

PETRONAS An Overview

Petroleum Nasional Berhad (PETRONAS) is a leading global energy company committed to powering society’s progress in a responsible and sustainable manner. With close to 50,000 employees and a global reach spanning over 100 countries, we are ranked among the world’s largest corporations by revenue in the Fortune Media IP Ltd’s 2022 Fortune Global 500® list.

As Malaysia’s national oil and gas company, we safeguard and manage the nation’s hydrocarbon resources to ensure national energy security and maximise value. We explore, develop and produce hydrocarbons as well as cleaner energy solutions. We have three core businesses, namely Upstream, Gas and Downstream, supported by Project Delivery and Technology division, which acts as an enabler. We recently launched Gentari, our new entity providing customers with cleaner energy and lower carbon solutions in three core offerings – renewables, hydrogen and green mobility alongside our core portfolio.

We remain committed to produce oil and gas in a differentiated manner, with focus on reducing carbon emissions and at competitive cost. Our hydrocarbon portfolio today is two-thirds gas, which puts us in an advantageous position as gas and Liquefied Natural Gas (LNG) will continue to play a vital role even as the energy system evolves. As one of the leading LNG players in the world, PETRONAS will continue to serve the global LNG demand.

As a responsible and conscientious global energy player, sustainability is at the heart of our business and how we operate. Our commitment to responsible business growth and positive contributions to society and the environment remains unwavering. Fuelled by our passion to be a partner for our customers in the journey towards a lower carbon energy future, every step we take brings us closer towards achieving our aspiration of Net Zero Carbon Emissions by 2050 (NZCE 2050).

PETRONAS Cultural Beliefs



Customer Focused

I deliver solutions from the customer lens



Innovate Now

I challenge norms and push boundaries



Be Enterprising

I seek opportunities and make them happen



Speak Up

I express my views openly



Courage to Act

I take action to progress with pace

Our Shared Values

- **Loyalty**
Loyal to corporation
- **Integrity**
Honest and upright
- **Professionalism**
Strive for excellence
- **Cohesiveness**
United, trust and respect for each other

Competitive Advantage

Our long-standing track record as a global energy and solutions partner



Having transformed PETRONAS from a domestic-based national oil and gas company into a fully integrated global energy player, we have gained valuable experience that enable us to navigate the energy transition and further contribute to societal progress.

with extensive reach



PETRONAS, as a leading global energy company aims to play a key role in the energy transition, focusing on energy security and at the same time delivering energy solutions responsibly. We became Southeast Asia's first oil and gas company to declare our aspiration to achieve NZCE 2050. We see our role as a catalyst to speed up the transition to net zero specifically in Malaysia and Southeast Asia, drawing on our experience and reach as a global energy company. Strengthening our core business will sustain the vibrancy of the local Oil and Gas Services and Equipment (OGSE) ecosystem.

is driven by a dedicated team of people



Our people are our greatest asset and growth partners. They fuel our passion for innovation to advance towards sustainable energy solutions. Across the globe, our employees lead the way in executing our strategic goals, armed with the knowledge and capabilities to thrive in a lower carbon future.

and underpinned by responsible governance



We strive for the utmost integrity in all aspects of our business and operations, implementing robust policies, systems and protocols to uphold ethical business practices and good governance. We ensure our employees and contractors work together in creating a safe working environment for all.

that supports our expanding business and portfolio.



With a proven track record in oil and gas exploration, development and production both in Malaysia and internationally and supported by our strong financial performance, we are broadening our portfolio to encompass clean energy solutions in three core offerings – renewable energy, hydrogen and green mobility to align with changing customers needs.

2022 Key Highlights

Financial

↑ Revenue
RM375.3
 billion

2021: RM248.0 billion

↑ Cash Flows from Operations (CFFO)
RM135.3
 billion

2021: RM78.5 billion

↑ Profit After Tax
RM101.6
 billion

2021: RM50.9 billion

↑ Total Assets
RM710.6
 billion

2021: RM635.0 billion

↑ Return on Average Capital Employed (ROACE)
19.9%

2021: 11.4%

Business

Upstream

Recorded a total daily production average of **2,434 thousand** barrels of oil equivalent (boe) per day, a **7% increase** in comparison to 2021.

Achieved first hydrocarbon for **37 projects** in Malaysia (30), Indonesia (six) and South Sudan (one).

Reached Final Investment Decision (FID) for **26 projects** covering Malaysia (16), Indonesia (four), South Sudan (four) and Brazil (two).

Made **9 exploration discoveries** in Malaysia (six), Brazil (two) and Suriname (one).

Signed **6 Production Sharing Contracts (PSCs)** with new and existing players in Malaysia.

Reached FID for the development of the **Kasawari CO₂ Sequestration (CCS)** project offshore Sarawak.

Gas

Overall Equipment Effectiveness (OEE) for Gas business stood at **96.6%** across all business segments.

405 total LNG cargoes delivered from PETRONAS LNG Complex.

43 LNG cargoes delivered from PFLNG SATU and PFLNG DUA.

2,619 Virtual Pipeline System (VPS) and LNG Bunkering deliveries completed.

136 MMscfd of natural gas supply deals secured with non-power customers.

Achieved FID for **Sabah's first nearshore LNG facility**. The Engineering, Procurement, Construction and Commissioning (EPCC) contract for the project was awarded to a consortium comprising Japan's JGC and South Korea's Samsung Heavy Industries.

Downstream

OEE of **85.9%** across all business segments.

Overall marketing sales volume of **24.9 billion litres**.

89.0% petrochemical plant utilisation (Nexant).

10.0 million metric tonnes of petrochemicals production volume.

PETRONAS Dagangan Berhad collaborated with Gentari Sdn Bhd and other industry players to provide electric mobility services by rolling out **battery swap stations for electric two-wheelers and charging infrastructure for electric buses** at PETRONAS stations.

Project Delivery and Technology

RM5.1 billion value realised through enterprise and business digital solutions.

Project Delivery and Technology (PD&T) managed projects recorded over **37 million** manhours with a Full Time Equivalent of **12,800** personnel at the work site. **13 projects** achieved on time, on budget and on scope (OTOBOS), while **11** were completed ahead of schedule.

Achieved over **RM150 million** in revenue from the commercialisation of technology and digital solutions.

Gentari

1.6 GW of global renewable energy capacity in operations and under development.

13 MoUs for hydrogen collaborations with international partners and customers. In November 2022, delivered first cargo of low carbon ammonia from Malaysia to Thailand.

In India, delivered **382 three-wheel** Electric Vehicles (EVs), **161** charge points and clocked in **2 million** clean kilometers.

In Malaysia, delivered **151 charge points**, Southeast Asia's **first public 350kW super charger** in X Park Malaysia in Sunway Serene charging hub, the first hub to be licensed by Malaysia's Energy Commission.

Other Businesses

Maritime and Logistics

MISC is the only Malaysian transportation sector company and one of the three Malaysian companies listed on **DJSI Emerging Market Index** globally.

MISC secured over **USD1.1 billion** in long-term contracts, expanded its supplier base and raised **USD1.0 billion** in funding under the Global Medium Term Notes programme.

Property

KLCC Group as a whole also achieved a commendable **119** sustainability targets, showcasing its commitment to a better future.

Installed **35 EV chargers** at car parks within KLCC Precinct in 2022, bringing the total to 57.

Key Highlights

Sustainability

GHG Emissions

- **10.86%** of Scope 1 and Scope 2 GHG emissions reduced from 2019 based on Operational Control (Malaysia operations i.e., cap of 49.5 Million tCO₂e) approach.
- **8.49%** of Scope 1 and Scope 2 GHG emissions reduction from 2019 based on Equity Share approach.
- **20%** reduction in flaring and venting emissions in our Malaysia operated assets in 2022 including four fields achieving Zero Routine Venting of Hydrocarbon.
- Estimated reduction of **49.88%** in absolute methane emissions from PETRONAS Groupwide natural gas value chain since 2019.

Climate Change Risks

- Established the **Enterprise Climate-related Risk Profile** to expressly incorporate climate-related risks into the PETRONAS Corporate Risk Profile.

Environmental Management

- Recycled **63,133 tonnes** of hazardous waste from Malaysia operations, which is equivalent to **77%** of the total waste generated.

Nature and Biodiversity

- Established the **PETRONAS Position on Nature and Biodiversity** to improve oversight on our nature and biodiversity footprint at enterprise level and strengthen our commitment to achieve NZCE 2050.

Safety Management

- Reduced **30%** of Tier 1 Process Safety Events (PSE) with 81% reduction in Operational Integrity-related Loss of Primary Containment (LOPC) compared to 2021.
- A total of **1,209** participants trained in Generative Culture in 2022.

Human Rights

- **100%** completion of Human Rights compliance assessment for 22 contractors identified with high Human Rights exposure based on set criteria.
- **100%** grievance cases were closed in 2022.
- **81%** of employees completed Human Rights Management e-learning module.

Employee Attraction, Retention and Development

- Recorded **5,210** new hires.
- Employees spent an average of **39.1 hours** on training.
- **RM264 million** invested in training and development.

Health and Well-being

- **33 MIND-A-CARE facilitators and 169 MIND-A-CARE ambassadors** were trained through an in-house programme for early detection and intervention of psychosocial risk factors.
- Upskilled **885 leaders** on **psychological safety** and ways to create a psychosocially safe work environment.
- Achieved **99.8%** primary COVID-19 vaccine uptake and booster uptake.
- **282 employees** engaged in the Employee Assistance Programme (EAP), where **70%** found the counselling received to be effective.

Corporate Governance

- Established extensive Board onboarding programme for new Directors with the aim that Board members can make meaningful contribution in the Company's approach to sustainability and roadmap.
- Broadened the Board's engagement and oversight of sustainability-related matters.

Anti-Bribery and Corruption

- PETRONAS' Executive Leadership Team signed the "Ikrar Bebas Rasuah", or Corruption-Free-Pledge to demonstrate Top-level commitment to the 'TRUST' principle of adequate procedure as one of the defenses against Corporate Liability.
- Published the **PETRONAS Organisational Anti-Corruption Plan 2022-2023** to strengthen commitment to zero tolerance for corruption in the pursuit of a corruption-free organisation.

Lower Carbon and Energy Transition Business

- Achieved **1.6 GW** of global renewable energy capacity in operations and under development.
- Signed **13 Memoranda of Understanding (MoUs)** for hydrogen collaborations with international partners and customers and delivered first cargo of low carbon ammonia from Malaysia to Thailand.
- More than **300** charge points for EVs were delivered for Malaysia and India.

Economic Contribution

- **RM93.1 billion** contributed to the Federal Government of Malaysia and state governments.
- Invested **RM579 million** in technology delivery and research and development (R&D).
- More than **RM174.5 million** invested in the PETRONAS Education Sponsorship Programme (PESP) benefitted **587** students.
- PETRONAS Groupwide (including Yayasan PETRONAS) invested close to **RM900 million** for Social Impact activations.
- Invested over **RM30 million** to train **1,760** new graduates under Graduate Employability Enhancement Scheme (GEES) programme.

Sustainable Supply Chain

- Conducted two sustainability awareness programmes to strengthen vendors' awareness on our approach to sustainability, with a total of **725** participants.

Innovation and Technology

- Achieved the **first steel cut milestone** for our Offshore Low-Speed Wind Turbine project.
- Bio-MEG pilot plant became the first GPM360-certified green project.
- Conducted the **first field deployment** of floating solar photovoltaic (PV) technology for open sea application at Pulau Redang and Tok Jembal, Terengganu.
- **Collaborated with Tenaga Nasional Berhad (TNB)** to drive innovative solutions for decarbonisation.

Circular Economy

- PETRONAS approved the **Position on Single-Use Plastics**, which centres on our strategic focus on phasing out single-use plastics in our operations.
- PETRONAS Syntium Bag-In-Box (BIB) new 20-litre format reduced plastic quantity up to **92%** compared to traditional 20-litre packs.

Key Highlights

Awards and Recognitions

We are delighted with our numerous accomplishments over the year. These awards and accolades are a strong testimony to our continuous pursuit of excellence across the PETRONAS Group.



Branding and Marketing



Putra Brand Awards

PETRONAS Dagangan Berhad

- Automotive Fuel, Lubricant and Accessories – Gold

Universiti Teknologi PETRONAS

- Education and Learning – Gold



Universiti Teknologi PETRONAS (UTP) has been awarded its first Gold Award for Education and Learning category, recognising the university as the consumer's choice of brand for universities in higher education.



Communications

PR Awards 2022

Group Strategic Communications

- Best COVID-19 Related Campaign – Gold

Awarded PETRONAS with Gold in PR Awards 2022 for Best COVID-19 Related Campaign category titled *Tunggu Sekejap* Campaign. This campaign which ran during the Movement Control Order 2.0, aimed to inspire Malaysians to not give up and keep fighting on.





Corporate Reporting

National Annual Corporate Report Awards (NACRA) 2022

Petroleum Nasional Berhad (PETRONAS)

- Excellence Awards (Non-Listed Organisations) – *Platinum*

PETRONAS Dagangan Berhad

- Best Designed Annual Report – *Gold Special Awards*

PETRONAS Chemicals Group Berhad

- Best Sustainability Reporting – *Gold Special Awards*
- Best Designed Annual Report – *Platinum Special Awards*
- Companies with more than RM10 billion in Market Capitalisation – *Gold Excellence Awards*



PETRONAS and two of its public listed subsidiaries, PETRONAS Chemicals Group Berhad and PETRONAS Dagangan Berhad, won the Platinum and Gold awards from the National Annual Corporate Awards (NACRA) 2022 for excellence and improvement in corporate reporting. These awards acknowledge the quality of corporate reporting by PETRONAS and its listed subsidiaries.



Sustainability

The Edge Billion Ringgit Club (BRC) Awards 2022

PETRONAS Chemicals Group Berhad won the Best CR (Corporate Responsibility) Initiatives under Super Big Cap Companies More Than RM40 Billion Market Capitalisation for its Net Zero Carbon Emissions (NZCE) roadmap, which aligns with PETRONAS' pathway to NZCE 2050.



PETRONAS Chemicals Group Berhad

- Super Big Cap Companies More Than RM40 Billion Market Capitalisation – *Best CR Initiatives*

CSR China Education Award

PETRONAS China was honoured with three awards in CSR China Education Award; for a series of activities in 2022 targeting the youth. This is a strong recognition for PETRONAS' CSR efforts in China towards encouraging young minds to embrace a net zero carbon future through creative thinking and self-expression.



PETRONAS China

- CSR China SDG Special Award
- CSR China Public Recognition Special Award
- CSR China TOP100 Rank

Key Highlights

Awards and Recognitions



Governance

12th Institutional Investor Corporate Awards 2022

PETRONAS Dagangan Berhad

- Best Senior Management Investor Relations (IR) Support – 1st Place
- Most Consistent Dividend Policy – 1st Place

PETRONAS Gas Berhad

- Most Organised Investor Relations – 2nd Place
- Most Consistent Dividend Policy – 3rd Place
- Best Strategic CSR – 3rd Place



PETRONAS Chemicals Group Berhad

- Best Annual Report in Malaysia – Winner
- Strongest Adherence to Corporate Governance – 1st Place



Talent and Capability

Malaysia's 100 Leading Graduate Employers Awards

Group Human Resource Management

- Graduate Employer of the Year – Winner
- Energy, Oil and Gas, Utilities – Winner



GRADUAN Brand Awards

Group Human Resource Management

- Malaysia's Most Preferred Employers 2022 – Top 5
- Energy category – Winner

2022 Egypt Petroleum Show (EGYPS)

Project Delivery and Technology

- Nex-Gen Female of the Year Award (Irene Lock Sow Mei) – Winner



Asian Downstream Summit

Group Digital

- Young Engineer of the Year – Lee Kian Seng

International Project Management Association (IPMA) Malaysian Individual Achievement Award 2022



Project Delivery and Technology

- Project Manager of the Year – Goh Hwei Hou



Technology and Innovation

Malaysia Technology Excellence Awards (MTEA) 2022

Project Delivery and Technology

- AI – Oil and Gas Category: PETRONAS Machinery Monitoring and Prescriptive Diagnostics – *Winner*
- Analytics – Engineering Category: PETRONAS Intelligent Substations – *Winner*
- Digital – Oil and Gas Category: Pipeline Engineering Solution – *Winner*

Gas

- Winner Information Management – *Oil and Gas* Category: GO Dashboard – *Winner*

Project Delivery and Technology

- Analytics – Oil and Gas Category: Digital Twin – *Winner*



Brandon Hall Group Technology Excellence Awards

Group HR and PETRONAS Leadership Centre

Gold

- Best Advance in Learning Management Measurement/ Business Impact Tools
- Best Advance in Online Coaching Tools

Silver

- Best Advance in Emerging Learning Technology
- Best Advance in Social Learning Technology
- Best Advance in Learning Management Technology (LMT)
- Best Advance in Unique Learning Technology

Asian Experience Awards 2022



Upstream

Won the Malaysia Digital Experience of the Year – Oil and Gas for its one-stop integrated pipeline integrity management system, Integrated Pipeline Integrity Assurance Solutions (i-PIMS).

Asian Oil and Gas Awards

Group Digital

- Data Initiative of the Year
- Digital Transformation Initiative of the Year
- Innovation Technology Initiative of the Year

Alpha LNG Award Accenture V360

Malaysia LNG Sdn Bhd

- Alpha LNG – *Digital*

Asian Downstream Summit



Group Digital

- Downstream Project of the Year: Project ARIES

Event and Conference Highlights

In 2022, we actively engaged with local and international stakeholders. A number of events provided an avenue for sharing knowledge and ideas, enabling us to contribute towards the progress of both the industry and the nation. Our participation in these events also helped us gain a better understanding of how we can do more in harnessing our abilities to address the energy needs of the future.

Prime Minister's Visit to PETRONAS Twin Towers

13 January 2022

The 9th Prime Minister of Malaysia, Dato' Sri Ismail Sabri Yaakob visited the PETRONAS Twin Towers, where we showcased our business operations and contributions to the nation. Presentations included the challenges of energy transition, developments in the local Oil and Gas Services and Equipment (OGSE) sector, digitalisation of oil and gas operations, human capital development and Social Impact contributions.



Jan

Feb

Mar

May



Government-Linked Companies (GLCs) Open Day 2022

11-13 March 2022

The GLC Open Day was an opportunity for the public to gain information on job prospects, scholarships and other relevant information about PETRONAS. GLCs play an important role in supporting the nation's socio-economic development.

CERAWEEK 2022

7-11 March 2022

We participated as a Strategic Partner and Agora Partner in the conference, enhancing our position as a thought leader advocating views of Asia with insightful sharings by our leadership team.



International Petroleum Technology Conference (IPTC) 2022

21-23 February 2022

The IPTC was held in Riyadh, Saudi Arabia. We participated as an exhibition sponsor. Our Executive Vice President and Chief Executive Officer, Upstream, Datuk Adif Zulkifli, delivered the keynote address during the opening ceremony and participated in the panel session.



Offshore Technology Conference (OTC) Asia 2022

22-25 March 2022

We were the Principal Sponsor for OTC Asia 2022 where we continued strengthening our relationship and played a leading role with industry peers. Our President and Group Chief Executive Officer (GCEO), Datuk Tengku Muhammad Taufik, delivered the keynote address during the opening ceremony.



World Gas Conference

17-28 May 2022

Our President and GCEO Datuk Tengku Muhammad Taufik and Chief Operating Officer and Executive Vice President and Chief Executive Officer, Gas, Adnan Zainol Abidin led our delegation at WGC to participate and strengthen ties with partners in South Korea and the region.



World Economic Forum (WEF)

22-26 May 2022

President and GCEO, Datuk Tengku Muhammad Taufik attended the World Economic Forum Annual Meeting 2022 in Davos, where heads of state and government, CEOs and other leaders convene in dialogue on the most pressing global issues. He was also a panelist for the Strategic Outlook on ASEAN, which touched on strengthening regional integration for shared prosperity and energy security as well as the investment opportunities ASEAN has to offer.



Oil and Gas Asia (OGA) X Malaysia Oil and Gas Services Exhibition and Conference (MOGSEC) 2022

13-15 September 2022

President and GCEO officially launched OGA X MOGSEC which was held alongside the inaugural Petrochemicals Sustainability Conference. We were also the corporate partners for the conference.

International Greentech and Eco Products Exhibition and Conference (IGEM) 2022

12-14 October 2022

PETRONAS signed two new agreements with technology partners to accelerate the adoption of green tech and support the development of Malaysia's electric vehicle infrastructure.



International Project Management Conference (IPMC) 2022

12-13 December 2022

More than 1,800 participants from across the globe attended the first in-person IPMC 2022. In his welcome address, PETRONAS Senior Vice President of Project Delivery and Technology (PD&T) Datuk Bacho Pulong reiterated the role of project leaders as flagbearers of sustainable development. The event was jointly launched by the Secretary-General, Ministry of Works, Malaysia, Dato' Wira Wan Ahmad Uzir and PETRONAS President and GCEO, Datuk Tengku Muhammad Taufik and IPMC 2022 Chairman, Noor Ilias Mohammad Idris.



May

Sep

Oct

Nov

Dec

Gentari Launch

15 September 2022

Gentari Sdn Bhd (Gentari) was established to accelerate the adoption and commercialisation of clean energy in a just and sustainable manner. It focuses on delivering integrated net zero solutions and capturing opportunities across the electron value chain to help customers achieve zero emissions. The launch was officiated by the 9th Prime Minister of Malaysia.



Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) 2022

31 November-3 December 2022



President and GCEO, Datuk Tengku Muhammad Taufik, spoke at the conference on the topic 'The New Business and Energy Portfolio Model: Managing Geopolitical Uncertainty and the Energy Transition.'

Executive Vice President and CEO, Upstream, Datuk Adif Zulkifli and Vice President and Chief Sustainability Officer, Charlotte Wolff-Bye, respectively spoke on Asia Pacific's journey towards net zero and the important role circular economy will play in the drive to decarbonise the economy.



Majlis Pelancaran Dasar Tenaga Baharu (NEP) 2022-2040

19 September 2022

We participated as an exhibitor at the launch of Malaysia's NEP. Our booth was visited by the 9th Prime Minister of Malaysia who was escorted by our Chairman, Tan Sri Dato' Mohd Bakke Salleh.

Business Snapshots



Upstream

Our Upstream business explores and develops hydrocarbon resources and operates oil and gas production assets in Malaysia and over 20 countries. PETRONAS, through Malaysia Petroleum Management (MPM), is the country's oil and gas industry shaper and investment enabler that spearheads the growth and development of the nation's oil and gas industry.

We continue to strengthen our Upstream performance by delivering focused exploration, efficient development of discovered resources and value-driven operations underpinned by a strong focus on Health, Safety and Environment (HSE) and integrity. We continue to adopt digitalisation and technology to deliver business excellence.

We will continue to decarbonise our operations. In 2022, we reduced our greenhouse gas (GHG) emissions by 14.4 per cent. We also pursued solutions such as carbon capture and storage (CCS), as evidenced by achieving Final Investment Decision (FID) for the Kasawari CO₂ Sequestration project, to support PETRONAS' Net Zero Carbon Emissions by 2050 (NZCE 2050) Pathway.



Gas

The Gas business is a one-stop centre for lower carbon energy solutions, providing secure natural gas supply to customers in Malaysia and abroad through our integrated value chain. As a leading provider of natural gas and Liquefied Natural Gas (LNG), we are focused on sustaining world class operational excellence to maximise value from existing assets, pursue new projects and supply modes. This will allow us to create new markets and continue fulfilling the growing energy needs from power and non-power customers.

We are decarbonising our production footprint and delivering innovative solutions for customers.

With natural gas well-positioned as the transition fuel to shift towards a lower carbon economy, we will continue to take deliberate steps in strengthening customer-centricity, operational and commercial excellence, human capital and culture development as well as digital and technological innovations. This will be done in pursuit of realising our growth and NZCE 2050 Pathway, while supporting the energy security of our customers.



Downstream

The Downstream business focuses on enhancing the value of our energy resources, transforming them into high quality, value-added products that are distributed to over 90 markets worldwide. Our operations consist of refining, marketing and trading crude oil and petroleum products, manufacturing and marketing petrochemical products including derivatives and specialty chemicals.

With an extensive retail network of more than 1,000 PETRONAS stations in Malaysia, we offer high-quality fluids and lubricants as well as innovative non-fuel offerings such as Setel and Kedai Mesra in 800 locations to make our customers' lives simpler and better. We also own and operate more than 40 Café Mesra that are also available beyond PETRONAS retail locations, offering premium quality coffee and pastries for customers on-the-go.

We are expanding our Downstream business by growing in the cleaner energy space with biofuels, circular economy, LNG bunkering as well as next generation fluids with PETRONAS Iona Range and installation of charging facilities at our PETRONAS stations for Electric Vehicles (EV) in line with our NZCE 2050 Pathway to meet the growing demand for lower carbon energy.



Project Delivery and Technology

Project Delivery and Technology (PD&T) division serves as PETRONAS' Centre of Excellence (CoE). We shape and support the Group's growth strategies and realise our NZCE 2050 Pathway. We do this through best-in-class project delivery, extensive research and development in technology, technical expertise and novel digital solutions.

We continue safeguarding, shaping as well as advancing solutions and positioning future ventures. We are leveraging data as an asset, digital as an accelerator and technology as a differentiator. We strive for progress in decarbonisation, value creation and business expansion through a well-established and expanding innovation ecosystem to go beyond hydrocarbons.



Gentari

PETRONAS is committed to playing a key role in the energy transition. We are investing in decarbonising our operations to achieve our NZCE 2050 Pathway as well as growing our energy offerings as part of our New Business. To this end, Gentari was established to pursue opportunities in the energy transition.

Gentari offers cleaner energy solutions through three initial core offerings – renewable energy, hydrogen and green mobility, forming a portfolio of solutions cutting across the electron value chain. In the long term, Gentari aims to be an integrated clean energy solutions provider, creating greater value, connecting businesses and accelerating the journey to net zero.



Other Businesses

Our core businesses are complemented by other businesses, comprising primarily the maritime and logistics segment (MISC Berhad or MISC); and the property segment (KLCCP Stapled Group), comprising KLCC Property Holdings Berhad and KLCC REIT, constituting 32 per cent of the Malaysian REIT industry, is a subsidiary of PETRONAS that owns and manages top-quality assets.

Maritime and Logistics

MISC is a global leader in energy-related maritime solutions, boasting over 50 years of experience and a modern fleet of over 100 owned and chartered vessels. Our vessels consist of LNG and Ethane carriers, Petroleum and Product vessels, Floating Production System (FPS) and LNG Floating Storage Units (FSUs), with a total capacity of over 13 million dead weight tonnage (dwt).

Property

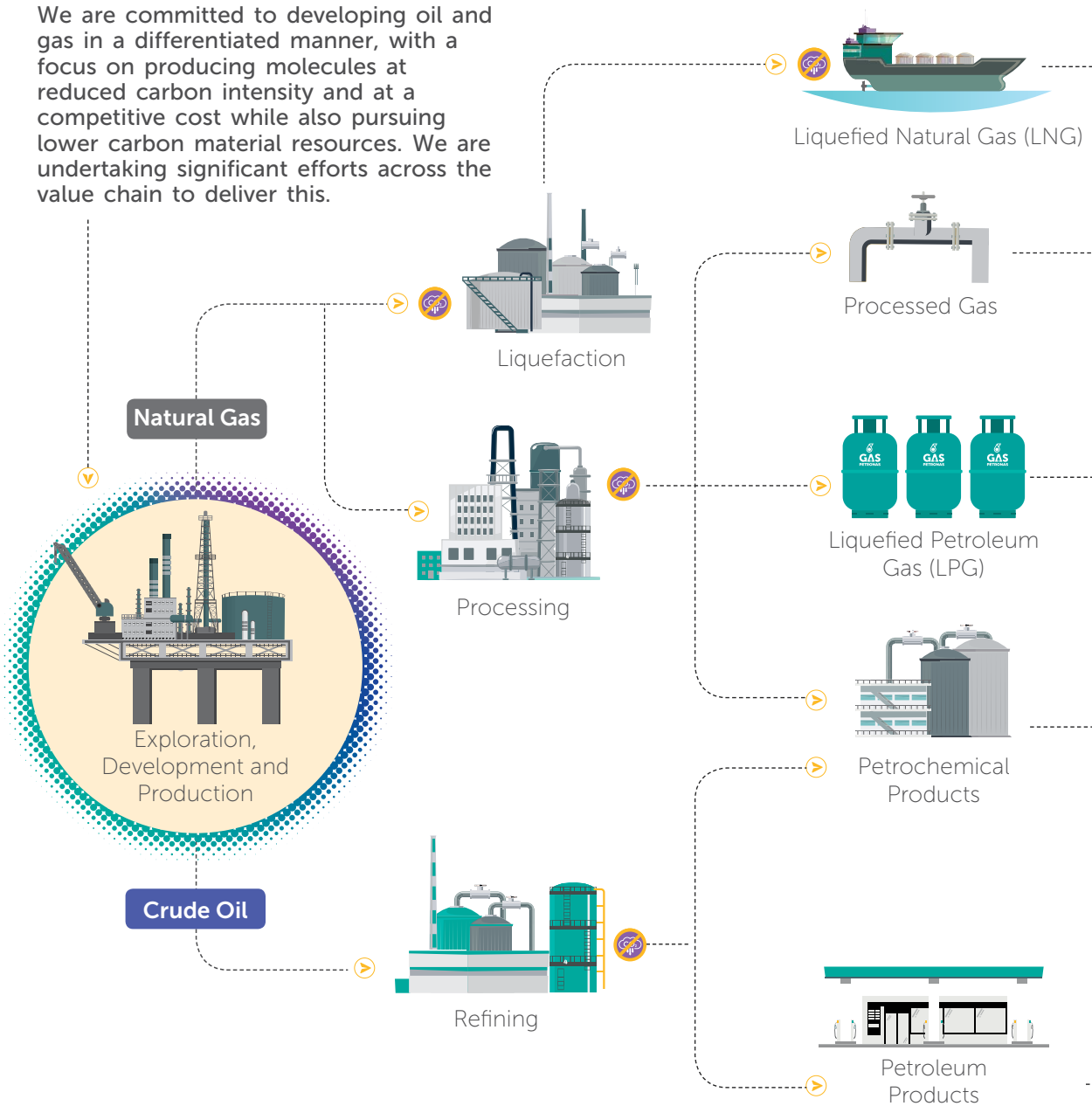
KLCCP Stapled Group's iconic and high quality assets generate additional revenue streams for PETRONAS and help diversify its business portfolio beyond oil and gas. KLCCP Stapled Group is also charting the course towards sustainability, moving its properties in alignment with PETRONAS' NZCE 2050 Pathway.

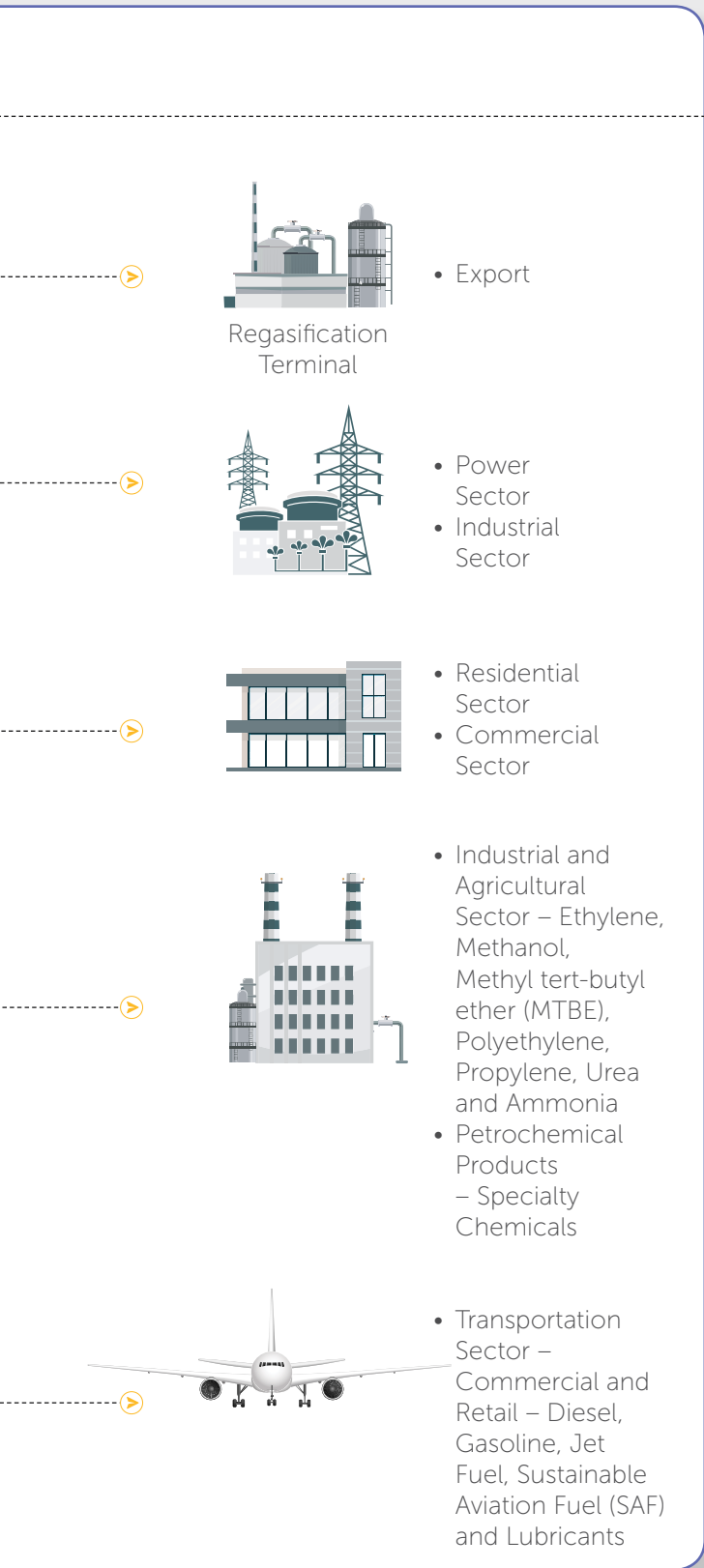
Our Integrated Value Chain

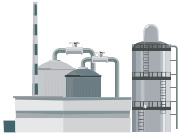
Core Portfolio



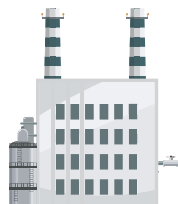



We are committed to developing oil and gas in a differentiated manner, with a focus on producing molecules at reduced carbon intensity and at a competitive cost while also pursuing lower carbon material resources. We are undertaking significant efforts across the value chain to deliver this.








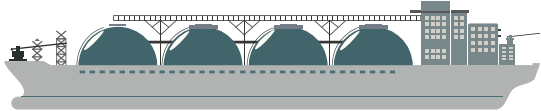
- 
 - Export

Regasification Terminal
- 
 - Power Sector
 - Industrial Sector
- 
 - Residential Sector
 - Commercial Sector
- 
 - Industrial and Agricultural Sector – Ethylene, Methanol, Methyl tert-butyl ether (MTBE), Polyethylene, Propylene, Urea and Ammonia
 - Petrochemical Products – Specialty Chemicals
- 
 - Transportation Sector – Commercial and Retail – Diesel, Gasoline, Jet Fuel, Sustainable Aviation Fuel (SAF) and Lubricants

Clean Energy Solutions

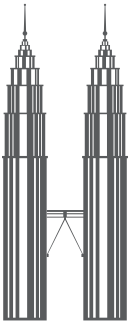
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 - Renewable Energy
- 
 - Hydrogen
- 
 - Green Mobility

Other Businesses



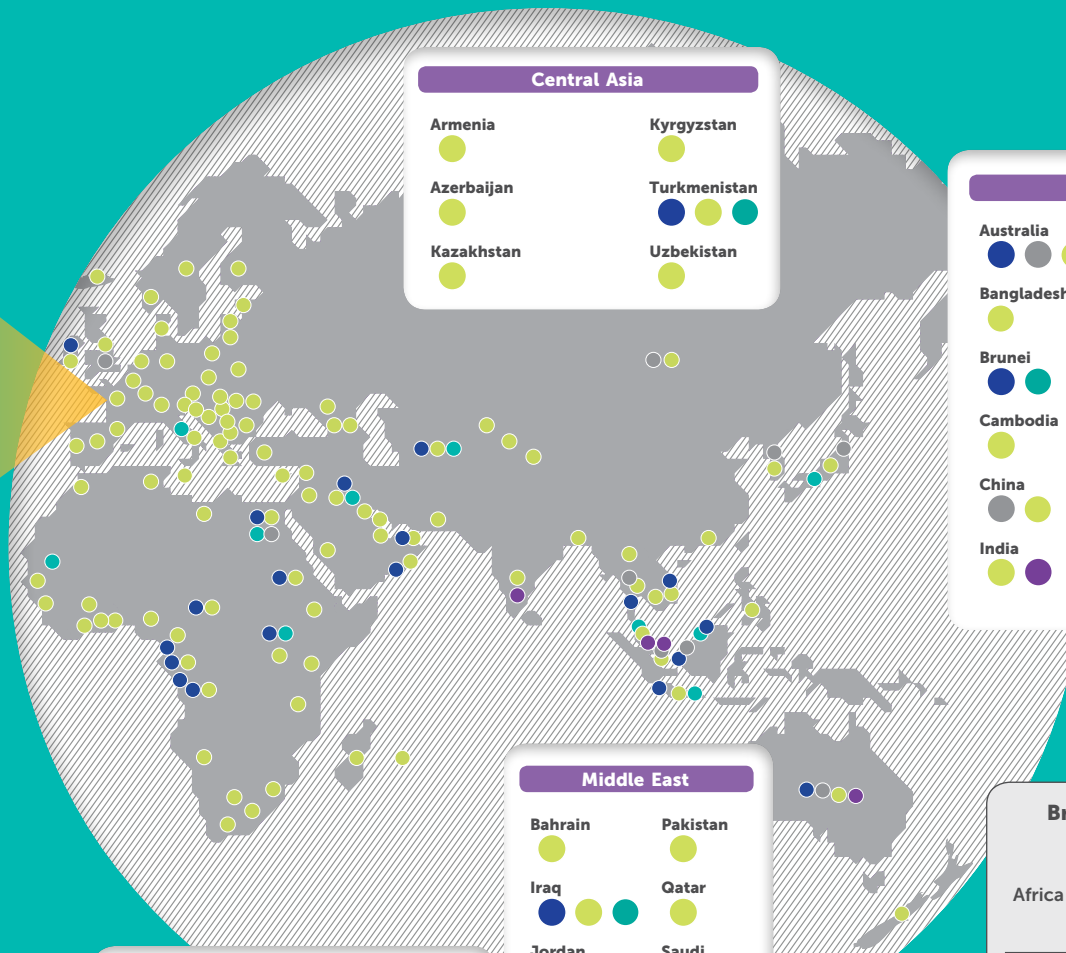
Maritime and Logistics

With a modern fleet of more than 100 owned and chartered vessels, MISC stands as a global leader in providing energy-related maritime solutions. Our broad spectrum of services include offshore floating solutions, energy shipping, marine repair and conversion, engineering and construction, integrated marine services, as well as port management and maritime education and training, making us a one-stop solution provider for our customers.



Property

Located in the heart of Kuala Lumpur City Centre, KLCC is Malaysia's largest real estate investment trust (REIT) that manages a portfolio of high-quality assets including KLCCP and KLCC REIT. Our focus is on growing our property portfolio across all segments, from office and retail to hotel and management services, ensuring that we continue to provide superior value to our investors and tenants.



Central Asia

- Armenia
- Azerbaijan
- Kazakhstan
- Kyrgyzstan
- Turkmenistan
- Uzbekistan

Asia Pacific

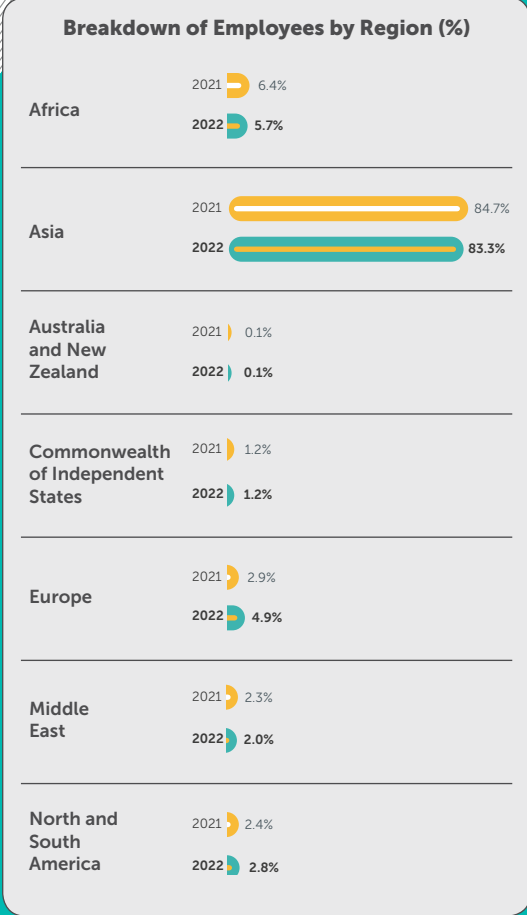
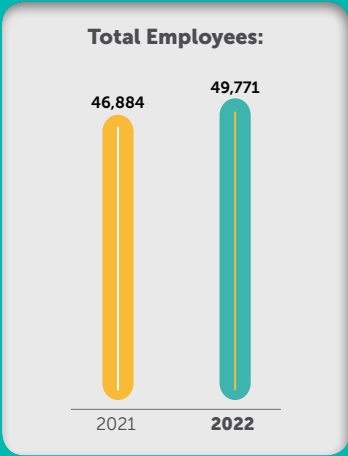
- Australia
- Bangladesh
- Brunei
- Cambodia
- China
- India
- Indonesia
- Japan
- Macau
- Malaysia
- Malaysia-Thailand Joint Development Area
- Myanmar
- New Zealand
- Philippines
- Singapore
- South Korea
- Thailand
- Vietnam

Middle East

- Bahrain
- Iraq
- Jordan
- Kuwait
- Lebanon
- Oman
- Pakistan
- Qatar
- Saudi Arabia
- Turkiye
- United Arab Emirates

Africa

- Angola
- Botswana
- Burkina Faso
- Cameroon
- Chad
- Congo Brazzaville
- Cote d'Ivoire
- Egypt
- Eswatini
- Ethiopia
- Gabon
- Ghana
- Guinea
- Kenya
- Lesotho
- Libya
- Madagascar
- Mauritania
- Mauritius
- Morocco
- Namibia
- Nigeria
- Senegal
- South Africa
- South Sudan
- Sudan
- Tanzania
- Togo
- Tunisia
- Uganda



Corporate Structure

Wholly-owned Subsidiaries (237)

PETRONAS Carigali Sdn Bhd

- PETRONAS Carigali Overseas Sdn Bhd
 - PETRONAS Carigali Nigeria Limited *(in the process of winding-up)*
 - PC Randugunting Ltd
 - PETRONAS Carigali (Ketapang) Ltd
 - PETRONAS Carigali (West Galagah Kambuna) Ltd
 - PETRONAS Carigali (Surumana) Ltd
 - PETRONAS Carigali White Nile (5B) Ltd
 - PETRONAS Carigali (Australia) Pty Ltd

- PC JDA Limited

- E&P Venture Solutions Co. Sdn Bhd

- E&P Malaysia Venture Sdn Bhd

- Vestigo Petroleum Sdn Bhd

PETRONAS Assets Sdn Bhd

- Petrofibre Network (M) Sdn Bhd
- PETRONAS Digital Sdn Bhd

PETRONAS Hartabina Sdn Bhd

- PRBF Holdings Corporation Sdn Bhd
 - PRBF Properties Sdn Bhd

PETRONAS Trading Corporation Sendirian Berhad

- PETCO Trading (UK) Limited
- PETCO Trading Labuan Company Ltd
- PETCO Trading DMCC
- P.T. PETRONAS Niaga Indonesia *(in the process of winding-up)*

PETRONAS Technical Services Sdn Bhd

- PTSSB DMCC (Iraq branch) *(in process of closure)*
- PETRONAS Technology Ventures Sdn Bhd
 - PTV International Ventures Ltd
 - Virtus IP Sdn Bhd
- PETRONAS Global Technical Solutions Sdn Bhd

OGP Technical Services Sdn Bhd *(in the process of winding up/liquidation)*



Partly-Owned Subsidiaries (112)

Associate Companies (59)

- Kebabangan Petroleum Operating Co. Sdn Bhd (40%)
- PCPP Operating Company Sdn Bhd (40%)

- Carigali Hess Operating Co. Sdn Bhd (50%)
- Carigali-PTTEPI Operating Co. Sdn Bhd (50%)

- Ophir Production Sdn Bhd (20%)

Corporate Structure

Wholly-owned Subsidiaries (237)

PETRONAS International Corporation Ltd

- PETRONAS Carigali Myanmar Inc.
- PETRONAS Carigali (Turkmenistan) Sdn Bhd
- MITCO Labuan Co. Limited (MLCL)
 - ↳ PCM Chemical India Private Limited (PCMC IPL)*
- PETRONAS Carigali Nile Ltd
- PICL (Egypt) Corporation Ltd
 - ↳ WDDM Energy Ltd
- Nada Properties Co. Ltd
- PC Muriah Ltd
- PC (Myanmar) Holdings Limited (99%) – (99% held by PICL & 1% held by PCOSB)
 - ↳ PC Myanmar (Hong Kong) Limited (99%) – (99% held by PCMHL & 1% held by PICL)
- PETRONAS Carigali Myanmar III Inc.
- PETRONAS Carigali (Jabung) Ltd
- PICL Marketing Thailand Ltd
- Myanmar PETRONAS Trading Company Limited *(in the process of winding-up)*
- PETRONAS (Thailand) Co. Ltd
- PC Vietnam Limited
- PC Mauritania I Pty Ltd
- PC Mauritania II B.V.
- PETRONAS Philippines Inc.
- Argentinean Pipeline Holding Company S.A *(in the process of winding up/liquidation)*
- PETRONAS Australia Pty Ltd (PAPL)
 - ↳ PAPL Services Pty Ltd
 - ↳ PAPL (Upstream) Pty Ltd
 - ↳ PAPL (Upstream II) Pty Ltd
 - ↳ PAPL (Downstream) Pty Ltd
- Labuan Energy Corporation Limited
 - ↳ PSE Ireland Limited
 - ↳ LEC Ireland Employment Limited
- PETRONAS LNG Sdn Bhd
 - ↳ PETRONAS Energy (India) Private Limited (99%) – (1% held by PETRONAS LNG Ltd 1%)
 - ↳ PETRONAS LNG (UK) Ltd
 - ↳ PETRONAS LNG Ltd
 - ↳ PETRONAS Energy Trading Limited
 - ↳ LNG Investments Europe Ltd

Note

* (99.99% owned by MLCL and 0.01% by PETRONAS Chemicals Marketing Sdn Bhd)

Partly-Owned Subsidiaries (112)

Associate Companies (59)

→ SUDD Petroleum Operating Co. Ltd **(67.875%)**

→ Transasia Pipeline Company Pty Ltd **(35%)**
 ↳ PT Transportasi Gas Indonesia **(40%)**

→ Petrodar Operating Company Ltd **(40%)**
 → Greater Nile Petroleum Operating Company **(30%)**
 → DAR Petroleum Operating Co. Ltd **(40%)**
 → Greater Pioneer Operating Co. Ltd **(30%)**

→ Egyptian LNG Co. S.A.E **(35.5%)**
 → Burullus Gas Company S.A.E **(25%)**
 → Idku Natural Gas Liquefaction Company S.A.E **(38%)**
 → El Beherah Natural Gas Liquefaction Company S.A.E **(35.5%)**
 → Egyptian Operating Company for Natural Liquefaction Project S.A.E **(35.5%)**

→ PP Oil & Gas Indonesia Holding Ltd **(50%)**

→ Lam Son Joint Operating Company **(50%)**
(in the process of winding-up)

→ Japan Malaysia LNG Co. Ltd **(93%)**

Corporate Structure

Wholly-owned Subsidiaries (237)

PETRONAS International Corporation Ltd (Cont'd)

- ↳ PETRONAS (E&P) Overseas Ventures Sdn Bhd (PEPOV)
 - ↳ PETRONAS Iraq Garraf Ltd
 - ↳ Natuna 1 B.V.
 - ↳ PETRONAS Carigali Canada B.V. (PCCBV)
 - ↳ PETRONAS Carigali International E&P B.V. (PCIEPBV)
 - ↳ PETRONAS Carigali Iraq Holding B.V.
 - ↳ PETRONAS Brasil E&P Limitada (99%, PCOSB 1%)
 - ↳ PETRONAS Angola E&P Ltd
 - ↳ Garraf Technical Services Ltd
 - ↳ PETRONAS Azerbaijan Upstream Sdn Bhd
 - ↳ PC Kualakurun Ltd
 - ↳ PC North Madura II Ltd
 - ↳ PETRONAS Carigali Chad Exploration & Production Inc
 - ↳ PC Senegal Ltd
 - ↳ Petroleum Manpower Services Mexico S.A. de C.V. (PMSM)
 - ↳ PC Sakakemang B.V.
 - ↳ PC Gambia Ltd
 - ↳ PETRONAS Petroleo Brasil Limitada (90%) – (10% held by PCIEPBV)
 - ↳ PC Oman Ventures Ltd
 - ↳ Petroleum Manpower Support Services Mexico S.A de .C.V.
 - ↳ PETRONAS Carigali International Sdn Bhd
 - ↳ PETRONAS Gebang Indonesia B.V.
 - ↳ PETRONAS Andaman III Indonesia B.V.
 - ↳ PETRONAS West Papua IV Indonesia B.V.
 - ↳ PETRONAS Aru Indonesia B.V.
 - ↳ PETRONAS North Ketapang Sdn Bhd
 - ↳ PETRONAS Abu Dhabi Sdn Bhd
 - ↳ PC Madura Ltd
 - ↳ PETRONAS Carigali Brunei Ltd

PETRONAS Lubricants International Sdn Bhd

- ↳ PLI (Netherlands) B.V.
 - ↳ PLI Italy SPA
- ↳ PETRONAS International Marketing (Thailand) Co. Ltd – (99.95% held by PLISB, 0.05% held by PETRONAS Lubricants China Co, Ltd and 0.05% held by PLI Netherlands B.V.)
- ↳ PETRONAS Base Oil (M) Sdn Bhd
- ↳ PETRONAS Lubricants Africa Ltd
 - ↳ PETRONAS Lubricants (India) Private Limited – (99.99% held by PETRONAS Lubricants Africa Ltd & 0.000011% holds by PETRONAS Trading Co. Ltd)
 - ↳ PLAL DMCC
- ↳ PETRONAS Lubricants China Company Limited
 - ↳ PETRONAS Lubricants International (China) Co. Ltd
 - ↳ PETRONAS Marketing (China) Co. Ltd
- ↳ PT PLI Indonesia (99.98%) – (0.02 held by PLI (Netherlands) B.V.)
- ↳ PLI Australia Pty. Limited

Partly-Owned Subsidiaries (112)

Associate Companies (59)

→ Guangxi Beihai Yuchai Petronas High Quality Lub Co. Ltd (50%)
- 50% held by Guangxi Yuchai Machinery Group Co. Ltd

Corporate Structure

Wholly-owned Subsidiaries (237)

PETRONAS International Power Corporation B.V.

- ↳ Amplus Energy Solutions Pte Ltd
 - ↳ Amplus Energy Solution FZE
 - ↳ Amplus Energy Solutions (Thailand) Co. Ltd
 - ↳ Amplus Energy Solutions Private Limited
 - ↳ Amplus Athena Energy Private Limited
 - ↳ Amplus Helios Private Limited
 - ↳ Amplus Iru Private Limited
 - ↳ Amplus Vidyut Power Private Limited
 - ↳ Amplus Beat Energy Private Limited
 - ↳ Amplus Active Private Limited
 - ↳ Amplus Uttar Private Limited
 - ↳ Amplus EON Private Limited
 - ↳ Amplus Sunlight Private Limited
 - ↳ Amplus Centaur Solar Private Limited
 - ↳ Amplus Phoenix Energy Private Limited
 - ↳ Amplus Ampere Private Limited
 - ↳ Amplus IIFA Solar Private Limited
 - ↳ Amplus Alpha Solar Private Limited
 - ↳ Amplus Solar Shakti Private Limited
 - ↳ Amplus Solar Power Private Limited
 - ↳ Amplus Solar Solutions Private Limited
 - ↳ Amplus Andhra Power Private Limited
 - ↳ Amplus Power Solutions Private Limited
 - ↳ Amplus KN Solar Power Private Limited
 - ↳ Amplus KN One Private Limited
 - ↳ Amplus Management Services Private Limited
 - ↳ Grian Energy Private Limited
 - ↳ Amplus Sun Solutions Private Limited
 - ↳ Amplus Ages Private Limited
 - ↳ Amplus Solar Power MH Private Limited
 - ↳ Amplus Costal Power Private Limited (65%)
 - ↳ Nay Energy Private Limited (74%)
 - ↳ Amplus RJ Solar Private Limited
 - ↳ Sunroot Energy Private Limited
 - ↳ Amplus Green Power Private Limited (70%)
 - ↳ Amplus Dakshin Private Limited (74%)
 - ↳ Amplus Poorva Private Limited (70%)
 - ↳ Amplus Shams Private Limited
 - ↳ OneVolt Energy Private Limited
 - ↳ Solbridge Energy Private Limited (69.50%)
 - ↳ Amplus Green One Power Private Limited
 - ↳ Amplus Power Supply Private Limited
 - ↳ Amplus Tumkur Solar Energy One Private Limited
 - ↳ Amplus Pavagada Solar Energy Two Private Limited
 - ↳ Amplus Venus Private Limited

Gentari Renewables Sdn Bhd (formerly known as PETRONAS Power Sdn Bhd)

- ↳ PETRONAS International Power Corporation (Mauritius) Ltd

Partly-Owned Subsidiaries (112)

Associate Companies (59)

→ Vanda RE Pte Ltd (25%)

→ Voltage Renewables Sdn Bhd (70%)
→ NE Suria Satu Sdn Bhd (80%)

→ Eastern Sabah Power Consortium Sdn Bhd (30%)
(In the process of winding up)

Corporate Structure

Wholly-owned Subsidiaries (237)

Note:

- * Although PGB has more than 50% ownership, PGB treats these companies as joint ventures in accordance with Malaysian Financial Reporting Standard 10
- # Listed on Bursa Malaysia
- ## Equity Interest held directly and indirectly by PETRONAS
- #### Joint ventures

Partly-Owned Subsidiaries (112)

Associate Companies (59)

#PETRONAS Chemicals Group Berhad (64.35%)

- PETRONAS Chemicals International Holdings Sdn Bhd
(Formerly known as PETRONAS Chemicals Marketing Sdn Bhd)
 - PETRONAS Chemicals Marketing (Labuan) Ltd
 - PCM (Thailand) Company Limited **(99.99%)***
 - PCM (China) Co. Ltd
 - PT PCM Kimia Indonesia **(99.67%)****
- PETRONAS Chemicals International B.V.
- PETRONAS Chemicals Derivatives Sdn Bhd
- PETRONAS Chemicals Polyethylene Sdn Bhd
- Vinyl Chloride (Malaysia) Sdn Bhd
- PETRONAS Chemicals Methanol Sdn Bhd
- PETRONAS Chemicals Glycols Sdn Bhd
- PETRONAS Chemicals Ammonia Sdn Bhd
- Polypropylene Malaysia Sdn Bhd
- Kertih Port Sdn Bhd
- PETRONAS Chemicals Fertiliser Kedah Sdn Bhd
- PETRONAS Chemicals MTBE Sdn Bhd
- PETRONAS Chemicals Isononanol Sdn Bhd
- PRPC Elastomers Sdn Bhd
- PETRONAS Chemicals Olefins Sdn Bhd
- PETRONAS Chemicals LDPE Sdn Bhd
- PETRONAS Chemicals Fertiliser Sabah Sdn Bhd
- PETRONAS Chemicals Ethylene Sdn Bhd **(87.5%)**
- Asean Bintulu Fertilizer Sdn Bhd **(63.47%)**
- PETRONAS Chemicals Aromatics Sdn Bhd

- BASF PETRONAS Chemicals Sdn Bhd **(40%)**
- Kertih Terminals Sdn Bhd **(40%)**
- Idemitsu SM (Malaysia) Sdn Bhd **(30%)**
- Ineos PCG Acetyls Sdn Bhd **(30%)**
- PCG PCC Oxyalkylates Sdn Bhd **(50%)**
- Pengerang Petrochemical Company Sdn Bhd **(50%)**
- LG PETRONAS Chemicals Malaysia Sdn Bhd **(49%)**
- Pengerang Intermediate Chemicals Sdn Bhd **(49%)**
- PT Anugerah Kimia Indonesia **(49%)**

→ Malaysian NPK Fertilizer Sdn Bhd **(20%)**

#PETRONAS Gas Berhad (PGB) (51%)

- Regas Terminal (Sg. Udang) Sdn Bhd
- Regas Terminal (Lahad Datu) Sdn Bhd **(90%)**
- Regas Terminal (Pengerang) Sdn Bhd
- Pengerang LNG (Two) Sdn Bhd **(65%)**
- ####Kimanis Power Sdn Bhd **(60%)***
- ####Kimanis O&M Sdn Bhd **(60%)***
- ####Pengerang Gas Solutions Sdn Bhd **(51%)***

→ ####Industrial Gases Solutions Sdn Bhd **(50%)**

#PETRONAS Dagangan Berhad (63.94%)

- PETRONAS Lubricants Marketing (Malaysia) Sdn Bhd
- Setel Ventures Sdn Bhd
- PETRONAS Aviation Sdn Bhd
- PDB (Netherlands) B.V.
- Mesra Retail & Cafe Sdn Bhd
- Setel Express Sdn Bhd
- Setel Pay Sdn Bhd
- Kuala Lumpur Aviation Fuelling System Sdn Bhd **(65%)**

- IOT Management Sdn Bhd **(20%)**
- Tanjung Manis Oil Terminal Management Sdn Bhd **(20%)**
- ####P S Pipeline Sendirian Berhad **(50%)**
- ####P S Terminal Sendirian Berhad **(50%)**
- ####Petrosniaga Sdn Bhd **(49%)**
- ####United Fuel Company Limited Liability Company **(40%)**

#MISC Berhad (51%)

→ #Bintulu Port Holdings Berhad **(28.52%)**
(28.52% held by PETRONAS & 2.31% held by MISC Berhad)

Corporate Structure

Wholly-owned Subsidiaries (237)

KLCC (Holdings) Sdn Bhd

PETRONAS Research Sdn Bhd

Primesourcing International Sdn Bhd

Institute of Technology PETRONAS Sdn Bhd

↳ UTP FutureTech Sdn Bhd

PETRONAS Penapisan (Terengganu) Sdn Bhd

PETRONAS Penapisan (Melaka) Sdn Bhd

Malaysian Refining Company Sdn Bhd

PETRONAS Management Training Sdn Bhd

PETROSAINS Sdn Bhd

Sanzbury Stead Sdn Bhd

PETRONAS Capital Limited

PETRONAS Global Sukuk Limited - (shares hold by PETRONAS' nominees since 07.07.2009)

PETRONAS NGV Sdn Bhd

Energas Insurance (L) Limited

PETRONAS Technical Training Sdn Bhd

PETRONAS Floating LNG 1 (L) Ltd

PETRONAS Floating LNG 2 (L) Ltd

PETRONAS Refinery and Petrochemical Corporation Sdn Bhd

↳ PRPC Utilities and Facilities Sdn Bhd

↳ PRPC Water Sdn Bhd

↳ Pengerang Power Sdn Bhd

↳ PRPC SPJ Sdn Bhd

PETRONAS Marketing International Sdn Bhd

PETRONAS Energy & Gas Trading Sdn Bhd

Gentari Sdn Bhd (formerly known as PETRONAS Gas & New Energy Sdn Bhd)

↳ Gentari Hydrogen Sdn Bhd (formerly known as PETRONAS Hydrogen Sdn Bhd)

↳ Gentari Green Mobility Sdn Bhd

↳ Gentari International Renewables Pte Ltd

↳ Gentari Renewables India Pte Ltd

↳ Gentari Renewables Australia Pty Ltd

Listed on Bursa Malaysia

Note: This chart excludes subsidiary companies of MISC Berhad, KLCC (Holdings) Sdn Bhd and Engen Limited

Partly-Owned Subsidiaries (112)

- Malaysia LNG Sdn Bhd (90%)
- Malaysia LNG Dua Sdn Bhd (80%)
- Malaysia LNG Tiga Sdn Bhd (60%)
- PETRONAS LNG 9 Sdn Bhd (60%)
- #KLCC Property Holdings Berhad## (66.94%)

Engen Limited (74%) - (PETRONAS has reached an agreement to sell its entire interest in Engen Limited in February 2023, transaction is currently pending regulatory approvals and fulfilment of conditions precedent)

Associate Companies (59)

Indianoil PETRONAS Private Limited (50%)

Trans Thai-Malaysia (Thailand) Ltd (50%)

↳ TTM Sukuk Berhad

Trans Thai-Malaysia (Malaysia) Sdn Bhd (50%)

↳ Pengerang Refining Company Sdn Bhd (50%)

↳ Pengerang Terminals (Two) Sdn Bhd (40%)

↳ SPT Services Sdn Bhd (30%)

↳ EV Connection Sdn Bhd (30%)

Other Companies (11)

Shell MDS (Malaysia) Sdn Bhd (7%)

Labuan Reinsurance (L) Ltd (10%)

Tenaga Nasional Berhad (0.40%)

Through PETRONAS Gas Berhad

Gas Malaysia Berhad (14.8%)

Through PETRONAS Technology Ventures Sdn Bhd

LanzaTech New Zealand Limited (3.6%)

Through Petrofibre Network (M) Sdn Bhd

Fiberail Sdn Bhd (10%)

Through PETRONAS Marketing International Sdn Bhd

Vivo Energy Plc (3.679%)

Through PTV International Ventures Sdn Bhd

Braintree Technologies Sdn Bhd (12%)

SOLS Energy Sdn Bhd (8%)

Iraya Energies Sdn Bhd (16.7%)

Through Kuala Dagang Sdn Bhd

Malaysian Jet Services Sdn Bhd (50%)

- effective interests in assets