VERIFICATION STATEMENT OF GREENHOUSE GAS ASSERTIONS
Statement No. 00020-2019-AG-RGC-DNVGL

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TSMC (China) Company Limited
initiate reporting of

Greenhouse Gas Inventory

Scope of Verification
DNVGL Business Assurance (China) Co. Ltd (DNVGL) has been commissioned by TSMC (China) Company Limited to perform a verification of the greenhouse gas assertion of TSMC (China) Company Limited Greenhouse Gas Inventory Management Report (hereafter the “Inventory Report”) with respect to the following organization scope area: 4000 Wen Xiang Road, Songjiang District, Shanghai, China.

Verification Criteria and GHG Programme
The verification was performed on the basis of ISO 14064-1:2006 as well as criteria given to provide for consistent GHG emission identification, calculation, monitoring and reporting.

Verification Statement
It is DNVGL’s opinion that with reasonable assurance the greenhouse gas assertion of the Inventory Report of 2017, which was published on February 25, 2019 is free from material discrepancies in accordance with ISO 14064-1:2006.

FANG Guo Wei
GHG Verifier
Date: February 27, 2019

Hsieh, David Chen-wei
Project Manager
DNVGL Certification (China) Co. Ltd.
PROCESS AND METHODOLOGY

The reviews of the Inventory Report and the subsequent follow-up interviews have provided DNVGL with sufficient evidence to determine the fulfilment of stated criteria. The Inventory Report correctly complies with the requirement of ISO 14064-1:2006.

QUANTIFICATION OF GREENHOUSE GAS EMISSION

The Inventory Report covering the period January 1, 2018 to December 31, 2018, it is DNVGL’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

☐ CO₂  ☑ CH₄  ☑ N₂O  ☑ HFCs  ☑ PFCs  ☑ SF₆  ☑ NF₃

The Global Warning Potential (GWP) defined in IPCC AR5 (2014) has been chosen and referred by the Organisation. Total emissions: 570666.4 Tonnes CO₂-e, in which:

Total Direct Emissions : 275753.2 Tonnes CO₂-e
Total Energy Indirect Emissions: 294913.2 Tonnes CO₂-e
(The electricity consumption related energy indirect emissions were calculated by the factor of 0.8112 kg CO2-e/kwh (2015) which was announced by National Development and Reform Commission.)

In February 2019, the company has applied for 363565 MWH I-RECs under International REC Standard and I-REC Registry with Redemption Request no. 2019-0131-0555-25, Redemption Account of TSMC-F10.

VERIFICATION OPINION

☐ Verified without Qualification
☐ Verified with Qualifications
☐ Unable to Verify

This Verification Opinion is based on the information made available to us and the engagement conditions detailed above. Hence, DNVGL cannot guarantee the accuracy or correctness of the information. DNVGL cannot be liable to any party relying or acting upon this Verification Opinion.