



# Opinion Statement



## Greenhouse Gas Emissions Verification Opinion Statement

This is to verify that: Taiwan Cement Corporation  
No.113, Sec. 2, Zhongshan N. Rd.  
Zhongshan Dist.  
Taipei City  
104414  
Taiwan

臺灣水泥股份有限公司  
臺灣  
台北市  
中山區  
中山北路二段 113 號  
104414


Holds Statement No: GHGEV 809693

### Verification opinion statement

As a result of carrying out verification and validation procedures in accordance with ISO 14064-3:2019, it is the statement for mixed engagement including reasonable assurance for verification activity as well as validation and agreed-upon procedures (AUP) contains the following:

- The Greenhouse Gas Emissions with Taiwan Cement Corporation for the period from 2023-01-01 to 2023-12-31 was verified and validated.
- The verified organization-level greenhouse gas emissions include direct greenhouse gas emissions 136.9376 tonnes of CO<sub>2</sub> equivalent and indirect greenhouse gas emissions from imported energy 1,544.1173 tonnes of CO<sub>2</sub> equivalent.
- Taiwan Cement Corporation has defined and explained its own process and pre-determined criteria for significance of indirect Greenhouse Gas Emissions and quantify and report these identified significant emissions accordingly.

For and on behalf of BSI:

  
Managing Director BSI Taiwan, Peter Pu

Originally Issue: 2024-08-13

Latest Issue: 2024-08-13

Page: 1 of 5

...making excellence a habit.™

The British Standards Institution is independent to the above named client and has no financial interest in the above named client. This Opinion Statement has been prepared for the above named client only for the purposes of verifying its statements relating to its carbon emissions more particularly described in the scope. It was not prepared for any other purpose. The British Standards institution will not, in providing this Opinion Statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used or to any person by whom the Opinion Statement may be read. This Opinion Statement is prepared on the basis of review by The British Standards Institution of information presented to it by the above named client. The review does not extend beyond such information and is solely based on it. In performing such review, The British Standards Institution has assumed that all such information is complete and accurate. Any queries that may arise by virtue of this Opinion Statement or matters relating to it should be addressed to the above name client only.

Taiwan Headquarters: 2nd Floor, No. 37, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.  
BSI Taiwan is a subsidiary of British Standards Institution.

The Greenhouse Gas Emissions Verification activities are based on reasonable level of assurance:

- The data and information of greenhouse gas emissions are based on historical in nature, and no material misstatements for the period from 2023-01-01 to 2023-12-31 Greenhouse Gas Emissions calculation were revealed.
- Data quality was considered acceptable in meeting the principles as set out in ISO 14064-1:2018.
- The emission factor for electricity of year 2023 is 0.494 kgCO<sub>2</sub>e per kWh.
- The others indirect emissions (Scope 3) category reference: "GHG protocol" documented in the Inventory Report, as shown in the table below:

EMISSIONS		Notes	tonnes CO <sub>2</sub> e
Category 1: Direct GHG emissions and removals			<b>136.9376</b>
1.1	Stationary combustion		3.2948
1.2	Mobile combustion		6.8979
1.3	Industrial processes (anthropogenic systems)		0.0000
1.4	Fugitive (anthropogenic systems)		126.7449
1.5	Land use, land use change and forestry		0.0000
Direct emissions in tonnes of CO <sub>2</sub> e from biomass			0.0000
Category 2: Indirect GHG emissions from imported energy			<b>1,544.1173</b>
2.1	Indirect emissions from imported electricity	location-based approach	1,544.1173
2.2	Indirect emissions from imported energy (steam, heating, cooling and compressed air)		0.0000
Scope 3: Indirect emissions resulting from value chain activities			<b>5,499,459.1332</b>
1	Purchased goods and services		1,352.7027
2	Capital goods		645.1093
3	Fuel- and energy-related activities (not included in scope 1 or scope 2)		306.7983
4	Upstream transportation and distribution		1.0231
5	Waste generated in operations		19.9614
6	Business travel		149.2656
7	Employee commuting		96.9158
8	Upstream leased assets		4,413.9969
9	Downstream transportation and distribution	N/A	
10	Processing of sold products	N/A	
11	Use of sold products	N/A	
12	End-of-life treatment of sold products	N/A	
13	Downstream leased assets		670.0480
14	Franchises	N/A	
15	Investments		5,491,803.3121

\* NS: Non significant; N/A: Not applicable

Agreed upon procedures (AUP)

- AUP are specific types of verification activities, BSI have performed the evidence-gathering procedures for the period from 2023-01-01 to 2023-12-31
- BSI do not express any assurance on the GHG emissions, removals and storage in listed below.

EMISSIONS		Notes	AUP Item(s)	tonnes CO <sub>2</sub> e
Category 3: Indirect GHG emissions from transportation				<b>247.2045</b>
3.1	Emissions from upstream transport and distribution for goods	Use the Distance-based method	1,743.0178 tkm	1.0231
3.3	Emissions from Employee commuting	Use the Distance-based method	the bus: 130,444.032 pkm Subway (domestic): 455,070 pkm Train (domestic): 167,648 pkm High Speed Raul 18,352 pkm Car(gasoline): 198,440.176 pkm 24,056 pkm Automobile (gas-electric hybrid): 23,372.512 pkm Automobile (diesel): 24,056 pkm Car(electric): 6,596.8 pkm Motorcycle (gasoline): 179,299.04 pkm Motorcycle (electric) 12,400 pkm	96.9158
3.5	Emissions from Business travels	Use the Spend-based method and Use the Online calculator method EEIO	Public Transport 3956195 NTD Car 45.765.9 km	149.2656
Category 4: indirect GHG emissions from products used by organization				<b>6,738.5686</b>
4.1	Emissions from Purchased goods	Goods: Use the supplier-specific method Energy & Fuel: Use the	Diesel: 1.5053 KL Electricity: 3,125.7435 kwh Gasoline: 1.2357 KL	1,659.5010

The British Standards Institution is independent to the above named client and has no financial interest in the above named client. This Opinion Statement has been prepared for the above named client only for the purposes of verifying its statements relating to its carbon emissions more particularly described in the scope. It was not prepared for any other purpose. The British Standards institution will not, in providing this Opinion Statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used or to any person by whom the Opinion Statement may be read. This Opinion Statement is prepared on the basis of review by The British Standards Institution of information presented to it by the above named client. The review does not extend beyond such information and is solely based on it. In performing such review, The British Standards Institution has assumed that all such information is complete and accurate. Any queries that may arise by virtue of this Opinion Statement or matters relating to it should be addressed to the above name client only.

Taiwan Headquarters: 2nd Floor, No. 37, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.  
BSI Taiwan is a subsidiary of British Standards Institution.

		Average-data method EEIO	Gas: 1,742 m <sup>3</sup> Goods: 48,969,433 NTD	
4.2	Emissions from Capital goods	Use the Average spend-based method	Total purchase amount: 24,137,721 NTD	645.1093
4.3	Emissions from the disposal of solid and liquid waste	Use the waste-type-specific method	11,467.4 m <sup>3</sup> 32.7735 tonnes 1,390.41 tkm	19.9614
4.4	Emissions from the use of assets	Use the Asset-specific method and Lessor-specific method	448,782,973 NTD	4,413.9969
Category 5: indirect GHG emissions associated with the use of products from the organization				<b>5,492,473.3601</b>
5.2	Emissions from downstream leased assets	Use the accounting for the total expected lifetime emissions from all relevant portion leased to other entities	Electricity: 634,506.9124 kwh	670.0480
5.4	Emissions from investments	Use the investments-specific method	5,491,803.31 tCO <sub>2</sub> e	5,491,803.3121

The direct GHG emissions and removals(cat.1) and indirect GHG emissions from imported energy emissions(cat.2) were verified in selected branches and representative offices, including but not limited to the following:

Location	Verification Information
Taiwan Cement Corporation No. 113, Sec. 2, Zhongshan N. Rd. Zhongshan Dist. Taipei City 104414 Taiwan 臺灣水泥股份有限公司 臺灣 台北市 中山區 中山北路二段 113 號 104414	The Greenhouse Gas Emissions with Taiwan Cement Corporation for the period from 2023-01-01 to 2023-12-31 was verified, include direct greenhouse gas emissions 136.9376 tonnes of CO <sub>2</sub> equivalent and indirect greenhouse gas emissions from imported energy 1,544.1173 tonnes of CO <sub>2</sub> equivalent.



The British Standards Institution is independent to the above named client and has no financial interest in the above named client. This Opinion Statement has been prepared for the above named client only for the purposes of verifying its statements relating to its carbon emissions more particularly described in the scope. It was not prepared for any other purpose. The British Standards institution will not, in providing this Opinion Statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used or to any person by whom the Opinion Statement may be read. This Opinion Statement is prepared on the basis of review by The British Standards Institution of information presented to it by the above named client. The review does not extend beyond such information and is solely based on it. In performing such review, The British Standards Institution has assumed that all such information is complete and accurate. Any queries that may arise by virtue of this Opinion Statement or matters relating to it should be addressed to the above name client only.

Taiwan Headquarters: 2nd Floor, No. 37, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.  
BSI Taiwan is a subsidiary of British Standards Institution.