

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2018 of

Taiwan Mobile Co., Ltd.

11F., No.88, Yanchang Rd., Xinyi Dist.,
Taipei City 110, Taiwan



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

ISO 14064-1:2006

Direct emissions

4,940.2591 tonnes of CO₂e

Energy indirect emissions

229,672.6234 tonnes of CO₂e

Direct emissions and energy indirect emissions

234,612.883 tonnes of CO₂e

Authorized by



David Huang

Senior Director

Date: 01 June 2020

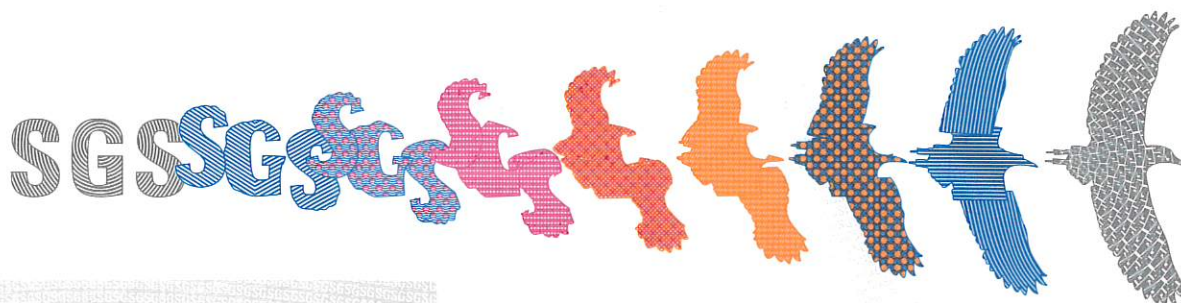
Version 1

TGP56A-15-1 2003

SGS Taiwan Ltd.

No. 136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District,
New Taipei City 24803, Taiwan

t (02) 22993279 f (02)22999453 www.sgs.com



Statement TW20/00135GG, continued

The emissions of energy by location-based and market-based approach as below :

Operational Boundaries			GHG Emissions	
			Location-based	Market-based
Direct emissions			4,940.2591	
Energy indirect emissions			229,672.6234	226,973.5114
Total Emissions			234,612.883	231,913.771
Purchased Renewable Energy Certificate(s) Information				
Site/Location	Type	Renewable Energy Source/Location	Energy indirect emissions	
			Location-based	Market-based
Taiwan Mobile	I-REC T-REC	Solar Energy/ Taiwan	229,672.6234	226,973.5114

Unit: tonnes of CO₂e

SGS has been contracted by Taiwan Mobile Co., Ltd. (hereinafter referred to as "Taiwan Mobile"), 11F., No.88, Yanchang Rd., Xinyi Dist., Taipei City 110, Taiwan for the verification of direct and indirect Greenhouse Gas emissions in accordance with

ISO 14064-3: 2006

as provided by Taiwan Mobile Co., Ltd. (hereinafter referred to as "Taiwan Mobile"), 11F., No.88, Yanchang Rd., Xinyi Dist., Taipei City 110, Taiwan, in the GHG Assertion in the form of GHG report covering GHG emissions of the period 01 January 2018 to 31 December 2018.

Roles and responsibilities

The management of Taiwan Mobile 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 2018 to 31 December 2018.

SGS conducted a third party verification of the provided GHG assertion against the principles of ISO 14064-1:2006, ISO 14064-3:2006 in the period 21 May 2020. The verification was based on the verification scope, objectives and criteria as agreed between Taiwan Mobile and SGS on 20 May 2020.

Level of Assurance

The level of assurance agreed is that of reasonable assurance.

Scope

Taiwan Mobile has commissioned an independent verification by SGS Taiwan of reported GHG emissions of Taiwan Mobile arising from Provision of telecommunication services activities, to establish conformance with ISO 14064:2006 principles within the scope of the verification as outlined below.

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.

Statement TW20/00135GG, continued

- Title or description activities: GHG verification for Taiwan Mobile in year 2018
- Location/boundary of the activities:

Company	Address
Taiwan Mobile Co., Ltd.	11F~13F, No. 88, Yanchang Rd., Xinyi District, Taipei
Taiwan Fixed Network Co., Ltd.	4F, No. 111, Dunhua S. Rd., Sec. 1, Da-an District., Taipei
Taiwan Teleservices & Technologies Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei
Taiwan Digital Service Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei
Taiwan Kuro Times Co., Ltd.	12F, No. 88, Yanchang Rd., Xinyi District, Taipei
TFN Media Co., Ltd.	11F, No. 98, Zhouzi St., Neihs District, Taipei
Win TV Broadcasting Co., Ltd.	11F, No. 98, Zhouzi St., Neihs District, Taipei
Taiwan Digital Communications Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei
Taihsin Property Insurance Agent Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei

- Physical infrastructure, activities, technologies and processes of the organization: Provision of telecommunication services
- GHG sources, sinks and/or reservoirs included: Sources as presented in the inventory spreadsheet provided by Taiwan Mobile
- Types of GHGs included: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃
- The IPCC 2013 AR5 GWP values are applied in this inventory.
- Electricity emission factor: 0.533 kgCO₂e/kwh (Announced by Bureau of Energy, Ministry of Economic Affairs in 2019)
- Directed actions: NA
- GHG information for the following period was verified: 01 January 2018 to 31 December 2018
- The version of inventory sheet: 2020.05.21
- The version of GHG assertion: 2020.05.21
- 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 14064-1:2006

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

Taiwan Mobile provided the GHG assertion based on the requirements of ISO14064-1: 2006. The GHG information for the period 01 January 2018 to 31 December 2018 disclosing emissions of 234,612.883 metric tonnes of CO₂ equivalent and 0.0000 metric tonnes of direct CO₂ 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.

Taiwan Mobile purchased 5,064 Renewable Energy Certificate(s) in 2018. The energy indirect emissions by location-based and market-based approach shown as the following table, which is based on the GHG Protocol Scope 2 Guidance (2015).

Unit: tonnes of CO₂e

Purchased Renewable Energy Certificate(s) Information				
Site/Location	Type	Renewable Energy Source/Location	Energy indirect emissions	
			Location-based	Market-based
Taiwan Mobile	I-REC T-REC	Solar Energy/ Taiwan	229,672.6234	226,973.5114

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 for the period 01 January 2018 to 31 December 2018 are fairly stated.

Statement TW20/00135GG, continued

We conducted our verification with regard to the GHG assertion of Taiwan Mobile 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 ISO14064-1:2006 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

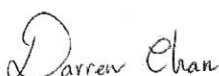
The reports and attachments are completely complied with the standards and procedures that related-authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but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

This statement shall be interpreted with the GHG assertion of Taiwan Mobile as a whole.

Verifier Group

Above statements coincide with auditing process with fairness and impartiality, and aim at the emission of year 2018 of clients.

Lead Verifier:



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. 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 Taiwan Mobile Co., Ltd., 11F., No.88, Yanchang Rd., Xinyi Dist., Taipei City 110, Taiwan, 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.

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2018 of

Taiwan Mobile Co., Ltd.

11F., No.88, Yanchang Rd., Xinyi Dist.,
Taipei City 110, Taiwan



has been verified in accordance with ISO 14064-3:2006

Scope 3: Other indirect emissions
414,948.953 tonnes of CO₂e

Authorized by



David Huang

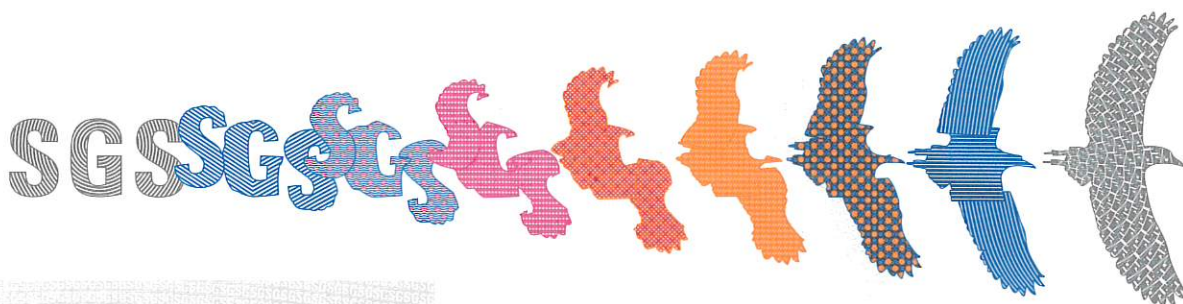
Senior Director

Date: 01 June 2020

Version 1

TGP 56A-15-2 2001
SGS Taiwan Ltd.

No. 136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District,
New Taipei City 24803, Taiwan
t (02) 22993279 f (02)22999453 www.sgs.com



Statement TW20/00134GG, continued

Target	Scope 3: Other indirect emissions	
Boundary	This is a multi-site verification, additional site details are listed in Appendix A.	
Data Period	From 01 January 2018 to 31 December 2018	
Category	Description	Emissions (tonnes of CO ₂ e)
01 Purchased goods and services	Upstream GHG emissions from the production of products purchased by Taiwan Mobile, including smartphone, pad, smart watch, camera drone and other 3C products.	191,116.6797
02 Capital goods	Upstream GHG emissions from the production of capital goods purchased by Taiwan Mobile, including tangible and intangible assets.	133,609.1510
03 Fuel- and energy-related activities (not included in scope 1 or scope 2)	Upstream GHG emissions related to the production of diesel oil, gasoline and Electricity consumed.	56,533.6510
04 Upstream transportation and distribution	GHG emissions related to the fuel consumed by internal logistics.	2,413.9021
05 Waste generated in operations	GHG emissions related to the treatment of domestic waste, industrial Waste (used cable, scrap battery and waste electric and electronic equipment), sewage.	744.1962
06 Business travel	GHG emissions from the transportation of employees for business related activities.	417.7749
07 Employee commuting	GHG emissions from the transportation of employees between their homes and worksites.	2,845.6056
08 Upstream leased assets	GHG emissions from the manufacturing of upstream leased assets, including official vehicles, MFP, PC and Notebook.	3,549.6757
09 Downstream transportation and distribution	GHG emissions from the transportation and distribution of sold products in vehicles. (virtual channel, myfone logistics)	893.0522
11 Use of sold products	GHG emissions from the use of products sold by Taiwan Mobile, including smartphone, pad and smart watch.	12,393.2754
12 End-of-life treatment of sold products	GHG emissions from the waste disposal and treatment of products sold by Taiwan Mobile, including smartphone, pad, smart watch and TV set-top box.	740.8172
13 Downstream leased assets	GHG emissions from the operation of downstream leased assets (building).	2,962.5825
14 Franchises	GHG emissions from the operation of franchises, including electricity consumption and the fugitive emissions of refrigerator.	6,728.5898

Reference

- The definition of 15 categories are based on the “ GHG Protocol -- Corporate Value Chain (Scope 3) Accounting and Reporting Standard”, which initiative by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)
- The IPCC 2013 AR5 GWP values are applied in this inventory.
- Electricity emission factor: 0.66 kgCO₂e/kWh (TWEPA CFP Calculation Platform)
- The emission factor calculated for GHG emissions is quoted by TWEPA Carbon Footprint Calculation Platform, Simapro 9.0 (Ecoinvent3.0).
- This EEIO emission factor was calculated by National Taipei University of Technology (NTUT). It combined Taiwan Input-Output Table 2016 (published by TW DGBAS, 2019), Taiwan Energy Balance Sheet 2018 (published by TW DOE, 2019), IPCC guideline 2006, National GHG Inventory for Taiwan 2018 and calculated the EEIO emission factor for industrial value chain. The limitation of this EEIO Methodology: (1) It is assumed that the relationship between input and output of industry in year 2016 to 2018 is the same. (2) The EEIO emission factor is only calculated for GHG emissions by industry, and not be calculated for specific goods or activities.

Confidentiality

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

Avoidance of Conflict of Interest

The statement is completely complied with the standards and procedures that related-authorities established and the auditing process is conduct with fairness and honesty.

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. The findings recorded hereon are based upon an audit performed by SGS. 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.

Statement TW20/00134GG, continued

Appendix A

The site included within Taiwan Mobile Co., Ltd. for 2018 GHG inventory.

Company	Address	Scope 3 Category
Taiwan Mobile Co., Ltd.	11F~13F, No. 88, Yanchang Rd., Xinyi District, Taipei	1,2,3,4,5,6,7,8,9,11,12,13,14
Taiwan Fixed Network Co., Ltd.	4F, No. 111, Dunhua S. Rd., Sec. 1, Da-an District., Taipei	2,3,4,5,6,7,13
Taiwan Teleservices & Technologies Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei	2,3,4,5,6,7,8
Taiwan Digital Service Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei	2,3,4,5,6,7,8
Taiwan Kuro Times Co., Ltd.	12F, No. 88, Yanchang Rd., Xinyi District, Taipei	2,3,4,5,6,7,8
TFN Media Co., Ltd.	11F, No. 98, Zhouzi St., Neihu District, Taipei	2,3,5,8
Win TV Broadcasting Co., Ltd.	11F, No. 98, Zhouzi St., Neihu District, Taipei	2,3,5,8
Taiwan Digital Communications Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei	3,5
Taihsin Property Insurance Agent Co., Ltd.	7F, No. 206, Dunhua S. Rd., Sec. 2, Da-an District., Taipei	2,3,5,6,7