

# Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2022 of

## Port of Keelung, Taiwan International Ports Co., Ltd.

No. 1, Zhongzheng Rd., Zhongzheng Dist.,  
Keelung City 202, Taiwan (R.O.C.)



has been verified in accordance with ISO 14064-3:2006 as  
meeting the requirements of

### ISO 14064-1:2018

Direct emissions

**3,192.3592** tonnes of CO<sub>2</sub>e

Indirect emissions

**58,888.4734** tonnes of CO<sub>2</sub>e

Direct emissions and indirect emissions

**62,080.833** tonnes of CO<sub>2</sub>e

Authorized by

Stephen Pao

Knowledge Deputy General Manager

Date: 20 February 2024

Version 1

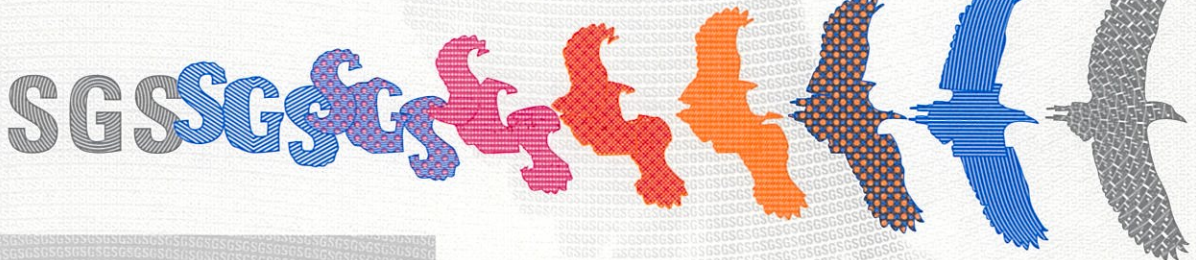
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Statement TW24/00051GG, continued

The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

Reporting Boundaries		GHG Emissions	
Inventory categories	Description		
Direct emissions	This direct GHG emissions are the sum of owned or controlled by the organization within the organization.	3,192.3592	
Indirect emissions	Imported energy	Imported electricity	4,384.3586
	Transportation	<ul style="list-style-type: none"> <li>Emissions from business travel(automobiles, MRT, trains, high-speed rail, airplanes)</li> <li>Employee Commuting Emissions(automobiles, motorcycles, trains, buses, electric motorcycles)</li> <li>Emissions from client and visitor transport(automobiles, trucks, container ships)</li> </ul>	24,818.6017
	Products used by an organization	<ul style="list-style-type: none"> <li>Energy-Related Activities (Not Included in category 2)(imported electricity, gasoline, diesel fuel)</li> <li>Emissions from the disposal of solid and liquid waste(Include waste transportation)</li> </ul>	1,879.3493
	Associated with the use of products from the organization	Emissions from downstream leased assets(include those from the operation of assets that are owned by the reporting organization and leased to other entities during the reporting year, voluntarily provide from other entities) (imported electricity, gasoline, diesel fuel)	27,806.1638
	Other sources	-	-
Direct emissions and indirect emissions		62,080.833	



SGS has been contracted by WSP Engineering Consultants, Inc. (hereinafter referred to as “WSP”), 19F., No.68, Sec. 2, Xianmin Blvd.Banqiao Dist, New Taipei City 220 Taiwan, R.O.C. for the verification of direct and indirect Greenhouse Gas emissions in accordance with

**ISO 14064-3:2006**

as provided by Port of Keelung Taiwan International Ports Corporation, Ltd. (hereinafter referred to as “Keelung Port-TIPC”), No. 1, Zhongzheng Rd., Zhongzheng Dist., Keelung City 202, Taiwan (R.O.C.), in the GHG Assertion in the form of GHG report covering GHG emissions of the period 01 January 2022 to 31 December 2022.

**Roles and responsibilities**

The management of Keelung Port-TIPC is responsible for the organization’s GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS’s responsibility to express an independent GHG verification opinion on the GHG emissions as provided in the GHG Assertion for the period 01 January 2022 to 31 December 2022.

SGS conducted a third-party verification of the provided GHG assertion against the principles of ISO 14064-1:2018, ISO 14064-3:2006 in the period 03 November 2023 to 27 December 2023. The verification was based on the verification scope, objectives and criteria as agreed between WSP and SGS on 10 July 2023.

**Level of Assurance**

The level of assurance for category 1 and category 2 agreed is that of reasonable assurance. Category 3 till category 6 agreed is that of limited assurance.

**Scope**

WSP has commissioned an independent verification by SGS Taiwan of reported GHG emissions of Keelung Port-TIPC arising from Port operation and management business activities, to establish conformance with ISO 14064:2018 principles within the scope of the verification as outlined below.



Statement TW24/00051GG, continued

This engagement covers verification of emission from anthropogenic sources of greenhouse gases included within the organization’s boundary and is based on ISO 14064-3:2006.

- Title or description activities: GHG verification for Keelung Port-TIPC in year 2022
- Location/boundary of the activities:
  - No. 1, Zhongzheng Rd., Zhongzheng Dist., Keelung City 202, Taiwan (R.O.C.)
  - No. 6, Gangxi St., Ren’ ai Dist., Keelung City 200, Taiwan (R.O.C.)
- Physical infrastructure, activities, technologies and processes of the organization:
  - Port operation and management business
- GHG sources, sinks and/or reservoirs included: Sources as presented in the inventory spreadsheet provided by Keelung Port-TIPC
- Types of GHGs included: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>
- The IPCC 2021 AR6 GWP values are applied in this inventory.
- Emission factor:
  - Direct emissions: Greenhouse Gas Emission Factor Table (6.0.4), MOENV.
  - Indirect emissions:
    - Electricity emission factor is 0.495 kgCO<sub>2</sub>e/kwh (Announced by Bureau of Energy, Ministry of Economic Affairs in 2023).
    - The secondary database has Carbon Footprint Information Platform, Ecoinvent 3, Mandarin Airlines Carbon Footprint and Carbon Footprint of THSR.
- Directed actions: NA
- GHG information for the following period was verified: 01 January 2022 to 31 December 2022
- The version of inventory sheet: 2024.02.16
- The version of GHG assertion: 2024.02.16
- Intended user of the verification statement: Private

**Objective**

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the GHG emissions are as declared by the organization’s GHG assertion
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

**Criteria**

Criteria against which the verification assessment is undertaken are the principles of ISO 14064-1:2018



**Materiality**

The materiality required of the verification was considered by SGS to 5%, based on the needs of the intended user of the GHG Assertion.

**Conclusion**

Keelung Port-TIPC provided the GHG assertion based on the requirements of ISO 14064-1: 2018. The GHG information for the period 01 January 2022 to 31 December 2022 disclosing emissions of 62,080.833 metric tonnes of CO<sub>2</sub> equivalent and 0.0000 metric tonnes of direct CO<sub>2</sub> emissions from the combustion of biomass are verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria.

The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

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Inventory categories	Description	
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	Products used by an organization <ul style="list-style-type: none"> <li>Energy-Related Activities (Not Included in category 2)(imported electricity, gasoline, diesel fuel)</li> <li>Emissions from the disposal of solid and liquid waste(Include waste transportation)</li> </ul>	1,879.3493
	Associated with the use of products from the organization	Emissions from downstream leased assets(include those from the operation of assets that are owned by the reporting organization and leased to other entities during the reporting year, voluntarily provide from other entities) (imported electricity, gasoline, diesel fuel)



	Other sources	-	-
Direct emissions and indirect emissions			62,080.833

SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions information and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the organization's reported GHG emissions.

We planned and performed our work to obtain the information, explanations, and evidence that we considered necessary to provide a reasonable level of assurance that the GHG emissions of category 1 and category 2, and limited level of assurance of category 3 till category 6 for the period 01 January 2022 to 31 December 2022 are fairly stated.

We conducted our verification with regard to the GHG assertion of Keelung Port-TIPC which included assessment of GHG information system, monitoring and reporting plan/protocol. This assessment included the collection of evidence supporting the reported data, and checking whether the provisions of the protocol reference, were consistently and appropriately applied.

In SGS's opinion the presented GHG assertion

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO14064-1:2018 on GHG quantification, monitoring and reporting.

**Confidentiality**

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

**Avoidance of Conflict of Interest**

The reports and attachments are completely complied with the standards and procedures that related authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

This Statement is not valid without the full verification scope, objectives, criteria and findings available on the Statement.



Statement TW24/00051GG, continued

This statement shall be interpreted with the GHG assertion of Keelung Port-TIPC as a whole.

**Verifier Group**

Above statements coincide with auditing process with fairness and impartiality and aim at the emission of year 2022 of clients.

Lead Verifier:

*Ocean Wu*

Verifier:

*Brill Lu*

*Victor Tseng*

Verifier:

*Mark Kong*

Note: This Statement is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Greenhouse Gas Verification Services available at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting GHG Assertion may be consulted at Port of Keelung, Taiwan International Ports Corporation, Ltd, No. 1, Zhongzheng Rd., Zhongzheng Dist., Keelung City 202, Taiwan (R.O.C.), This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.