

# PETRONAS Energy Transition Strategy

Employees on routine walkabout at Malaysian Refining Company in Melaka, Malaysia.



**The PETRONAS Energy Transition Strategy charts our path forward in a rapidly evolving energy landscape shaped by the ongoing imperatives of security, affordability and sustainability. We leverage our integrated portfolio, capital discipline and execution capability to support our ability to deliver energy that is reliable, affordable and progressively lower-carbon.**

Our Energy Transition Strategy is anchored on **three strategic pillars**: strengthening and delivering our Core Business, scaling New Business and pursuing a credible Pathway to Net Zero by 2050.

Collectively, these pillars position us to deliver reliable energy solutions with lower emissions that adapt to evolving customer needs, diversify our portfolio through disciplined expansion into lower-carbon businesses, and embed decarbonisation and sustainability considerations into how we allocate capital and make strategic decisions.



## Core Business

### More Energy, Less Emissions

#### What It Means

Core Business centres on delivering an integrated hydrocarbon value chain, with a disciplined focus on progressively lowering carbon intensity across operations. It encompasses our Upstream, Gas and Maritime, and Downstream segments, spanning both domestic and international footprints.

As a substantial component of our portfolio, Core Business remains a primary cash generator, sustaining current commitments while providing the financial capacity to fund New Business growth and progress our decarbonisation agenda.

We are strengthening our Core Business through more differentiated business and partnership models, and increasing capital recycling to unlock the next wave of growth and drive value creation.

In Malaysia, Core Business continues to serve as a critical economic pillar, catalysing foreign direct investment and supporting the resilience of the local Oil and Gas Services and Equipment ecosystem.

Decarbonisation and sustainability considerations are increasingly embedded into investment and operational decisions, ensuring the systematic reduction of carbon intensity across our Core Business portfolio.

The **three primary areas** of PETRONAS Core Business are:

#### Core Business

##### Upstream

- Our Upstream strategy focuses on delivering advantaged barrels safely at low cost and lower emissions, while strengthening long-term competitiveness by accelerating value delivery across the exploration, development and production life cycle.
- We prioritise disciplined portfolio management through high-grading and optimisation, faster maturation of resources and selective capital deployment to enhance resilience and value creation.
- Operational excellence remains a core pillar, anchored in fit-for-purpose design, standardised development models and disciplined execution, delivering safer, lower-cost and lower-emissions production through integrated planning and strong asset reliability.
- Advanced digital and data-driven capabilities are progressively embedded to improve decision quality, resource certainty and recovery outcomes.
- Safety, reliability and environmental responsibility are integral to how we operate. We continue to strengthen lower-emission practices across our Upstream activities, including emissions management and readiness for carbon capture and storage (CCS) solutions.
- We actively pursue strategic partnerships and technology collaborations to enable sustainable growth, strengthen competitiveness and build long-term resilience in a changing energy landscape.

##### Gas and Maritime

- Our Gas and Maritime business is evolving into a provider of integrated, more emission-efficient energy solutions, driven by a commitment to supply resilience, commercial agility and operational excellence. Anchored by a portfolio where gas comprises two-thirds of our mix, we are strategically positioned to play a key role in the global energy transition.
- We are expanding our supply base and penetrating new markets by balancing long-term asset-backed positions with flexible, asset-light arrangements. This ensures a competitive supply of lower-carbon liquefied natural gas (LNG) as a critical transition fuel for our customers globally.
- We deliver high-efficiency maritime services by deploying vessels with reduced emissions and optimising fleet utilisation, creating enterprise-wide synergies across the LNG value chain.
- Our offerings span the full spectrum, from infrastructure and processing to transportation and trading, supported by targeted decarbonisation initiatives that reinforce our commitment to a net-zero carbon future.

##### Downstream

- Our Downstream business refines, trades and markets crude oil, petroleum products and chemicals, including commodity and specialty chemicals, for domestic and international markets.
- We create and preserve value in retail, commercial and industrial segments across commodity cycles by leveraging operational excellence of integrated assets and deep market insights.
- We expand product offerings and solutions that evolve with market and customer needs, through strategic partnerships and differentiated business models, providing new value sources to Downstream.

#### What It Delivers

- Energy security by ensuring stable and reliable supply to domestic and international markets.
- Strong cash flows to fund dividends to shareholders and reinvestment into New Business and energy transition initiatives.
- A lower greenhouse gas intensity hydrocarbon portfolio, supporting long-term resilience and sustainability.

# PETRONAS Energy Transition Strategy



## New Business Capturing New Growth Opportunities

### What It Means

New Business represents our pursuit of portfolio diversification, guided by evolving customer needs and the transition towards a cleaner, lower-carbon and more sustainable energy system.

Our investments in New Business remain deliberate, selective and disciplined, with a clear focus on capital efficiency and value accretive outcomes.

Complementing our hydrocarbon-based solutions, New Business enables integrated lower-carbon solutions that address customer demand for energy security while meeting their carbon reduction and cost targets.

In doing so, New Business provides a hedge against earnings volatility arising from the inherent cyclical nature of oil and gas markets, helping to preserve overall portfolio resilience.

Today, PETRONAS is advancing **six New Business verticals**:

#### New Business

##### Renewable Energy

We pursue renewable energy growth with discipline, in selected countries with strong demand growth, activate best-practice funding structures that can deliver robust returns, emphasise renewable energy-hydrogen synergies and unlock value through long-duration energy storage.

##### Specialty Chemicals

We strengthen our specialty chemicals portfolio through continuous innovation and disciplined growth, with a differentiated approach from product to product, while gaining access to new capabilities, markets and geographies.

##### Bio-based Value Chain

We embark on bio-based solutioning aligned with evolving customer preferences, ensuring a sustainable value chain, leveraging strategic partnerships to accelerate market access and capability development.

##### Hydrogen

We undertake progressive growth in green hydrogen and ammonia projects, secure offtake to underpin investments, improve cost competitiveness and strengthen market positioning through partnerships and technology, balancing long-term hydrogen market potential and short-term challenges.

##### Green Mobility

We expand electric vehicle charging infrastructure, leveraging partnerships to support growing adoption of sustainable mobility solutions.

##### Carbon Capture and Storage

We are building a carbon capture and storage (CCS) ecosystem to position Malaysia as a regional hub, enabling decarbonisation across industries. By leveraging our subsurface expertise, existing infrastructure and strategic partnerships across the CCS value chain, we are developing scalable carbon management capabilities to address residual emissions that cannot be eliminated through operational efficiency alone.

### What It Delivers

- Diversification of revenue streams beyond traditional hydrocarbons.
- Integrated solutions to customers.
- Strengthens PETRONAS' position as an integrated energy company, supporting long-term growth.



## Net Zero Carbon Emissions

### Pathway to Net Zero

#### What It Means

We pursue our pathway to net zero carbon emissions (NZCE), aligned with our commitment to achieve NZCE by 2050, by embedding decarbonisation across our portfolio. Decarbonisation and sustainability considerations are increasingly integrated into investment and operational decisions, ensuring the systematic reduction of carbon intensity across our portfolio.

The energy transition is not linear. Over the past year, its pace has evolved in response to policy developments, cost dynamics and technological progress. As a result, today's transition is increasingly shaped by pragmatic and practical solutions that balance emissions reduction with energy security and affordability.

In this context, we adopt a disciplined and integrated approach that focuses on practical and scalable solutions, portfolio prioritisation and capital discipline to deliver measurable emissions reduction. This ensures our decarbonisation efforts remain responsible, credible and aligned with business realities.

Our decarbonisation efforts are driven by **four key abatement levers**, which form the foundation of our operational emissions reduction pathway:

#### Key Abatement Levers

##### Zero Routine Flaring and Venting

We commit to systematically eliminating routine flaring and venting across existing and new production sites in support of the World Bank's Zero Routine Flaring by 2030 initiative. This includes flare gas recovery, enhanced compressor capacity and the conversion of venting-to-flare systems - recovering otherwise-wasted gas, and reducing methane and carbon emissions from upstream operations.

##### Energy Efficiency

We drive energy efficiency across our operations through optimising asset performance, deploying digital solutions and implementing targeted process improvements to reduce greenhouse gas intensity. This includes enhancements in plant performance, heat recovery and equipment efficiency, enabling us to deliver more output with less energy.

##### Electrification

We electrify our operations, where feasible, with lower-carbon power through asset modification, infrastructure development and the integration of renewable energy, reducing direct emissions from on-site combustion.

##### Carbon Capture and Storage

We advance carbon capture and storage (CCS) solutions to capture carbon dioxide from identified high-emission assets and store it securely in geological formations. CCS supports the reduction of residual emissions that cannot currently be eliminated through operational efficiency, electrification or other abatement measures.

Beyond operational decarbonisation, our Net Zero Carbon Emissions by 2050 Pathway is supported by broader sustainability considerations, including the protection of nature and biodiversity, and respect for human rights. These priorities are addressed through our Sustainability Approach.

#### What It Delivers

- Reduction of operational emissions.
- Alignment with evolving regulatory and policy requirements.
- Strengthening access to transition finance and sustainable capital to support PETRONAS' long-term transformation.

# Value Creation Model

## PETRONAS Energy Transition Strategy



**Core Business**  
More Energy,  
Less Emissions



**New Business**  
Capturing  
New Growth  
Opportunities



**Net Zero Carbon Emissions**  
Pathway to  
Net Zero

Our Capitals	Inputs
<p><b>FC</b></p> <p><b>Financial Capital</b> Capital available to the Group to finance our operations, activities and investments in growth areas.</p>	<ul style="list-style-type: none"> <li>• <b>RM775.0 billion</b> in total assets.</li> </ul>
<p><b>MC</b></p> <p><b>Manufactured Capital</b> Assets and infrastructure that underpin our business.</p>	<ul style="list-style-type: none"> <li>• <b>RM283.9 billion</b> in property, plant and equipment.</li> </ul>
<p><b>HC</b></p> <p><b>Human Capital</b> Workforce that delivers on our strategy and long-term value.</p>	<ul style="list-style-type: none"> <li>• <b>RM439.0 million</b> of total investment in employee training.</li> </ul>
<p><b>IC</b></p> <p><b>Intellectual Capital</b> Proprietary technologies, solutions and organisational systems that deliver value and growth.</p>	<ul style="list-style-type: none"> <li>• <b>RM413.0 million</b> in technology investments.</li> </ul>
<p><b>NC</b></p> <p><b>Natural Capital</b> Manage impacts on land, water, air and biodiversity through responsible operations and resource use.</p>	<ul style="list-style-type: none"> <li>• Over <b>RM4.0 billion</b> directed to emissions reduction projects and cleaner energy solutions.</li> <li>• <b>7.92 billion</b> barrels of oil equivalent (boe) 2P Reserve.*</li> </ul> <p><b>Note:</b> * 2P Denotes the best estimate of Reserves. The sum of Proved plus Probable Reserves.</p>
<p><b>SRC</b></p> <p><b>Social and Relationship Capital</b> Our engagements and relationships with stakeholders, including government agencies, local communities, industry partners and customers.</p>	<ul style="list-style-type: none"> <li>• Contributed more than <b>RM500.0 million</b> worldwide on social impact programmes.</li> </ul>

**Activities**



Liquefaction



Processing

**Sustainability Approach**

**Creating Sustainable Value through Responsible Governance**



**Delivering Net Zero**



[Refer to Our Approach to Sustainability on pages 40 to 41 and Material Topics on pages 42 to 45.](#)

**Operating Landscape**

- Macroeconomic and Policy Realignment
- Energy Markets and Capital Discipline
- Oil Price Volatility
- Energy Transition and Climate Regulation
- Technology and Capability Evolution

[Refer to Operating Landscape on pages 22 to 25.](#)

➤ **Outputs and Outcomes**      ➤ **Trade-offs**      ➤ **Stakeholders**



Refining



Renewable Energy



Thriving with Nature



Fostering a Just Transition

**Key Risks**

- Market
- Financial Liquidity
- Legal and Regulatory
- Sustainability
- Health, Safety, Security and Environmental
- Geopolitical
- Hydrocarbon Reserves and Resources
- Technology
- Project Execution
- Human Capital

🔗 Refer to Risks Linked to Creating Value on pages 26 to 39.

**FC**

Sustaining profitability and growth to meet Malaysia's and customer markets' current and future energy needs through reinvestment, emissions reduction efforts and dividends.

- **RM45.4 billion** profit after tax.
- **RM32.0 billion** dividend to the government.

**MC**

Managing a resilient asset and infrastructure portfolio aligned with strategic goals for long-term productivity.

- **36.6 million** metric tonnes LNG sales.
- **10.5 million** metric tonnes of chemical sales volume.
- **209.4 million** barrels of petroleum products sales volume.

**HC**

Strengthening a skilled talent and succession pipeline.

- **49** learning hours per employee on average.

**IC**

Strengthening long-term resilience by investing in research and development, technology and new businesses.

- **19** intellectual property (IP) filed.
- **78** patents secured.

**NC**

Responsible resource use and ecosystem management to ensure operational continuity, compliance and long-term value.

- **2,423 thousand** barrels of oil equivalent (boe) per day crude oil, condensates and natural gas production.
- **1.0 million** tonnes of CO<sub>2</sub>e emissions reduced annually from 24 projects, with overall annual emissions decreasing by 0.3 per cent to 55.6 per cent.
- **62,828** tonnes total hazardous waste reduced, reused and recycled.
- **More than 40,000** mangrove saplings planted under the Blue Carbon Collective.

**SRC**

Supporting social progress through community projects.

- More than **2.5 million** lives reached through community initiatives.

- Continued investment in hydrocarbon resources supports energy security and current energy demand. However, where emissions cannot yet be fully abated, these investments may increase exposure to climate-related impacts and transition risks, reflecting the balance between sustaining Financial and Manufactured Capital while managing impacts on Natural Capital as lower-carbon energy solutions and business models continue to scale.

- Investments in Manufactured, Natural and Intellectual Capitals, ranging from emissions reduction technologies to capability building, require significant Financial Capital. While this may create short-term financial pressure, this balancing is important to secure future value and long-term resilience.

- Strengthening Intellectual and Human Capitals through talent development, innovation and knowledge-sharing may constrain Financial Capital in the short-term. However, these investments build future talent capabilities that enhance operational effectiveness, innovation and competitiveness while contributing to Malaysia's socio-economic progress.



# Our Operating Landscape

The operating landscape in 2025 reflected a world of slower growth, shifting policies and stricter regulations. Global economic growth moderated as elevated interest rates, heightened geopolitical tensions and widening trade fragmentation weighed on investment. This occurred even as energy demand continued to grow and oil and gas remained key in meeting the world's energy needs.

## Key Themes in 2025

● Macroeconomic and Policy Realignment

● Energy Markets and Capital Discipline

● Oil Price Volatility

● Energy Transition and Climate Regulation

● Technology and Capability Evolution

The year also saw markets going through increased volatility, intensifying challenges in portfolio planning in the oil and gas sector, which typically have long-term developments. This affected oil and gas service providers that rely on continuous project sanctioning.

This mix of pressure created an environment in which the world demanded more energy but with stronger governance and greater transparency to ensure lower emissions. For us, this meant navigating several transitions simultaneously: economic divergence, energy transition, regulatory tightening and technological change. All of these factors shaped how we planned, invested and operated throughout the year.

What Is Changing	What It Means for PETRONAS
<ul style="list-style-type: none"> <li>• Slower global growth.</li> <li>• Fiscal reform.</li> <li>• Carbon pricing preparation.</li> </ul>	<p>Shifts in demand, pricing dynamics and long-term cost structures.</p>
<ul style="list-style-type: none"> <li>• Oil and gas demand growth under current policies.</li> <li>• Slowing LNG demand growth in the long-term.</li> <li>• Pressure on chemicals margins.</li> </ul>	<p>Heightens need for cost leadership and portfolio discipline.</p>
<ul style="list-style-type: none"> <li>• Range-bound, volatile prices with oversupply risk.</li> </ul>	<p>Increases pressure on margins and investment selectivity.</p>
<ul style="list-style-type: none"> <li>• Climate disclosure shifting from voluntary to regulatory.</li> <li>• Carbon cost emerges.</li> </ul>	<p>Makes decarbonisation and data quality business-critical.</p>
<ul style="list-style-type: none"> <li>• AI, digitalisation and future-ready skills.</li> </ul>	<p>Enhances productivity upside and reskilling pressure.</p>

# Our Operating Landscape

## Macroeconomic and Policy Realignment

### Context and Trends

Global growth moderated as interest rates remained elevated relative to post-pandemic lows, despite being eased from its peak level. This was further compounded by geopolitical tensions and widening trade fragmentation. Taken together, these factors have slowed investments for 2025. The International Monetary Fund projected global growth of about 3.0 per cent to 3.2 per cent in 2025, with inflation easing but real rates remaining structurally higher than in the previous decade.

Malaysia's economy was resilient, with gross domestic product growth accelerating to 5.2 per cent in 2025, from 4.2 per cent a year earlier, supported by strong domestic consumption and favourable exports. The government advanced fuel subsidy rationalisation through the BUDI MADANI RON95 (BUDI95) programme and is prepared to introduce a carbon tax for emissions-intensive sectors. Malaysia also launched the National Sustainability Reporting Framework (NSRF), aligned with the International Financial Reporting Standards (IFRS) S1 and S2, with a stronger emphasis on assurance.

These developments raise cost exposure for high-emitting assets and may compress margins in upstream, gas and downstream businesses if efficiency and decarbonisation do not keep pace. They also lift compliance and assurance costs, influence domestic pricing and demand behaviour, while shaping investment certainty through evolving state-federal dynamics.

### Our Efforts

- Built carbon pricing assumptions into project economics and capital allocation.
- Intensify energy efficiency efforts in core asset and advocate industry imperatives to support the development of the Carbon Capture, Utilization and Storage (CCUS) Act 2025.
- Embedded IFRS S2-aligned disclosures across governance, strategy, risk, metrics and targets, and phased in independent assurance of greenhouse gas (GHG) emissions data.
- Refined our energy transition focus towards advantaged barrels, liquefied natural gas (LNG), carbon capture and storage (CCS) and new energy.

### Outlook

Regulatory complexity and disclosure demands will continue to rise. Carbon pricing and fuel subsidy reform will favour players with credible decarbonisation plans and low-cost supply.

## Energy Markets and Capital Discipline

### Context and Trends

Under current policies, global oil and gas demand could continue rising through 2050, with oil consumption increasing from about 100 million barrels per day in 2024 to around 105 million barrels per day by 2035, and potentially 113 million barrels per day by 2050. Fossil fuels still supply nearly four-fifths of global energy.

LNG supply is set to expand by about 50 per cent by 2030, driven by new projects in the United States, Qatar and Africa. Asia remains the main demand centre, but some markets showed softness and price sensitivity in 2025. Chemicals faced margin pressure from overcapacity in China and slower global growth.

These trends raise price and utilisation risk in gas projects and intensify margin pressure in chemicals, underscoring the need for sharper portfolio choices.

### Our Efforts

- Focused on low-cost, lower-carbon barrels and molecules, prioritising high-return, low unit-cost developments.
- Reinforced LNG competitiveness through cost control, reliability and integrated trading.
- High-graded the portfolio by rationalising lower-return assets and investing selectively in advantaged resources.
- Continued growth in specialty chemicals while progressively integrating with lower-carbon solutions.

### Outlook

Oil and gas will remain central to energy systems, especially in Asia, but growth demand will slow and competition will intensify. Success will depend on supplying cleaner molecules at competitive cost while building lower-carbon businesses.



Scan the QR code to view our PETRONAS Activity Outlook 2026 to 2028, which provides Malaysia's OGSE industry with insights into forecasted activities across our Upstream, Downstream, and Gas and Maritime businesses for the Malaysian operations.

### Oil Price Volatility

#### Context and Trends

Slowing economic expansion and trade fragmentation tempered oil demand growth. Outlooks show no clear peak in oil demand before 2035 under current policies, but short-term supply surpluses and capacity additions keep markets well supplied. Geopolitics, OPEC+ policy and United States shale responsiveness continue to drive volatility.

Lower average prices in the first half of 2025 reduced our revenue and profit compared with the prior year. Prolonged moderate prices compressed margins and raised the importance of disciplined capital allocation.

#### Our Efforts

- Applied conservative price assumptions in investment cases and stress-tested projects against downside scenarios.
- Phased capital expenditure (CAPEX) to protect balance sheet strength.
- Intensified cost efficiency, digitalisation and reliability initiatives to sustain margins at lower price levels.

#### Outlook

Prices will likely remain volatile, driven by geopolitical risk and OPEC+ policy, with supply tightness due to the current US-Israel war with Iran.

### Energy Transition and Climate Regulation

#### Context and Trends

Investment in renewables, CCS and hydrogen continued to rise, even as oil and gas demand grew under current policies. Climate reporting shifted from a voluntary practice to a regulatory expectation.

The International Sustainability Standards Board’s (ISSB) IFRS S1 and S2 took effect globally from 2024. Malaysia launched the NSRF, to be implemented in phases, and had announced plans to introduce a carbon tax in 2026, though the government has since indicated it will review the implementation timeline, while maintaining its long-term commitment to carbon pricing as part of the National Climate Change Bill and National Carbon Market Policy.

These shifts raise compliance expectations and place carbon costs directly into business decisions.

#### Our Efforts

- Embedded climate-considerations into governance, strategy, risk management and performance in line with IFRS S2.
- Strengthened emissions measurement, controls and assurance.
- Enhanced methane emissions measurement precision and reporting transparency to sustain the Oil and Gas Methane Partnership 2.0 Gold Standard.

#### Outlook

Disclosure demands will continue to tighten, favouring credible lower-carbon solutions.

### Technology and Capability Evolution

#### Context and Trends

Digital tools, data analytics and AI expanded their role in planning, maintenance and safety. Rapid growth in data centres increased electricity demand and may reinforce the role of gas in power generation. To remain competitive, our operating model and workforce capabilities must evolve rapidly to meet these shifting demands.

These forces reshape the mix of skills required and increase the value of digital capability in daily operations.

#### Our Efforts

- Invested in digital and technical skills across operations.
- Aligned planning to emerging demand patterns such as data centre-driven power needs.
- Implemented strategic transformation with reskilling programmes and people-centred transition measures.

#### Outlook

Technology will increasingly support safer and more reliable operations. Success will depend on our ability to rapidly deploy innovative solutions, supported by an agile workforce.

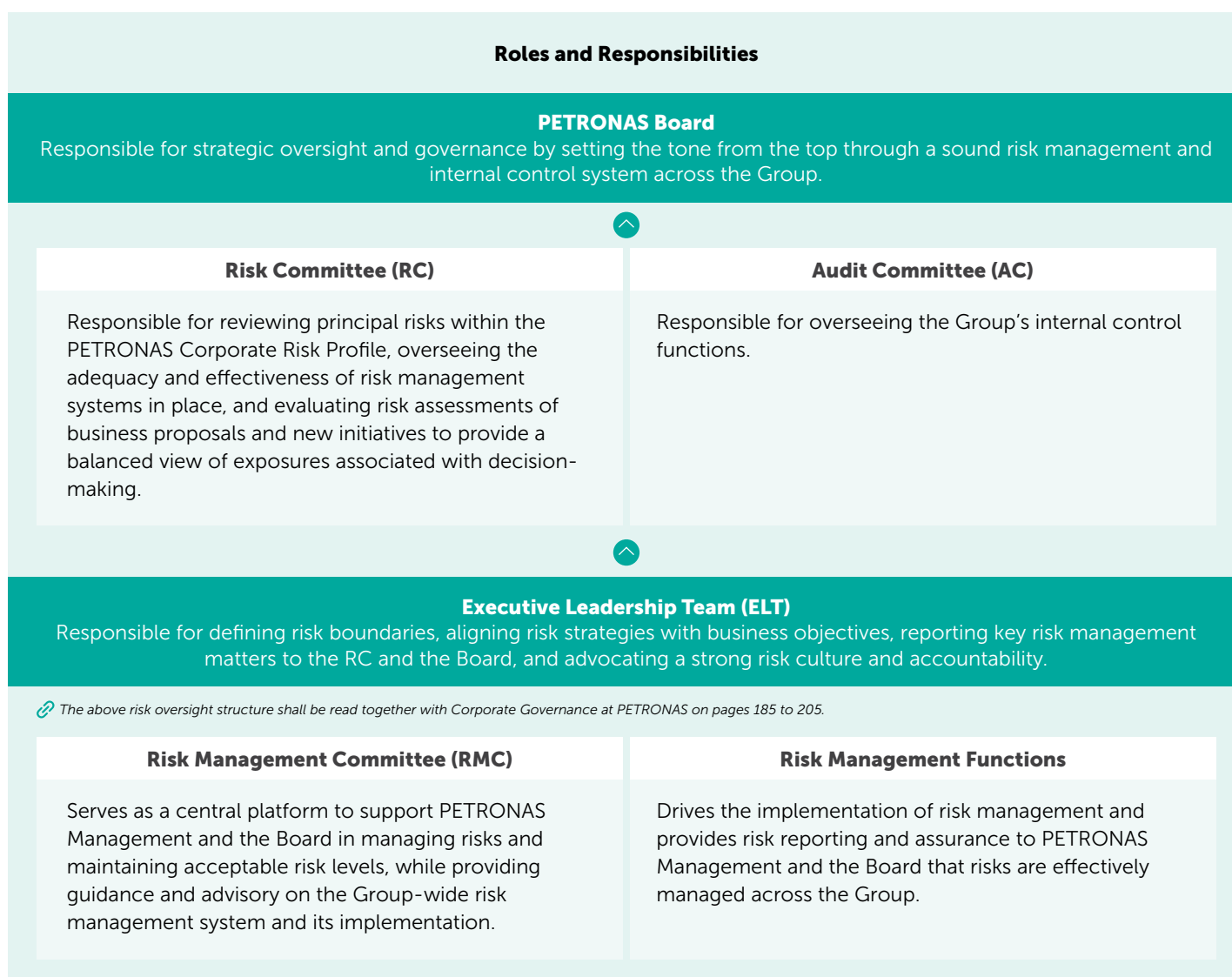
# Risks Linked to Creating Value

Operating across complex, evolving energy markets requires disciplined risk management to enable strategic execution and protect long-term value. We treat risks and opportunities as integral to value creation and embed risk considerations into strategic planning, capital allocation, operational decision-making and performance management. This integration strengthens foresight, supports timely responses to emerging challenges and informs the pursuit of opportunities aligned with our strategic priorities.

## Robust Risk Management Practices

We implement a robust risk management and internal control system across PETRONAS and our subsidiaries to manage risk exposure and unlock opportunities, safeguarding value and supporting sustainable value creation. The system provides reasonable assurance against material misstatements or losses and focuses on areas where risks create value for the business, enabling proactive and fit-for-purpose risk management across the Group.

The PETRONAS Board oversees the adequacy and effectiveness of the system, supported by the Risk Committee (RC), Audit Committee (AC) and Executive Leadership Team (ELT). For risk management specifically, the Risk Management Committee (RMC) and risk management functions drive implementation through an integrated approach to addressing risk, safeguarding organisational resilience.



## How We Manage Risks

The PETRONAS Risk Policy sets our Group-wide approach to risk management, driving the adoption of best practices and integrating risk considerations across value protection and value creation processes. This approach reinforces our commitment to achieving our business objectives, remaining agile in an evolving operating environment and safeguarding stakeholder interests.

Our PETRONAS Resiliency Model supports this policy by providing a cohesive and structured framework for managing risks effectively across the organisation. It is anchored on three core pillars of resilience: Enterprise Risk Management, Crisis Management and Business Continuity Management.

### PETRONAS Risk Policy and PETRONAS Resiliency Model

#### PETRONAS Risk Policy

- ▶ **PETRONAS is committed to becoming a risk-resilient organisation.**
- ▶ **PETRONAS shall continuously strive to implement:**
  - Risk management best practices to protect and create value within the set boundaries.
  - Risk-based decision-making by providing a balanced and holistic view of exposures to achieve business objectives.
- ▶ **Managing risk is everyone’s responsibility.**

#### PETRONAS Resiliency Model

- ▶ **Enterprise Risk Management**  
Structured and holistic approach to identify, assess, manage and monitor risks. The aim is to REDUCE the likelihood and impact of identified risks to enhance the organisation’s ability to achieve its strategic objectives.
- ▶ **Crisis Management**  
Comprehensive set of processes that aims to prepare the organisation to RESPOND and manage crises to protect people, environment, assets and reputation.
- ▶ **Business Continuity Management**  
Holistic management process that aims to build the capability of an organisation to RECOVER and continue delivering products or services at acceptable predefined levels following a prolonged disruptive incident.

# Risks Linked to Creating Value

## Enterprise Risk Management

Enterprise Risk Management (ERM) is a systematic process of identifying, assessing, treating, monitoring and reviewing risks. It enables us to reduce the likelihood of and/or mitigate the risks that may impact our business objectives through appropriate mitigations and effective risk control monitoring.

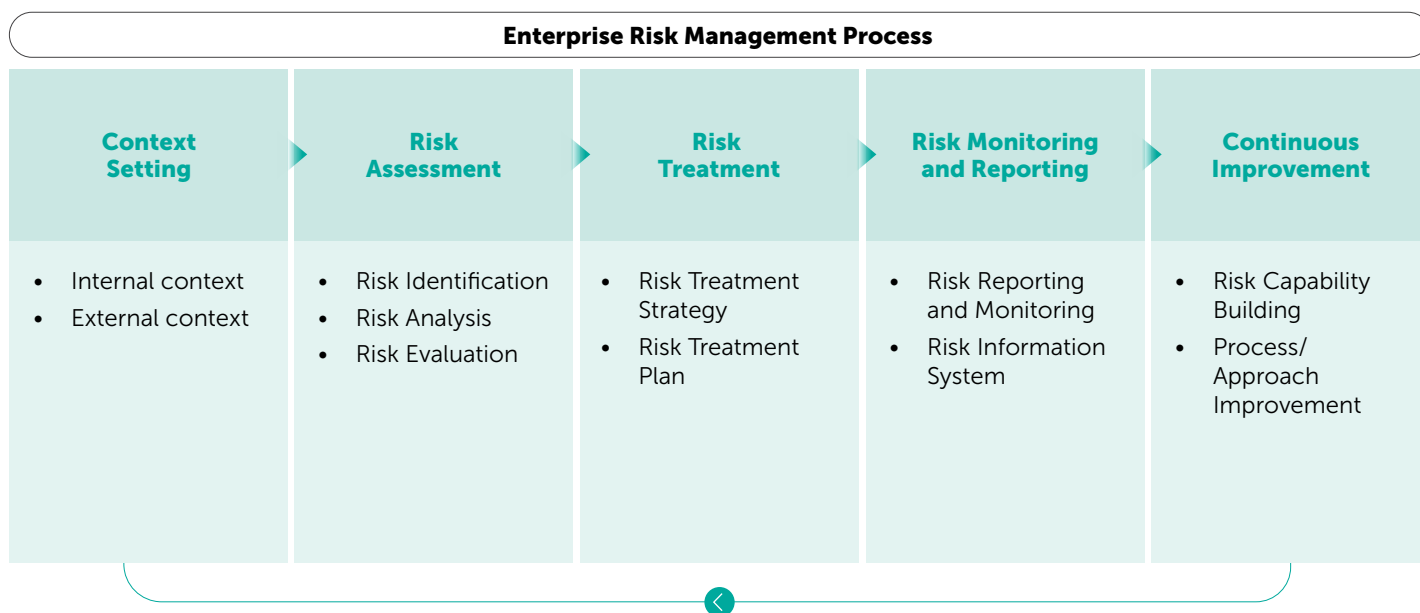
Our risk appetite guides strategic decisions, reflecting our position, propensity and willingness to accept and manage risks within tolerable limits across strategic, financial, operational and reputational areas, while complying with legal and regulatory requirements. The risk appetite for each area is determined by its respective tolerance and threshold levels.

Our risk profile reflects the Group’s principal risks at the enterprise level, assessed collectively to capture interdependencies and potential aggregated impacts across the portfolio. It also incorporates opportunities, providing a balanced view that supports strategic decision-making and sustainable value creation.

We continue to strengthen our efforts to build a risk-resilient organisation. Our risk profile, corresponding risk mitigations, key risk indicators and risk appetite are monitored and reported quarterly to the RMC, ELT, RC and the Board.

We also conduct risk assessments at key decision points to:

- Ensure decisions impacting our business operations and strategies are made with careful considerations of risk-reward trade-offs.
- Foster risk-reward discussions at relevant decision-making platforms and/or approving authorities.



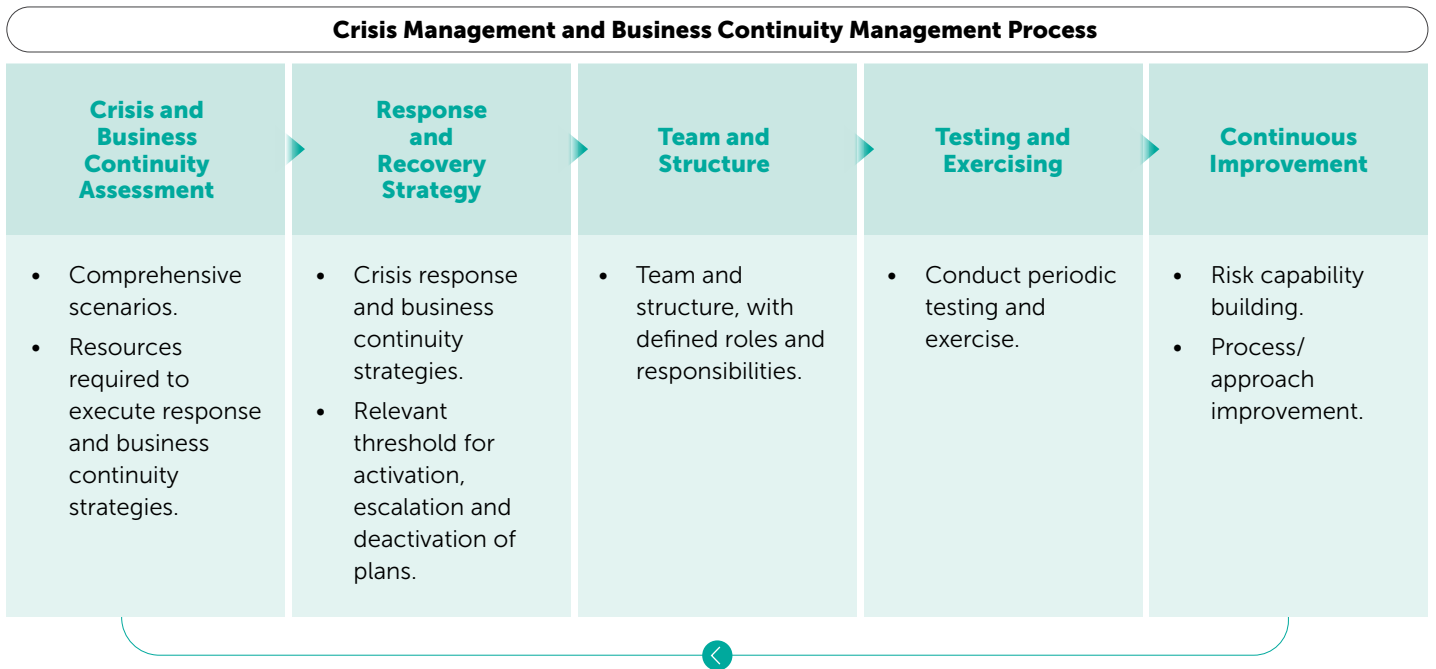
### Crisis Management and Business Continuity Management

Crisis Management and Business Continuity Management are integrated processes that prepare our operations to respond effectively to crises and recover from business disruptions.

Our Crisis Management adopts a three-tiered response protocol that clearly defines roles and responsibilities at each level: emergency site management, operating unit management and corporate. It ensures coordination and collaboration with internal and external response agencies and authorities. This structured approach enables us to respond promptly and effectively to crises that significantly impact normal operations, particularly in relation to people, environment, assets and reputation, that may result in significant business disruption.

Our Business Continuity Management focuses on strengthening our ability to recover and restore critical business functions, ensuring continuous delivery of products and services at predefined acceptable levels. This includes recovery from prolonged crises that severely deteriorate and disrupt business operations and services, enabling a swift return to acceptable business operations with minimal disruption to stakeholders.

We conduct periodic testing and exercises based on simulated crisis and business disruption scenarios identified in our crisis and business continuity plans. These exercises help ensure preparedness and that our response and recovery strategies remain robust and effective.



### Risk Management in 2025

We identify, assess and manage material risks that are crucial to our business and operations. These risks, outlined in the following pages, can influence strategic execution, operational performance and business continuity, both directly and indirectly. Our risk management approach supports informed decision-making and allows for timely responses to evolving internal and external developments.

# Risks Linked to Creating Value

## Material Topics



## Stakeholders



## Capitals



### MR Market Risk

#### What It Means

The Group's performance is influenced by market factors which impact global supply and demand dynamics for crude oil, gas and related products. These include geopolitical developments and macroeconomic headwinds in key economies during the year, such as the United States and China. Shifts in government policies and consumer preference towards cleaner and renewable energy sources and products may also heighten competition for conventional oil and gas products. These developments require us to continue diversifying our core business.

#### Impact on Value

- **Price and Demand Dynamics:** Geopolitical tensions and slower economic activity in key markets may weaken demand, leading to suppressed price levels for crude oil, gas and related products. This affects our financial performance and shareholder returns, as lower commodity prices directly reduce revenue and profit after tax, impacting overall shareholder value.
- **Currency Fluctuations:** Movements in major currencies, particularly fluctuations of the US Dollar against the Malaysian Ringgit, significantly affect our revenue, operating costs and capital investment requirements, for our USD-denominated revenue and cost structures.
- **Market Preference Shifts:** The increasing focus on climate change mitigation and the global shift towards lower-carbon solutions continue to influence customer preferences and intensify competition, placing pressure on returns across conventional oil and gas value chains.
- **Contractual and Counterparty Risks:** Commercial agreements pegged to commodity prices expose us to changes in market dynamics that may affect revenue, operating costs and counterparties' ability to fulfil contractual obligations, potentially constraining growth and business sustainability.
- **Asset Valuation and Impairment:** Prolonged low market prices may trigger asset revaluations or potential impairments, affecting balance sheet strength and long-term asset value.
- **Cash Flow and Investment Capacity:** Sustained price pressure may reduce operating cash flows, limiting our ability to fund growth initiatives and advance strategic investments.
- **Cost of Capital and Credit Standing:** Market volatility may impact our financial performance and credit rating, affecting borrowing costs and financial flexibility.

#### Impact on Capitals

- **Financial Capital:** Market volatility may disrupt steady returns, reduce cash inflows and challenge our ability to maintain adequate liquidity and credit rating thresholds.
- **Manufactured Capital:** Changing market conditions and lower prices may affect asset utilisation and lead us to delay or reprioritise capital projects, impacting long-term asset development.
- **Intellectual Capital:** Rapid technological advancements and evolving market dynamics may diminish the relevance or economic value of our existing intellectual capital.

- **Natural Capital:** Shifts in market outlook may render certain oil and gas investments or asset life extension initiatives economically unviable.

#### Mitigation Strategies

- Optimise resource allocation through regular strategic reviews, disciplined prioritisation and active portfolio management to remain competitive.
- Enable timely and proactive interventions by continuously reviewing portfolio composition, counterparty performance and market indicators.
- Protect value, margins and cash flows from adverse commodity price movements and foreign exchange fluctuations through active hedging strategies and diversified revenue streams.
- Apply prudent financial risk management guided by the PETRONAS Financial Policy and PETRONAS Financial Standards, supported by scenario planning and sensitivity analyses to assess impacts on liquidity and capital structure.
- Evaluate foreign exchange exposures for major capital projects at the investment decision stage to determine appropriate risk management approaches.
- Review risk appetite thresholds, including minimum commodity prices, cash balances and credit ratings, to enable timely corrective actions.
- Engage key stakeholders, including governments, banks, financiers, investors, partners and regulators, to strengthen strategic alignment, secure favourable terms and maintain operational flexibility.

#### Tactical Opportunities

- Capture trading value from volatility in commodity markets by leveraging favourable price movements to unlock additional value.
- Integrate environmental, social and governance (ESG)-linked products into our hedging and trading activities, supported by growing climate awareness and market demand for sustainable solutions.
- Diversify into new markets by capitalising on shifts in consumer preferences towards renewables, cleaner energy solutions and other ESG-related offerings.
- Leverage geopolitical developments to access new markets, alternative supply bases and strategic partnerships.
- Accelerate the adoption of digital, analytics and cost management technologies to manage price volatility and enhance value creation.

#### Risk Movements

In 2025, market risk remained elevated, with the operating environment significantly impacted by geopolitical tensions that amplified uncertainty and contributed to commodity price volatility, while supply chain challenges further compressed margins. Against this backdrop, PETRONAS as the national oil company leveraged the strength of our integrated value chain to generate and preserve value while ensuring energy security for the country, even as these external pressures intensify through disciplined capital allocation, operational and commercial excellence, structural cost optimisation and active portfolio high-grading. While the environment remains increasingly unpredictable and risks are heightened, our resilience and agility ensure we are well positioned to respond to emerging challenges and capitalise on new opportunities.

**Material Topics**



**Stakeholders**



**Capitals**



**FLR Financial Liquidity Risk**

**What It Means**

Our business activities require significant capital investments, adequate operating cash flows and timely access to external financing to support ongoing operations and long-term growth. These are influenced by factors such as volatile market conditions, global or regional financial stress events, emerging regulatory development and heightened stakeholder expectations.

**Impact on Value**

- **Affordability and Capital Availability:** Reduced cash generation, competing capital demands and suboptimal liquidity positions may limit business agility, constrain future growth and affect our ability to meet shareholder expectations, including national agenda.
- **Credit Rating and Borrowing:** Potential credit rating downgrades due to weaker liquidity positions and non-compliance with ESG and climate change requirements could increase our borrowing costs.
- **CAPEX Concentration and Portfolio Balance:** Consistent capital allocation towards conventional oil and gas, new businesses and emissions reduction initiatives, amid liquidity pressures may affect our financial sustainability and the pace of technology and AI deployment.
- **Regulatory and Jurisdictional Headwinds:** Regulatory changes and geopolitical conflicts, the implementation of carbon pricing mechanisms and jurisdictional shifts may impact our operational execution and cash flows.

**Impact on Capitals**

- **Financial Capital:** Liquidity constraints influenced by regulatory changes, market conditions, stakeholder expectations and business challenges may affect our cash flow stability, indebtedness limits, access to financing and ability to sustain long-term value creation.

**Mitigation Strategies**

- Strengthen execution discipline by implementing prudent financial risk management in line with PETRONAS Financial Policy and PETRONAS Financial Standards, reinforcing cash discipline and maintaining sufficient liquidity buffers through the following measures:
  - i. Conduct continuous monitoring of our liquidity position and enable timely interventions to address potential liquidity gaps, including scenario planning.
  - ii. Protect value and margins against adverse price movements by undertaking hedging activities and utilising approved financial derivatives, such as forwards and swap contracts, to enhance predictability of financial results and mitigate downside risks.
  - iii. Ensure readiness for external funding and borrowing through timely and comprehensive reporting and continuous engagement with stakeholders, including governments, banks, financiers and investors.
  - iv. Reinforce management oversight of liquidity strategies through established governance processes, with regular liquidity monitoring relative to risk appetite thresholds, including asset-liability management.
  - v. Enhance our readiness and responsiveness in liquidity crisis management and business continuity measures in line with the established Liquidity Risk Contingency Protocol.

**Risk Movements**

During 2025, financial liquidity risk indicators remained elevated amid persistent market volatility, evolving stakeholder requirements and business challenges, notwithstanding the effective implementation of existing controls and mitigations, including strict capital discipline and robust portfolio management. We maintain supplementary measures, such as liquidity buffers and internal borrowings, to address potential gaps and uphold financial stability where needed to support resilience.

# Risks Linked to Creating Value

## Material Topics



## Stakeholders



## Capitals



### LR Legal and Regulatory Risk

#### What It Means

We operate within a complex and evolving legal and regulatory landscape, both domestically and globally. Critical laws such as those related to ethics and integrity, bribery and corruption, sanctions and export control, competition and data privacy often carry enterprise-wide and extra territorial effects. Evolving laws and regulations affect continuity of operations and our licence to operate. Heightened sustainability expectations and increasing mandatory disclosure standards continue to increase compliance demands. This dynamic and constantly changing legal and regulatory landscape exposes us to claims and legal proceedings, which could affect operations, financial performance and reputation.

#### Impact on Value

- **Litigation and Commercial Disputes:** Adverse outcomes from these disputes may adversely affect our operations, financial condition and reputation, with potential implications for stakeholder relationships, investor confidence and market access.
- **Emerging and Evolving Regulations:** Dynamic evolution of laws and regulations, as well as jurisdiction-specific and challenging regulatory landscapes may impact operational certainty and increase compliance requirements involving critical laws.
- **Policy Uncertainties and Oversight:** Shifts in political, regulatory and socio-economic environments, together with changes in enforcement posture, may create policy uncertainty that requires us to adapt rapidly, undertake additional assurance and strengthen advocacy efforts to maintain operational continuity and value creation.

#### Impact on Capitals

- **Financial Capital:** Legal or regulatory breaches may result in financial penalties, limit our access to financing and increase the overall cost of doing business.
- **Social and Relationship Capital:** Legal and regulatory non-compliance may erode trust among governments, partners, investors and communities, potentially impacting our licence to operate and the effectiveness of our stakeholder engagement and advocacy.
- **Human Capital:** Non-compliance with legal requirements can undermine our position as a preferred employer, increasing the risk of talent attrition and adversely affecting our ability to attract talent.

#### Mitigation Strategies

- Strengthen our legal and regulatory governance frameworks, such as the PETRONAS Code of Conduct and Business Ethics, PETRONAS Legal Compliance Framework and the PETRONAS Contractors Code of Conduct on Human Rights, through robust implementation and periodic enhancements to ensure consistent, Group-wide assurance and accountability.
- Operate a secure, enterprise-wide whistleblowing and centralised complaint management system to foster accountability, promote ethical conduct and support timely corrective actions.
- Enhance workforce awareness and competency through regular training and ongoing communication on applicable laws, regulations and critical compliance areas such as anti-corruption, sanctions and export controls, competition, data protection and human rights.
- Monitor and review legal, regulatory and integrity compliance against approved risk appetite thresholds, enabling proactive interventions to address gaps and prevent escalation.
- Execute targeted action plans with defined milestones to realise our Net Zero Carbon Emissions (NZCE) by 2050 Pathway targets and operationalise human rights commitments, while maintaining regulatory oversight and engaging in external advocacy to shape emerging sustainability requirements.
- Engage constructively with regulators on coexisting frameworks as well as sustainability-related regulations to shape the ecosystem, secure clarity for operations and streamline compliance.
- Obtain clarity through legal process to ensure operational certainty and continuity.
- Continuous dialogue and engagement with key stakeholders including federal and state governments, regulators and authorities.

#### Risk Movements

Legal and regulatory risk remained elevated in 2025 amid continued scrutiny of critical laws, the acceleration of regulations and jurisdictional developments. While these factors heighten complexity and compliance demands, we are strengthening governance, deepening regulatory oversight, and advancing enterprise integrity and human rights programmes. We also continue with policy advocacy and ongoing engagement with regulators on applicable laws and compliance requirements to preserve our licence to operate, enhance resilience and support long-term value creation.

## Material Topics



## Stakeholders



## Capitals



## SR Sustainability Risk

### What It Means

We operate in an environment of heightened attention to climate-related issues, shifting stakeholder expectations, and evolving policy, regulatory and market dynamics. We have set a clear commitment to achieve NZCE by 2050 and continue to integrate sustainability considerations into our strategic and operational decision-making, including efforts to decarbonise operations, scale lower-carbon solutions and uphold expectations on nature, biodiversity and human rights. Regulatory developments, tightening disclosure requirements and jurisdictional measures are also influencing market behaviour, with customers and financiers increasingly linking decisions to measurable ESG performance, which may affect our access to markets and capital.

#### Impact on Value

- **Access to Capital and Cost of Finance:** Failure to meet investor and financier ESG requirements may restrict our access to capital or increase financing costs, limiting our funding capacity, capital efficiency and overall growth potential.
- **Competitive Positioning and Market Capture:** Ineffective management of sustainability-related risks or delays in deploying credible lower-carbon solutions may weaken our preferred partner status, reduce earnings resilience and hinder the timely capture of energy transition opportunities, eroding our long-term financial performance.
- **Energy Transition and Market Viability:** Inability to offer competitive lower-carbon energy solutions or weakening demand for such projects, together with regulatory, technical or offtake challenges may constrain project viability and affect our revenue, liquidity and financial standing.
- **Operating Certainty and Compliance Requirements:** The accelerating pace of sustainability regulations, mandatory disclosure standards and nature- and human rights-related requirements may increase our compliance costs, stretch execution resources and lengthen approval processes, affecting our delivery confidence and operational continuity.
- **Reputational and Confidence in Delivery:** Gaps in communication, engagement and execution against stated strategy and investment commitments may undermine stakeholder confidence, weaken our reputation and reduce confidence in our ability to deliver our Energy Transition Strategy.

#### Impact on Capitals

- **Financial Capital:** Transition investments, emissions reduction efforts and new compliance requirements may increase upfront capital and operating costs, influencing our cash generation, near-term returns and overall financial performance.
- **Manufactured Capital:** Physical climate impacts and transition-driven shifts may disrupt asset reliability, pressure legacy assets and require us to resequence CAPEX towards resilience and lower-carbon projects and solutions, potentially affecting asset value and operational continuity.
- **Social and Relationship Capital:** Gaps in stakeholder expectations, including those of financial institutions, related to our energy transition outcomes may weaken trust, slow project delivery and constrain access to resources, partnerships and advocacy effectiveness.
- **Human Capital:** Workforce capability and readiness may impact our transition to a lower-carbon business model, which requires specialised skills that must be developed or acquired. Additionally, failure to support a just transition that upholds human rights may adversely affect workforce confidence, operations and our reputation.

- **Natural Capital:** Insufficient action to mitigate our impact on nature and biodiversity may undermine long-term environmental resilience, affect the issuance of permits and stakeholder support, and weaken our social licence to operate.

#### Mitigation Strategies

- Embed sustainability into our enterprise decision-making by aligning strategy, capital allocation, risk appetite and business resilience with our NZCE by 2050 Pathway, nature and biodiversity commitments, and international human rights standards, supported by central oversight of evolving regulations and disclosure requirements.
- Invest in workforce capability development and organisational readiness through targeted training and development initiatives, vocational programmes and partnerships with tertiary institutions to support our business sustainability agenda.
- Apply disciplined capital allocation and focused funding approaches to support decarbonisation initiatives, grow lower-carbon businesses and leverage strategic partnerships, including sustainable financing instruments aligned to measurable outcomes.
- Strengthen our climate resilience insights by deepening understanding of climate impacts on assets and value chains, enabling us to remain adaptive and future-ready in a rapidly evolving risk landscape.
- Engage proactively with regulators, financiers, customers and communities to inform the development of transition approaches that are credible, practical and investable, secure clarity on coexisting frameworks, and support just and equitable outcomes.
- Engage with internal stakeholders, regulators, government agencies and industry partners to shape credible, practical and investable energy transition and carbon management policies.
- Strengthen measurement precision and reporting transparency to sustain compliance with evolving global reporting frameworks, supporting continued access to sustainable capital and reinforcing stakeholder trust.

#### Tactical Opportunities

- Pursue growth across lower-carbon solutions where our capabilities offer strategic advantage and offtake certainty.
- Expand opportunities in emissions reduction and lower-carbon solutions through targeted partnerships, collaborations and investment avenues to support the scaling of decarbonisation technologies.
- Strengthen supplier capability through capacity building programmes, while reinforcing governance, due diligence and performance expectations on human rights and ESG data management to enhance delivery reliability, reduce compliance risk and reinforce trust across our value chain.

#### Risk Movements

In 2025, jurisdictional challenges and evolving disclosure standards have added complexity. Nevertheless, we have strengthened governance and oversight, while maintaining focus on priority risk areas across our portfolio. With disciplined capital deployment, targeted partnerships and proactive regulatory engagement, we remain confident in navigating evolving transition requirements, preserving our resilience while positioning for long-term value creation.

# Risks Linked to Creating Value

## Material Topics



## Stakeholders



## Capitals



## HSR Health, Safety, Security and Environmental Risk

### What It Means

We operate in a complex, high-risk environment where health, safety, security and environmental (HSSE) risks arise across project execution and operational activities. These risks are heightened by stringent product safety and environmental regulations, physical security threats, and the increasing complexity introduced by technological advancements and emerging cyber-physical threats. Managing these risks requires vigilant oversight of our operations, stakeholders, assets and natural resources.

### Impact on Value

- **Operational Incidents:** HSSE incidents arising from gaps such as non-compliant behaviours and technical integrity issues could result in harm to people, the environment and assets, leading to operational disruption, impacting our reputation and increasing the cost of doing business.
- **Security Threats in High-risk Locations:** Heightened security risks, particularly in higher risk countries, require us to conduct disciplined and frequent assessments, and coordinated responses to protect personnel, assets and operations, as lapses can lead to immediate operational and reputational consequences.
- **Stringent and Evolving Regulations:** Increasingly stringent regulatory requirements may raise our compliance costs and lengthen or jeopardise approval processes, potentially affecting business continuity, project schedules, our financial position and overall stakeholder confidence.

### Impact on Capitals

- **Financial Capital:** HSSE incidents may result in penalties, compensation claims, asset repair costs and operational downtime, adversely affecting our financial resilience and overall financial position.
- **Social and Relationship Capital:** Failure to manage HSSE risks effectively may erode stakeholder trust, impact our licence to operate and weaken confidence among communities, regulators and partners.
- **Natural Capital:** Inability to effectively contain HSSE incidents may cause environmental pollution, jeopardising long-term stewardship commitments and undermining our responsibility as a custodian of natural resources.
- **Human Capital:** HSSE incidents can lead to injuries or loss of life, undermining workforce morale and our reputation as a responsible and preferred employer.
- **Manufactured Capital:** Incidents and integrity failures may damage assets, compromise operational reliability and reduce long-term asset performance, requiring additional investment to restore safe operability.

### Mitigation Strategies

- Maintain robust HSSE governance through dedicated HSSE management systems, supported by the HSE Management System (HSEMS) and PETRONAS Security Standards, through the following measures:
  - Operationalise continuous digital monitoring and predictive analytics to enable data driven decision-making and institutionalise proactive risk management, improving incident prevention, optimising maintenance windows and enhancing asset reliability.
  - Strengthen technical integrity through targeted process safety and asset integrity initiatives to uphold operational reliability and safeguard against major hazards.
  - Enhance security readiness in sensitive geographies through structured assessments, drills and coordinated responses with internal and external agencies, while embedding security planning into project and operations life cycle.
  - Bolster organisational resilience by regularly reviewing, maintaining and simulating HSSE crisis management and business continuity plans to validate response strategies and ensure continuity of critical functions.
- Proactively track evolving HSSE regulatory requirements and engage with authorities to secure timely approvals and maintain compliant, uninterrupted operations, reducing execution uncertainty.
- Build workforce, contractor and partner competency through targeted HSSE programmes such as:
  - Training programmes leveraging digital solutions, while reinforcing accountability and positive behaviours through leadership visibility, assurance activities and structured discipline programmes.
  - Targeted partnerships for security, emergency response and advanced inspection technologies, such as drone-enabled asset inspections.

### Risk Movements

In 2025, HSE risk remains inherent while the security risk landscape has heightened, particularly for our operations in the Middle East. For HSE, gaps in personal accountability, technical integrity and regulatory compliance continue to pose potential exposure, which could result in harm to people, the environment, assets and our reputation. We mitigate these risks through leadership-driven safety culture initiatives, targeted process safety and asset integrity programmes, and rigorous regulatory compliance, including readiness for new HSE laws. For security, we address potential exposure through enhancements in digital monitoring, predictive analytics, and crisis and business continuity testing and exercising.

**Material Topics****Stakeholders****Capitals****GR Geopolitical Risk****What It Means**

We operate across multiple jurisdictions where jurisdiction-specific political and regulatory tensions cause uncertainty in operations. This exposes our business to shifts in political, legal and fiscal regimes, as well as broader geopolitical tensions that can alter energy and trade flows, reshape policies and affect the sanctity of commercial agreements. Policy directives covering market access and environmental controls may impact our operations, while armed conflict and civil unrest may require us to reprioritise assets and workforce deployment.

**Impact on Value**

- **Operational Disruption and Supply Chain Impact:** Shifts in political and legal environments, including licensing requirements, development and export limits, and pricing policies, together with geopolitical crises, may disrupt supply chains, alter contractual terms, require us to reroute shipments and interrupt our operations. These factors may lead to cost and schedule variances that affect delivery assurance and our financial stability.
- **Security and Compliance Overheads:** Heightened security exposure in selected geographies and evolving host country requirements may drive higher assurance, protection and compliance costs, impacting our operating margins and business resilience.

**Impact on Capitals**

- **Financial Capital:** Unfavourable geopolitical developments may lead to penalties, litigation, extended operational disruptions and higher insurance or rerouting costs, pressuring our cash flows, increasing our cost of doing business and affecting our overall financial position.
- **Manufactured Capital:** Geopolitical incidents can disrupt supply chains, constrain access to critical infrastructure or damage assets located in affected areas, impacting our asset reliability, utilisation and long-term performance.
- **Human Capital:** Escalating geopolitical tensions may compromise the safety and security of our employees in impacted locations, requiring additional readiness measures, rotations or evacuation protocols.
- **Social and Relationship Capital:** Inability to navigate complex government and community relationships across jurisdictions may erode stakeholder trust, damage our reputation and affect our licence to operate, potentially delaying or stalling projects.

**Mitigation Strategies**

- Establish dedicated stakeholder management functions in priority jurisdictions to navigate regulatory landscape, strengthen relationships with host governments and authorities and enable intelligence gathering on emerging geopolitical risks, supported by the following efforts:
  - i. Proactively engage host, federal and state regulators to clarify regulatory frameworks and sustain dialogue platforms to manage expectations, approvals and operating certainty.
  - ii. Monitor geopolitical developments and rebalance our exposure across markets, partners and sourcing options, guided by periodic portfolio reviews against our risk appetite, while maintaining flexible contract structures to protect margins and operational continuity.
  - iii. Support community resilience by delivering sustained social programmes that improve quality of life and socio-economic outcomes in operating regions, strengthening long-term relationships and our licence to operate.
- Conduct risk assessments and due diligence across the business value chain to support international investment decisions, including asset acquisition, pre-entry, in-country operations, exit management and crisis management. This includes continuous review of our supply chain and sourcing strategies, and identification of alternative sources.

**Tactical Opportunities**

- Explore opportunities in non-traditional markets and routes to bridge supply-demand gaps and strengthen our energy security proposition amid shifting political alignments and evolving energy demand.
- Build new partnerships with local players and regional logistics providers to enhance route certainty, share costs and secure access to critical infrastructure, improving our competitiveness under volatile geopolitical conditions.
- Enhance operational certainty through legal process.

**Risk Movements**

In 2025, the geopolitical landscape continues to shift, with security exposure elevated in selected regions and policy developments, including domestic jurisdictional challenges, influencing operating certainty. We are tightening country-risk oversight, exercising crisis and business continuity plans, and deepening regulatory engagement to reduce ambiguity and safeguard continuity. We remain focused on protecting our people and assets, upholding contract stability, and capturing opportunities arising from evolving global trade environment to sustain our resilience and continued value creation in a fragmented environment.

# Risks Linked to Creating Value

## Material Topics



## Stakeholders



## Capitals



### HR Hydrocarbon Reserves and Resources Risk

#### What It Means

Our ability to reliably supply oil and gas, and honour long-term commitments depends on the successful discovery, timely maturation and effective development of hydrocarbon reserves and resources. This entails strong exploration outcomes, reservoir performance, disciplined project execution, robust asset integrity and reliability, and sound commercial arrangements. We face a narrowing runway for oil and gas, heightened technical complexity, pressures on the pace of hydrocarbon monetisation, as well as asset integrity constraints and infrastructure bottlenecks.

#### Impact on Value

- **Supply Shortfalls:** Insufficient supply due to technical challenges, high contaminants, maturing fields and depleting reserves may lead to our reliance on third-party sourcing at a premium or an inability to meet customer demand, resulting in contract non-performance, loss of trust, market share erosion and lower profitability.
- **Capacity-driven Restrictions:** Operational constraints at the demand centre, driven by capacity and asset integrity challenges, may limit our ability to fully utilise gas-receiving capacity.
- **Project Viability and Impairment Exposure:** Poor exploration outcomes, technical and commercial challenges, complex greenfield development or downward revisions in recoverable volumes may reduce future cash flows and trigger asset impairments, affecting our portfolio returns and long-term value.

#### Impact on Capitals

- **Financial Capital:** Failure to monetise resources, whether due to inadequate resource maturation, technical constraints or inability to secure viable commercial arrangements, may jeopardise our cash generation, long-term financial stability and overall operational viability.
- **Intellectual Capital:** Limited reservoir insights or slow adoption of fit-for-purpose technologies and innovations may erode project value, weaken asset performance and delay our optimisation of resource recovery.
- **Manufactured Capital:** Technical and integrity challenges, including high contaminant fields, reliability events and other internal or external constraints, may reduce our asset efficiency, increase unplanned deferrals and disrupt operations across the value chain.

#### Mitigation Strategies

- Accelerate resource maturation and monetisation by executing disciplined area development plans, progressing appraisal to sanction to start-up phases, and applying phased investments and front-loaded subsurface studies to accelerate time-to-value and increase value realisation.
- Enhance reservoir and field performance through robust operational excellence programmes, addressing asset integrity and reliability issues, and deploying fit-for-purpose technologies such as enhanced recovery, advanced surveillance and digital optimisation to improve field development outcomes.
- Sequence feed gas nodes and critical infrastructure upgrades to align with contract windows and integrate planning across the upstream gas LNG value chains to reduce uncertainty to the initial hydrocarbons, ramp up profiles and overall delivery reliability.
- Drive production sustainability by applying carbon capture and storage (CCS) pathways and contaminant handling strategies for high carbon dioxide fields, expanding economically viable resources under evolving standards.
- Apply stringent petroleum resource management through the Annual Review of Petroleum Resources and enterprise resource governance processes to monitor reserves and resources against commitments and trigger targeted interventions early.

#### Tactical Opportunities

- Strengthen our Right Asset, Right Player strategy by aligning technically complex fields with capable partners under progressive fiscal terms to co-create solutions, share risks and accelerate monetisation, while delivering equitable returns for us and our partners.
- Deploy fit-for-purpose technologies and processes, including subsurface analytics, digital optimisation tools and advanced integrity inspection technologies, to overcome technical constraints, unlock incremental barrels, reduce downtime, and enhance asset efficiency and investment attractiveness.

#### Risk Movements

Indicators through 2025 show uncertainty stemming from selected project deferrals and operational reliability constraints, which have affected reserves and resources data in parts of the funnel. Nonetheless, we continue to meet contractual delivery commitments. With disciplined resource maturation, infrastructure readiness and technology deployment, we remain focused on maintaining resilience while advancing long-term value creation.

**Material Topics****Stakeholders****Capitals****TR Technology Risk****What It Means**

As we expand our use of digital technologies, we gain efficiency and new growth opportunities but also face higher cyber security risks. Cyber attacks may disrupt critical systems and compromise information, particularly through data leakage, unauthorised access and the rapid adoption of technologies such as AI. Rapid technological change also increases the risk of technology obsolescence, which may affect our long-term competitiveness and operational resilience.

**Impact on Value**

- **Cyber Security Threats:** Undetected or sophisticated cyber attacks targeting both operational technology and information systems may disrupt our operations, compromise employee safety, trigger legal or regulatory penalties and damage our reputation.
- **Technological Obsolescence:** Failure to adopt or effectively deploy emerging technologies, compounded by insufficient technical skillsets and capability gaps, may erode our efficiency, increase operating costs, limit access to new revenue streams and undermine our long-term competitiveness.
- **Evolving Regulatory Requirements:** The introduction of cyber security regulations may increase our compliance costs and impact technology deployment timelines, with non-compliance potentially undermining system resilience and stakeholder trust.

**Impact on Capitals**

- **Manufactured Capital:** Slow adaptation to technology and gaps in predictive maintenance may increase the risk of operational disruptions, costly downtime and rapid asset obsolescence, affecting our asset performance and reliability.
- **Intellectual Capital:** Insufficient innovation, poor digital adoption and weak intellectual property (IP) protection may erode our proprietary value, undermining our competitiveness and the long-term relevance of our intellectual assets.
- **Financial Capital:** Failure to innovate or technology-related incidents, such as cyber breaches or system failures, may lead to unplanned expenditures, insurance claims, loss of revenue and weaker financial returns.
- **Social and Relationship Capital:** Weak cyber defences or data misuse may negatively impact stakeholder trust and confidence in us.

**Mitigation Strategies**

- Maintain strong digital, information and communication technology (ICT) and cyber security governance by implementing enterprise-wide frameworks, including the Enterprise Cyber Security Governance Framework, PETRONAS Cyber Security Incident Response Procedure, Cyber Security Ransomware Crisis Management and AI ethics guidelines, supported by the following efforts:
  - Conduct continuous monitoring and threat hunting, and strengthen incident response capabilities within our Security Operations Centre to enhance operational resilience, alongside regular penetration testing, cyber drills and periodic review of ICT and cyber security crisis management and business continuity measures.
  - Leverage technologies and methodologies such as advanced analytics, automation and AI to optimise operations, minimise downtime, improve decision-making efficiency and develop an ecosystem that drives value creation and business growth across our integrated value chain.
- Support and implement the Malaysia Cyber Security Act 2024 (Act 854) as one of three Energy Sector Leads, driving compliance, resilience and alignment with national cyber security requirements.
- Strengthen technological leadership through continuous talent development and upskilling programmes across functions and roles, including solution development, research, scale-up, deployment, commercialisation and technology management.
- Enhance and scale our AI capabilities to govern, standardise and accelerate AI adoption, strengthen implementation oversight and promote responsible use of emerging technologies.

**Tactical Opportunities**

- Create competitive advantage through an outcome-oriented research and development partnership ecosystem, enhancements to our PETRONAS Technology Management System and a targeted intellectual property strategy for priority technology programmes.
- Capture value from technological advancements and deployment by unlocking monetisation opportunities through the selective commercialisation of mature and proven in-house technologies and digital solutions.
- Strengthen stakeholder confidence by positioning ourselves as a trusted partner through best-in-class cyber resilience and robust digital governance, enhancing our competitiveness in an increasingly technology-driven energy landscape.

**Risk Movements**

In 2025, technological risk continued to be shaped by rapid digital adoption, the proliferation of AI and increasingly sophisticated cyber threats. To mitigate these exposures, we are strengthening our cyber security frameworks, AI governance and internal technical capabilities. Strategic partnerships and dedicated innovation platforms enable the accelerated deployment of fit-for-purpose solutions, while rigorous IP protection supports our long-term competitiveness. By embedding innovation into investment and operational planning, we turn digital disruption into a strategic advantage, supporting sustained value creation across the energy landscape.

# Risks Linked to Creating Value

## Material Topics



## Stakeholders



## Capitals



### PER Project Execution Risk

#### What It Means

We depend on the successful delivery of complex, long-term and capital-intensive projects, supported by strong asset and technical integrity, to fulfil our commitments and provide value-added solutions to customers. Execution exposure may arise from front-end planning quality, technical challenges, supply chain capacity and cost dynamics, evolving jurisdictional requirements and regulatory approval timelines. These factors may affect our ability to meet targeted schedules, budgets and project scope, potentially resulting in deferred production, cost overruns or value dilution.

#### Impact on Value

- **Schedule Slippage and Cost Escalation:** Delays in execution timelines and cost overruns, particularly in capital-intensive projects such as greenfield developments and debottlenecking initiatives, may delay first hydrocarbons, defer return realisation and adversely affect our business strategy, operational performance and financial position.
- **Supply Chain and Workforce Tightness:** Disruptions across the supply chain, coupled with scarcity and cost escalation in specialised vessels, turnaround manpower and fabrication capacity, may delay critical deliveries, undermine our production continuity, increase execution costs and weaken our competitive positioning.
- **Capital Investment Gap:** Insufficient capital investment may weaken project viability, constrain production targets, reduce competitiveness and hinder achievement of sustainability objectives in a rapidly evolving market environment.

#### Impact on Capitals

- **Financial Capital:** Inefficient project planning and execution, supply chain disruptions and shortages of skilled manpower may trigger project delays and operational disruptions, adversely affecting our earnings, cash flows, financial position and investment planning.
- **Manufactured Capital:** Ineffective project execution, inadequate asset integrity and reliability programmes, or poor maintenance practices may degrade our asset performance, extend downtime and potentially damage facilities.
- **Social and Relationship Capital:** Operational disruptions, product quality and reliability issues, and supply chain disruptions, including challenges related to our suppliers' capacity and capability, may damage our reputation and erode stakeholder confidence.

#### Mitigation Strategies

- Strengthen project delivery by allocating right-sized resources and sufficient time across project lifecycles, ensuring informed decision-making via fit-for-purpose gatekeeping processes and adherence to key compliance frameworks such as the PETRONAS Group Project Management System, PETRONAS Asset Management System, PETRONAS Procurement Standard and Project, Plant and Facilities Risk Management Guideline, supported by oversight platforms to surface risks early and safeguard capital investment.
- Strengthen our supply chain and supplier ecosystem capacity through strategic partnerships with Malaysian financiers to enable supplier financing, structured development programmes for local suppliers, and secure long-term arrangements for construction resources and specialised vessels to navigate supply chain tightness.
- Build workforce capability and productivity by scaling apprenticeship and industry programmes to close skilled manpower gaps, strengthening competencies through targeted development with contractors, peers and partners, and optimising Project Management Team deployment and project resource management through work process improvements to future-proof our talent pipeline.

#### Tactical Opportunities

- Enhance project and operational excellence to secure long-term supply at competitive prices, leveraging strategic partnerships with key suppliers to improve cost competitiveness and maintain a sustainable advantage in a complex operating environment.
- Deploy digital solutions across projects and assets, including planning analytics and shutdown orchestration tools, to compress timelines, improve readiness and enhance the quality and speed of decision-making.
- Engage proactively with authorities and regulators to de-risk approval processes, align execution plans with evolving jurisdictional requirements and reduce operating ambiguity.

#### Risk Movements

In 2025, project execution risks remained elevated amid continued tightness in supply markets and the delivery of selected projects, alongside the management of complex, coordinated shutdowns requiring heightened execution discipline. We implemented mitigating actions to improve delivery across upcoming project phases. Supported by enhanced front-end governance, focused reliability interventions and collaborative contracting arrangements, we remain focused on safeguarding schedules and contractual performance, enabling more predictable cash flows and reinforcing portfolio-level operational resilience.

**Material Topics****Stakeholders****Capitals****HCR Human Capital Risk****What It Means**

Our people remain central to delivering our business objectives, our Energy Transition Strategy and our Net Zero Carbon Emissions by 2050 Pathway. Attracting, retaining and developing the skills and workforce flexibility remain critical as business needs evolve across core and emerging areas. These challenges are intensified by shortages in critical skills, including onshore plant turnarounds and AI-driven capabilities. We continue to prioritise upskilling across our workforce and supply chain to sustain safety performance and meet our transformation milestones.

**Impact on Value**

- **Talent Pipeline:** Challenges in attracting, developing and retaining skilled talent, particularly in specialised areas such as turnarounds, offshore construction, digital and AI, may weaken the talent pipeline, delay critical work, increase costs, constrain energy transition readiness and reduce competitiveness.
- **Strategy Delivery and Transformation Readiness:** Inability to build and sustain workforce capabilities, behaviours, culture, mindset and alignment to organisational goals may slow strategy execution, impede innovation and weaken our ability to sustain competitive positioning while pursuing long-term objectives.
- **Stakeholder and Regulatory Expectations:** Continued expectations on workforce standards across PETRONAS ecosystem may increase exposure to regulatory compliance risks, where gaps may affect our licence to operate, stakeholder trust and reputation.

**Impact on Capitals**

- **Human Capital:** Reduced availability, depth and deployment of critical skills, coupled with elevated fatigue exposure, may lower workforce readiness to support transformation priorities.
- **Social and Relationship Capital:** Challenges in attracting and retaining talent, as well as workforce regulatory compliance across the supply chain, may erode stakeholder trust and weaken PETRONAS' reputation and strategic partnerships.
- **Intellectual Capital:** Failure to recruit, develop and align talent aspirations with business priorities may limit our ability to sustain innovation, build critical capabilities and deliver value-adding solutions.
- **Manufactured Capital:** Misalignment between workforce capabilities and business needs may extend downtime, reduce asset reliability and hinder effective strategy execution.
- **Financial Capital:** Workforce capability gaps, reliance on higher-cost resources arising from skill shortages, as well as rework and delay costs, may impede strategy execution and adversely affect margins, earnings, cash flows and overall financial standing.

**Mitigation Strategies**

- Strengthen workforce planning through analytical tools to forecast manpower needs, improve talent fulfilment and ensure alignment across operating units.
- Strengthen workforce and leadership readiness by developing critical skills, reinforcing the talent pipeline and advancing future-ready leadership to enable resilience, transformation and sustainable value creation through the following efforts:
  - Build workforce agility and resilience by intensifying upskilling and reskilling in core technical and trade skills, such as turnaround operations and maintenance; HSSE capabilities, including compliant execution; and emerging skills such as digital and AI, through programmes developed with reputable learning institutions and industry partners.
  - Strengthen the talent pipeline through education sponsorships, strategic partnerships, on-the-job training and apprenticeship programmes to support resource availability.
  - Advance leadership capability through focused development pathways, competency assessments and succession planning to ensure a future-ready leadership pipeline that supports organisational transformation and sustainable business growth.
- Refresh and reinforce desired behaviours anchored in PETRONAS' values through targeted mindset and culture change efforts, strengthening organisational agility, adaptability and future-readiness.

**Tactical Opportunities**

- Expand long-term partnerships with government agencies, learning institutions, industry bodies, industry players and leading corporates to strengthen access to specialised skills, research capabilities and apprenticeship pipelines.
- Leverage technological advancements to enhance ways of working, improve productivity and build a workforce equipped for evolving business needs.
- Accelerate capability development in digital and AI, and lower-carbon technologies to meet rising regulatory and market expectations, while building competitive advantage and enabling new growth opportunities.

**Risk Movements**

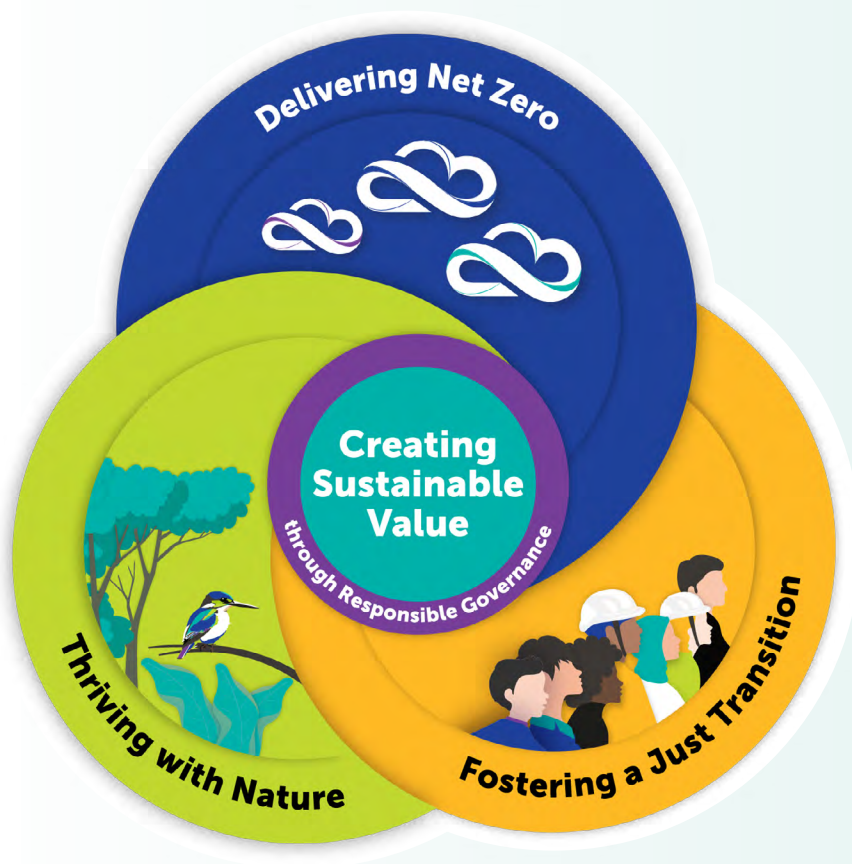
In 2025, human capital risk was driven by limited availability of skilled talent in critical execution areas, resource optimisation pressures and rising expectations for digital capabilities. We are addressing these through stronger data-driven workforce planning, accelerated upskilling in core technical, HSSE and digital and AI skills, and reinforced talent pipelines through education sponsorships, on-the-job training and apprenticeship programmes. Continued focus on culture, leadership development and strategic partnerships supports sustained value creation and a resilient workforce.

# Our Approach to Sustainability

Our approach to sustainability supports PETRONAS' role as a progressive energy and solutions partner by integrating sustainability as a value driver across our Core Business and New Business activities, guided by the PETRONAS Energy Transition Strategy. This approach shapes how we contribute responsibly to the energy transition by managing sustainability-related risks, capturing transition opportunities and strengthening portfolio resilience. It integrates climate, nature, social and governance considerations into how we plan, operate and invest across our business model, decision-making processes and value chain.

Our sustainability priorities are anchored in our business activities and strategic focus areas, enabling us to clearly articulate our impacts and progress to stakeholders.

## Sustainability Approach



● **Creating Sustainable Value through Responsible Governance**

● **Delivering Net Zero**

● **Thriving with Nature**

● **Fostering a Just Transition**

## Sustainability Governance

The Board has ultimate responsibility for overseeing sustainability, including climate-related risks and opportunities at PETRONAS. Sustainability governance is supported by structured reporting channels from business units and functions to management committees, including the Sustainability Executive Leadership Team, and onwards to the Board. Controls, data governance and assurance processes further support the integrity of sustainability disclosures and alignment with enterprise risk management.

[Refer to the Corporate Governance section on pages 185 to 205 for details on the role of the Board.](#)



Scan the QR code or refer to the PETRONAS website for an overview of PETRONAS' Sustainability Governance Structure.

### Material Topics

### Aligned with United Nations Sustainable Development Goals (UN SDGs)

Guided by our purpose to be a progressive energy and solutions partner, we believe that creating sustainable value and practising responsible governance are essential to organisational resilience. This approach supports our Energy Transition Strategy and our ambitions to achieve net zero carbon emissions by 2050, thrive with nature and foster a just transition.

- CDP** Cyber Security and Data Protection
- CG** Corporate Governance
- EC** Economic Contribution
- EI** Ethics and Integrity
- HS** Health and Safety
- IT** Innovation and Technology



The evolving energy landscape requires urgent action to respond to the expanding challenge of climate change. To deliver our Net Zero Carbon Emissions by 2050 Pathway, we aim to reduce emissions across our core operations, invest in lower-carbon business growth opportunities, and deepen our understanding of how climate change may affect the resilience of our assets and value chains, so that we remain adaptive and future-ready.

- CGE** Climate Change and GHG Emissions
- LCT** Lower-Carbon and Energy Transition Business



Nature and biodiversity are essential for sustaining life on Earth. We recognise both our impacts on nature and our dependence on healthy ecosystems. We are committed to using natural resources responsibly, promoting circular practices and where possible, addressing nature and biodiversity loss. We engage in activities to restore, protect and conserve ecosystems in Malaysia and the countries where we operate.

- CER** Circular Economy and Resource Use
- EM** Environmental Management
- NB** Nature and Biodiversity



The energy transition will vary from country to country. We recognise the importance of an inclusive transition that supports societal progress. We are committed to advancing a transition that upholds human rights, and to supporting our employees, suppliers, partners and communities to access equitable opportunities for socio-economic growth.

- HC** Human Capital
- HR** Human Rights
- SC** Sustainable Supply Chain



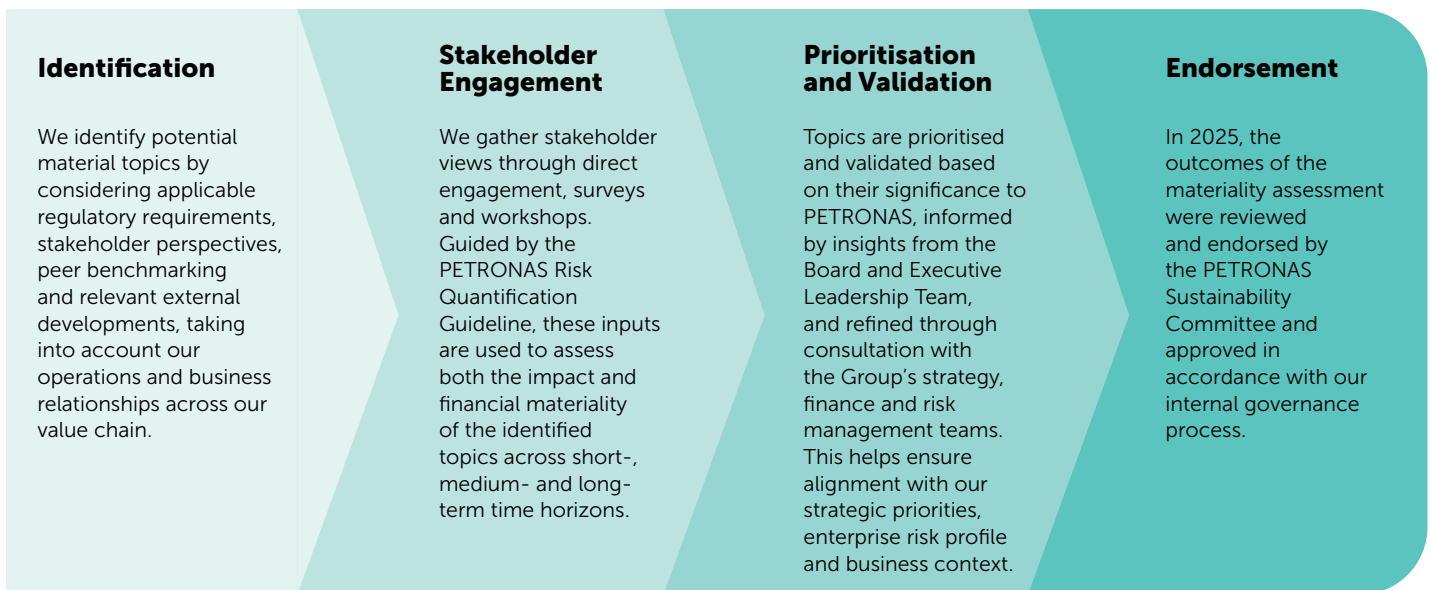
# Material Topics

Material topics represent the sustainability-related matters that are most significant to PETRONAS' long-term value creation, as well as to the economic, environmental and social impacts of our activities. These topics guide the content of this Integrated Report and form the basis of our disclosures, ensuring alignment with the Group's strategic priorities, key risk considerations and stakeholder expectations.

We continue to strengthen our materiality assessment process in line with evolving sustainability reporting practices and regulatory developments, including the standards issued by the European Sustainability Reporting Standards (ESRS) and Malaysia's National Sustainability Reporting Framework (NSRF), which are aligned with the International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards.

Since 2022, we have applied a double materiality approach, assessing sustainability matters from both their potential impact on people and the environment, and their financial materiality. In 2025, we undertook a revalidation exercise to confirm the continued relevance of previously defined material topics, taking into account regulatory developments, stakeholder needs and the Group's strategic direction.

Our materiality assessment outlines the process used to identify, assess and confirm the sustainability-related matters most relevant to PETRONAS. Material topics are prioritised based on the significance of impacts and the magnitude of associated financial risks and opportunities, taking into account likelihood, severity and time horizon. Year-on-year trends are also considered to capture shifts in impact and financial exposure. The outcomes of the 2025 revalidation exercise were reviewed and approved in accordance with our internal governance process.



Sustainability Approach > Material Topics > Description

<p><b>Creating Sustainable Value through Responsible Governance</b></p>	<p><b>CDP Cyber Security and Data Protection</b></p>	<p>Cyber security and data protection play a critical role in safeguarding our operations and information assets as we continue to leverage digital solutions. Strong governance, robust systems and ongoing investments in advanced security measures protect data integrity and confidentiality, support business continuity and sustain stakeholder trust amid an evolving cyber-threat landscape.</p>
	<p><b>CG Corporate Governance</b></p>	<p>Corporate governance provides the foundation for effective oversight, accountability, transparency and performance across our organisation. Anchored in applicable laws and recognised governance principles, our framework supports sound decision-making and risk management, strengthening business resilience and enabling long-term sustainable value creation for investors and stakeholders.</p>
	<p><b>EC Economic Contribution</b></p>	<p>Our economic contribution reflects our commitment to driving long-term business growth and our role in generating economic value for the markets and communities in which we operate. Through our products and services, capital payouts, payments to governments, compensation to employees and suppliers, and contributions to social and environmental causes, we support inclusive development and shared value creation.</p>
	<p><b>EI Ethics and Integrity</b></p>	<p>PETRONAS maintains a firm stance against all forms of corruption and unethical conduct. This commitment extends across our value chain, encompassing directors, employees, partners, suppliers, contractors, intermediaries and other third parties. We promote responsible business practices and adherence to established policies, standards and guidelines. The PETRONAS Code of Conduct and Business Ethics, the PETRONAS Anti-Bribery and Corruption Policy and the PETRONAS Anti-Bribery and Corruption Manual provide the guiding principles that set expectations for ethical business conduct.</p>

### Impact Materiality

We assess our actual and potential impacts on society and the environment arising from our operations and business relationships.

### Financial Materiality

We assess the extent to which sustainability-related risks and opportunities could reasonably affect our financial position, performance or cash flows over the short-, medium- and long-term.

## Outcomes of the 2025 Materiality Revalidation Exercise

Following our 2025 revalidation exercise, we refined our material topics to enhance clarity, reduce overlap and better reflect how sustainability-related matters are governed and managed across the Group. These refinements involved targeted consolidation and renaming of selected topics without introducing new material topics, and were designed to maintain continuity with prior years to enable comparability. As a result, the number of material topics reduced from 16 in 2024 to 14 in 2025, and the remaining topics were reaffirmed.

2024 Material Topic	2025 Material Topic	Nature of Change	Rationale
<ul style="list-style-type: none"> <li>Climate Change</li> <li>GHG Emissions</li> </ul>	<ul style="list-style-type: none"> <li>Climate Change and GHG Emissions</li> </ul>	Consolidation	Reflects integrated management of climate risks and emissions under PETRONAS Net Zero Carbon Emissions by 2050 Pathway.
<ul style="list-style-type: none"> <li>Safety Management</li> <li>Health and Well-being</li> </ul>	<ul style="list-style-type: none"> <li>Health and Safety</li> </ul>	Consolidation	Reflects integrated management of occupational safety, health and well-being.
<ul style="list-style-type: none"> <li>Employee Attraction, Retention and Development</li> </ul>	<ul style="list-style-type: none"> <li>Human Capital</li> </ul>	Renaming	Broadens the scope to reflect workforce management, talent retention and capability development.
<ul style="list-style-type: none"> <li>Circular Economy</li> </ul>	<ul style="list-style-type: none"> <li>Circular Economy and Resource Use</li> </ul>	Refinement	Clarifies our focus on resource efficiency, waste management and circular practices across operations.

**Legend:** Material More Material Most Material Increase In Impact No Changes In Impact Decrease In Impact

Significance	Trend Compared to 2024	Significance	Trend Compared to 2024	Our Response
Impact Materiality		Financial Materiality		
				Refer to pages 92 to 95.
				Refer to pages 185 to 205.
				Refer to pages 12 to 15.
				Refer to pages 185 to 205.

# Material Topics

Sustainability Approach	Material Topics	Description
 <p><b>Creating Sustainable Value through Responsible Governance</b></p>	<p><b>HS Health and Safety</b></p>	<p>The safety, health and well-being of our employees, contractors and communities are fundamental to our operations. By cultivating a strong health and safety culture, implementing robust safety management practices, and providing health and wellness programmes, we aim to protect our people and communities, reduce operational risks, improve efficiency and promote a productive, healthy and engaged workforce.</p>
 <p><b>Delivering Net Zero</b></p>	<p><b>IT Innovation and Technology</b></p>	<p>Innovation and technology play a critical role in strengthening PETRONAS' resilience and long-term value in a rapidly evolving energy landscape. We promote innovation and adopt technology across our operations and services to improve efficiency, enhance customer and stakeholder satisfaction, and support the energy transition.</p>
 <p><b>Thriving with Nature</b></p>	<p><b>CGE Climate Change and GHG Emissions</b></p>	<p>Climate change and GHG emissions are key elements embedded in PETRONAS' long-term strategy and enterprise risk management. We assess and manage climate-related transition and physical risks, including evolving regulatory and market conditions as well as extreme weather that may affect our assets, operations and product demands. Through climate risk management and GHG emissions reduction efforts via four key abatement levers aligned with our Net Zero Carbon Emissions by 2050 commitment, we strengthen asset resilience, support operational continuity, manage regulatory exposure and help sustain stakeholder confidence.</p>
 <p><b>Fostering a Just Transition</b></p>	<p><b>LCT Lower-Carbon and Energy Transition Business</b></p>	<p>Lower-carbon and energy transition business activities enable PETRONAS to create long-term value by expanding into areas such as renewables and lower-carbon energy solutions. Guided by our Energy Transition Strategy, we invest selectively across new energy value chains to support emissions reduction, meet evolving stakeholder and customer expectations, and contribute to global climate goals, while maintaining financial discipline and resilience.</p>
 <p><b>Thriving with Nature</b></p>	<p><b>CER Circular Economy and Resource Use</b></p>	<p>Circular economy and resource use focus on optimising the use of materials and natural resources to maximise efficiency, retain value and minimise waste. By creating value through responsible resource management, reuse, recycling and value recovery, we respond better to regulation, enhance operational resilience and reinforce stakeholder confidence in our sustainability commitments.</p>
 <p><b>Thriving with Nature</b></p>	<p><b>EM Environmental Management</b></p>	<p>Effective environmental management addresses the environmental impacts of our operations while supporting sustainable resource use and emissions reduction. Internal standards and practices across water stewardship, waste and circular economy management, air emissions control and spill prevention enable us to manage environmental impacts, meet regulatory requirements and protect natural resources.</p>
 <p><b>Fostering a Just Transition</b></p>	<p><b>NB Nature and Biodiversity</b></p>	<p>Nature and biodiversity are integral to PETRONAS' long-term business resilience, asset integrity and social licence to operate. Guided by our policy position and strengthened capabilities, we are advancing nature and biodiversity management practices by addressing our impacts and dependencies, aligning climate action with biodiversity conservation and proactively managing nature-related risks to support sustainable value creation.</p>
 <p><b>Fostering a Just Transition</b></p>	<p><b>HC Human Capital</b></p>	<p>Our long-term performance and ability to operate safely, strengthen our core business and build new energy value chains are anchored in strong organisational and talent foundations, encompassing organisational effectiveness, the right mindset and culture, leadership capability and workforce readiness. Central to this is developing an agile, skilled and motivated workforce that can adapt to evolving business needs and support sustainable value creation across the organisation.</p>
 <p><b>Fostering a Just Transition</b></p>	<p><b>HR Human Rights</b></p>	<p>Human rights underpin PETRONAS' responsible business conduct across all the Group's activities and relationships. We are committed to respecting internationally recognised human rights, which are fundamental to ethical and sustainable business practices, fostering stakeholder trust and promoting fair labour practices. By identifying and addressing human rights risks through due diligence and ensuring access to remedy, we safeguard our social licence to operate and support sustainable value creation.</p>
 <p><b>Fostering a Just Transition</b></p>	<p><b>SC Sustainable Supply Chain</b></p>	<p>A sustainable supply chain is central to our risk management and long-term value creation across our operations. By advancing responsible sourcing and procurement practices, we aim to strengthen environmental, social and economic outcomes, support local suppliers where appropriate and enhance supply chain resilience. These efforts contribute to safer practices, more sustainable products, improved operational efficiency and positive socio-economic outcomes across the markets in which we operate.</p>

**Legend:** Material More Material Most Material Increase In Impact No Changes In Impact Decrease In Impact

	Significance Impact Materiality	Trend Compared to 2024	Significance Financial Materiality	Trend Compared to 2024	Our Response
					Refer to pages 87 to 91.
					Refer to pages 55 to 82.
					Refer to pages 97 to 113.
					Refer to pages 65 to 80.
					Refer to pages 121 to 124.
					Refer to pages 125 to 131.
					Refer to pages 115 to 120.
					Refer to pages 145 to 156.
					Refer to pages 133 to 144.
					Refer to pages 157 to 162.

# Engaging with Stakeholders



The inaugural Energy Asia Global Leadership Executive Forum (EAGLe) convened over 30 global CEOs and C-suite leaders across oil and gas, energy, renewables, power, utilities, technology and finance.

## Driving Progress Together, Delivering Sustainable Value

We engage our stakeholders as strategic partners in long-term value creation. Through sustained dialogue with key stakeholders who influence our strategy, operations and risk profile, we continuously aim to integrate diverse perspectives into decision-making across our operations. This collaborative approach builds mutual trust, strengthens execution certainty and ensures we remain resilient and attuned to evolving stakeholder expectations in the energy transition.



PETRONAS Refinery and Petrochemical Corporation (PRPC) collaborated with Universiti Teknologi Malaysia (UTM) to support educational development for primary school students in Pengerang, Johor, Malaysia through the PIC Literacy and Numeracy Programme (PLaN).

**Frequency**

- O Ongoing   
 Q Quarterly   
 A Annually   
 AR As Required

**FG Federal Government****Why They Matter to Us**

A trust-based working relationship with the Federal Government of Malaysia, key ministries, regulators and agencies supports regulatory certainty and smooth business operations in delivering national development roadmap, energy security and sustainability priorities.

**Common Areas of Interest**

- Nation-building agenda
- Compliance with laws and regulations
- Ethical business conduct and governance
- Health and safety
- Socio-economic and industry development
- Environment and climate change
- Sustainable development and ESG commitments

**Our Response**

- Contributed to national policy discourse to advance Malaysia's energy security, accelerate energy transition and support carbon management initiatives.
- Aligned with national net zero and carbon-neutrality goals through consultation on transition plans and responsible operational practices.
- Collaborated with government agencies and regulators to strengthen energy industry standards, prioritise safety and reinforce compliance across businesses.
- Partnered with federal agencies to support a just energy transition, strengthen environmental stewardship and deliver shared societal value.

**Meaningful Outcomes**

- Sustained nation-building through economic contribution and support for the national development roadmap, energy security and sustainability priorities.
- Contributed to human capital and industry upliftment through skills development initiatives.
- Served as a credible thought-partner in shaping energy policies that support Malaysia's energy transition goals.

**Engagement Mode and Frequency**

- O In-person and virtual engagements
- O Statutory reporting, briefings, meetings and roundtable discussions
- Q Periodical performance briefings
- O Participation in Federal Government programmes and consultations
- O Engagements with various federal agencies
- AR Familiarisation visits and site visits

**SG State Governments****Why They Matter to Us**

Close relationships with State Governments enable effective collaboration, support local industries and empower communities. Continuous engagement helps maintain regulatory compliance, enables safe and reliable operations, and minimises disruptions across state jurisdictions. These efforts are essential in contributing to both state and national economic growth while supporting sustainability and long-term value creation where we operate.

**Common Areas of Interest**

- State economic growth and reliable energy supply
- Local participation and industry development
- New energy and sustainability opportunities
- Social development and community well-being
- Talent and human capital development
- Biodiversity conservation and environmental protection

**Our Response**

- Leveraged formal platforms and joint committees with State Governments to align delivery priorities with shared development goals and economic objectives.
- Maintained strategic engagement with state leadership to identify growth opportunities and strengthen energy access and resilience.
- Delivered local socio-economic impact through targeted community-focused partnerships, including programmes by Yayasan PETRONAS.
- Strengthened disaster preparedness and climate adaptation at the state level through coordinated planning and response efforts.

**Meaningful Outcomes**

- Uplifted community well-being and quality of life.
- Strengthened local business integration across the value chain to amplify economic multiplier effects.
- Advanced energy transition ambitions through state-level collaborative initiatives.
- Built stakeholder confidence and long-term trust with State Governments and local stakeholders.
- Strengthened Oil and Gas Services and Equipment (OGSE) and local talent pipeline through collaborative upskilling and capability building initiatives with state agencies.

**Engagement Mode and Frequency**

- O In-person and virtual engagements
- Q Joint Coordination or Working Committee meetings
- O Statutory reporting, briefings, meetings and roundtable discussions
- O Participation in State Government and state-owned entities' programmes
- O Engagements with various state agencies
- AR Familiarisation visits and site visits

# Engaging with Stakeholders

## Frequency

- O Ongoing
- Q Quarterly
- A Annually
- AR As Required

### HG Host Governments

#### Why They Matter to Us

Proactive engagement with host governments across our international operations supports constructive diplomatic relationships and strategic partnerships. Regular interaction helps us navigate geopolitical risks, understand regulatory and legal requirements, maintain compliance and preserve our licence to operate, reducing the risk of disruption to our international activities.

#### Common Areas of Interest

- Economic contribution
- Operational efficiencies
- Compliance with laws and regulations
- Ethics and integrity
- Health and safety
- Human rights
- Community development
- Greenhouse gas emissions

#### Our Response

- Maintained ongoing engagement with host governments, authorities and embassies across our international footprint.
- Aligned with key ministries and stakeholders to assess investment opportunities and support national energy and resource priorities.

- Engaged in global and bilateral forums to advance energy transition objectives and reinforce PETRONAS' international standing.
- Strengthened government-to-government and business-to-government relationships through regular engagements that support our licence to operate.
- Delivered social impact initiatives tailored to the needs of local communities in host countries.
- Supported cross-country and regional best practice sharing.

#### Meaningful Outcomes

- Contribution to economic growth in host countries.
- Advancement of socio-economic and community development within local communities.
- Stronger bilateral and multilateral relations between Malaysia and host countries.

#### Engagement Mode and Frequency

- O In-person and virtual engagements
- O Briefings, meetings and roundtable discussions
- O Participation in host government programmes
- O Engagements with various host government agencies
- AR Familiarisation visits and site visits

### C Customers

#### Why They Matter to Us

Customers play a direct role in shaping our business. Their feedback informs improvements to our energy solutions, products and services, including after-sales support and delivery performance. This focus helps us respond to evolving customer expectations and environmental considerations while supporting sustainable business growth.

#### Common Areas of Interest

- Product pricing, availability, safety and quality
- Innovative products, solutions and services
- Retail loyalty programme privileges and benefits
- Product management optimisation
- Brand reputation and advocacy
- Strategic networking opportunities
- Seamless customer experience
- Sustainability and community uplift

#### Our Response

- Provided products and services relevant to customer needs, supported by innovation and strategic partnerships.
- Strengthened customer satisfaction and engagement through reliable, tailored experiences and proactive relationship management.

- Maintained consistent communication and collaboration with customers across domestic and international markets.
- Applied customer insights to guide product development and service enhancements, ensuring continued relevance and value creation.

#### Meaningful Outcomes

- Built customer trust, loyalty and brand equity through consistent delivery of safe, reliable and innovative products and services.
- Deepened long-term partnerships and delivered customer-centric solutions by translating ongoing engagement into actionable insights.
- Accelerated development of new products and services by responding constructively to customer feedback.

#### Engagement Mode and Frequency

- O In-person and virtual engagements
- O Social media engagements
- O Customer feedback system, online customer survey
- O Marketing activities and outreach programmes
- O Events, dialogues, roadshows and engagements
- AR Customer appreciation programmes

**Frequency**

○ Ongoing

○ Quarterly

○ Annually

○ As Required

**E Employees****Why They Matter to Us**

Employees drive operational excellence through their expertise and commitment, enabling growth and resilience in a changing environment. We focus on maintaining a respectful and supportive workplace that safeguards well-being and enables sustained performance.

**Common Areas of Interest**

- Safe and healthy work environment
- Learning and development opportunities
- Career progression
- Diversity and inclusion
- Work culture rooted in our Shared Values
- Ethical and sustainable business practices
- Flexible working arrangements
- Job security

**Our Response**

- Reinforced a safe, healthy and supportive work environment across operations, anchored in ethics, compliance and generative safety practices.
- Enabled continuous learning and upskilling opportunities to build capability and future readiness.
- Advanced diversity, inclusion and employee well-being through targeted programmes, inclusive workspaces and a supportive culture.
- Provided structured support during workforce transitions through career advisory, access to mental health support and financial well-being programmes, helping affected employees navigate change with dignity and clarity.

- Reinforced governance and transparency through structured initiatives on ethics, integrity and compliance.
- Recognised employee contributions and strengthened engagement to foster belonging and shared purpose.
- Enabled engagement and collaboration through digital platforms, supporting seamless communication and knowledge-sharing across geographies.

**Meaningful Outcomes**

- A safe, inclusive and supportive workplace culture.
- Employee support during periods of transition, with access to professional guidance, psychosocial support and financial well-being resources.
- Continuous employee growth and well-being, enabled through upskilling, wellness and engagement initiatives supporting professional and personal development.
- Enhanced operational efficiency, driven by streamlined communication, reduced reliance on manual intervention, faster decision-making and stronger team alignment.

**Engagement Mode and Frequency**

- Internal communications
- Knowledge-sharing engagements and forums
- AR Townhalls
- A Organisational culture survey
- Upskilling sessions

**SIC Shareholders, Investors and Credit Rating Agencies****Why They Matter to Us**

Transparent disclosure of financial and strategic performance strengthens confidence, supports access to capital and helps manage cost of capital. Ongoing engagement provides market perspectives that guide our response to capital market developments and long-term strategic priorities.

**Common Areas of Interest**

- Business and industry outlook
- Project progress and deliverables
- Financial position and shareholder returns
- Energy transition initiatives
- Sustainable value creation
- Environmental, social and governance performance

**Our Response**

- Maintained transparent and timely communication through regular reporting, financial disclosures and performance updates.
- Demonstrated financial resilience and strengthened confidence through robust fundamentals and clear strategic direction.
- Strengthened sustainability disclosures in line with international standards to enhance transparency on long-term commitments and our Net Zero Carbon Emissions by 2050 Pathway.

**Meaningful Outcomes**

- Consistent access to accurate financial, strategic and sustainability information to support investment decisions and credit assessments.
- Financial resilience and strategic alignment, strengthening investor confidence and creditworthiness, and supporting stable credit ratings and access to competitive financing.

**Engagement Mode and Frequency**

- In-person and virtual engagements
- Conferences, forums, meetings and briefings
- Financial results announcements
- Analyst briefings
- Annual General Meetings
- AR Announcements and disclosures via corporate websites and reports

# Engaging with Stakeholders

## Frequency

- O Ongoing
- Q Quarterly
- A Annually
- AR As Required

## M Media

### Why They Matter to Us

We maintain constructive, two-way engagement with media partners to communicate our strategy, operations and priorities clearly, while gaining insights into community needs and customer perspectives. This engagement supports accurate reporting, informed dialogue and broader understanding of our role and impact.

### Common Areas of Interest

- Societal progress
- Nation building
- Sustainability
- Environmental stewardship
- Governance
- Business strategy
- Financial performance
- Leadership
- Products and services

### Our Response

- Fostered open and constructive engagements with media partners to support societal progress, strengthen industry understanding and improve awareness of PETRONAS' operating landscape.
- Leveraged media insights to strengthen organisational readiness and support timely, coordinated responses to emerging risks and issues.
- Supported media causes and recognised excellence in journalism, promoting transparency and the public's right to accurate information.

- Strengthened media collaboration to ensure timely, accurate and transparent reporting.

### Meaningful Outcomes

- Enhanced understanding of PETRONAS' activities through proactive, accurate and transparent communication of business strategy, sustainability commitments and innovation efforts.
- Improved the quality of public discourse by providing clear, consistent and contextualised narratives that clarify PETRONAS' role, priorities and operating environment.
- Strengthened organisational readiness by leveraging media insights to deepen understanding of societal expectations, enabling faster, more coordinated and pragmatic responses to emerging risks and issues.

### Engagement Mode and Frequency

- O In-person and virtual engagements
- O Meetings and briefings
- O Digital updates through websites and social media
- AR Press conferences, press releases and interviews
- AR Responses to media queries and maintain open communication channels

## GIP Government-Linked Companies and Industry Partners

### Why They Matter to Us

Partnerships with industry players support delivery across all business phases, strengthen standards and accelerate the adoption of sustainable energy technologies. Collaboration with Malaysian Government-linked Companies (GLCs) and other key partners aligns execution with national objectives while supporting energy security, revenue generation as well as environmental and social commitments. These partnerships drive collective progress in economic development, energy transition, innovation and responsible business practices.

### Common Areas of Interest

- Governance and integrity
- Industry requirements, regulations and policies
- Business continuity and energy transition relevance
- Health, safety and environment
- Business opportunities and participation in relevant industries
- Industry partner capability development

### Our Response

- Deepened strategic partnerships with GLCs and industry players to support business growth and advance sustainable energy initiatives.
- Leveraged structured forums, formal agreements and thought leadership platforms to unlock opportunities and support partners.

- Expanded supplier engagement and capability-building programmes to raise industry standards and promote sustainability across the OGSE sector.
- Enabled collaborative industry initiatives and events that strengthen digital capabilities, competitiveness and market resilience.

### Meaningful Outcomes

- Elevated industry standards, regulatory maturity and industrial professionalism.
- Strengthened the resilience of Malaysia's OGSE sector.
- Enhanced sector capabilities, innovation uptake and market access, aligned with national energy transition and sustainability priorities.

### Engagement Mode and Frequency

- O In-person and virtual engagements
- O Briefings, meetings and roundtable discussions
- O Dialogues, panels, conferences and exhibitions
- AR Company events
- AR Familiarisation visits and site visits

**Frequency**

- O Ongoing
- Q Quarterly
- A Annually
- AR As Required

**IO International Organisations**

**Why They Matter to Us**

Partnerships and engagements with international organisations support coordinated action on shared priorities, including a just energy transition. These engagements strengthen PETRONAS' global standing, enable informed participation in international dialogue and support navigation of complex and evolving policy environments and fluctuating energy markets.

**Common Areas of Interest**

- Opportunities and barriers to a just energy transition
- Capacity and capability building
- Sharing of global best practices, frameworks and standards
- Joint projects and partnerships

**Our Response**

- Formed strategic partnerships to advance sustainability, including climate, nature and energy transition initiatives at regional and global levels, including policy and carbon market engagement.
- Worked with international organisations and industry groups to co-develop solutions for decarbonisation and methane emissions reduction.
- Participated in global dialogues, publications and knowledge-sharing to advance climate action and the energy transition.
- Built internal capability by working with global experts and specialised entities and initiatives to strengthen sustainability practices and governance alignment.

**Meaningful Outcomes**

- Reinforced PETRONAS' role as a recognised thought leader and strategic partner in advancing a just and inclusive energy transition and climate action.
- Facilitated cross-border knowledge exchange and solution development in decarbonisation, biodiversity and market-based climate mechanisms.
- Expanded access to regional transition financing and funding opportunities, supporting energy transition initiatives and long-term sustainability objectives.

**Engagement Mode and Frequency**

- O In-person and virtual engagements
- O Briefings, meetings and roundtable discussions
- O Dialogues, panels, conferences, exhibitions, awards schemes and secondments
- AR Company events
- AR Familiarisation visits and site visits

**CN Communities and Non-Governmental Organisations**

**Why They Matter to Us**

Engagement with communities and non-governmental organisations (NGOs) helps address social and environmental priorities that affect our operations. These relationships support community well-being, environmental stewardship and public trust, while sustaining our social licence to operate through open, transparent and inclusive dialogue, partnering around specific objectives, investments and donations.

**Common Areas of Interest**

- Human rights
- Education
- Community well-being and development
- Governance and integrity
- Health, safety and environment
- Compliance with relevant legislation
- Sustainability
- Ethical practices

**Our Response**

- Partnered with NGOs, academic institutions and local organisations to support environmental protection and sustainable development.
- Enabled inclusive community engagement through structured dialogue platforms, supported by accessible grievance mechanisms.

- Invested in education, particularly in Science, Technology, Engineering and Mathematics (STEM) and Technical and Vocational Education and Training (TVET), through targeted funding and industry-aligned programmes.
- Supported communities through focused relief, livelihood improvement and capacity-building initiatives, especially in underserved areas.
- Improved community health and safety awareness, disaster risk management and preparedness through simulation exercises.

**Meaningful Outcomes**

- Strengthened community resilience and socio-economic well-being through targeted, inclusive interventions.
- Enhanced environmental stewardship and local capabilities through sustained partnerships and sustainable initiatives.
- Reinforced community and NGO awareness, confidence and preparedness to manage potential risks, supporting local resilience.

**Engagement Mode and Frequency**

- O Meetings and briefings
- O PETRONAS' signature social impact programmes: Powering Knowledge®, Uplifting Lives® and Planting Tomorrow®
- O Engagements with local communities
- O Joint projects and partnerships