

# VERIFICATION OPINION OF GREENHOUSE GAS STATEMENT

Opinion No.:  
00014-2023-GHG-RGC

Date of issue:  
24 March 2023

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

## TSMC (China) Company Limited

### Scope of Verification

DNV Business Assurance (DNV) has been commissioned by TSMC (China) Company Limited (hereafter the "Company") to perform a verification of the GHG Emissions Inventory Report (2022) (hereafter the "Inventory Report") in China, with respect to the emissions related to the site located at: 4000 Wen Xiang Road, Songjiang District, Shanghai, China.

### Verification Criteria and GHG Programme

The verification was performed on the basis of,

- ISO 14064-1:2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals as well as those given to provide for consistent GHG emission identification, calculation, monitoring and reporting.

### Verification Opinion

It is DNV's opinion that the Inventory Report (2022), which was published in March 2022, 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 Indirect GHG emissions from products used by the Company, the involved information was verified and tested using agreed-upon procedures (AUP) as defined in Inventory Report.

DNV Business Assurance  
China



Song, Ke  
GHG Verifier



C. K. Wong  
Management Representative

Place and date: Shanghai, 24 March 2023

## Supplement to Statement

### Process and Methodology

The reviews of the Inventory Report 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 Jan. to 31st Dec. 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<sub>2</sub>  CH<sub>4</sub>  N<sub>2</sub>O  HFCs  PFCs  SF<sub>6</sub>  NF<sub>3</sub>

GHG Inventory Categories	Amount <sup>1</sup> (tCO <sub>2</sub> e)
Category 1 - Direct GHG emissions	187,180.87
Category 2 - Indirect GHG emissions from imported energy <sup>2</sup>	311,637.54
Category 4 - Indirect GHG emissions from products used by the Company <sup>3</sup>	203,926.95

- The Global Warming Potential (GWP) defined in IPCC AR5 has been chosen and referred by the Organization.
- The electricity consumption related indirect emissions from imported energy were calculated by the emission factor which was announced by Ministry of Ecology and Environment.
- The indirect GHG emissions from products used by the company are counted by the upstream emissions (cradle-to-gate) from purchased goods and the upstream emissions of purchased energy (cradle-to-gate, incl. diesel, natural gas and electricity).

During this reporting period, the company has implemented following mitigation activities:

- In January 2023, the company has applied and retired 394,580 MWH i-RECs under International REC Standard (equivalent to its electricity consumption in 2022);
- On 17 March 2023, the company has purchased and retired 187,181 ton CO<sub>2</sub>e (equivalent to its Direct GHG emissions in 2022) of VCUs (Verified Carbon Unit) respectively generated by "Hechu Afforestation Project in Anhui Province" (VCS ID 1855) and "Gansu Dingxi Afforestation Project" (VCS ID 2405) under Verra Registry.

### Verification Opinion

Verified without Qualification  
 Unable to Verify