



ISO 14064-1

Greenhouse Gas (GHG)

The GHG Report for reporting period from 1 January 2023 to 31 December 2023

MANTRA SWITCHGEAR COMPANY LIMITED

- Head Office : 56/14 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
- Branch 01 : 56/15 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
- Branch 02 : 104/59 Moo 12, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
- Office : 33/17 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
- Canteen : 56/16 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540

It has been verified at a limited level of assurance according to ISO 14064-1:2018 and ISO 14064-3:2019

The total greenhouse gas emission in the period 1 January 2023 to 31 December 2023 as following

Category A: Direct GHG emissions	146	tCO ₂ e
Category B: Indirect GHG emissions from imported energy	257	tCO ₂ e
Category D: Indirect GHG emissions from products used by organization	70	tCO ₂ e
- Purchased goods and services		
The total greenhouse gas emission for Category A and Category B	403	tCO ₂ e
The total greenhouse gas emission for Category A, Category B and Category D	473	tCO ₂ e
GHG Storage (if any)	-	tCO ₂ e
Biogenic CO ₂ emissions (if any)	7	tCO ₂ e
Additional : HCFC-22 (if any)	-	tCO ₂ e

For the following activities

- Direct GHG emissions --- Stationary combustion (Gasohol95, LPG), Mobile combustion (Diesel B7, Gasohol95, E20), Fugitive emissions (CH₄, HFCs and CO₂)
- Indirect GHG emissions from imported energy --- Electricity
- Indirect GHG emissions from products used by organization --- Fuel- and energy related activities
- Additional GHG emissions (HCFC-22)

Date of Verification Statement: 30 January 2025

This verification statement is not valid without the full verification scope, objective, criteria and conclusion available on page 2 to 3 of this statement.

Signed by

Jongrak Rojpalasatean

Mr. Jongrak Rojpalasatean
President of Management System
Certification Institute (Thailand)

Signed by

Teerakul Boonyong

Mr. Teerakul Boonyong
Technical Reviewer

Signed by

Atchada

Ms. Atchada Ngeimvijawat
Lead Verifier



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Greenhouse Gas (GHG)



Verification Statement related to GHG Report for reporting period from 1 January 2023 to 31 December 2023 prepared for MANTRA SWITCHGEAR COMPANY LIMITED

Terms of Engagement

MANTRA SWITCHGEAR COMPANY LIMITED (hereafter referred to as "MANTRA") has commissioned to Foundation for Industrial Development - Management System Certification Institute (Thailand) (hereafter referred to as "MASCI") to carry out a limited level of assurance of the GHG Report for reporting period from 1 January 2023 to 31 December 2023 (hereafter referred to as "GHG Report").

Management Responsibility

MANTRA is responsible for the preparation and fair presentation of the GHG Report in accordance with ISO 14064-1: 2018. This responsibility includes designing, implementing and maintaining a data and information management system relevant to the preparation and fair presentation of the GHG Report that is free from material misstatement.

MASCI's responsibility is to express a third party opinion on the GHG Report based on our verification. We conduct our verification in accordance with the ISO 14064-3:2019. This International Standard requires that we comply with ethical requirements and plan and perform the verification to obtain a limited level of assurance in accordance with our contract with MANTRA. Ultimately, the GHG Report has been approved by, and remains the responsibility of MANTRA.

Verification Objective

The purpose of the verification is to provide interested parties with professional and independent judgment, which is a third party opinion regarding the data and information contained in the GHG Report.

Verification Scope

- Type of GHG included - CO₂, CH₄, N₂O, SF₆, PFCs, HFCs and NF₃ including HCFC-22
- The organizational boundaries was established by using operational control approach.
- Office and factory :
 - Head Office : 56/14 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
 - Branch 01 : 56/15 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
 - Branch 02 : 104/59 Moo 12, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
 - Office : 33/17 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
 - Canteen : 56/16 Moo 3, Bang Pla Sub District, Bang Phli District, Samut Prakarn 10540
- The GHG emissions, removals and storage in GHG Report for the period 1 January 2023 to 31 December 2023, which comprise the following:
 - Direct GHG emissions --- Stationary combustion (Gasohol95, LPG), Mobile combustion (Diesel B7, Gasohol95, E20), Fugitive emissions (CH₄, HFCs and CO₂)
 - Indirect GHG emissions from imported energy --- Electricity
 - Indirect GHG emissions from products used by organization --- Fuel- and energy related activities
 - Additional GHG emissions (HCFC-22)
- Data and information related to GHG emission reduction and removal enhancement initiatives, projects and targets has not been included.

Verification Criteria

- ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
- IR-801 MASCI's regulation for GHG validation and verification services
- IPCC Fifth Assessment Report (AR5), Global warming potential (GWP) values are applied in this GHG Report (Except Thailand Grid Emission Factor which is calculated from IPCC AR5, GWP)

Level of Assurance & Materiality

The conclusion expressed in this verification statement has been formed on the basis of a limited level of assurance and at a materiality threshold of 5%.



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MASCI's Approach

Our verification has been conducted in accordance with ISO 14064-3:2019, Specification with guidance for the verification and validation of greenhouse gas statements, to provide a limited level of assurance for the disclosure of data and information in the GHG Report have been prepared in accordance with ISO 14064-1:2018, Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

Focusing on the basic principles of ISO 14064-3:2019, Impartiality, Evidence based approach, Fair presentation, Documentation, Conservativeness, and focusing on the basic principles of 14064-1:2018, Relevance, Completeness, Consistency, Accuracy, Transparency Verification team performed verification activity as per procedure and criteria, including audit trail and source of evidence in line with strategic review and risk assessment, sampling plan, justification for quantifying and selecting the data sets.

Evidence-gathering procedures included but were not limited to:

- 1) Review of historical data from 1 January 2023 to 31 December 2023, which has been set as the base year, data and information from 1 January 2023 to 31 December 2023, data and information management procedure, calculation and analyze the amount of greenhouse gas emissions and reduction including relevant data and information,
- 2) Assessment and cross check the activity data and emission factor values i.e. sampling of fuel and energy records to confirm accuracy of source data into calculations, and recalculation of emissions
- 3) Verification of operational activities of facilities [Office and factory] to inspect the completeness of the GHG Report and re-perform access controls to onsite records
- 4) Interviews the executives, operators and persons responsible for greenhouse gas data and information to confirm operational behaviour and standard operating procedures

MASCI's Conclusion

Our verification opinion based on the process and procedures conducted and the basis of a limited level of assurance, there is no evidence that the GHG Report, is not materially correct and is not a fair representation of GHG data and information, or has not been prepared in accordance with ISO 14064-1:2018.

The total greenhouse gas emission in the period 1 January 2023 to 31 December 2023 as following

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This verification statement is subject to the provisions of this legal section:

- Management System Certification Institute (Thailand) and their respective officers assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the data and information or advice in this document or howsoever provided, unless that person has signed a contract for the provision of this data and information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.
- This verification statement is only valid when published with the report to which it refers. It may only be reproduced in its entirety.
- In the case of any conflict between the English and Thai language versions of this legal section, the Thai version shall prevail.
- Due to inherent limitations in any internal control, it is possible that fraud, error, or non-compliance with laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the verification has not been performed continuously throughout the period and the verification carried out on the relevant internal controls were on a test basis. Any projection of the evaluation of control to future periods is subject to the risk that the processes may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

