



LRQA Group Independent Assurance Statement

Relating to Petroliaam Nasional Berhad (PETRONAS) Greenhouse Gas (GHG) emissions (Scope 1 and Scope 2) – Limited Level of Assurance using an equity share approach for year 2024

This Assurance Statement has been prepared for Petroliaam Nasional Berhad (PETRONAS) in accordance with our contract.

Terms of Engagement

LRQA INSPECTION MALAYSIA SDN. BHD. (LRQA) was commissioned by PETRONAS to provide independent assurance of its greenhouse gas (GHG) emissions inventory (the Inventory) against the assurance criteria below to a limited level of assurance and materiality of the professional judgement of the verifier using LRQA's verification procedure that is in accordance with ISO 14064 - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.

Our assurance engagement covered PETRONAS' operations and activities for entities globally related to its various business divisions including Upstream¹, Gas, Downstream, KLCC (Property) and MISC Group (Shipping). The engagement required us to verify the GHG emissions from the PETRONAS' entities using an equity share approach for the years 2024. Our engagement specifically covered the following:

- Verifying conformance of the selected datasets with:
 - PETRONAS Technical Standards (PTS) 18.72.05 Greenhouse Gas (GHG) Emissions Management, March 2023.
 - Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard by the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) for the GHG emissions data².

Our assurance engagement covered entities listed in Annex A, excluded the data and information of PETRONAS' suppliers, contractors and any third parties mentioned in the report.

LRQA's responsibility is only to PETRONAS. LRQA disclaims any liability or responsibility to others as explained in the end footnote. PETRONAS' responsibility is for collecting, aggregating, analysing and presenting all the data and information within the Inventory and for maintaining effective internal controls over the systems from which the GHG emissions data is derived. Ultimately, the GHG emissions data has been approved by, and remains the responsibility of PETRONAS.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that PETRONAS has not, in all material respects:

- met the requirements of the criteria listed above; and
- disclosed accurate and reliable performance data and information as summarized in Table 1 below.

The opinion expressed is formed on the basis of a limited level of assurance³ and at the materiality of the professional judgement of the verifier.

¹ excludes exploration and decommissioning activities

² <https://www.ghgprotocol.org/corporate-standard>

³ The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.



Table 1. Summary of PETRONAS GHG emissions for Scope 1 and Scope 2 emissions using equity share approach for year 2024:

Scope	2024 (tCO ₂ e)
Scope 1 GHG emissions	47,273,242
Scope 2 GHG emissions (Location-based)	890,926
Note 1: Scope 2 Location-based is defined in the WRI/WBCSD GHG Protocol Scope 2 Guidance, 2015	

LRQA's Approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- conducting GHG data verification through remote interactions with key personnel from sampled units from operated assets and non-operated joint ventures as in Annex B;
- reviewing processes related to the GHSE's control of GHG emissions data and records of its operational and non-operational joint ventures;
- interviewing relevant employees of the businesses and GHSE responsible for managing GHG emissions data and records;
- assessing PETRONAS' data management systems to confirm they are designed to prevent significant errors, omissions or mis-statements in the GHG emissions data. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal quality control.
- verifying historical GHG emissions data and records at an aggregated level for the year 2024 through:
 - verifying that the GHG emissions data of the operated assets has been
 - aligned with that presented to us under separate engagement for verification at an operational control for 2024 in the current year;
 - reflected from the various tools being in use by the businesses; GHG emissions calculators by MISC Group (Shipping); SANGEA and GCON used by Upstream, Gas and Downstream businesses or GHG emissions calculation spreadsheet used by KLCC (Property).
 - verifying that the GHG emissions data presented for non-operated joint ventures have been arrived at through one of the various means that included:
 - GHG emissions data obtained from other credible sources such as external third-party assurance statements or from those submitted to regulator, e.g. Malaysia Petroleum Management (MPM).
 - GHG emissions intensities based on production for the year 2024;
 - adopting GHG emissions intensity of a similar operating plant that is under PETRONAS operational control;
- verifying equity share percentage through references to the previously issued PETRONAS Integrated Report, Audited Financial Statements and the Fact Book issued by Group Finance PETRONAS; and
- verifying that the GWPs⁴ used are aligned with IPCC AR4.

Observations and recommendations were provided to PETRONAS management, intended for internal use only. These do not affect our opinion.

⁴ Global Warming Potentials



LRQA's Standards, Competence and Independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity audit – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification audits is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

We conducted gap analyses in previous years for PETRONAS on their methodology of reporting Scope 1 and Scope 2 GHG emissions under equity share and Scope 3 Category 11 (GHG emissions from sold products) for 2019-2023. The verification audits are the only work undertaken by LRQA for PETRONAS and as such do not compromise our independence or impartiality.

Signed

Dated: 28 Jun 2025

A handwritten signature in black ink, appearing to read 'Sew Shuh Ping', is written over a light blue horizontal line.

Sew Shuh Ping

LRQA GROUP LIMITED Lead Verifier

On behalf of LRQA INSPECTION MALAYSIA SDN. BHD., Level 25, Naza Tower, Platinum Park, No.10, Persiaran KLCC, 50088 Kuala Lumpur

LRQA GROUP LIMITED reference: KLR00000809

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Annex A

List of sites covered under equity share

Business Division	List of OPU/ Companies
Upstream*	PETRONAS Carigali Sdn. Bhd. Vestigo Petroleum Sdn. Bhd. PETRONAS Carigali (Turkmenistan) Sdn. Bhd. PETRONAS Carigali Vietnam Limited PETRONAS Carigali (Ketapang) Limited PETRONAS Energy Canada Limited PETRONAS Carigali International Ventures Sdn. Bhd.
Gas	Malaysia LNG Sdn. Bhd. Malaysia LNG Dua Sdn. Bhd. Malaysia LNG Tiga Sdn. Bhd. PETRONAS LNG 9 Sdn. Bhd. PETRONAS Floating LNG 1 (L) Ltd. PETRONAS Floating LNG 2 (L) Ltd. PETRONAS Gas Berhad Regas Terminal (Sg.Udang) Sdn. Bhd. Gas Malaysia Bhd. GLNG Operations Pty Ltd. GLNG Upstream Operations Pty Ltd. Kimanis Power Sdn. Bhd. Pengerang Gas Solutions Sdn. Bhd. The Egyptian LNG Company S.A.E Trans Thai-Malaysia (Malaysia) Ltd. Trans Thai-Malaysia (Thailand) Ltd.
Downstream	ASEAN Bintulu Fertiliser Sdn. Bhd. Malaysian Refining Company Sdn. Bhd. PETRONAS Chemicals Aromatics Sdn. Bhd. PETRONAS Chemicals Ethylene Sdn. Bhd. PETRONAS Chemicals Fertiliser Kedah Sdn. Bhd. PETRONAS Chemicals Fertiliser Sabah Sdn. Bhd. PETRONAS Chemicals LDPE Sdn. Bhd. PETRONAS Chemicals Ammonia Sdn. Bhd. PETRONAS Chemical Methanol Sdn. Bhd. PETRONAS Chemicals MTBE Sdn. Bhd. PETRONAS Chemicals Olefins Sdn. Bhd. PETRONAS Chemicals Glycols Sdn. Bhd. PETRONAS Chemicals Derivatives Sdn. Bhd. PETRONAS Chemical Polyethylene Sdn. Bhd. PETRONAS Dagangan Berhad PETRONAS Trading Corp. PETRONAS NGV Sdn. Bhd. PETRONAS Lubricants International Sdn. Bhd. PETRONAS Penapisan (Terengganu) Sdn. Bhd. PRPC Utilities and Facilities Sdn. Bhd.

Business Division	List of OPU/ Companies
Downstream (continue)	BASF PETRONAS Chemicals Sdn. Bhd. (subsidiary of BASF Nederland B.V.) Idemitsu Styrene Monomer Sdn Bhd (subsidiary of Idemitsu Kosan Company Co. Ltd.) Ineos PCG Acetyls Sdn Bhd Kertih Terminals Sdn Bhd Malaysian NPK Fertilizer Sdn Bhd IOT Management Sdn. Bhd. PS Pipeline Sendirian Berhad PS Terminal Sdn Bhd Tanjung Manis Oil Terminal Management Sdn Bhd Pengerang Terminals (Two) Sdn. Bhd. Guangxi Beihai Yuchai PETRONAS High Quality Lube Co., Ltd. PRPC Water Sdn Bhd
MISC Group	AET Bermuda One Limited AET Brasil Servicos Maritimos Ltda AET DP Shuttle II Pte. Ltd. (Incorp in 2020) AET DP Shuttle Pte. Ltd. (Incorp in 2020) AET DP Shuttle Tankers Sdn. Bhd. (Incorp in 2021) AET Labuan One Pte. Ltd. AET Lightering Services LLC AET MCV Alpha L.L.C. AET MCV Beta L.L.C. AET Offshore Services Inc. AET Petroleum Tanker (M) Sdn. Bhd. AET Product Tankers Sdn Bhd AET Sea Shuttle AS AET Sea Shuttle II AS AET Shuttle Tankers II Pte Ltd AET Shuttle Tankers III Pte. Ltd. (Incorp in 2020) AET Shuttle Tankers Sdn. Bhd. AET SINGAPORE ONE PTE LTD AET Tankers (Suezmax) Pte. Ltd. AET Tankers Pte. Ltd. AET Tankers VLCC II Sdn. Bhd. (Incorp in 2021) AET Tankers VLCC III Pte Ltd AET Tankers VLCC IV Pte Ltd AET Tankers VLCC Pte. Ltd. (Incorp in 2021) AET Tankers VLCC V Pte Ltd AET UK Limited Atenea Services S.A. Hendham Enterprises Ltd. Odley Worldwide Inc. Oldson Ventures Ltd. Twyford International Business Corp. Zangwill Business Corp. AET Inc. Limited Akudel S.A. Cawerty S.A. Zascul S.A. Malaysian Maritime Academy Sdn. Bhd.

	Eaglestar Marine (Malaysia) Sdn. Bhd. (previous company name in 2019 and 2020 is AET Shipmanagement (Malaysia) Sdn. Bhd.)
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Business Division	List of OPU/ Companies
MISC Group (continue)	Eaglestar Marine (S) Pte Ltd Eaglestar Marine B.V. Eaglestar Marine Holdings (L) Pte Ltd Eaglestar Marine India Private Limited Eaglestar Shipmanagement (L) Pte Ltd Eaglestar Shipmanagement (S) Pte. Ltd. Eaglestar Shipmanagement (USA) LLC Eaglestar Shipmanagement GAS (S) Pte. Ltd. (Incorp in 2020) Eaglestar Shipmanagement Ventures (S) Pte. Ltd. (Incorp in 2020) ES Crewing Pte Ltd ES Marine Pte Ltd ES Marine Servicos (Brazil) Ltda MISC Ship Management Sdn. Bhd. Asia LNG Transport Sdn. Bhd. Future Horizon (L) Pte. Ltd Gas Asia Terminal (L) Pte. Ltd. Polaris LNG One Pte. Ltd. Polaris LNG Two Pte.Ltd. Portovenere and Lerici (Singapore) Pte Ltd Puteri Delima (L) Pte Ltd Puteri Delima Satu (L) Pte. Ltd. Puteri Delima Sdn. Bhd. Puteri Firus Satu (L) Pte. Ltd. Puteri Intan (L) Pte Ltd Puteri Intan Satu (L) Pte. Ltd. Puteri Intan Sdn. Bhd. Puteri Mutiara Satu (L) Pte. Ltd. Puteri Nilam (L) Pte Ltd Puteri Nilam Satu (L) Pte. Ltd. Puteri Nilam Sdn. Bhd. Puteri Zamrud (L) Pte Ltd Puteri Zamrud Satu (L) Pte. Ltd. Puteri Zamrud Sdn. Bhd. Seri Camar (L) Private Limited Seri Camellia (L) Private Limited Seri Cemara (L) Private Limited Seri Cempaka (L) Private Limited Seri Cenderawasih (L) Private Limited Seri Elbert (Singapore) Pte. Ltd. (Incorp in 2020) Seri Emei (Singapore) Pte. Ltd. (Incorp in 2020) Seri Emory (Singapore) Pte. Ltd. (Incorp in 2020) Seri Emperor (Singapore) Pte. Ltd. (Incorp in 2020) Seri Erlang (Singapore) Pte. Ltd. (Incorp in 2020) Seri Everest (Singapore) Pte. Ltd. (Incorp in 2020) Diamond LNG Shipping 5 Pte Ltd (Incorp in 2020) Diamond LNG Shipping 6 Pte Ltd (Incorp in 2020) Malaysia Marine and Heavy Engineering Holdings Berhad Malaysia Marine and Heavy Engineering Sdn. Bhd.



MHS Integrated Engineering Sdn. Bhd. (Incorp in 2020)
MISC Berhad

Business Division	List of OPU/ Companies
MISC Group (continue)	MISC Maritime Services Sdn Bhd Sungai Udang Port Sdn Bhd FPSO Ventures Sdn. Bhd. Gumusut-Kakap Semi-Floating Production System (L) Limited Malaysia Vietnam Offshore Terminal (L) Ltd. MISC Agencies (Netherlands) B.V.
KLCC (Property)	Gas District Cooling (M) Sdn. Bhd. Gas District Cooling (Putrajaya) Sdn. Bhd. Gilang Cendana Sdn. Bhd. KLCC Parking Management Sdn. Bhd. KLCC Urusharta Sdn. Bhd. Putrajaya Bina Sdn. Bhd. Putrajaya Holdings Sdn. Bhd. Putrajaya Management Sdn. Bhd. Kuala Lumpur Convention Centre Sdn. Bhd. Putrajaya Holdings Sdn. Bhd.

** Note: For Upstream, verification done for GHG emissions based on participating interest of PETRONAS Upstream listed entities in their respective operated and non-operated Production Sharing Contracts (PSCs)*

Annex B

List of sample sites

List of Samples Sites		
Business Divisions	Operated Assets	Non-operated Joint Ventures
Upstream	• SKA (Block 316: 2011, Baram Delta EOR, Anjung) • Indonesia Ketapang • Canada NMJV	• Argentina La Amarga Chica • Sudan GPOC • Sudan DPOC • Indonesia Jabung Ext • MT JDA A-18 • MT-JDA B-17 • 2011 North Sabah EOR PSC • BLOCK PM3 CAA PSC • Block PM8 PSC (Extension) • Gas PSC (EMEPMI Operated) (2008 + GPSC) • BLOCK PM304 PSC • Deepwater Block J PSC • Deepwater Block K PSC • Deepwater Block K PSC
Gas	• GPS - PETRONAS Gas Berhad • PLC - Malaysia LNG Tiga Sdn. Bhd. • Utilities Gebeng • Utilities Kerteh	• GLNG Upstream Operations Pty Ltd • Gas Malaysia Bhd (associate of Petronas Gas Bhd. and subsidiary of MMC Shapadu Holdings Sdn. Bhd.) • The Egyptian LNG Company S.A.E • Trans Thai-Malaysia (Thailand) Ltd.
Downstream	• Malaysia Refinery Company Sdn Bhd • PETRONAS Chemical Methanol Sdn Bhd • PRPC Utilities and Facilities Sdn Bhd • PETRONAS Chemical Polyethylene Sdn Bhd • PETRONAS Trading Corporation	• BASF PETRONAS Chemicals Sdn. Bhd. (subsidiary of BASF Nederland B.V.) • Guangxi Beihai Yuchai PETRONAS High Quality Lube Co., Ltd. @ 29/5/2025 • Ineos PCG Acetyls Sdn Bhd • Idemitsu Styrene Monomer Sdn Bhd (subsidiary of Idemitsu Kosan Company Co. Ltd.) • Malaysian NPK Fertilizer Sdn Bhd
MISC Group	• AET Inc. Limited • AET SINGAPORE ONE PTE LTD • AET Bermuda One Limited • AET Petroleum Tanker (M) Sdn. Bhd. • Asia LNG Transport Sdn. Bhd. • Atenea Services S.A. • MISC Berhad • Gas Asia Terminal (L) Pte. Ltd. • Hendham Enterprises Ltd. • Puteri Mutiara Satu (L) Pte. Ltd. • Puteri Nilam (L) Pte Ltd • Twyford International Business Corp. • Zangwill Business Corp.	• Diamond LNG Shipping 5 Pte Ltd (Incorp in 2020) • Diamond LNG Shipping 6 Pte Ltd (Incorp in 2020) • Gumusut-Kakap Semi-Floating Production System (L) Limited
KLCC (Property)	Gas District Cooling (M) Sdn. Bhd. Gas District Cooling (Putrajaya) Sdn. Bhd. Putrajaya Bina Sdn. Bhd. (Operation)	Kuala Lumpur Convention Centre Sdn. Bhd.
Others	Petrolia Nasional Berhad (HC)	