Energy Indirect Emissions: 47,727.9240 tons CO₂e

Total emissions of Cat.1 and Cat.2: 64943.7217 tons CO₂e

Total emission of direct and indirect emissions: 160,483.467 tons CO₂e

	Cat. 1 tons CO ₂ e	Cat. 2 tons CO ₂ e	Cat. 1+2 tons CO ₂ e	Cat. 3 tons CO ₂ e	Cat. 4 tons CO ₂ e	Total tons CO ₂ e
Global Operations Headquarters	154.7459	168.7731	323.5190	136.0825	73.2617	532.863
Taichung Office in Taiwan	23.1603	3.2485	26.4088	4.8632	6.6576	37.930
Tainan Office in Taiwan	20.4915	1.9908	22.4823	2.4136	5.4860	30.382
1st Plant	3,142.6803	10,945.9292	14088.6095	1,038.2007	27,911.8936	43,038.704
2nd Plant	7,379.0063	6,954.1028	14333.1091	824.2452	21,534.3187	36,691.673
Electronic Chemical Plant	402.2508	1,833.0641	2235.3149	121.5883	1,662.7984	4,019.702
Pharmaceutical Plant	283.3454	2,230.9638	2514.3092	122.1485	886.9591	3,523.417
3rd Plant	5,299.3999	9,521.3454	14820.7453	361.0982	18,497.1082	33,678.952
4th Plant	127.7171	555.2955	683.0126	86.0197	1,523.1689	2,292.201
Trend Tone Imaging, Inc.	186.5524	8,195.2104	8381.7628	393.0884	11,017.6676	19,792.519
Everlight (Suzhou) Advanced Chemicals Ltd.	108.1774	7,272.2620	7380.4394	159.5991	9,019.1891	16,559.228
Everlight (Suzhou) Advanced Chemicals Ltd. (Zhuhai Office)	5.2082	4.0968	9.3050	0.0000	1.4257	10.731
Shanghai Everlight Trading Co., Ltd./Ethical International Trading & Warehousing (Shanghai) Co., Ltd.	23.6905	6.2733	29.9638	7.0740	5.6694	42.707
Shanghai Everlight Trading Co., Ltd. (Tianjin Office)	1.6346	0.9410	2.5756	0.0000	0.4135	2.989
Shanghai Everlight Trading Co., Ltd. (Suzhou Office)	0.2731	2.7180	2.9911	0.0000	0.2335	3.225
Shanghai Everlight Trading Co., Ltd. (Qingdao Office)	0.6297	1.8255	2.4552	0.5276	0.2613	3.244
Guangzhou Ethical Trading Co., Ltd	11.2193	6.1861	17.4054	3.4098	2.4910	23.306
Shanghai Anda International Trading Co., Ltd.	8.6280	0.0000	8.6280	6.9585	3.0667	18.653
Everlight (Hong Kong) Limited	0.3920	2.3498	2.7418	0.0000	0.2952	3.037
Everlight Chemicals (Vietnam) Co., Ltd.	0.2009	0.0000	0.2009	3.4245	0.0000	3.625
Everlight USA, Inc.	19.5075	11.3616	30.8691	36.9288	7.9181	75.716
Everlight Europe B.V.	3.7764	9.3372	13.1136	15.8037	4.1339	33.051
Elite Foreign Trading Incorporation	13.1102	0.6491	13.7593	48.6642	3.1898	65.613

*: Unless other indicated, the Indirect Emissions in Taiwan was calculated based on 2023 electricity emission factor of 0.494 kg CO₂e/kwh, which was announced by Energy Administration, Ministry of Economic Affairs. The Global Warming Potential (GWP) defined in IPCC AR6 (2021) 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 statements of EVERLIGHT CHEMICAL INDUSTRIAL CORPORATION Greenhouse Gas Inventory Report (2023) with respect to the following sites:

Site	Address
臺灣永光化學工業股份有限公司全球營運總部 Everlight Chemical Industrial Corporation (Global Operations Headquarters)	6F., No.77, Sec. 2, DunHua S. Rd., Taipei 10682, Taiwan
臺灣永光化學工業股份有限公司台中辦事處 Everlight Chemical Industrial Corporation (Taichung Office in Taiwan)	17F.-3, No. 925, Sec. 4, Taiwan Blvd., Xitun Dist., Taichung City 40767, Taiwan
臺灣永光化學工業股份有限公司台南辦事處 Everlight Chemical Industrial Corporation (Tainan Office in Taiwan)	9F.-B2, No. 189, Sec. 1, Yongfu Rd., West Central Dist., Tainan City 70051, Taiwan
臺灣永光化學工業股份有限公司第一廠 Everlight Chemical Industrial Corporation (1st Plant)	No. 271, Zhongshan N. Rd., Dayuan Dist., Taoyuan City 33759, Taiwan
臺灣永光化學工業股份有限公司第二廠 Everlight Chemical Industrial Corporation (2nd Plant)	No. 12, Gongye 3rd Rd., Guanyin Dist., Taoyuan City 32853, Taiwan
臺灣永光化學工業股份有限公司電子化學品廠 Everlight Chemical Industrial Corporation (Electronic Chemical Plant)	No. 12, Gongye 3rd Rd., Guanyin Dist., Taoyuan City 32853, Taiwan
臺灣永光化學工業股份有限公司原料藥廠 Everlight Chemical Industrial Corporation (Pharmaceutical Plant)	No. 12, Gongye 3rd Rd., Guanyin Dist., Taoyuan City 32853, Taiwan
臺灣永光化學工業股份有限公司第三廠 Everlight Chemical Industrial Corporation (3rd Plant)	No. 935 & 937, Sec. 2, Chenggong Rd., Guanyin Dist., Taoyuan City 32849, Taiwan
臺灣永光化學工業股份有限公司第四廠 Everlight Chemical Industrial Corporation (4th Plant)	No. 399, Datan N. Rd., Guanyin Dist., Taoyuan City 32841, Taiwan
全通科技股份有限公司 Trend Tone Imaging, Inc.	No.3, Gungyedung 1st Rd. , Hsinchu Science Park, Hsinchu 300, Taiwan
永光(蘇州)光電材料有限公司 Everlight (Suzhou) Advanced Chemicals Ltd.	No.33, Ping Sheng Road, Suzhou Industrial Park Suzhou 215126, P.R.China
永光(蘇州)光電材料有限公司珠海分公司 Everlight (Suzhou) Advanced Chemicals Ltd. (Zhuhai Office)	Room 1203, Quan Fu Building (CF TOWER), NO 325, East Renmin Road, Xiangzhou District, Zhuhai city 519000, P.R.China
上海德樺貿易有限公司/明德國際倉儲貿易 Shanghai Everlight Trading Co., Ltd./ Ethical International Trading & Warehousing (Shanghai) Co., Ltd.	Rm.1101, No.2067, West YanAn Road, Super Ocean Finance Center, Shanghai 200336, P.R.China Unit W502, 5th Floor, West Building, 168 Meisheng Road, China (Shanghai) Pilot Free Trade Zone
上海德樺貿易有限公司天津分公司 Shanghai Everlight Trading Co., Ltd. (Tianjin Office)	Room M, 19F., No.256, Jiefang South Road, Taida Building, Tianjin 300042 P.R.China
上海德樺貿易有限公司蘇州分公司 Shanghai Everlight Trading Co., Ltd. (Suzhou Office)	45th, B6 Warehouse, No. 8815 Dongshan Avenue, Suzhou.

上海德樺貿易有限公司青島分公司 Shanghai Everlight Trading Co., Ltd. (Qingdao Office)	Room 1302, No.29, shandong Road, Galaxy Building, Qingdao 266071, P.R.China No. 93 Hua'an Road, Xiazhuang Street, Chengyang District, Qingdao City
廣州明廣貿易有限公司 Guangzhou Ethical Trading Co., Ltd	Room 408 & 409, Regal Business Center No.574-578, TianHe North Road, Guangzhou 510630, P.R.China NO.30 Houshan road,Nangang town Huangpu District,Guangzhou
上海安立國際貿易有限公司 Shanghai Anda International Trading Co., Ltd.	D304-2 R&D Building of New World of Science & Technology, 1355 Jinji Lake Ave. Suzhou Industrial Park 215021 P.R.China
Everlight (Hong Kong) Limited (簡稱香港永光)	Unit 14, 6/F, Kwai Cheong Centre, 50 Kwai Cheong Road. Kwai Chung, NT. HongKong
Everlight Chemicals (Vietnam) Co., Ltd. (簡稱越南永光)	Unit 605, Floor 6, Me Linh Point Tower, No. 2 Ngo Duc Ke Street, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam
Everlight USA, Inc. (簡稱美國永光)	10507 Southern Loop Blvd, Pineville NC 28134 U.S.A.
Everlight Europe B.V. (簡稱荷蘭永光)	Rivium Boulevard 224, 2909 LK, Capelle aan den IJssel, The Netherlands
Elite Foreign Trading Incorporation (簡稱土耳其 Elite)	Mersin Serbest Bolgesi, Mersin, Turkey
Everlight Chemicals (Singapore) PTE LTD. (簡稱新加坡永光)	Paper company
Greatlight Investment Coproration (簡稱宏輝投資)	Paper company

APPENDIX B

The emissions and the scope of indirect emissions, other than Imported Energy of EVERLIGHT CHEMICAL INDUSTRIAL CORPORATION Greenhouse Gas Inventory Report (2023)

Category	Subcategory	Boundary
Indirect GHG emissions from transportation	Upstream transportation and distribution	<ul style="list-style-type: none"> Emissions from the transportation of the purchased raw materials, consumables and packaging materials, including domestic land transportation, overseas air freight, and shipping. The purchased materials included in the calculation are consistent with category 4.
	Employee commuting (car & scooter)	<ul style="list-style-type: none"> Emissions from the transportation of employees travelling between company and residential area by cars or scooters. Only regular employees covered by labour health insurance will be considered.
	Business travel (air)	<ul style="list-style-type: none"> Emissions from the air transportation by employees for business-related activities.
Indirect GHG emissions from products used by organization	Purchased materials	<ul style="list-style-type: none"> Upstream (cradle-to-gate) emissions of purchased raw materials used for production and manufacturing. Office and warehouse purchasing goods are not considered. Raw materials accounting for less than 1% by weight can be excluded, but the total amount excluded cannot exceed 20%.
	Fuel-and-energy-related activities (not included in Scope 1 or 2)	<ul style="list-style-type: none"> Upstream emissions of purchased fuels and electricity, excluding steam energy.

Lack of fulfillment 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.

DNV Business Assurance Co., Ltd. 29Fl., No.293, Sec.2, Wenhua Road 220 Ban Chiau Dist., New Taipei City Taiwan TEL : +886-2-82537800, website: <https://www.dnv.com/tw/>

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

	Waste generated in operations	<ul style="list-style-type: none"> - Emissions from the disposal treatment and transportation of waste. - Only waste generated at production sites is considered. Excludes waste generated at office and warehouse locations.
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The scope of other indirect emissions (other than Imported Energy with specified/limited list of sources) was defined by EVERLIGHT CHEMICAL INDUSTRIAL CORPORATION's own pre-determined criteria for significance of indirect emissions, considering the intended use of the GHG inventory.

Category	Indirect GHG emissions from transportation			Indirect GHG emissions from products used by organization	
Subcategory	Upstream transportation and distribution	Employee commuting (car & scooter)	Business travel (air)	Purchased goods	Waste generated in operations
Global Operations Headquarters	-	21.1596	114.9229	73.2617	-
Taichung Office in Taiwan	-	1.2606	3.6026	6.6576	-
Tainan Office in Taiwan	-	0.5708	1.8428	5.4860	-
1st Plant	862.6234	162.7472	12.8301	27,626.8111	285.0825
2nd Plant	530.0453	260.0120	34.1879	21,204.3281	329.9906
Electronic Chemical Plant	41.3458	75.7320	4.5105	1,632.3620	30.4364
Pharmaceutical Plant	7.6508	111.6059	2.8918	762.5546	124.4045
3rd Plant	170.5670	174.0417	16.4895	18,039.4587	457.6495
4th Plant	13.4209	66.3739	6.2249	1,515.9805	7.1884
Trend Tone Imaging, Inc.	269.8654	113.9754	9.2476	10,975.4648	42.2028
Everlight (Suzhou) Advanced Chemicals Ltd.	103.3437	55.4730	0.7824	8,997.2035	21.9856
Everlight (Suzhou) Advanced Chemicals Ltd. (Zhuhai Office)	-	0.0000	0.0000	1.4257	-
Shanghai Everlight Trading Co., Ltd./Ethical International Trading & Warehousing (Shanghai) Co., Ltd.	-	0.0000	7.0740	5.6694	-
Shanghai Everlight Trading Co., Ltd. (Tianjin Office)	-	0.0000	0.0000	0.4135	-

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

Shanghai Everlight Trading Co., Ltd. (Suzhou Office)	-	0.0000	0.0000	0.2335	-
Shanghai Everlight Trading Co., Ltd. (Qingdao Office)	-	0.0000	0.5276	0.2613	-
Guangzhou Ethical Trading Co., Ltd	-	0.0000	3.4098	2.4910	-
Shanghai Anda International Trading Co., Ltd.	-	6.9585	0.0000	3.0667	-
Everlight (Hong Knog) Limited	-	0.0000	0.0000	0.2952	-
Everlight Chemicals (Vietnam) Co., Ltd.	-	1.0069	2.4176	0.0000	-
Everlight USA, Inc.	-	22.9487	13.9801	7.9181	-
Everlight Europe B.V.	-	6.9885	8.8152	4.1339	-
Elite Foreign Trading Incorporation	-	48.0121	0.6521	3.1898	-

- : determined as non-significant