

## SEGMENTAL REVIEW

## COMMODITIES

## OVERVIEW

**In the year under review, PCG's commodities portfolio which comprises Olefins & Derivatives (O&D) segment and Fertiliser & Methanol (F&M) segment faced a combination of external and internal challenges that impacted both operational and sales performance.**

On the commercial front, we had to navigate soft market demand that affected the entire industry, while operationally, there were a range of unexpected shutdowns due to reliability challenges as well as feedstock and supply disruptions which impacted plant utilisation. PCG navigated these headwinds to the best of our ability, focusing on our Operational Excellence and Commercial Excellence initiatives to mitigate the effects on our business.

## CHALLENGES

From an operations perspective, we met with a number of internal and external reliability challenges that prompted unexpected shutdowns and disruptions at our plants. Internally, we had several unplanned shutdown events mainly at PC Methanol, ASEAN Bintulu Fertilizer (ABF), PC Aromatics and PC MTBE. Maintenance downtime at the Sabah-Sarawak Gas Pipeline (SSGP), through which our gas feedstock is delivered, meant that our PC Fertiliser Sabah and PC Methanol (Plant 2) plants also had to shut down. Besides, we also experience utilities supply disruptions to our facilities in Kertih. As a consequence, the overall plant utilisation rate declined to 84.8% from 88.9% in 2022 and led to a shortfall in production and sales volume.

In 2023, we undertook two planned turnarounds and six scheduled maintenance activities and these were executed successfully with improved HSE performance as a result of the implementation of the HSE Turnaround Standardisation and Best Practices programme that began in 2022. We continuously evaluating the effectiveness of our operational and strengthening our efforts in mitigating all reliability challenges through enhanced maintenance strategies, and improve collaboration with our feedstock and utility suppliers. The efforts include reinforcing the technical collaboration internally and externally to ensure we learn and implement the best practices within the industry.

From a commercial perspective, the entire petrochemicals industry had to navigate the impact of China's slower-than-expected post-pandemic recovery, high oil prices and an overall moderation in global economic growth that weighed on business sentiment. With sufficient domestic supply in China, demand remained soft for chemical imports, which also prompted China producers to compete in European markets. With high oil prices, shale oil producers were also able to restart production, which brought extra capacity to the market for certain products. Consequently, margins have been compressed for much of the year.

However, within the rest of the Asian region, we continue to maintain our edge as a supplier of choice given our dedication to customer service excellence, competitive prices and strong technical support. Internally, we responded to the unplanned shutdowns by conducting strategic sourcing to ensure that the shortfall in production did not impact our customers. In addition, we continued to introduce new enhanced products and rolled out PETRONAS360, a new self-service portal for our customers aimed at delivering a more seamless experience.

**R** For more information regarding our Operational and Commercial Excellence initiatives, please refer to our Strategy section on pages 53 to 58.

## SEGMENTAL REVIEW-COMMODITIES

### PERFORMANCE HIGHLIGHTS & ACHIEVEMENTS

#### O&D SEGMENT :

In 2023, plant utilisation for the O&D segment was 85.4% compared to 91.4% in 2022. Lower plant utilisation was contributed by turnaround activities at PC MTBE as well as scheduled shutdown at PC Glycols and PC Derivatives in the third and fourth quarter. Externally, utility supply disruption from Utilities Kertih in the second half of 2023 impacted the segment's plant utilisation.

In terms of sales performance, the O&D segment experienced an increase in sales volume at 3,516 kilometric tonnes (KMT) in 2023 from 2,879 KMT in 2022, mainly due to contribution from PIC despite the lower Plant Utilisation (PU) this year. Despite unexpected plant reliability issues, we maintained a high Order Fulfilment Reliability (OFR) of 95% through effective mitigation plans such as order prioritisation and strategic sourcing.

Furthermore, we intensified our route-to-market efforts to secure homes for the upcoming volumes from PIC. In 2023, a total volume of 0.84 million MT from pre-operation activities was delivered to the market.

This year, we launched a new product under the Enhanced Product Development (EPD) initiative - Ethonas SF401, an engineered spacer fluid in oil-based mud drilling activities that enhances wettability and is sustainable and cost-effective.

#### OVERALL PRODUCTION VOLUME:

**2023**  
3,365 KMT      2022: 3,577 KMT  
                         2021: 3,910 KMT

#### OVERALL SALES VOLUME:

**2023**  
3,516 KMT      2022: 2,879 KMT  
                         2021: 3,056 KMT

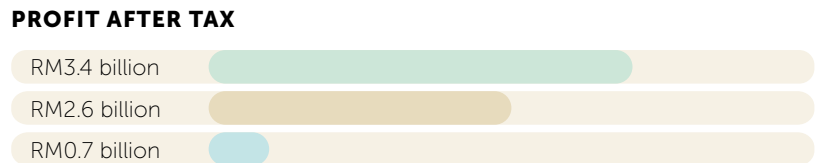
#### PLANT UTILISATION:

**2023**  
85.4%      2022: 91.4%  
                         2021: 99.6%

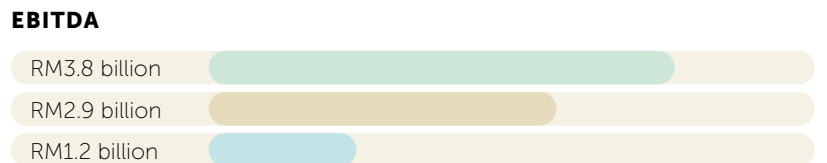
#### REVENUE



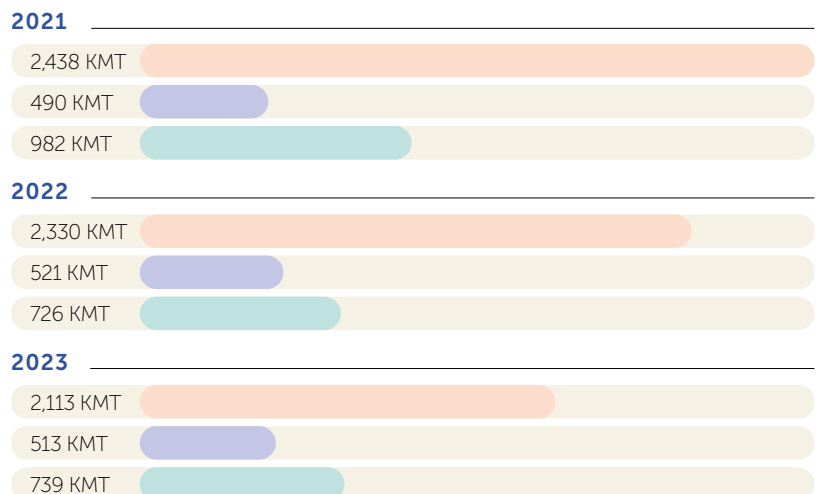
#### PROFIT AFTER TAX



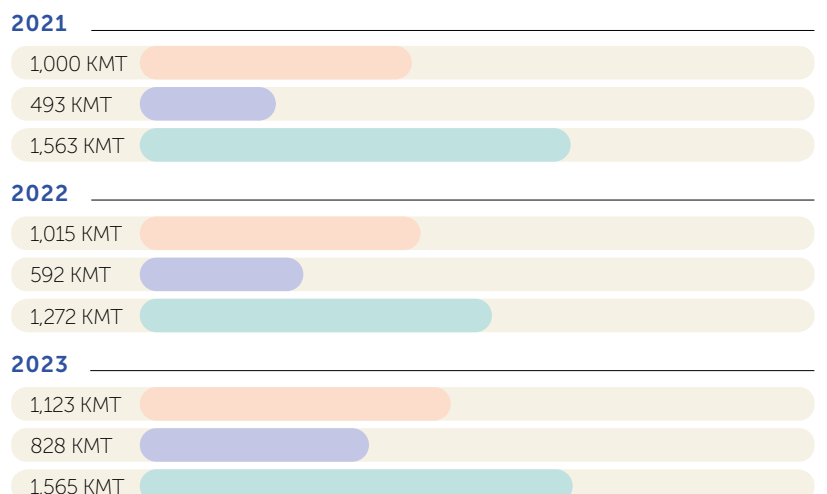
#### EBITDA



#### PRODUCTION VOLUME BREAKDOWN



#### SALES VOLUME BREAKDOWN



Olefins, Glycols & Derivatives   Polymers   Aromatics & MTBE

## SEGMENTAL REVIEW-COMMODITIES

## PERFORMANCE HIGHLIGHTS &amp; ACHIEVEMENTS

## F&amp;M SEGMENT :

For the F&M segment, plant utilisation was 84.4% compared to 87.5% in 2022, attributed to higher plant maintenance activities. These were in addition to extended scheduled shutdowns at ABF.

Consequently, due to the multiple unplanned shutdowns, volume availability for sales was lower than planned. However, our wide network and solid relationship with co-producers and suppliers enabled the commercial team to ensure supply reliability to customers via strategic sourcing, especially for methanol. At the same time, we were able to minimise risks of contract cancellations and maintained our reputation as a preferred supplier.

In terms of sales performance, we improved delivery at key markets with the first delivery and operationalisation of new methanol tanks at Semarang in Indonesia, and Fujian & Taicang in China. In addition, we increased the production volume of Ultra High Purity Methanol (UHPM) from 3,600 litres to 5,040 litres since the launch of this product in 2021. UHPM is a low-carbon solution applied in fuel cells for stationary and mobile energy solutions.

Further to that, we intensified our route-to-market endeavours to secure homes for upcoming methanol volume from Sarawak Petchem, with 67% of the total volume already committed to customers through Letters of Intent (LOI). Situated in Bintulu, the methanol plant will have an annual capacity of 1.7 million metric tonnes. PCG will be the marketing agent for Sarawak Petchem Sdn. Bhd. (Sarawak Petchem) for a duration of 20 years.

In addition, we commenced retail sales of PETRONAS AireBlue™ at Kedai Mesra outlets in Johor, in collaboration with PETRONAS Lubricants Marketing (Malaysia). AireBlue™ was developed by PCG and launched in 2019 as a solution to help reduce the formation of impurities and produce cleaner exhaust emissions.

## OVERALL PRODUCTION VOLUME:

**2023**  
6,169 KMT      2022: 6,390 KMT  
2021: 6,478 KMT

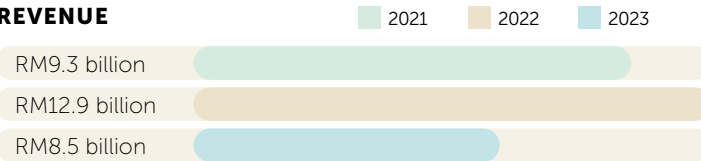
## OVERALL SALES VOLUME:

**2023**  
5,252 KMT      2022: 5,184 KMT  
2021: 5,145 KMT

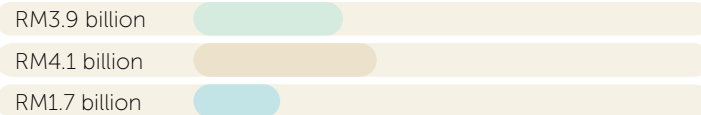
## PLANT UTILISATION:

**2023**  
84.4%      2022: 87.5%  
2021: 88.7%

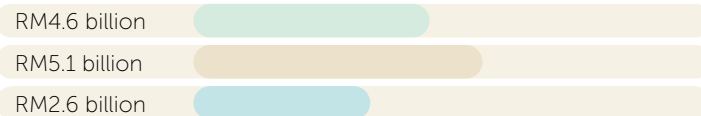
## REVENUE



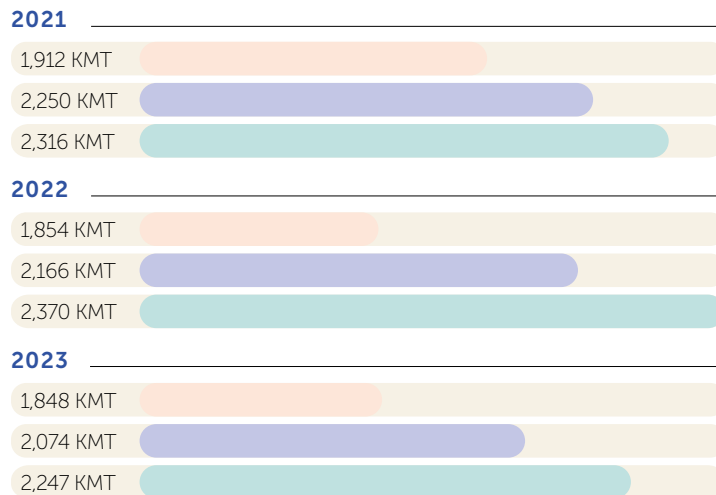
## PROFIT AFTER TAX



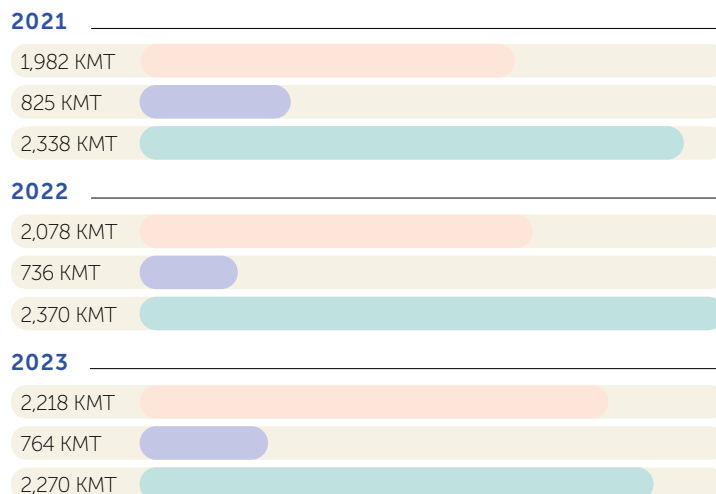
## EBITDA



## PRODUCTION VOLUME BREAKDOWN



## SALES VOLUME BREAKDOWN



Methanol      Ammonia      Urea



PETRONAS AireBlue™  
introduced in selected  
Kedai Mesra outlets.

# SEGMENTAL REVIEW-COMMODITIES

## RISKS & OPPORTUNITIES

### H Health, Safety and Environment Risk

Unsafe working environment exposes our employees and contractors to physical and chemical hazards, leading to potential injuries or fatalities.

#### Opportunity

- Drive the implementation of HSE excellence programmes at all levels, including for contractors, to ensure a safe working environment

### O Plant Operational Risk

Unreliable and inconsistent production impacts sales volume and revenue growth.

#### Opportunities

- Strengthen technical collaboration internally and externally to improve response and mitigate plant reliability challenges based on best practices and latest improved technology
- Deliver Operational Excellence by optimising digital tools utilisation in managing plant reliability issues and improving plant efficiency

**R** For more information regarding Plant Operational Risk, please refer to our Risk Overview section on page 68.

### F Feedstock and Utilities Risk

Unreliable feedstock, utilities and chemicals supply which may disrupt plant operation.

#### Opportunity

- Effectively collaborate with feedstock, utilities and chemicals suppliers

### M Market Risk

Mismanagement of customer relationships may result in loss of customer loyalty and subsequently tarnish the company's reputation.

#### Opportunities

- Reliable and timely delivery of products to customers promotes repeated purchases and customer loyalty
- Engagement and collaborations with customers enables a better understanding of their product expectations and better insight on current market needs
- Expansion of customer base and exploration of new markets through innovative products
- Deliver Commercial Excellence through strategic approaches in sales and logistics initiatives

#### Action taken

- In 2023, we intensified PCG HSE Turnaround Standardisation and Best Practices while consistently implementing our HSE Generative Culture
- Implemented the Road Transport Operation Guideline (RTOG), Vehicle Acceptance Checklist (VAC) and Electronic Pre-Departure Checklist (ePDC)
- Launched the HSE Partnership Pledge 2023 with the theme 'Strive for ZERO, ZERO is possible' for PCG's contractors to pledge their commitment and compliance to health and safety requirements

#### Results

- Recorded ZERO fatality and ZERO major fire incident since 2019 as well as achieved reduced Lost Time Injury Frequency (LTIF) at 0.09 compared to 0.17 LTIF in 2022
- Maintained low Total Vehicle Accident Rate (TVAR) at 0.08 (1) vs 0.19 (3) limit

#### Action taken

- Established an expert network for all technical experts to manage specific discipline, knowledge and work processes from across PCG to come together on a single platform to discuss and share solutions
- Continuation of Plant Facing Analytics (PFA) tools to increase plant Overall Equipment Effectiveness (OEE) and targeting the reduction of plant downtime due to equipment failure through advanced analytics

#### Results

- Addressed majority of plant issues during shutdown activities. Specifically for ABF, the ABF Reliability Improvement Strategy & Execution (ARISE) programme and rectification, which took place in the first half of 2023, resulted in the improvement of plant utilisation to 85% compared to less than 50% in the first half of 2023\*

\* For more information regarding our Operational Excellence initiatives, please refer to our Strategy section on pages 53 to 55.

#### Action taken

- Continued to collaborate with the Additional Ethane Taskforce (AET) and Additional Methanol Team (AMT) in maximising feedstock availability through collaboration between PCG and feedstock supplier up to upstream facilities
- Sustained close collaboration with local agencies to ensure uninterrupted water supply to our facilities
- During the SSGP downtime incident, PC Fertiliser Sabah used it as an opportunity to conduct maintenance activities that ultimately led to the optimisation of planned downtime

#### Results

From AET, PCG managed to secure more than 147 tonnes per hour (tph) of ethane supply availability and an additional 40 mmscfd of gas supply from AMT.

#### Action taken

- Established CDEx, a digital platform that provides visibility to customers on delivery updates
- Collaborated on product co-creation opportunities to solve customers' pain points
- Delivered customer-centric value propositions that meet customer needs
- Optimised sales portfolio mix and maintained high pricing excellence against market benchmark to maximise value
- Maintained competitive logistics costs through cost-to-serve optimisation initiatives

#### Results

- Continued to achieve high sales volume despite challenges amid market volatility and slow demand
- Achieved 5.5 sigma on customer feedback, exceeding the industry standard of 5.0 sigma
- Achieved a Net Promoter Score (NPS) of +68, an increment from +65 in 2022

## SEGMENTAL REVIEW-COMMODITIES

### CONTRIBUTION TO SUSTAINABILITY

In 2023, PCG took significant steps to embed sustainability in its operations, aligning with PETRONAS' Sustainability Agenda. We met and exceeded our emissions targets in what is a multiphased decarbonisation journey. Some of our key initiatives include:

#### **Kertih Site-wide Energy Review (SER) :**

- Identified opportunities such as utilising tail gas from PC Olefins for fuel gas usage of neighbouring aromatic plants (PC Aromatics)
- Rebalanced turbine operations at PC Olefins for optimised steam consumption

#### **Flaring and Venting Optimisation :**

- Minimised C5 flaring at PC MTBE
- Optimised CO<sub>2</sub> venting at PC Fertiliser Sabah

#### **Digital Transformation :**

- Implemented the Energy Twin project for live monitoring of equipment energy efficiency
- Sustained Advanced Process Control (APC) at PC Fertiliser Kedah and PC Methanol to reduce GHG emissions

#### **Scope 2 Emission Reduction :**

- Purchased renewable energy through Tenaga Nasional Berhad's Green Electricity Tariff (GET) and Sarawak Energy Berhad's Renewable Energy Credits (REC) to reduce market-based Scope 2 emissions

#### **Water-use Minimisation :**

- Concluded assessment of water consumption at our operating plants and identified efficient water consumption initiatives
- Reduced raw water consumption at our methanol plant by implementing adjustments and upgrades to the boiler and water treatment equipment to recover and reuse process condensate

#### **Material Matters :**



**R** For more information regarding our Operational and Commercial Excellence initiatives, please refer to our Strategy section on pages 53 to 58.

### OUTLOOK

Notwithstanding the challenging operating environment that is expected to persist well into 2024, PCG remains steadfast in ensuring that the focus going forward will be on plant reliability and performance.

With the effort we have implemented in this year, we anticipate that our plants will be able to achieve plant utilisation of above 90% going forward. In addition, we will emphasise the importance of rigour and discipline to all relevant stakeholders in complying with processes, policies and procedures as any lapses could lead to reliability issues.

We will also continue leveraging the structured sharing of lessons learnt to frontliners to ensure we maintain a culture of learning and empower our frontliners with the insights needed to excel in their roles and to drive better plant performance. Furthermore, in line with our HSE generative culture, we will continue to implement the PCG HSE Turnaround Standardisation and Best Practices Programme in 2024 and expand the practices to scheduled shutdown and normal operations as it has proven to be effective in 2023.

On the commercial front, 2024 looks to be an exciting year for PCG with new capacities coming online, namely PIC and the melamine plant in Gurun, Kedah. With the additional sales volume, the commercial team will be expanding market reach by exploring new geographical markets and untapped customer segments.