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Executive Vice President and  
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Downstream business showcased resilience, driving operational excellence and maximising resources across our value chain. We navigated challenges and seized opportunities in a recovering market, with demand nearing pre-COVID-19 levels across all units. Our production volumes in petroleum and petrochemical products saw an uptick due to stable plant operations and reliability. Significantly, our marketing arm recorded a rise in sales volume for the retail and commercial segments, fuelled by economic recovery.

Looking forward, our commitment is to strengthen our foothold into specialty chemicals, expand convenience business such as Café Mesra and Setel, and grow our presence in the Asian lubricant market, focusing on customer-centric solutions to drive long-term value creation in a changing world. We are also actively exploring growth opportunities in cleaner energy solutions, including biofuels, circular economy and next-generation fluids with the PETRONAS Iona range, aligning with the evolving global energy demands.

# Downstream



**26.3 billion**  
litres of overall marketing  
sales volume.



**87.2%**  
Overall Equipment  
Effectiveness (OEE).



Sanctioned the construction  
of an **advanced  
chemical recycling  
plant** in Pengerang, Johor.



Achieved **final  
investment decision  
(FID) to fully acquire  
maleic anhydride  
plant** in Gebeng, Pahang  
from BASF PETRONAS  
Chemicals Sdn Bhd.

**Key Focus Areas and Results**

Focus Area	What We Did in 2023	Results	Stakeholders
<p><b>Core Business</b></p>	<p><b>Stable and Efficient Operations</b></p> <ul style="list-style-type: none"> <li>Sustained safe, stable and efficient operations across all units, meeting energy security needs.</li> </ul>	<ul style="list-style-type: none"> <li>Improved Overall Equipment Effectiveness (OEE) to 87.2 per cent from 85.9 per cent last year.</li> <li>Enhanced operational efficiency and reliability.</li> </ul>	<p>C E SIC</p>
<p><b>New Business</b></p>	<p><b>Biofuels Development</b></p> <ul style="list-style-type: none"> <li>Partnered with Idemitsu Kosan Co., Ltd. to explore co-marketing including sales and delivery of produced Sustainable Aviation Fuel (SAF) to the aviation industry overseas.</li> <li>Initiated a Used Cooking Oil (UCO) collection drive in selected regions to promote responsible waste management and circular economy practices.</li> <li>Signed Memorandum of Understanding (MoU) with The Malaysian Palm Oil Board to study the viability and accessibility of domestic UCO and palm waste as feedstocks for the production of SAF.</li> </ul>	<ul style="list-style-type: none"> <li>Initiated collaboration with Idemitsu Kosan Co., Ltd. to establish a robust SAF sales and distribution network, ensuring SAF accessibility to airlines.</li> <li>Collected 137.95 tonnes of UCO nationwide at selected retail stations and refining plants, through collaboration with the Ministry of Plantation and Commodities to supply feedstock for SAF production. This initiative enhanced public awareness of waste management and circular economy through ongoing UCO collection campaigns.</li> </ul>	<p>GIP CN</p>
	<p><b>Specialty Chemicals Division</b></p> <ul style="list-style-type: none"> <li>Established a dedicated division for specialty chemicals to strategically drive growth.</li> </ul>	<ul style="list-style-type: none"> <li>Perstorp completed the construction of Sayakha plant in India in 2023 for the production of Pentaerythritol and ISCC PLUS certified Voxtar™ M40 to strengthen its market position in the Asia Pacific region.</li> <li>BRB significantly expanded its global footprint and capabilities in 2023, achieving key certifications for food safety in Malaysia and started full operations of its new Linde Ammonia Concept plant in the Netherlands, while strengthening its market presence in the UK and South Korea.</li> </ul>	<p>C SIC</p>
	<p><b>Circular Economy Advancement</b></p> <ul style="list-style-type: none"> <li>Reached a final investment decision for the construction of an advanced chemical recycling plant in Pengerang, Johor, set for operation by the first half of 2026.</li> </ul>	<ul style="list-style-type: none"> <li>Initiated the construction phase of the plant that will enable PETRONAS Chemicals Group Berhad to convert end-of-life plastics into pyrolysis oil, which can be used as chemical feedstock in the production of sustainable plastics.</li> </ul>	<p>CN</p>

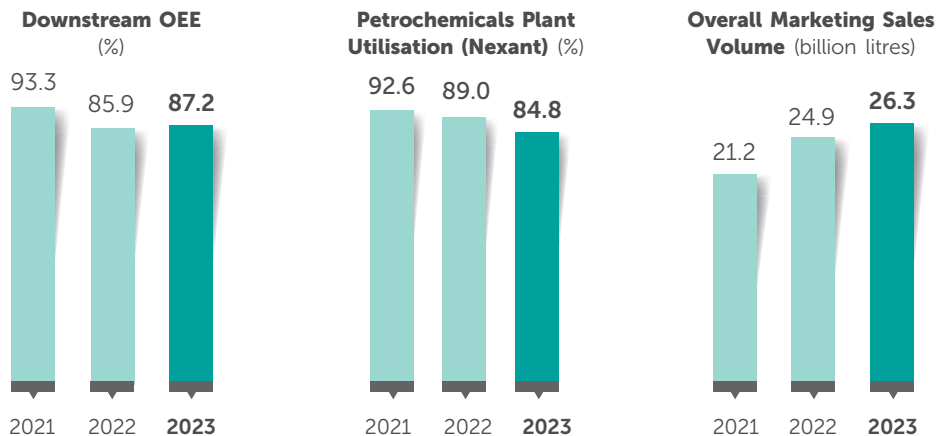
## Downstream

Key Focus Areas and Results			
Focus Area	What We Did in 2023	Results	Stakeholders
<b>New Business</b>	<p><b>Convenience Business Expansion</b></p> <ul style="list-style-type: none"> <li>Expanded the convenience business to cater to customer's needs through diversified product and service offerings at PETRONAS fuel retail stations and beyond.</li> </ul>	<ul style="list-style-type: none"> <li>Operated 97 Cafe Mesra outlets as of December 2023 in strategic locations nationwide including PETRONAS fuel retail stations and beyond, bringing its product and service offerings closer to customers for greater convenience.</li> <li>Launched Setel Lite and integrated DuitNow QR in the Setel app, strengthening Setel's position as a preferred e-wallet for motorists, bringing convenience through motorist-centric features beyond fuel.</li> </ul>	<p>FG C</p>
<b>Net Zero Carbon Emissions</b>	<p><b>Emissions Reduction Initiatives</b></p> <ul style="list-style-type: none"> <li>Implemented various Scope 1 and Scope 2 emissions reduction initiatives, including optimisation of fuel burning equipment and combustion process, generation and utilisation of renewable electricity sources, and energy efficiency enhancement.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced GHG emissions from Downstream operations to support PETRONAS' target of capping emissions to 49.5 million tonnes carbon dioxide equivalent (CO<sub>2</sub>e) by 2024.</li> </ul>	<p>FG C</p>

### Highlights and Achievements

We have maintained stable OEE but recorded a reduction in petrochemicals plant utilisation (Nexant) for the past three years due to planned turnaround and maintenance activities, as well as unscheduled plant shutdowns. Retail and Commercial segments meanwhile boosted overall marketing sales volume on the back of economic recovery.

#### Performance Highlights for 2023



## Challenges

### Challenge

#### Evolving Customer Preferences

Shifts in customer's preferences towards sustainably produced products and offerings.

#### Geopolitical Instability

Geopolitical tensions leading to supply disruptions, volatility of commodity prices and increased scrutiny on sanction laws.

### Mitigation Action

- **Sustainability Initiatives:** Implementing initiatives in line with the Net Zero Carbon Emissions by 2050 Pathway, focusing on operational emissions reduction and cleaner energy solutions.
- **Business Future-Proofing:** Diversifying into high-margin products and offerings to meet stakeholder demands.

- **Sourcing strategy:** Accelerate nearshoring sourcing strategy and global sourcing partnership to reduce geographic dependence, ensuring security of supply and cost competitiveness.
- **Compliance Review:** Rigorous review of counterparties to ensure compliance to relevant sanction laws.

### Results

- **Biofuel in Formula One:** Collaborated with Mercedes-AMG PETRONAS Formula One Team using biofuel in its fleet across nine races, leading to savings of 339 tonnes CO<sub>2</sub>e and a 67 per cent emissions reduction during the Formula One European Season.
- **Electric Vehicle Charging Expansion:** Grew the number of Gentari-branded electric vehicle chargers to 51, strategically placed at PETRONAS fuel retail stations to enhance customers' accessibility.
- **PETRONAS Syntium Hybrid Launch:** Met the increasing demand for sustainable vehicle solutions with the hybrid engine fluids, PETRONAS Syntium Hybrid.
- **AireBlue™ Launch:** Offered road users access to a cleaner diesel exhaust alternative through the Kedai Mesra network.
- **PETRONAS Iona and thermal management fluid enhancement:** Increased engine energy efficiency without compromising performance while delivering sustainable mobility for consumers.
- **Lubricant:** Increased supplier base with competitive prices.
- **Counterparty Screening:** Conducted additional screening methodology in determining the 'Ultimate Beneficial Owner' of counterparties as an added safeguard to the existing practices.

## Opportunities

- **Innovative Energy Solutions Demand:** Downstream is poised to meet the rising demand for innovative energy solutions, tapping into the growing global trend towards sustainable energy practices.
- **Retail Market Expansion:** With the retail market rebounding, Downstream is well-positioned to capitalise on the increased demand for diverse convenience business products and services.
- **Shift Towards Green Mobility:** Downstream will continue to expand strategic collaborations with Gentari and other industry players to enhance the eco-friendly transportation ecosystem in the country, making electric vehicle adoption more affordable and accessible.

## Downstream

### Our Approach to Sustainability

- **Mangrove Conservation Programme:** PETRONAS Refinery and Petrochemicals Corporation Sdn Bhd, in partnership with Pengerang Terminals (Two) Sdn Bhd and PETRONAS Chemicals Group Berhad has planted an additional 15,500 mangrove trees to reach the target of 30,000 trees in Pulau Tanjung Surat, Johor, contributing to reforestation and shoreline protection.
- **Be Green Initiative Expansion:** PETRONAS Chemicals Group Berhad expanded Be Green, its flagship social impact programme, internationally for the first time starting with Indonesia, to drive awareness on responsible waste management and the practice of 3R (Reduce, Reuse and Recycle).
- **4R (Reduce, Reuse, Recover, Recycle) Initiative:** PETRONAS Lubricants Brazil recycled eight tonnes of label liner waste per month to produce 180 recycled paper towel rolls (equivalent to 706 kilograms) for use in its blending plant in Contagem, Brazil.
- **Social Enterprise Education Lab (SEEd.Lab):** SEEd.Lab, which has impacted over 15,000 lives since 2020, launched Cohort 3 with 50 social entrepreneurs to address societal and environmental challenges.
- **ESG Performance Recognition:** PETRONAS Chemicals Group Berhad and PETRONAS Dagangan Berhad's high rating on the FTSE4Good Bursa Malaysia Index and top 25 per cent ESG ranking in the FTSE Bursa Malaysia EMAS Index demonstrate a strong commitment to environmental, social, and governance excellence.



For more information on our sustainability contributions, please refer to pages 108-197.



## ► Our Outlook

### Short-Term Outlook

Our focus is on agility and alignment with the broader PETRONAS organisation. We are committed to creating long-term value while addressing today's global energy demands and preparing for future needs.

Our targeted investments leverage our unique business strengths, future-proofing our portfolio and creating new revenue streams. Our strategy involves strengthening operational and commercial excellence and extending value to fully capture the market, especially in key growth areas in the new energy solutions space. These include:

- Advancing into biofuels to be supported by our upcoming first biorefinery in Pengerang, Johor
- Maximising value through asset-backed trading
- Delivering innovative solutions through the expansion of PETRONAS Iona range while enhancing product performance to promote the shift towards e-mobility
- Growing our convenience business to diversify product offerings beyond fuel.
- Strengthening our foothold in specialty chemicals as part of our portfolio diversification strategy.
- Advancing towards circular economy through the New Plastics Economy initiatives; and
- Driving growth and maximising the potential of the Pengerang Integrated Complex (PIC) through strategic partnerships and investments.

### Medium- to Long-Term Outlook

At Downstream, we aim to drive business value through the development of sustainable solutions. Our priority is to align with new policy developments, increased private sector commitment, rising consumer awareness, technological advancements in the societies we serve and address the energy transition in a just and responsible manner. We are committed to measuring, reducing and offsetting our carbon emissions to realise our Net Zero Carbon Emissions by 2050 Pathway and meeting the climate goals set out under the Paris Agreement. We will continue to reduce emissions from our operations through decarbonisation levers in support of PETRONAS' target of a 25 per cent reduction by 2030.