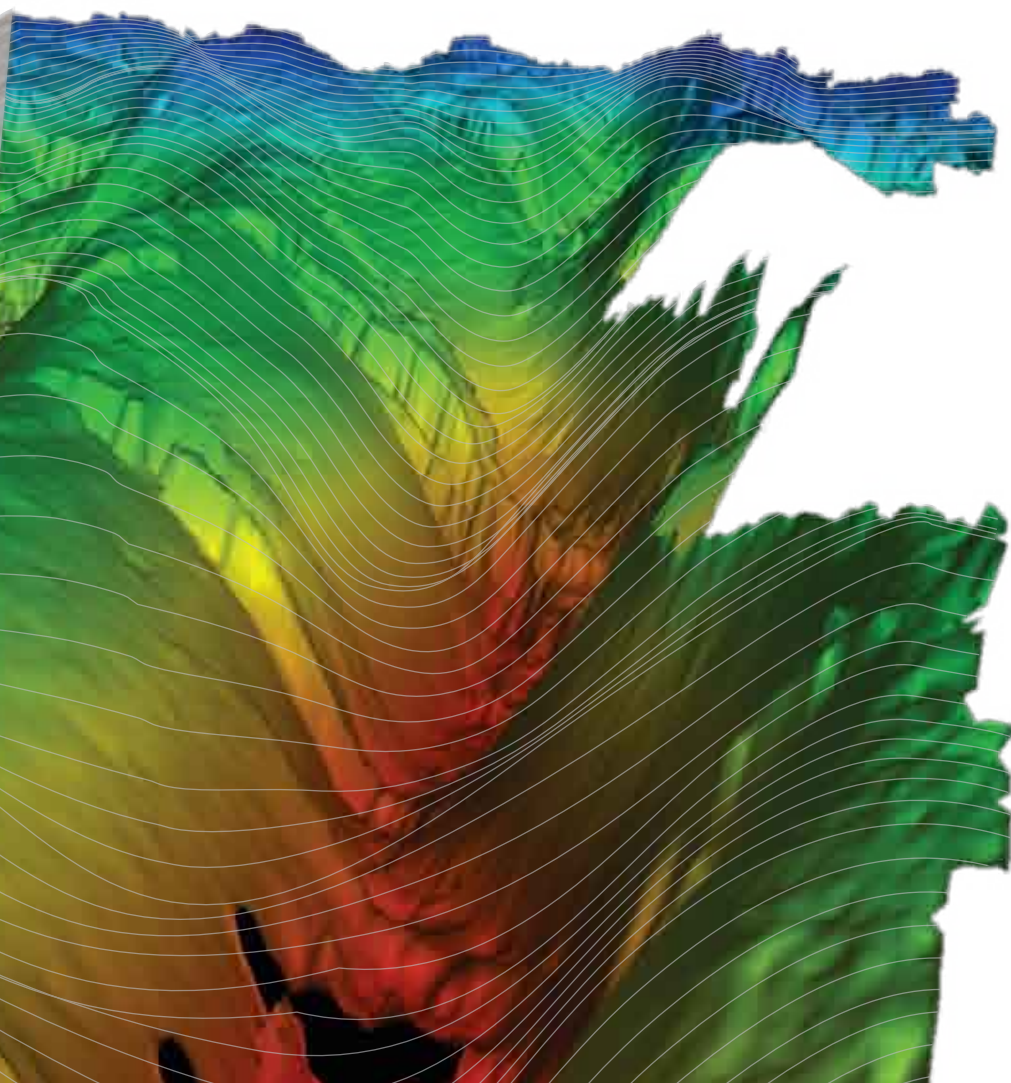
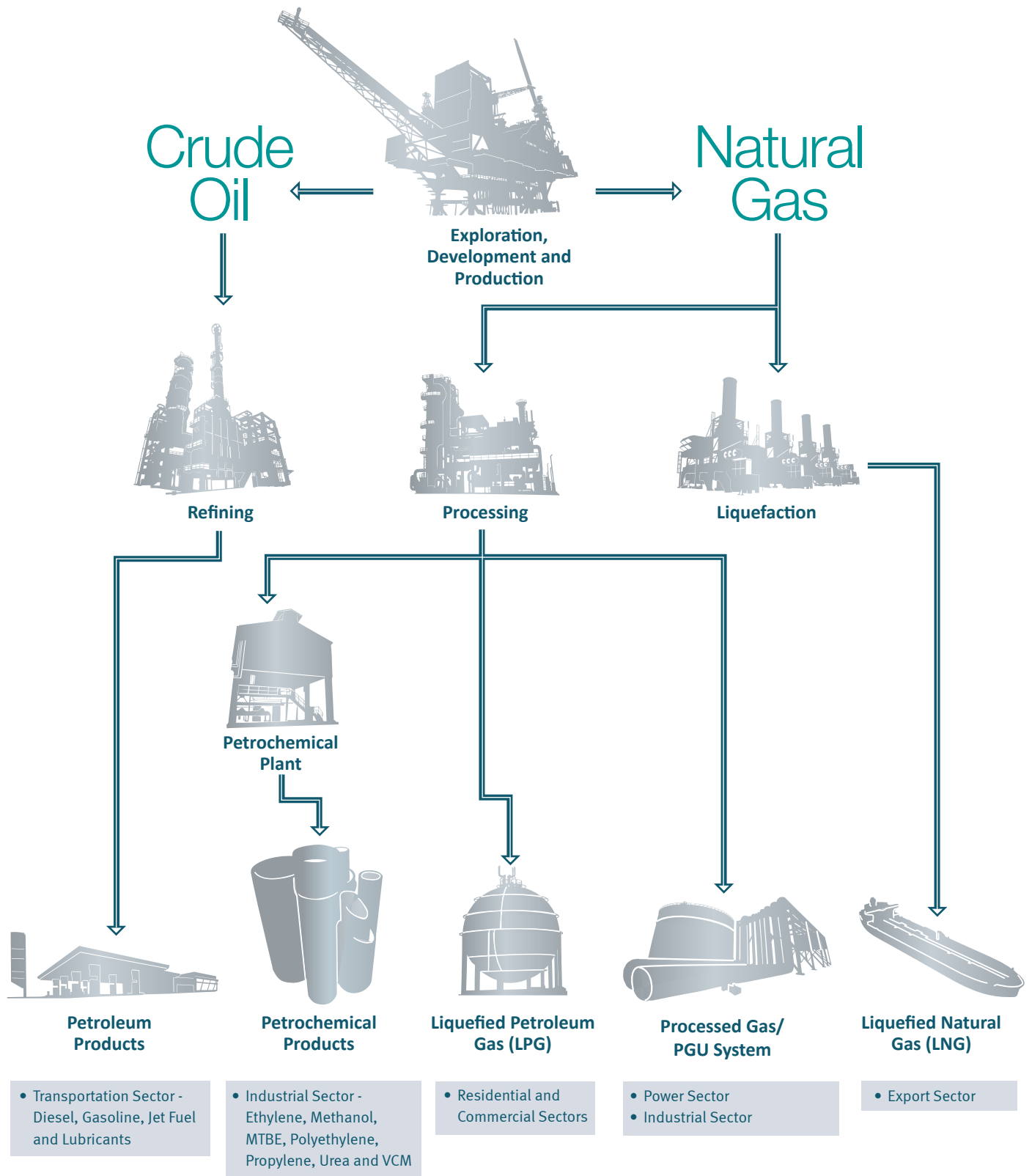


# 2011

Annual Report

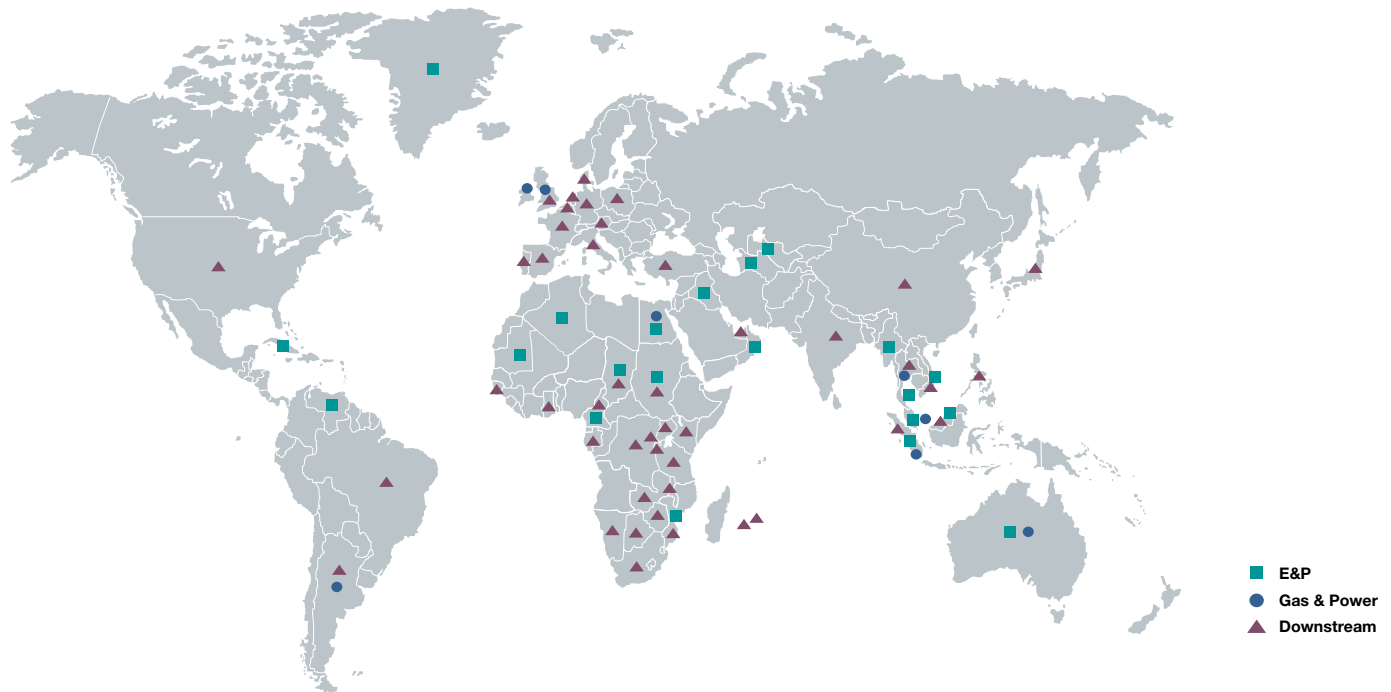


# Our Business



■ Non-exhaustive

# Our Presence



## Exploration & Production (E&P)

### Africa

• **Algeria** – Development • **Cameroon** – Exploration & Development • **Chad** – Development & Production

• **Egypt** – Exploration, Development & Production • **Mauritania** – Exploration & Production

• **Mozambique** – Exploration • **Sudan** – Exploration, Development & Production

### Asia Pacific

• **Australia** – Exploration • **Brunei** – Exploration • **Indonesia** – Exploration, Development & Production

• **Malaysia** – Exploration, Development & Production • **Malaysia-Thailand Joint Development Area** – Exploration, Development & Production

• **Myanmar** – Exploration, Development & Production • **Vietnam** – Exploration, Development & Production

• **Turkmenistan** – Exploration, Development & Production • **Uzbekistan** – Exploration, Development & Production

### Central Asia

### Latin America

### Middle East

### North America

• **Cuba** – Exploration • **Venezuela** – Development

• **Iraq** – Development • **Oman** – Exploration

• **Greenland** – Exploration

## Gas & Power

### Africa

• **Egypt** – LNG

### Asia Pacific

• **Australia** – LNG & Infrastructure • **Indonesia** – Infrastructure • **Malaysia** – LNG, Infrastructure, Utilities & Power

• **Thailand** – Infrastructure

### Europe

• **Ireland** – Infrastructure • **United Kingdom** – Infrastructure, Utilities & Trading

### Latin America

• **Argentina** – Infrastructure

## Downstream\*

### Africa

• **Botswana** – Oil Business • **Burundi** – Oil Business • **Cameroon** – Oil Business • **Chad** – Oil Business

• **Democratic Republic of the Congo** – Oil Business • **Gabon** – Oil Business • **Ghana** – Oil Business • **Guinea Bissau** – Oil Business

• **Kenya** – Oil Business • **Malawi** – Oil Business • **Mauritius** – Oil Business • **Mozambique** – Oil Business

• **Namibia** – Oil Business • **Réunion** – Oil Business • **Rwanda** – Oil Business • **South Africa** – Oil Business • **Sudan** – Oil Business

• **Tanzania** – Oil Business • **Uganda** – Oil Business • **Zambia** – Oil Business • **Zimbabwe** – Oil Business

### Asia Pacific

• **China** – Oil & Petrochemical Businesses • **India** – Oil & Petrochemical Businesses • **Indonesia** – Oil & Petrochemical Businesses

• **Japan** – Oil & Petrochemical Businesses • **Malaysia** – Oil & Petrochemical Businesses • **Philippines** – Oil & Petrochemical Businesses

• **Thailand** – Oil & Petrochemical Businesses • **Vietnam** – Oil & Petrochemical Businesses

### Europe

• **Austria** – Oil Business • **Belgium** – Oil Business • **Denmark** – Oil Business • **France** – Oil Business • **Germany** – Oil Business

• **Italy** – Oil Business • **Netherlands** – Oil Business • **Poland** – Oil Business • **Portugal** – Oil Business • **Spain** – Oil Business

• **Turkey** – Oil Business • **United Kingdom** – Oil Business

### Latin America

### Middle East

### North America

• **Argentina** – Oil Business • **Brazil** – Oil Business

• **United Arab Emirates** – Oil & Petrochemical Businesses

• **United States of America** – Oil Business

\*Includes Engen subsidiaries and marketing and trading offices.

©2011 PETROLIAM NASIONAL BERHAD (PETRONAS)

All rights reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the permission of the copyright owner. PETRONAS makes no representation or warranty, whether expressed or implied, as to the accuracy or completeness of the facts presented. PETRONAS disclaims responsibility from any liability arising out of reliance on the contents of this publication.

# Table of Contents

	Our Business	<b>30</b>	Financial Results
<b>3</b>	Our Presence	<b>38</b>	Exploration & Production Business
<b>5</b>	Corporate Statements	<b>46</b>	Gas & Power Business
<b>6</b>	Corporate Profile	<b>52</b>	Downstream Business
<b>10</b>	Corporate Enhancement Programme - A Year On	<b>60</b>	Maritime & Logistics Business
<b>14</b>	Board of Directors	<b>62</b>	Our People
<b>16</b>	Board Committees	<b>64</b>	Technology & Engineering
<b>18</b>	Executive Committee	<b>68</b>	Health, Safety & Environment (HSE)
<b>19</b>	Management Committee	<b>72</b>	Awards & Recognitions
<b>20</b>	President & CEO and Acting Chairman's Message	<b>78</b>	Corporate Social Responsibility
<b>26</b>	Statement of Corporate Governance	<b>82</b>	Main Events
<b>27</b>	Statement of Anti-Corruption	<b>90</b>	Glossary
<b>28</b>	Statement on Internal Control		

# Corporate Statements

## **VISION**

To be a Leading Oil and Gas Multinational of Choice

## **MISSION**

We are a business entity

Petroleum is our core business

Our primary responsibility is to develop and add value to this national resource

Our objective is to contribute to the well-being of the people and the nation

## **SHARED VALUES**

### **Loyalty**

Loyal to nation and corporation

### **Integrity**

Honest and upright

### **Professionalism**

Committed, innovative and proactive and always striving for excellence

### **Cohesiveness**

United in purpose and fellowship

# Corporate Profile



## PETRONAS at a Glance

PETRONAS, the acronym for Petroliam Nasional Berhad, was incorporated on 17 August 1974 under the Companies Act, 1965. It is wholly-owned by the Malaysian Government and is vested with the entire ownership and control of the petroleum resources in Malaysia through the Petroleum Development Act, 1974. Over the years, PETRONAS has grown to become a fully integrated oil and gas corporation and is ranked among the FORTUNE Global 500® largest corporations in the world.

## Exploration & Production Business



As custodian of Malaysia's oil and gas resources, PETRONAS is entrusted with the responsibility to develop and add value to the nation's hydrocarbon resources. In the early years, PETRONAS focused its efforts on managing the production sharing contractors who were exploring Malaysian acreages, but PETRONAS soon saw the need to take on a bigger and more proactive role in augmenting the nation's oil and gas reserves. PETRONAS has also reintensified efforts to strengthen Malaysia's upstream industry through the enhancement of fiscal terms and the introduction of new petroleum solutions, leveraging on the Government's new tax incentives.

Through its Exploration & Production (E&P) subsidiary, PETRONAS Carigali Sdn Bhd (PETRONAS Carigali), PETRONAS has developed capability as a hands-on operator with a track record of successful oil and gas developments. PETRONAS Carigali works alongside a number of petroleum multinational corporations through Production Sharing Contracts (PSCs) to explore, develop and produce oil and gas in Malaysia. Abroad, PETRONAS continues to strengthen its position by securing new acreages while undertaking various development projects.

The Petroleum Management Unit of PETRONAS acts as resource owner and manager of Malaysia's domestic oil and gas assets. It manages the optimal exploitation of hydrocarbon resources and enhances the prospectivity of domestic acreages to attract investment and protect the national interest. One of the key drivers of its business growth is deepwater E&P, with many positive prospects emerging in Malaysian acreages.

PETRONAS continues to harness and develop new technologies to maximise opportunities and further strengthen its capabilities as part of its ongoing efforts to become a leading global E&P player.



## Gas & Power Business

PETRONAS' Gas & Power Business aspires to be a leading integrated gas, liquefied natural gas (LNG) and power player. To create greater focus in these core areas of growth, the business has been restructured and streamlined into two major portfolios; Global LNG business and Infrastructure, Utilities & Power business.

### Global LNG



PETRONAS' global LNG business comprises the production and sale of LNG through its domestic operations in Bintulu, Sarawak (PETRONAS LNG Complex) and overseas operations in Egypt (Egyptian LNG). PETRONAS operates one of the world's largest LNG facilities in Bintulu, Sarawak, which consists of three plants, MLNG, MLNG Dua and MLNG Tiga, with a combined capacity of 24 million tonnes per annum.

PETRONAS is also involved in LNG and energy trading activities through its marketing arms in Malaysia and Europe (PETRONAS LNG Ltd and PETRONAS Energy Trading Ltd).

At present, PETRONAS commands a sizeable LNG market share in the Far East. Over the years, PETRONAS has sustained its market position and preserved its reputation as a reliable supplier of LNG, having sold more than 7,000 cargoes since the establishment of its first LNG plant in 1983.

As a global LNG player, PETRONAS is determined to defend its significant traditional Far East market and seize opportunities on the growing spot market, while continuing to grow its LNG presence in the Atlantic basin.

PETRONAS is also establishing its foothold in European energy trading, which includes electricity and carbon trading.

### Infrastructure, Utilities & Power



PETRONAS' Infrastructure, Utilities & Power business focuses its efforts towards ensuring long term security and sustainability of the gas market in Malaysia and expanding its portfolio of infrastructure and power positions in high growth markets. The business is leveraging on its widely respected operational excellence and sustainable energy developments.

PETRONAS, through its majority-owned subsidiary, PETRONAS Gas Berhad (PGB),

operates the Peninsular Gas Utilisation (PGU) system, comprising six processing plants and approximately 2,505 km of pipelines to process and transmit gas to end-users in the power, industrial and commercial sectors in Peninsular Malaysia. PETRONAS also exports gas for power generation to Singapore.

The PGU system is the principal catalyst for the development of Peninsular Malaysia's offshore gas fields, the use of natural gas products for power generation and utilities, and the expansion of Malaysia's petrochemical industry through the use of gas derivative products, such as ethane, propane, butane and condensates.

PGB is also developing Malaysia's first LNG Regasification Terminal in Melaka, which is due for completion in July 2012. This will facilitate the importation of LNG by PETRONAS and third parties towards ensuring security of gas supply for the nation in the future.

Globally, PETRONAS has investments in pipeline operations in Argentina, Australia, Indonesia and Thailand, as well as gas storage and LNG regasification facilities in Europe.

PETRONAS is also committed to further grow in the power and renewable energy business, leveraging on existing capabilities and venturing into opportunities in key focus markets in Asia and the Middle East. Entry into the power business will support PETRONAS' vision to be an integrated energy company.

# Downstream Business

PETRONAS' Downstream Business plays a strategic role in adding further value to petroleum resources through its integrated operations in refining & trading, marketing, and petrochemicals.

## Refining & Trading



PETRONAS owns and operates three refineries in Malaysia, two in Melaka (collectively known as the Melaka Refinery Complex) and another in Kertih (the Kertih Refinery). The first refinery in Melaka is 100% owned by PETRONAS while the second refinery is 53% owned by the Group. PETRONAS also operates a Group III base oil refining (MG3) plant in the Melaka Refinery Complex.

PETRONAS also has an oil refining presence in Africa through its 80% owned subsidiary, Engen Petroleum Limited (Engen), a leading South African refining and marketing company that owns and operates a refinery in Durban, South Africa.

To carry out trading activities in crude oil and petroleum products in the Malaysian and international markets (including Asia, Africa and the Indian subcontinent), PETRONAS formed a wholly-owned subsidiary, PETRONAS Trading Corporation Sdn Bhd (PETCO). PETCO also trades in crude oil and

petroleum products produced by affiliates and third parties, and has trading operations in Dubai and London via its wholly-owned subsidiaries PETCO Trading DMCC and PETCO Trading UK Limited, respectively.

## Downstream Marketing



PETRONAS is engaged in domestic marketing and retailing activities through PETRONAS Dagangan Berhad (PDB), a majority-owned subsidiary, which markets a wide range of petroleum products, including gasoline, Liquefied Petroleum Gas (LPG), jet fuel, kerosene, diesel, fuel oil, asphalt and lubricants. Natural Gas for Vehicles (NGV) is marketed through PDB's wholly-owned subsidiary PETRONAS NGV Sdn Bhd. PDB also has interest in Malaysia's Multi-Product Pipeline and the Klang Valley Distribution Terminal that transports gasoline, jet fuel and diesel oil from the refineries to major demand centres in the Klang Valley. Besides marketing activities, PDB also jointly operates a jet fuel storage facility and hydrant line system at the Kuala Lumpur International Airport.

PETRONAS has also established its downstream marketing presence in key Asian markets. PT PETRONAS Niaga Indonesia, a wholly-owned subsidiary, operates retail stations as well as markets petroleum products to industrial and commercial customers, and manages a network of local lubricant distributors in Indonesia. In Thailand similar activities are undertaken by PETRONAS Retail (Thailand) Co Ltd

that also supplies jet fuel to the Don Muang International Airport and the Suvarnabhumi International Airport, Bangkok. In China and India, the Group's lubricant products are sold through PETRONAS' wholly-owned subsidiary, PETRONAS Marketing China Company Ltd and PETRONAS Marketing India Private Ltd (PMIPL), respectively. PMIPL also has exclusive supply arrangements and collaborations with major Original Equipment Manufacturer (OEM) partners and car manufacturers.

In Africa, PETRONAS' subsidiary Engen has the largest retail network of service stations in South Africa as well as a strong retail presence in the Sub-Saharan region in countries including Botswana, Burundi, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Réunion, Swaziland, Tanzania, Zambia and Zimbabwe. In the Sudan, PETRONAS Marketing Sudan Limited (PMSL), a wholly-owned subsidiary is engaged in the marketing and retailing of petroleum products and lubricants, as well as owns and operates retail stations. PMSL also provides into-plane service at the Khartoum International Airport and El-Obeid International Airport, which is the main base for the UN World Food Programme's operations in the Sudan. PMSL also supplies fuel to the UN-African Union Mission peacekeeping force in Darfur and operates refueling stations and depots.

With a presence in more than 20 countries worldwide, PETRONAS Lubricants International Sdn Bhd (PLISB) is the lubricants arm of PETRONAS. PLISB has established a manufacturing base and distribution channel to sell its products in the European market by virtue of acquiring the FL Selenia Group, (re-named PL Italy Group) and offers lubricants, transmission, anti-freeze and functional fluids for automobiles, trucks, agricultural tractors and earth moving machinery as well as for other industrial equipment to the market.



Leveraging on PL Italy Group's strong OEM relationships and world-class research and development capabilities, PLISB currently has a long-term supply, technical, collaborative and commercial agreement for the exclusive right to supply lubricants to Fiat Italy via PL Italy Group.

Also in the lubricants marketing sector, PETRONAS Base Oil (M) Sdn Bhd, a wholly-owned subsidiary of PETRONAS, undertakes the marketing of MG3 base oil in Malaysia and the Asia Pacific region whereas marketing in Europe is handled by PETRONAS Marketing Netherlands BV. PETRONAS markets its base oil products under the brand ETRO.

Apart from eight LPG bottling plants in Malaysia, PETRONAS also has LPG facilities in selected Asian countries namely in India, the Philippines and Vietnam, either through a joint venture or wholly-owned subsidiary.

PETRONAS Aviation Sdn Bhd, a wholly-owned subsidiary of PETRONAS, markets PETRONAS' aviation fuel in the global market, including to Malaysia Airlines, as well as to Shell, Ceylon Petroleum Corporation and Repsol YPF for locations in Buenos Aires, Colombo and Hong Kong.

## Petrochemicals



PETRONAS first ventured into the production of basic petrochemical products in the mid-1980s and later embarked on several large scale petrochemical projects with multinational joint venture partners. PETRONAS' joint

venture partners have included The Dow Chemical Company, BASF Netherlands BV, BP Chemicals, Idemitsu Petrochemical Co Ltd, Mitsubishi Corporation, and Sasol Polymers International Investments (Pty) Ltd.

With a view to strengthening integration and improving economies of scale, PETRONAS recently consolidated its petrochemical business under the PETRONAS Chemicals Group Berhad (PCG). The leading integrated petrochemical producer in Malaysia and one of the largest in South East Asia, PCG is the listed holding entity for all of PETRONAS' petrochemical production, marketing and trading subsidiaries and has a total combined production capacity of over 11 million tonnes per annum.

The petrochemical business which has been consolidated under PCG, through joint ventures with multinational petrochemical companies, developed two Integrated Petrochemical Complexes (IPCs) at Kertih and Gebeng, along the eastern corridor of Peninsular Malaysia. The concept underlying the development of these IPCs is to achieve a competitive edge through the integration of petrochemical projects using common or related feedstock and common facilities within a self-contained complex.

PETRONAS' Kertih IPC consists principally of ethylene-based petrochemical projects, which include two ethylene crackers, a polyethylene plant, an ethylene oxide/ethylene glycol plant, a multi-unit derivatives plant, vinyl chloride monomer (VCM) and polyvinyl chloride (PVC) plants, ammonia/synthesis gas plants, an acetic acid plant, an aromatics complex and a low-density polyethylene plant. The petrochemical projects are fully integrated with the surrounding infrastructure facilities and other process plants in Kertih, including PGB's six gas processing plants and the

Kertih Refinery, all of which are located within the IPC. A joint venture comprising PETRONAS (40%), Dialog Equity Group Sdn Bhd (30%) and Vopak Terminals Penjurong (Jurong) Pte Ltd (30%) owns and operates the storage and distribution terminal, which has a throughput of approximately 2.7 million tonnes per annum. The Kertih marine facilities include six berths that can accommodate chemical tankers up to 40,000 dead-weight metric tonnes.

The Gebeng IPC comprises mainly of propylene-based petrochemical projects. The anchor project at the Gebeng IPC is a joint venture between PETRONAS and BASF, which owns and operates an acrylic acid/acrylic esters plant, an oxo-alcohols complex and a butanediol plant. PETRONAS, through PCG owns and operates an MTBE/propylene plant, a propane dehydrogenation plant and a polypropylene plant. The Gebeng IPC is also host to a number of multinational chemical companies, such as BP Chemicals, which owns and operates a purified terephthalic acid plant, and Eastman Chemicals, which owns and operates a copolyester plastic resin plant.

Both the Kertih and Gebeng IPCs are a major step towards establishing Malaysia as a regional petrochemical production hub.

The integrated development of Malaysia's petrochemical industry is expected to promote the development of the country's industrial base, especially the plastics and chemical based component manufacturing industry.

# Corporate Enhancement Programme – A Year On

As an oil and gas corporation, PETRONAS continues to evolve and re-invent itself, changing the way it carries out its business in order to match the challenging realities of the world around it.

Today's world is characterised by greater economic and social volatility, stiffer competition for dwindling resources and greater scrutiny of corporate conduct and behaviour. Clearly, the changing milieu presents a compelling case for PETRONAS to initiate real and meaningful change.

Given the imperative to raise the performance bar for the organisation and elevate its strategic and operational robustness to international standards, PETRONAS in early 2010 embarked on a Corporate Enhancement Programme (CEP).

The CEP was implemented to transform the Group's structure and supporting elements, to help drive PETRONAS through the challenges for the next phase of growth. The CEP was conceptualised to:

- Ensure greater Ownership & Accountability
- Elevate Governance & Transparency to international standards
- Focus resources to Core Business activities
- Establish clear and visible Succession Planning & Leadership Development

Realising the direct link between behaviours and structures that govern its actions and motivations in the corporate setting, PETRONAS' management had set out to introduce key structural changes from the

very pinnacle of the organisation downwards which include:

- The re-constitution of the Board to consist of independent industry professionals and eminent personalities, selected for their experience and credibility to guide PETRONAS through the next phase of growth.
- The establishment of Board Committees including the Governance and Risk and Remuneration Committees, in addition to the existing Board Audit Committee to elevate standards of corporate governance.
- The creation of the Executive Committee (EXCO) as a guiding coalition allowing for collective decision making, a leadership bench and a platform for clear succession planning.
- The refinement of PETRONAS' organisational structure aimed at aligning our core businesses along its integrated core activities.

PETRONAS has been able to elevate the Group's levels of openness and transparency, driven by other self-imposed initiatives including regular and consistent disclosure of its financial performance, as well as timely public announcements of its initiatives and its future plans and goals. This allows stakeholders including the public-at-large to assess the health of the Corporation and take an informed position in response to its business performance and pipeline of ventures moving forward. At the same time, the announcement of its performance on a quarterly basis allows the management and staff of PETRONAS to track and measure its business performance and increase efforts

towards meeting or exceeding planned targets.

Positive changes have occurred during the last year resulting in more dynamic and impactful decisions and initiatives. The growth momentum has been intensified, driven by strategic stewardship from the Board on PETRONAS' direction, with elevated standards of corporate governance mindful of balancing returns with risks.

In its own capacity, the EXCO has successfully driven strategic execution expediently, integrating relevant portions of the PETRONAS value chain to achieve optimal returns for the Group. Stringent risk parameters govern all decision making processes cascaded throughout the organisation, from the Board. The effectiveness of the newly established EXCO structure, in achieving impactful integrated solutions was acknowledged and replicated by the Executive Vice Presidents (EVPs) for their respective core businesses. The mirroring of functions in driving strategic growth and operational efficiency is done in an integrated manner.

The EXCO is at the forefront of the CEP, leading by example and instituting wide-ranging changes in their respective businesses, in driving desired high performance behaviour to be eventually embedded in the DNA and culture of PETRONAS.

The refinement of PETRONAS' organisational structure to support its core businesses has helped prioritise its allocation of capital, energy and time on investments that will contribute better to its growth. There is greater discipline in controlling costs and stronger focus on the

bottom line. Similarly, the new way of thinking has guided PETRONAS to objectively divest non-performing ventures. All of this has made PETRONAS' operations better geared to achieve hard business targets.

To reinforce the urgency for change and to cascade this to the individual level, the Key Performance Indicators (KPIs) of PETRONAS' top management are cascaded down to the KPIs of the individual staff. In this way, the success of achieving the larger scorecard targets will be the result of the cumulative effort of each and every one within the organisation.

As such, in driving accountability, the performance of each individual, at all levels, will be subjected to a rigorous appraisal process

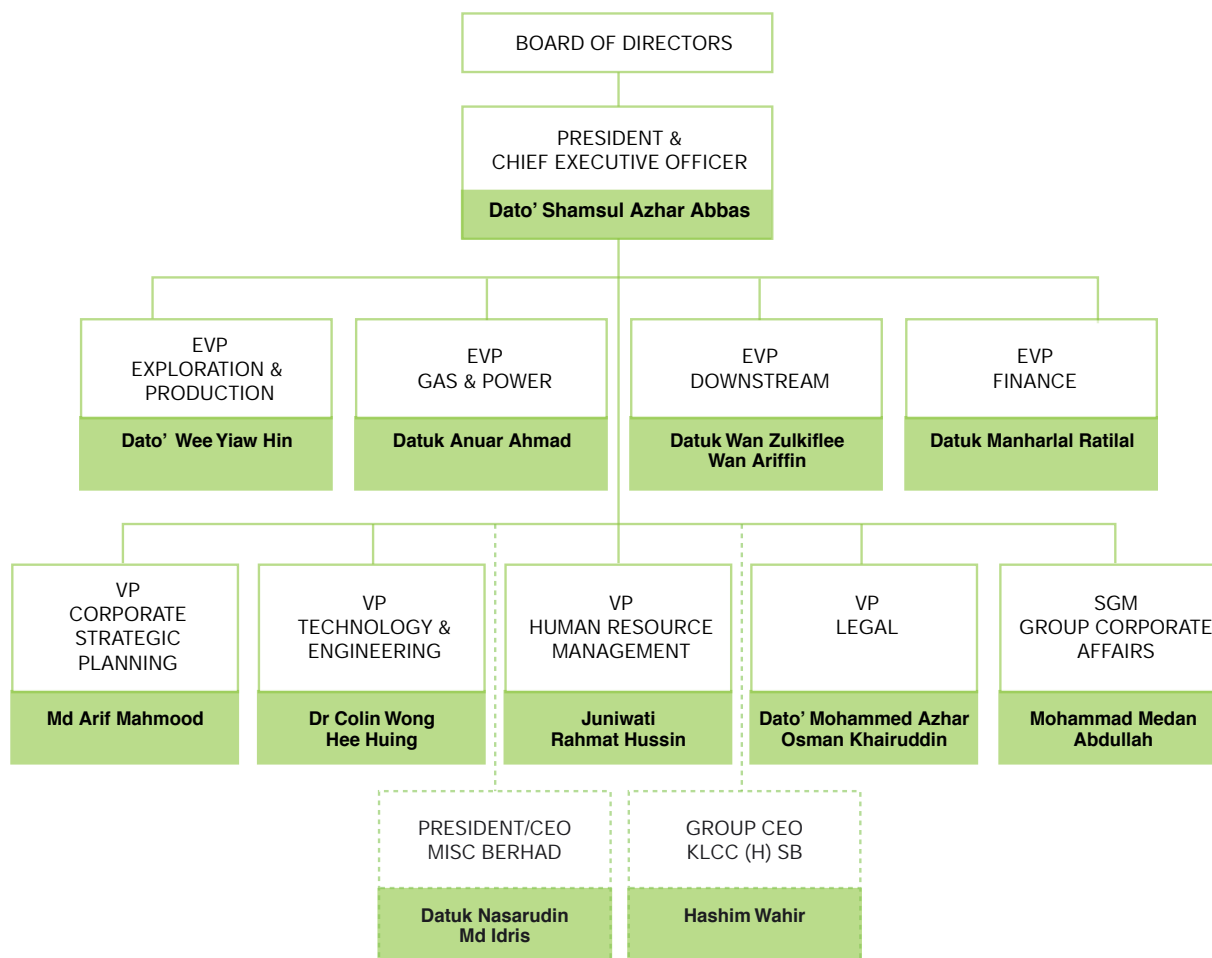
to reward the high performers, develop those with potential and ensure consequence management where necessary. To support the successful realisation of PETRONAS' hard and soft targets, a premium is placed on greater ownership and accountability, that brings with it a corresponding responsibility to initiate decision making, so long as this contributes positively towards the attainment of PETRONAS' key goals.

The all encompassing CEP includes dynamic human resource management policies and strategies, incorporating key improvements to meet the changing needs of PETRONAS' globally diverse workforce. With a strong emphasis on meritocracy, recognising and rewarding performance and rigorous consequence management, PETRONAS is

reinvigorating its Human Resource practices designed to retain critical professionals and attract experienced and capable talents to infuse the Group with the industry's best, who will bring with them value-adding knowledge, practices and new vitality.

Clearly, the CEP aims to strengthen PETRONAS while providing nimbleness to capitalise on opportunities and reinforce its foundations to weather external shocks in a fast-changing, volatile and often unpredictable industry environment. This allows the Corporation to move decisively in initiating key efforts in favour of business growth and strengthen a culture of high-performance and excellence among staff.

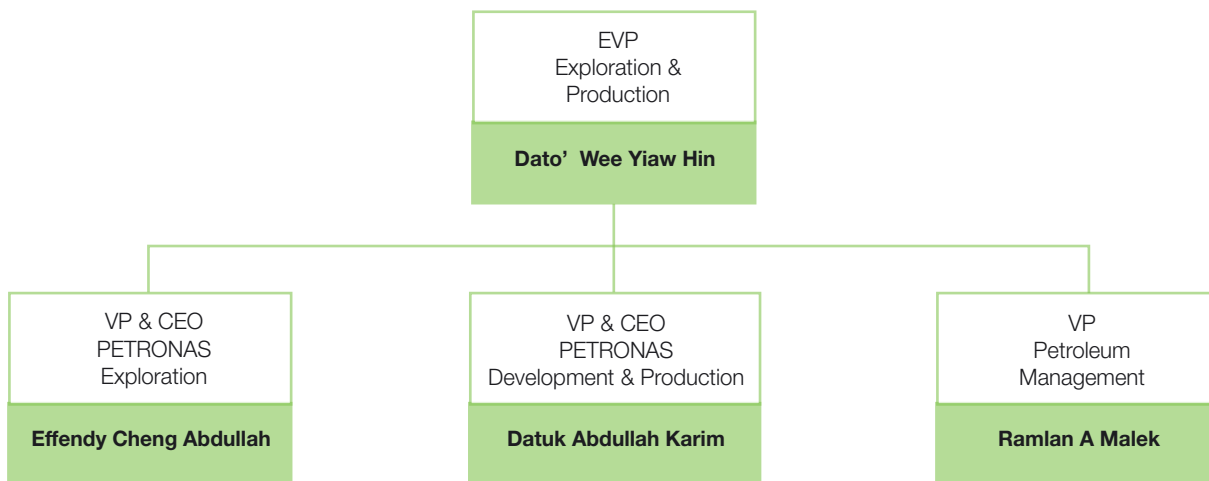
## PETRONAS Corporate Structure



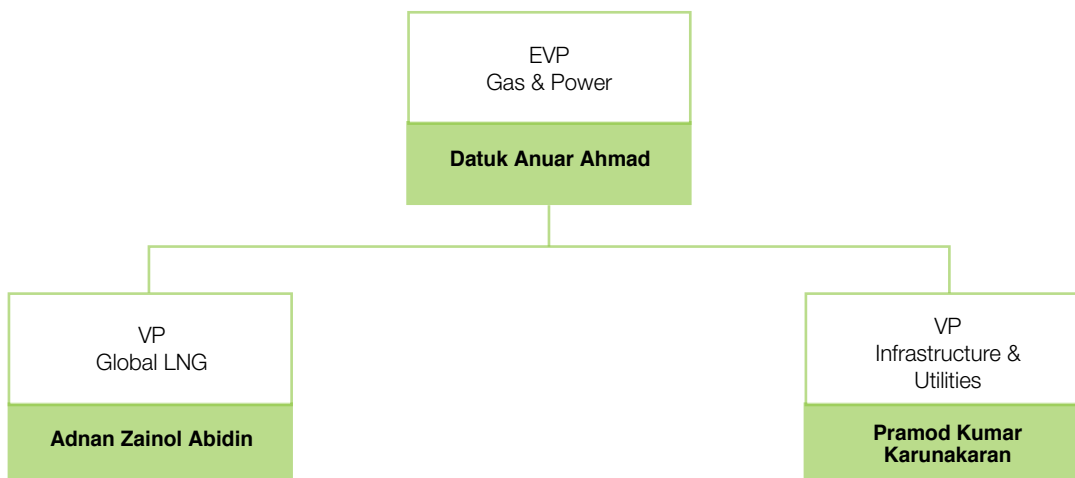
\*Executive Committee comprises the President & Chief Executive Officer and the four Executive Vice Presidents

EVP - Executive Vice President  
VP - Vice President  
SGM - Senior General Manager

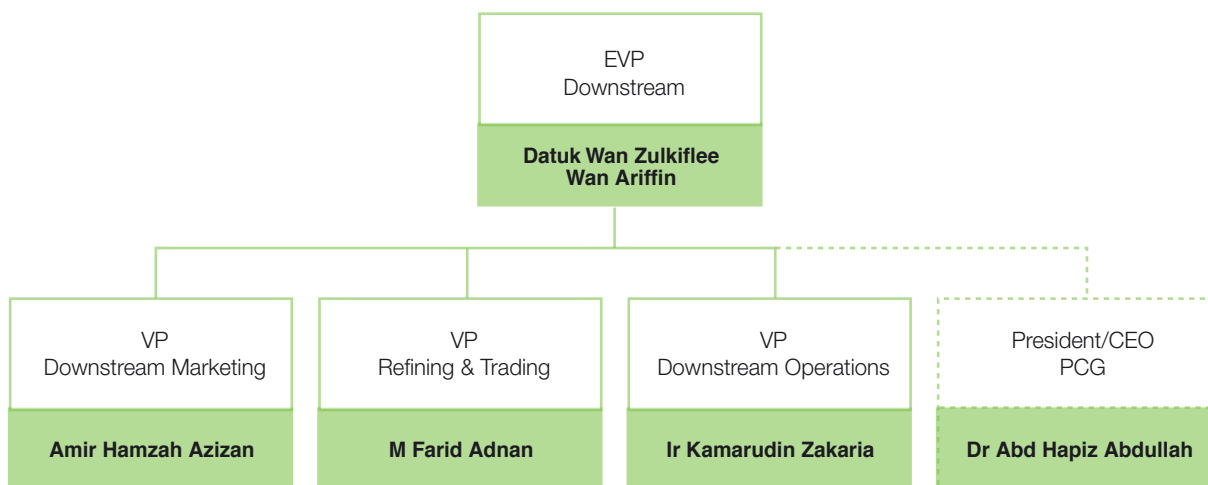
## Exploration & Production Business Leadership Team



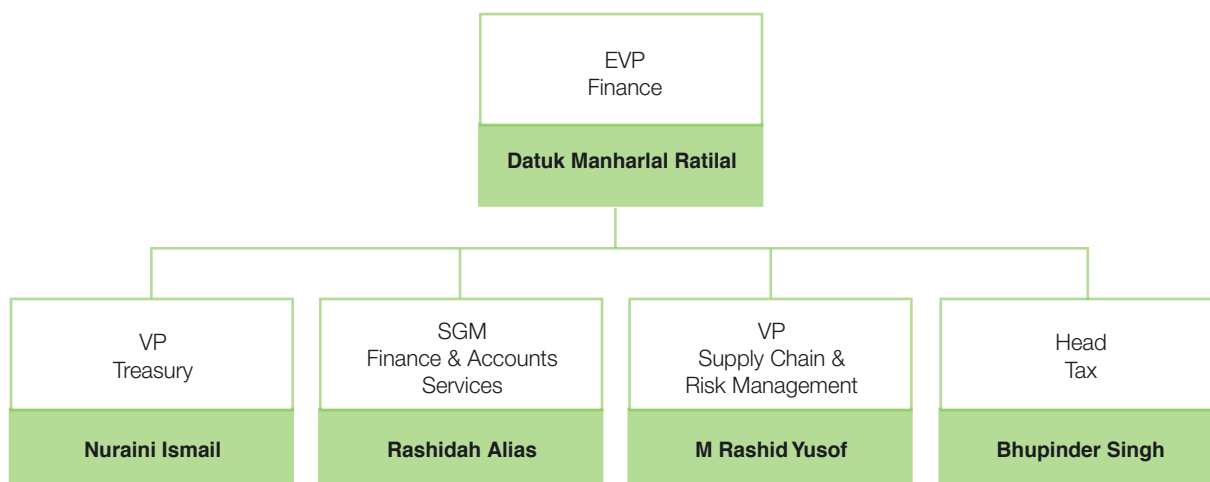
## Gas & Power Business Leadership Team



## Downstream Business Leadership Team



## Finance Division Leadership Team



# Board of Directors

## 01 Dato' Shamsul Azhar Abbas

*Acting Chairman of the PETRONAS Board,  
President & Chief Executive Officer*

Dato' Shamsul Azhar Abbas was appointed to the PETRONAS Board as Acting Chairman and as President and Chief Executive Officer of PETRONAS on 10 February 2010. He also serves as Chairman of the Board of several of the Group's subsidiaries, including wholly-owned exploration and production arm PETRONAS Carigali Sdn Bhd, South Africa-based petroleum refining and marketing company Engen Petroleum Limited and public-listed MISC Berhad. Prior to his current appointment, Dato' Shamsul, who began his career with PETRONAS in 1975, held various senior management positions within the Group.

## 02 Tan Sri Dr Wan Abdul Aziz Wan Abdullah

*Independent Director*

Tan Sri Dr Wan Abdul Aziz is a member of the PETRONAS Board and currently serves as the Secretary-General of Treasury in the Ministry of Finance. He also sits on the Board of various organisations including Malaysian Airline System Berhad, Bintulu Port Holdings Berhad, Bank Negara Malaysia, Retirement Fund Incorporated and the Federal Land Development Authority (FELDA).

## 03 Dato' Muhammad Ibrahim

*Independent Director*

Dato' Muhammad Ibrahim was appointed to the PETRONAS Board in April 2010. He is currently the Deputy Governor of Bank Negara Malaysia. His areas of expertise include finance, banking, supervision and regulation, strategic planning, insurance and financial markets. He is a trustee of the Tun Ismail Ali Chair Council, a former commissioner of the Securities Commission of Malaysia and Senior Associate of the Institute of Bankers Malaysia. He sits on the Board of the Retirement Fund Incorporated and is a member of the Malaysian Institute of Accountants.

## 04 Krishnan CK Menon, FCA

*Independent Director,  
Chairman of the PETRONAS  
Board Audit Committee*

Krishnan CK Menon was appointed to the PETRONAS Board in April 2010. He is a Fellow of the Institute of Chartered Accountants in England and Wales, a member of the Malaysian Institute of Accountants and the Malaysian Institute of Certified Public Accountants. He is currently Chairman of Putrajaya Perdana Berhad, SCICOM (MSC) Berhad, KLCC Property Holdings Berhad and KLCC (Holdings) Sdn Bhd. He is a non-executive director of MISC Berhad and is also the Chairman of the Board Audit Committee in MISC Berhad.

## 05 Tan Sri Dato' Seri Hj Megat Najmuddin Datuk Seri Dr Hj Megat Khas

*Independent Director,  
Chairman of the PETRONAS  
Governance & Risk Committee*

Tan Sri Megat Najmuddin was appointed to the PETRONAS Board in April 2010. He is currently the President of both the Federation of Public Listed Companies Berhad (FPLC) and the Malaysian Institute of Corporate Governance (MICG). He currently serves as the Non-Executive Chairman of several public listed companies and is active in Non-Governmental Organisations (NGOs).

## 06 Datin Yap Siew Bee

*Independent Director,  
Chairperson of the PETRONAS  
Remuneration Committee*

Datin Yap Siew Bee was appointed to the PETRONAS Board in April 2010. She is currently Consultant to the firm of Mah-Kamariyah & Phillip Koh. She has advised as legal counsel on significant oil and petrochemical projects in Malaysia and has extensive oil and gas advisory experience including negotiation of international oil and gas ventures on behalf of PETRONAS. Her areas of expertise include mergers and acquisitions, corporate finance, corporate restructuring and commercial ventures.

## 07 Dato' Mohamad Idris Mansor

*Independent Director*

Dato' Mohamad Idris Mansor was appointed to the PETRONAS Board in April 2010. He has extensive experience in the oil and gas industry, having held various senior management positions within the Group including as Senior Vice President. He is a Board member of PETRONAS Carigali Sdn Bhd. He was also the International Business Advisor to PTT Exploration and Production Company of Thailand prior to his current appointment.



01

02

03

04

05

06

07



08 **Datuk Mohd Omar Mustapha**

*Independent Director*

Datuk Mohd Omar Mustapha was appointed to the PETRONAS Board in September 2009. He is the Founder and Chairman of Ethos & Company, a boutique Malaysian-based management consulting firm and a General Partner of Ethos Capital, a leading regional private equity fund. He is a member of the Economic Council chaired by the Prime Minister, an independent director of Symphony House Berhad and Air Asia Berhad, an Eisenhower Fellow, a founding member of the World Islamic Economic Forum's Young Leaders Roundtable and a YGL member of the World Economic Forum in Davos.

09 **Datuk Wan Zulkiflee Wan Ariffin**

*Executive Director*

Datuk Wan Zulkiflee Wan Ariffin is a member of the PETRONAS Board, the Executive Committee, Management Committee and serves on various Boards of several Joint Ventures and subsidiary companies in the PETRONAS Group. He is the Executive Vice President of Downstream Business. He is the Chairman of two of PETRONAS' public listed subsidiaries namely PETRONAS Chemicals Group Berhad and PETRONAS Dagangan Berhad. He is also a member of the Board of Directors of MISC Berhad and is the Industry Advisor to the Engineering Faculty of Universiti Putra Malaysia.

10 **Datuk Anuar Ahmad**

*Executive Director*

Datuk Anuar Ahmad is a member of the PETRONAS Board, Executive Committee and Management Committee. He is the Executive Vice President of Gas & Power Business. Prior to this appointment, he served as Vice President of Human Resource Management Division and, earlier, as Vice President of Oil Business. He also sits on the Board of several companies within the PETRONAS Group.

11 **Dato' Wee Yiau Hin**

*Executive Director*

Dato' Wee Yiau Hin was appointed to the PETRONAS Board in May 2010. He is a member of the Executive Committee, Management Committee and serves on various Boards of subsidiary companies in the PETRONAS Group. He is the Executive Vice President of Exploration & Production Business. Previously, he worked in Talisman and Shell where he held various senior management positions.

12 **Datuk Manharlal Ratilal**

*Executive Director*

Datuk Manharlal Ratilal is a member of the PETRONAS Board, Executive Committee and Management Committee. He is the Executive Vice President of Finance. He also sits on the Board of several subsidiaries of PETRONAS. His areas of expertise include corporate finance, mergers and acquisitions, and the capital markets.

13 **Dato' Mohammed Azhar Osman Khairuddin**

*Company Secretary*

Dato' Mohammed Azhar Osman Khairuddin is the Company Secretary of PETRONAS since 1 April 2000. He joined PETRONAS in 1979 as a Legal Officer and currently holds the position of Vice President, Legal. He is a member of the PETRONAS Management Committee and serves on the Board of Directors of several companies within the PETRONAS Group. He is also a member of the International Bar Association.

14 **Faridah Haris Hamid**

*Joint Company Secretary*

Faridah Haris Hamid is the Head of Legal Finance & Corporate Secretariat, Legal Division. She spent 10 years in the banking sector before joining PETRONAS in 1992. She is the Joint Secretary to the PETRONAS Board of Directors and Secretary to the Executive Committee of PETRONAS. Her areas of legal expertise include corporate finance, capital markets and corporate governance.



08

09

10

11

12

13

14

# Board Committees

## Audit Committee



**Krishnan CK Menon, FCA**  
*Chairman*

**Tan Sri Dr Wan Abdul Aziz  
Wan Abdullah**

**Dato' Mohamad Idris  
Mansor**

**Dato' Muhammad  
Ibrahim**

# Governance & Risk Committee



**Tan Sri Dato' Seri Hj Megat Najmuddin**  
**Datuk Seri Dr Hj Megat Khas**  
*Chairman*

**Krishnan CK Menon, FCA**

**Dato' Muhammad  
Ibrahim**

# Remuneration Committee



**Datin Yap Siew Bee**  
*Chairperson*

**Datuk Anuar Ahmad**

**Datuk Mohd Omar  
Mustapha**

# Executive Committee



**Dato' Shamsul Azhar Abbas**

*President & Chief Executive Officer*

---

**Datuk Wan Zulkiflee Wan Ariffin**  
*Executive Vice President  
Downstream*

**Datuk Anuar Ahmad**  
*Executive Vice President  
Gas & Power*

**Dato' Wee Yaw Hin**  
*Executive Vice President  
Exploration & Production*

**Datuk Manharial Ratilal**  
*Executive Vice President  
Finance*

**Faridah Haris Hamid**  
*Secretary*

# Management Committee



**Dato' Shamsul Azhar Abbas**  
*President & Chief Executive Officer*

**Datuk Anuar Ahmad**  
*Executive Vice President  
Gas & Power*

**Datuk Manharlal Ratilal**  
*Executive Vice President  
Finance*

**Dr Colin Wong Hee Huing**  
*Vice President  
Technology & Engineering*

**Datuk Wan Zulkiflee  
Wan Ariffin**  
*Executive Vice President  
Downstream*

**Dato' Wee Yiau Hin**  
*Executive Vice President  
Exploration & Production*

**Ramlan Abdul Malek**  
*Vice President  
Petroleum Management*



**Datuk Nasarudin Md Idris**  
*President/CEO  
MISC Berhad*

**Md Arif Mahmood**  
*Vice President  
Corporate Strategic Planning*

**Mohammad Medan Abdullah**  
*Senior General Manager  
Group Corporate Affairs*

**Juniwati Rahmat Hussin**  
*Vice President  
Human Resource Management*

**Dato' Mohammed Azhar  
Osman Khairuddin**  
*Vice President  
Legal*

**Hazleena Hamzah**  
*Secretary*

# President & CEO and Acting Chairman's Message

In discharging its responsibilities as a custodian to the people and the nation, the PETRONAS Group of Companies delivered a solid financial and operational performance for the Financial Year Ended 31 March 2011 that reflects the enduring strength of its proven strategy of integration, adding value and globalisation, as well as the gains that have accrued from further progress in the Groupwide implementation of its Corporate Enhancement Programme (CEP), reaffirming once again PETRONAS' ability to return greater value to its stakeholders.

*Dato' Shamsul Azhar Abbas*





Group revenue for the year stood at RM241.2 billion, an increase of 14.4% from last year — achieved despite significant headwinds posed by the strengthening of the Ringgit against the US dollar. Profit Before Tax (PBT) rose 34.5% to RM90.5 billion and enabled the Group to more than comfortably meet its dividend obligations as well as sustain its capital expenditure (CAPEX) requirements for the year; Shareholder's Funds meanwhile having increased further by 8.6% to RM263.8 billion. Return on Average Capital Employed (ROACE) was higher at 17.5% against last year's 15.9%, comparable to those of its peers — namely, oil majors and other national oil companies.

A marked turnaround in industry conditions provided the backdrop against which this performance was attained. During the year, world oil and gas demand staged

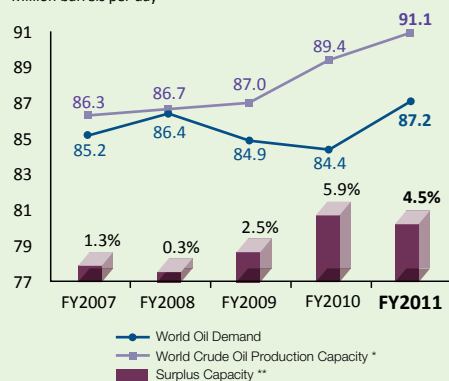
an exceptionally vigorous rebound as momentum in the global economic recovery, led primarily by the emerging economies, continued to strengthen. Stronger demand, coupled with the effects of a steadily weakening US dollar and rising geopolitical risks in the Middle East and North Africa as the year drew to a close, helped propel crude oil prices higher. Average key crude benchmark prices for the year increased 23% relative to the previous year's; Malaysia's Tapis averaging USD89.38 per barrel against last year's USD72.69 per barrel.

However, equally important were the concerted efforts expended by the Group to grow and improve the efficient conduct of its business that had strengthened its ability to capture the opportunities afforded by the industry upswing, both immediate and longer-term. In Malaysia,

eleven new PSCs were awarded, ten new discoveries were made and three new fields were brought onstream. Abroad, five Petroleum Arrangements were secured, including the Group's first upstream venture in South America — the Carabobo 1 Project in Venezuela's Orinoco Region. Combined efforts in exploration, intensified and enhanced recovery, as well as acquisitions, succeeded in adding two-and-a-half barrels of oil equivalent to Total Group Petroleum Resources for every barrel that was produced during the year. Management's resolve to highgrade the Group's international upstream portfolio was brought to bear with PETRONAS exiting Ethiopia and Timor Lesté, as well as divesting its interests in Pakistan — moves that pave the way for the redeployment of vital resources in favour of ventures that will bring greater focus and synergy to the Group's broader strategic goals.

## Crude Oil Production

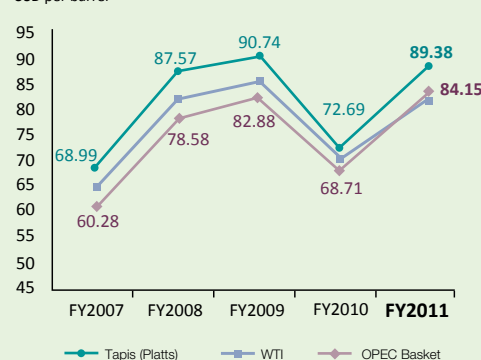
Million barrels per day



\* includes non-OPEC production, OPEC crude oil production capacity and OPEC natural gas liquids  
 \*\* as a percentage of demand

## Crude Oil Prices

USD per barrel



Source: EIA

The year also saw PETRONAS embarking on numerous key initiatives aimed at revitalising growth in the Malaysian oil and gas industry, as well as support efforts in nation-building.

Developments in other areas of operations similarly reflected efforts to expand and enhance the efficiency of the business. Improved plant performance during the year was a key contributing factor in having enabled the PETRONAS LNG Complex (PLC) in Bintulu achieve its highest-ever levels of production and exports of LNG. Similarly, improved utilisation rates sustained higher volumes of crude processing at the Group's Malaysia refineries. PETRONAS' maiden venture in the unconventional gas business — the Gladstone LNG (GLNG) in Queensland, Australia — also took a major step forward towards commercialisation, with all project

partners having committed to a Final Investment Decision (FID). GLNG, whose commissioning cargo is expected by 2015, will not only seal the Group's presence in a dynamic and increasingly important segment of the global gas value-chain, but also make a profound contribution towards enhancing the security of supply of natural gas to Peninsular Malaysia in the years ahead.

The year also saw PETRONAS embarking on numerous key initiatives aimed at revitalising growth in the Malaysian oil and gas industry, as well as support efforts in nation-building. Leveraging on new tax incentives provided by the Government of Malaysia, PETRONAS introduced a new petroleum arrangement solution — the Risk Service Contract (RSC) — designed to unleash the potential of Malaysia's small and marginal fields on a fast-track development basis. The first RSC was awarded in January 2011 for the Berantai Field, offshore Peninsular Malaysia and First Gas is expected to be achieved by end-2011.

Work on the country's first LNG Regasification Terminal in the state of Melaka also commenced during the year and

is achieving satisfactory progress towards its targeted completion date of July 2012. The import of LNG into Peninsular Malaysia promises not only to unlock latent high-value gas demand in helping to support the growth of the country's manufacturing sector, but also potentially allow significant reductions in its total annual energy costs by expanding the fuel options available to Malaysian manufacturers.

PETRONAS also initiated the Refinery and Petrochemical Integrated Development (RAPID) project, a major downstream investment to be located in Pengerang, Johor aimed at strengthening the Group's ability to ride the expected robust growth in energy and chemicals demand in East Asia, particularly in the specialty chemicals segment. The project is a significant contribution by the Group that will support wider efforts to position southern Johor as an oil and gas hub for the region, leveraging on the pre-existing strengths of, and mutually complementing Singapore. Furthermore, it will provide the impetus to spur the area's economic development in the same manner PETRONAS' investments in Kertih 20 years ago had had a transformational impact on the locality, help diversify Malaysia's export capabilities

and contribute to building a critical mass of human talent in the country through the creation of up to 4,000 employment opportunities of highly-skilled oil and gas professionals.

PETRONAS also listed two of its subsidiaries on Bursa Malaysia's main market during the year — namely, Malaysia Marine and Heavy Engineering Holdings Berhad (MHB), a subsidiary of the Group's shipping arm MISC Berhad and PETRONAS Chemicals Group Berhad (PCG). Both listings have not only helped broaden and deepen Malaysia's capital market — indeed, PCG's Initial Public Offering (IPO) was the largest-ever in Southeast Asia — but also provided avenues through which the investing public can now participate directly in the growth of the various PETRONAS businesses.

## Financial Highlights

- Group Revenue improved in tandem with higher oil prices and volumes sold.
- EBITDA margin increased to 44.7% despite rising costs and the negative impact of the Ringgit's strengthening against the US dollar.
- Achieved a higher ROACE of 17.5%, comparable to those of the oil majors and other national oil companies — a reflection of improved overall performance.

## Operational Highlights

- Secured 17 new upstream ventures in Malaysia and abroad, including the Carabobo 1 Project in Venezuela and also the award of the country's first Risk Service Contract (RSC).
- Attained a higher Group Resource Replenishment Ratio (Triple-R) of 2.5 times for combined oil and gas resources.
- Achieved the highest-ever level of production and exports of LNG from the PETRONAS Liquefied Natural Gas Complex (PLC).
- Announced the Refinery and Petrochemical Integrated Development (RAPID) project, a major integrated refinery and petrochemicals complex to be located in southern Johor.
- Listed two subsidiaries on Bursa Malaysia — Malaysia Marine and Heavy Engineering Holdings Berhad (MHB) and PETRONAS Chemicals Group Berhad (PCG).

Looking ahead, the Group's business priorities and key areas of focus will continue to be shaped by an all-out push for growth, consistent with efforts to further secure the long-term sustainability of its business.

Looking ahead, the Group's business priorities and key areas of focus will continue to be shaped by an all-out push for growth, consistent with efforts to further secure the long-term sustainability of its business. To this end, PETRONAS will be guided by the strategic imperatives of its Corporate Agenda, which have been conceived explicitly to support its aspiration of becoming a "Global Energy Champion Known for its Resilience and Distinctiveness", and will continue to leverage on the transformational objectives of the CEP to create a high-performance culture throughout the Group. PETRONAS

will also seek to distinguish itself as an organisation that "dares-to-be-different", possessing both the will and energy to drive flawless execution even under challenging circumstances—a resolve neatly embodied by its new corporate positioning statement, "Reimagining Energy".

Through this single-minded pursuit for growth and performance excellence, PETRONAS is forging ahead as an entity with a clear strategic focus, enhanced organisational robustness and a more distinctive performance-oriented, capability-driven culture — all of which will enhance its ability to continue creating and returning greater value to its stakeholders.

By way of a final note, I would like to take this opportunity to place on record my sincere appreciation to all PETRONAS employees whose dedication, sacrifice and steadfast adherence to the Company's Shared Values of Loyalty, Integrity, Professionalism and Cohesiveness was instrumental in having made this year's achievements possible. I would also like to thank members of the PETRONAS Board of Directors for their wise counsel, guidance and stewardship of the Corporation. A heartfelt tribute goes out to my colleagues in the Executive Committee (EXCO),

whose resolve, vision and commitment to PETRONAS were instrumental in driving the solid performance the Group achieved within such a brief period of time, and also to the members of the Management Committee each of whom played a vital enabling role to this end.

I would also like to express my deepest gratitude to the Government of Malaysia for the continued trust and support granted to PETRONAS, and likewise to our host governments and various communities as well as stakeholders that play host to our operations. My sincere thanks also goes to our business partners for their understanding and co-operation, as well as our clients and customers for their continued loyalty and confidence in us. Indeed, your continued support, partnership and friendship lies at the heart of PETRONAS' success — an honour that PETRONAS deeply appreciates and will seek always to uphold.



**DATO' SHAMSUL AZHAR ABBAS**  
President & CEO and Acting Chairman

## Key Strategies and Plans

### Exploration & Production

- Pursue a 3.5% CAGR production growth over 5 years
- Resource Replenishment Ratio >1 on a 3-year rolling average basis
- Maximise value creation and growth within Malaysia
- Highgrade portfolio of international assets
- Anchor capability building on EOR & CO<sub>2</sub> developments
- Explore new play types

### Gas & Power

- Secure supply and maximise value of gas within Malaysia
- Strengthen and grow LNG position in Asia Pacific and Atlantic
- Establish and grow energy trading in Europe

### Downstream

- Strengthen presence in selected markets and pursue opportunistic growth in attractive markets
- Rationalise non-value adding assets
- Grow refining and petrochemical capacity and product range
- Build global trading and marketing portfolio

# Statement of Corporate Governance

## Corporate Governance & Transparency

PETRONAS believes that good Corporate Governance is fundamental to ensuring the organisation's competitiveness, growth and sustainability. Implementing best practices in Corporate Governance is important to PETRONAS given the Group's strong global orientation and the growing expectations of stakeholders worldwide for good corporate citizenship.

Furthermore, enhanced standards of governance and transparency will serve to strengthen the Group's organisational effectiveness and drive a high-performance culture within the organisation, and are both essential for PETRONAS to compete successfully in today's challenging industry environment.

In cognisance of this, the Board maintains and requires the Management to uphold the highest standards of governance, transparency and ethical conduct. PETRONAS has adhered to the highest standards in governance throughout its corporate history, and indeed responsible business has always been a central tenet, as inscribed in our Mission Statement. Today, with a well-established global footprint, PETRONAS continues to pave the way towards ensuring the sustainability of good corporate governance based on international standards.

Following the Corporate Transformation exercise of 2010 and to further elevate the importance of governance and transparency for the Group, the Management of PETRONAS established a Corporate Governance & International Compliance Unit, under the purview of the Legal Division. This unit assists the Management and the Board via the Governance & Risk Committee on a range of current issues relating to Corporate Governance.

As part of PETRONAS' on-going efforts to enhance the application of the highest standards of governance across the Group in line with best global practices, the Company has a Board Education Programme for all Board members under the PETRONAS Group. The programme is designed to keep the Company's directors apprised of critical developments relating to 21st Century boardroom and global governance issues such as corruption, ethics & integrity and governance in emerging markets.

## Business Ethics

PETRONAS is committed to complying with the highest ethical standards and applicable anti-corruption laws. This is in line with PETRONAS' core values, business principles and various internal policies which reflect the continuous focus on making ethics and anti-corruption an integral part of PETRONAS' business operations. Such focus has helped to promote strong ownership in relation to compliance and ethics at all levels.

## PETRONAS Board Governance Framework

The Board governance framework was redesigned following the corporate enhancement measures adopted in April 2010.

The Board directs the Company's strategic planning, financial, operational and resource management, risk assessment and provides effective oversight of the executive management. Certain functions are delegated to Board Committees consisting of Non-Executive Directors as detailed in later sections.

The Chairman leads the Board, and the President & Chief Executive Officer (CEO) leads the executive management of the Company and provides direction for the implementation of the strategies and business plans as approved by the Board and the overall management of the business operations Group-wide.

In this regard, the President & CEO has the support of the Executive Committee and Management Committee which he chairs.

The Executive Committee's role is to assist the President & CEO in his management of the business and affairs of the Company particularly in relation to strategic business development, high impact and high value investments and cross-business issues of the Group. It also serves as a platform for the structured succession planning for the President & CEO in the Company.

The Management Committee continues to act as the advisory and deliberative body that supports the President & CEO and the Executive Committee and implements all the Board resolutions and policies, as well as supervise all management levels in the PETRONAS Group.

## The Board

For the period up to FY 2010/11, the Board was made up of the Acting Chairman and President & CEO, five Executive Directors including the CEO and seven Non-Executive Directors. A list of the current Directors, with their biographies, is provided on pages 14 to 15.

Currently, the position of the Chairman is vacant, and the President & CEO is assuming the responsibility until such time as the shareholder makes an official appointment.

The Chairman's role is to provide leadership to the Board, facilitate the meeting process and ensure that the Board and its Committees function effectively. Together with the Company Secretary, he ensures that the Board members receive regular and timely information regarding the Company prior to Board meetings. The Board members also have access to the Company Secretary for any further information they may require.

During the review period, the Board met a total of 18 times (which include five Special Board Meetings) with a formal schedule of matters reserved to it. These include the consideration of the Company's long term strategy, plan & budget, monitoring of Management Performance, introduction of CEO's and Executive Vice Presidents' (EVP) Performance Scorecards, Talent Management and the Company's Performance Review. In addition to managing the Company's financial reporting, the Board needed to monitor and



identify material risks to PETRONAS and ensure that internal systems of risk management and control are in place to mitigate such risks.

The Special Board Meetings, which were held five times in the FY 2010/11, have also given the directors the opportunity to engage in intensive deliberation on PETRONAS' long term strategy, plan & budget and talent management. These meetings have also been used as a platform for the induction and orientation of the Independent Non-Executive Directors. Such induction and orientation practice is crucial as it provides an informative environment for the Independent Non-Executive Directors to understand the business more closely. In fact, two out of the five meetings were held in the vicinity of business operations to allow the Independent Non-Executive Directors to witness for themselves PETRONAS' commercial and performance scales.

Through these Special Board meetings, the Board of Directors had gained a better understanding and appreciation of the challenges and issues faced by the Company and the Group and also a greater understanding of PETRONAS' business, plans, strategies and financial performances. These special meetings were also designed to foster greater collaboration and networking amongst the directors and the management as well as all staff at all levels.

Echoing the 2010 Corporate Transformation imperatives of "Greater Ownership & Accountability", the Board has also sanctioned the introduction of the CEO's and EVPs' Performance Scorecards with a view to enhancing the performance of the top management of the Company.

## Board Balance and Independence

The current Board composition reflects a good mix of experience, backgrounds, skills and qualifications and is considered to be of an appropriate size. This diversity is identified by the members as one of the strengths of the Board.

The Non-Executive Directors combine broad business and commercial experience with independent and objective judgment. The

balance between the Non-Executive and Executive Directors enables the Board to provide clear and effective leadership and maintain the highest standards of integrity across the Company's business activities.

All Non-Executive Directors are considered by the Board to be wholly independent.

In accordance with the provisions of the Company's Articles of Association, at least one-third of the Directors shall retire from office once every subsequent year but shall be eligible for re-election. This retirement by rotation shall only be applicable to Non-Executive Directors.

## Board Committees

There are three Board Committees made up primarily of Non-Executive Directors, namely the Audit Committee, the Governance and Risk Committee and the Remuneration Committee.

### Audit Committee

Established in 1985, the PETRONAS Board Audit Committee assists the Board in fulfilling its oversight functions in relation to internal controls, risk management and financial reporting of the Company. The Committee provides the Board with the assurance of the quality and reliability of the financial information issued by the Company whilst ensuring the integrity of the Company's assets.

The Board Audit Committee is comprised entirely of Non-Executive Directors. The members are as shown on page 16.

### Governance & Risk Committee

Reflecting the greater emphasis by the Board on risk management, the Nomination and Corporate Governance Committee was recently renamed Governance & Risk Committee. It now undertakes the oversight of this function for the Board.

The Committee continues to be responsible in the assessing of the performance of the Board, reviewing management succession planning as well as identifying, nominating and orientating new Directors.

The Committee also reviews and recommends to the Board the appropriate corporate governance policies and procedures in accordance with international governance and

best practices. The Committee will have access to the Corporate Governance & International Compliance Unit, recently established by the Management under the purview of the Legal Division, to ensure a structured, consistent and centrally-driven integrated approach to global governance and compliance for the PETRONAS Group.

The members of the Governance & Risk Committee are as shown on page 17.

### Remuneration Committee

The Remuneration Committee was established to assist the Board in discharging its responsibilities in the determination of the remuneration and compensation of the Executive Directors and certain Senior Management of the Company. The Committee determines and agrees with the Board on the remuneration policy for the President & CEO, the Executive Directors and certain Senior Management of the Company. The Committee also determines and agrees with the Board on the matter of the President & CEO's Performance Scorecard.

The members of the Remuneration Committee are as shown on page 17.

# Statement of Anti-Corruption

PETRONAS is committed to complying with the highest ethical standards and applicable anti-corruption laws. The PETRONAS Code of Conduct and Discipline expressly prohibits the giving and acceptance of bribes by PETRONAS employees. This is in line with PETRONAS' core values, business principles and various internal policies which reflect its focus on making ethics and anti-corruption an integral part of PETRONAS' business operations. PETRONAS' management is committed to communicating the vital importance of strong ethics and anti-corruption practices to all levels of the organisation.

# Statement on Internal Control

The Board is pleased to provide the following statement which outlines the nature and scope of internal control of Petroliaam Nasional Berhad and its subsidiaries (PETRONAS Group) during the year in review.

## Board's Responsibilities

The Board recognises the importance of sound internal control and risk management practices to good corporate governance with the objective of safeguarding the shareholders' investment and the Group's assets. The Board affirms its overall responsibility for the Group's system of internal controls and for reviewing the adequacy and integrity of those systems including financial and operational controls, compliance with relevant laws and regulations and risk management.

The Group has in place an ongoing process for managing the significant risks affecting the achievement of its business objectives throughout the period, which includes identifying, evaluating, managing and monitoring these risks that has been in place for the year and up to the date of approval of the Annual Report and Financial Statements.

The Group's system of internal control seeks to manage and control risks appropriately, rather than eliminate the risk of failure to achieve business objectives. Because of the inherent limitations in all control systems, these internal control systems can only provide reasonable and not absolute assurance against material misstatement or loss or the occurrence of unforeseeable circumstances.

## Risk Management

Having regard to managing risk as an inherent part of the Group's activities, risk management

and the ongoing improvement in corresponding control structures in all significant risk areas including among others, financial, health, safety and environment, operations, geopolitics, trading and logistics, remain a key focus of the Board in building a successful and sustainable business.

A Risk Management Committee (RMC) has been established to serve as a central platform of the Group to assist the Management in identifying principal risks at the Group level and providing assurance on effective implementation of risk management on a Group-wide basis. The RMC also promotes sound risk management practices through sharing of information and best practices to enhance the risk culture across the Group. The RMC seeks advice and direction from the Board Governance and Risk Committee.

Group risks are being managed on an integrated basis and their evaluation is incorporated into the Group's decision-making process such as the strategic planning and project feasibility studies. Separate risk management units or functions also exist within the Group at various operating unit levels, particularly for its listed subsidiaries, to assess and evaluate the risk management processes for reporting to their respective Board and Management level.

## Internal Audit Function

The Board recognises that the internal audit function is an integral component of the governance process. One of the key functions of PETRONAS' Group Internal Audit (GIA) Division is to assist the Group in accomplishing its goals by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes within the Group. GIA maintains its impartiality, proficiency and due professional care by having its plans and reports directly under the purview of the Board Audit Committee (BAC).

The internal audit function performs independent audits in diverse areas within the Group including management, accounting, financial and operational activities, in accordance with the annual internal audit plan which was presented to the BAC for approval.

The BAC receives and reviews reports on all internal audits performed including the "agreed corrective actions" to be carried out by the Management. GIA monitors the status of agreed corrective actions through the Quarterly Audit Status Report in which they are recorded and assessed. The consolidated reports are submitted and presented to the BAC for deliberations.

GIA adopts the principles of the Institute of Internal Auditor's International Standards for the Professional Practice of Internal Auditing.

## Other Elements Of Internal Control

The other elements of the Group's system of internal control are as follows:

### Organisational Structure

The internal control of the Group is supported by a formal organisation structure with delineated lines of authority, responsibility and accountability. The Board has put in place suitably qualified and experienced management personnel to head the Group's diverse operating units into delivering results and their performance are measured against approved performance indicators.

### Budget Approval

Budgets are an important control mechanism used by the Group to ensure an agreed allocation of Group resources and that the operational managers are sufficiently guided in making business decisions. The Group performs a comprehensive annual planning and budgeting exercise including the development and validation of business strategies for a rolling 5-year period and establishment of performance indicators against which business units and subsidiary companies are evaluated.

Variances against the budgets are analysed and reported to the Board on a quarterly basis. The Group's strategic directions are also reviewed at reasonable intervals taking into account changes in market conditions and significant business risks.

## Limits of Authority

The Limits of Authority (LOA) defines revenue and capital expenditure spending limits for each level of management within the Group. These limits cover among others, authority for payments, capital and revenue expenditure spending limits and budget approvals. This LOA manual provides a framework of authority and accountability within the organisation and facilitates decision making at the appropriate level in the organisation's hierarchy.

## Procurement

The Group has clearly defined authorisation procedures and authority limits set for awarding tenders and all procurement transactions covering both capital and revenue expenditure items. Tender committees with cross functional representation have been established to provide the oversight functions on tendering matters prior to approval by the approving authorities as set out in the LOA approved by the Board.

## Financial Control Framework

The Group has developed a Financial Control Framework (FCF) with the principal objective of enhancing the quality of the Company's financial reports through a structured process of ensuring the adequacy and effectiveness of key internal controls operating at various levels within the Company at all times. FCF requires among others, documentation of key controls, remediation of control gaps as well as a regular conduct of testing of control operating effectiveness.

On a semi-annual basis, each key process owner at various management level is required to complete and submit a Letter of Assurance which provides confirmation of compliance to key controls for the areas of the business for which they are accountable. FCF implementation is currently ongoing throughout the Group.

## Corporate Financial Policy

The Group has established a Corporate Financial Policy and Guidelines for adoption and implementation by companies across the Group. This attempts to prescribe a consistent framework in which financial risk exposures of entities within the Group are identified and strategies developed to mitigate such risks. The policies contained in the Corporate

Financial Policy are intended to provide clear communication of the policy stance governing financial and risk management throughout the PETRONAS Group of Companies, and consequently seeks to provide a foundation upon which financial risk management is practised across the Group.

## Group Health, Safety and Environment

There is a Group Health, Safety and Environment (GHSE) Division which drives various HSE sustainable initiatives and defines the framework that exemplifies the Group's effort to continuously meet legal compliance and industry best practices. GHSE also drives strategies and monitors and reports performance to the Executive Committee to ensure HSE risks are reduced to as low as reasonably practicable.

## Crisis Management

The Group Contingency Planning Standard (GCPS) is designed to provide guidelines for responding to any major emergency or crisis by defining the framework and delineation of roles and responsibilities which enable support and assistance where required. The Group has implemented a three-tier response system which seeks to provide a clear demarcation of roles and responsibilities between emergency site management, operating unit management, corporate and authorities. In the event of major emergency or crisis, the response system will be activated and the Group's priority is the protection of people, environment, asset and reputation.

## Business Continuity Plan

The Group is currently enhancing its Business Continuity Plans for both plant and non-plant operations. These plans seek to provide clear procedures to enhance the Group's preparedness in managing the impact of crisis. The main objective is to minimise impact, avoid disruption as well as recover and restore the Group's critical functions within a short period of time towards sustaining the Group's operational survival thus protecting businesses, partners and customers during crisis or disaster.

## Employees

Senior Management sets the tone for a nurturing culture in the organisation through the Group's Shared Values, developed to focus on the importance of these four key values – loyalty, integrity, professionalism and cohesiveness. The importance of the Shared Values is manifested in the Corporation's Code of Conduct for Officers and Staff which is issued to all employees upon joining. Employees are required to strictly adhere to the Code in performing their duties.

Employees undergo structured training and development programmes and potential entrants or candidates are subject to a structured recruitment process. A performance management system is in place, with established performance indicators to measure employee performance and the performance review is conducted on a semi-annual basis. Action plans to address employee developmental requirements are in place. The Group believes that this will enable employees to deliver their performance indicators so that the Group can meet its future management requirements.

## Conclusion

The Board is of the view that the system of internal control instituted throughout the Group is sound and provides a level of confidence on which the Board relies for assurance. In the year under review, there was no significant control failure or weakness that would have resulted in material losses, contingencies or uncertainties requiring separate disclosure in the Annual Report.

The Board provides for a continuous review of the internal control system of the Group to ensure ongoing adequacy and effectiveness of the system of internal control and risk management practices to meet the changing and challenging operating environment.

This statement is made in accordance with the resolution of the Board of Directors dated 30 May 2011.

# Financial Results

**Datuk Manharlal Ratilal**

*Executive Vice President  
Finance*



The Group's results for the year under review reflect better underlying performance in all segments aided by higher crude oil and gas prices. Earnings for the year after minority interests, though affected by a 9% strengthening of the Ringgit, increased by 36.0% to RM54.8 billion. Cash flow from operations increased to RM70.8 billion, an increase of 26.2% from the previous year. During the year, capital expenditure amounted to RM34.9 billion. Our financial position remained robust and we returned RM30 billion in dividends to our shareholder.

With effect from the first quarter of the year under review, we commenced quarterly reporting of our results (unaudited) under FRS 134 Interim Financial Reporting and core operating segments under FRS 8 Operating Segments.

Recognising increased challenges in our industry with regard to volatility and investment risks, we have elevated oversight of risk management to a Board Committee - the Governance & Risk Committee.

## Review of Financial Results

The Group recorded improved results benefiting from higher crude oil and gas prices and demand as a result of continuing regional growth and to some extent the uncertainty of supply driven by the political unrest in the Middle-East and North Africa region.

In spite of a 9% strengthening of the Ringgit, Group revenue increased by 14.4% to RM241.2 billion aided by higher realised prices in major product categories and higher sales volume.

Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) for the year increased to RM107.9 billion which included a net gain of RM9.2 billion arising from the Initial Public Offerings (IPOs) of Malaysia Marine and Heavy Engineering Holdings Berhad (MHB) and PETRONAS Chemicals Group Berhad (PCG) on Bursa Malaysia.

Profit before taxation was RM90.5 billion, an increase of 34.5% over the previous year.

## Financial Results Highlights for FY2011

### RM241.2

**billion in Revenue**

Revenue of RM241.2 billion for the year, up by 14.4% on the back of stronger prices and demand.

### RM107.9

**billion in EBITDA**

Earnings Before Interest, Taxes, Depreciation and Amortisation increased by 29.5% to RM107.9 billion after accounting for IPO gains of RM9.2 billion.

### RM439.0

**billion in Total Assets**

Total Assets increased by 6.8% to RM439.0 billion reflecting a stronger balance sheet.

### RM263.8

**billion in Shareholder's Funds**

Shareholder's Funds expanded by 8.6% to RM263.8 billion.

### 20.6%

**Return on Total Assets**

Return on Total Assets of 20.6% in line with the trends shown by major players in the industry.

### 17.5%

**Return on Average Capital Employed (ROACE)**

ROACE of 17.5% - an improvement from 15.9% recorded in FY2010.

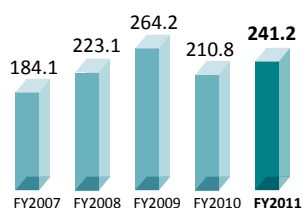
# Five-Year Group Financial Highlights

In RM billion	FY2011	+/- (%)	FY2010	FY2009	FY2008	FY2007
Revenue*	241.2	14.4%	210.8	264.2	223.1	184.1
EBITDA*	107.9	29.5%	83.3	105.7	105.9	84.8
Profit Before Taxation (PBT)	90.5	34.5%	67.3	89.1	95.5	76.3
Net Profit after Minority Interests	54.8	36.0%	40.3	52.5	61.0	46.4
Total Assets	439.0	6.8%	410.9	389.8	339.3	294.6
Shareholder's Funds	263.8	8.6%	242.9	232.1	201.7	171.7
<b>Ratios</b>	<b>FY2011</b>		<b>FY2010</b>	<b>FY2009</b>	<b>FY2008</b>	<b>FY2007</b>
Return on Revenue (PBT/Revenue)	37.5%		31.9%	33.7%	42.8%	41.4%
Return on Total Assets (PBT/Total Assets)	20.6%		16.4%	23.0%	28.1%	25.9%
Return on Average Capital Employed (ROACE)*	17.5%		15.9%	22.0%	28.0%	24.0%
Debt/Assets Ratio	0.11x		0.13x	0.11x	0.11x	0.12x
Debt/Equity Ratio	15.3%		17.6%	15.9%	15.8%	17.4%
Dividend Payout Ratio	54.7%		74.4%	57.1%	39.3%	38.8%
Resource Replenishment Ratio (Triple-R)	2.5x		1.1x	1.8x	0.9x	1.8x

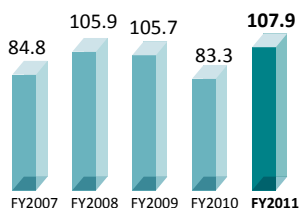
\*Revenue for FY2010 and EBITDA and ROACE for FY2007 to FY2010 have been restated to ensure consistency with the current year's presentation basis.

## In RM billion

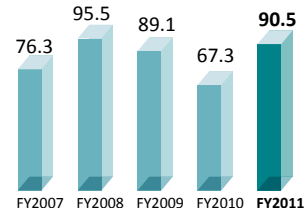
### Revenue



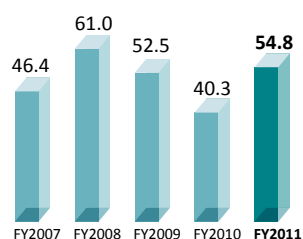
### EBITDA



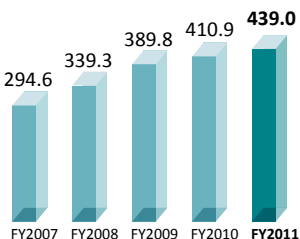
### Profit Before Taxation



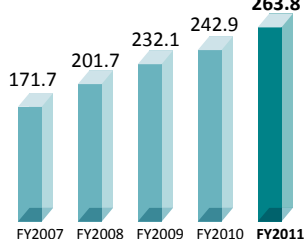
### Net Profit after Minority Interests



### Total Assets



### Shareholder's Funds



Accordingly, net profit after minority interests amounted to RM54.8 billion, recording an increase of 36.0%. NOPAT or net operating profit after tax was up 18.2% to RM52.6 billion, compared to RM44.5 billion for the previous year.

The Group's total assets increased by 6.8% to RM439.0 billion and shareholder's funds improved by 8.6% to RM263.8 billion. Cash-flow from operations in the year under review was RM70.8 billion which was 26.2% higher than the previous year.

The Group's improved performance was also reflected in our key financial ratios for the year. Pre-tax Return on Revenue and Pre-tax Return on Total Assets stood at 37.5% and 20.6% respectively, which are higher than in the previous year. These ratios are in line with the trends shown by major players in the industry.

Overall Group performance was robust with Return on Average Capital Employed (ROACE) at 17.5% comparing favourably with selected industry players.

The Group's Debt/Equity ratio continued to improve to 15.3%, benefiting from the stronger

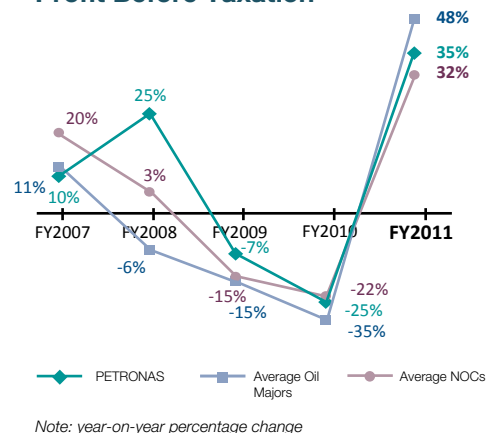
Ringgit which had lowered the translated value of US Dollar denominated debts.

The Group's capital expenditure (CAPEX) for the year under review was RM34.9 billion. As in previous years, Exploration & Production (E&P) business accounted for the bulk of our CAPEX at 64% which reflects the Group's efforts to replenish the nation's maturing resources and sustaining petroleum production to meet growing domestic and commercial needs. Apart from E&P CAPEX, the bulk of our spending was in Malaysia in line with our focus on expansion of the Group's value chain and carrying out improvements to maintain the integrity of our assets.

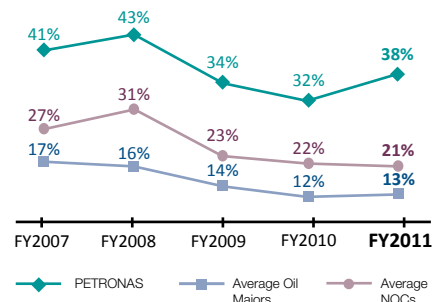
## Revenue by Products

The increase in the Group's revenue for the year under review was supported by higher revenue streams from our core products. Prices of our products moved higher in tandem with higher crude prices coupled with improved demand for our products as a result of increased economic activities across the globe.

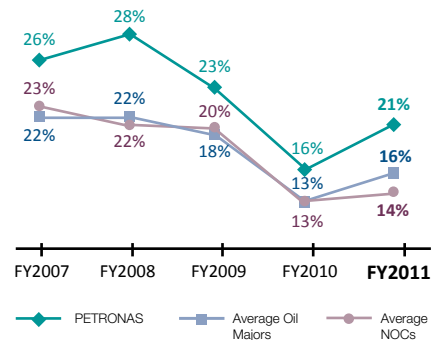
### Profit Before Taxation



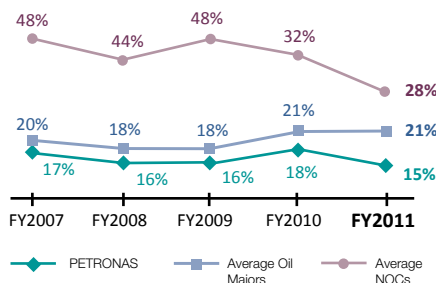
### Pre-tax Return on Revenue



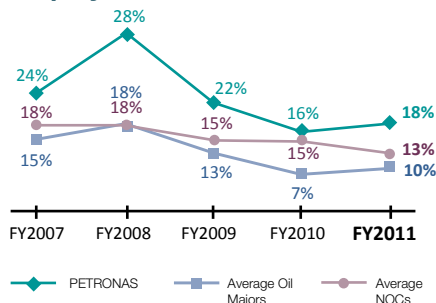
### Pre-tax Return on Total Assets



### Debt/Equity Ratio



### Return on Average Capital Employed





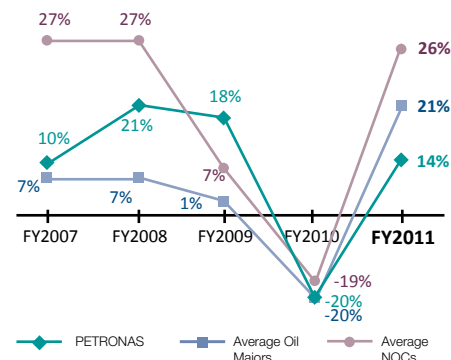
Refined petroleum products retained its top spot as the Group's main revenue generator with sales amounting to RM93.1 billion in the year under review. This was 14.7% higher than in the previous year and reflects the effects of higher sales price and higher sales volume of 266.4 million barrels. This in turn was driven by higher demand from customers and promotions for the retail segment. The second largest contributor to Group revenue was the sale of crude oil and condensates, which at RM52.6 billion accounted for 21.8% of the Group's total revenue. This was up 11.2% from the previous year, attributed to higher sales price despite a marginal fall of 1.6% in sales volume.

Liquefied natural gas (LNG) contributed RM45.3 billion or 18.8% to the Group's revenue, an increase of 22.4% from the previous year, due to higher realised prices of LNG as well as increase in sales volume by 4.5%. Sales of petrochemical products contributed RM14.5 billion to the Group's revenue, comprising 6.1% of total revenue and 14.2% higher than the previous year, as a result of higher margins

and consolidation of sales volume in newly acquired subsidiaries, OPTIMAL Glycols (M) Sdn Bhd, OPTIMAL Chemicals (M) Sdn Bhd, and Polyethylene Malaysia Sdn Bhd.

The Group's manufacturing activities, comprising the refining of crude oil into petroleum products, the processing and liquefaction of natural gas, as well as the manufacturing of various petrochemical products, continued to add value to the nation's oil and gas resources. Revenue from manufacturing activities stood at RM140.1 billion, 15.2% higher than the previous year.

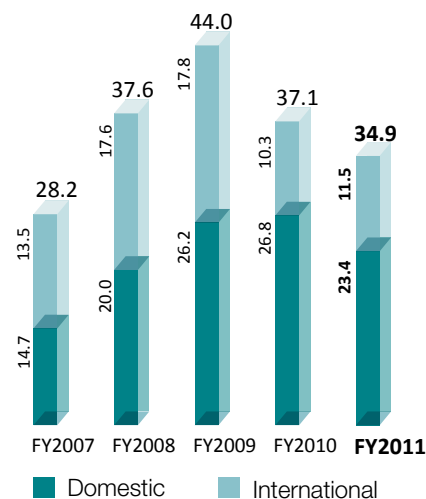
## Revenue



Note: year-on-year percentage change

## Domestic and International CAPEX Breakdown

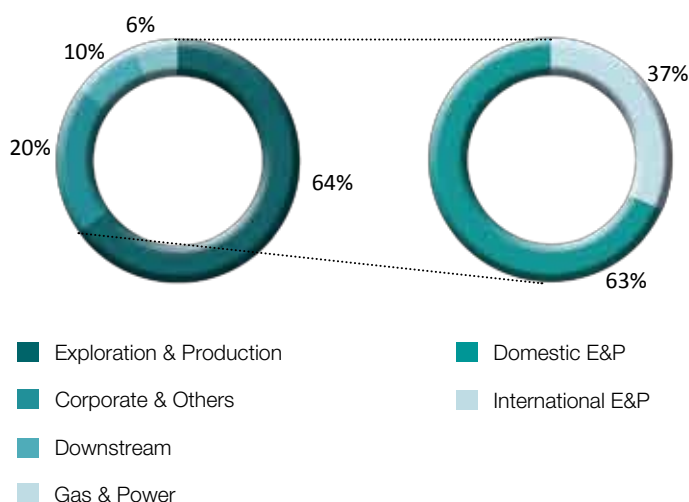
In RM billion



### Note

Results of oil majors and NOCs have been normalised to be consistent with PETRONAS' financial period, based on publicly available information. The oil majors consist of Shell, Chevron, ExxonMobil, BP and Total, while NOCs consist of PetroChina, Petrobras, Statoil and Rosneft.

## CAPEX Allocation for FY2011



## Revenue by Geographical Trade

For the fourth year running, revenue from international operations continued to make the largest contribution to the Group's revenue at RM99.1 billion or 41.1% of total revenue. Revenue from exports increased by 22.0% to RM92.5 billion, mainly due to higher revenue earned from the export of LNG, crude oil and condensates, representing about 73.9% of total exports in the year under review. Consequently, revenue from exports contributed 38.3% to the Group's revenue, where it continued to earn valuable foreign exchange revenue for the nation and contributed positively to the country's balance of payments. Revenue generated from domestic operations, meanwhile, increased by 16.2% to RM49.6 billion.

## Segment Earnings

E&P recorded the highest Net Operating Profit After Tax (NOPAT) with RM34.0 billion compared to RM30.8 billion in the previous year, representing an increase of 10.4%. The increase was mainly due to higher realised crude oil and natural gas prices partly offset by lower production in Malaysia.

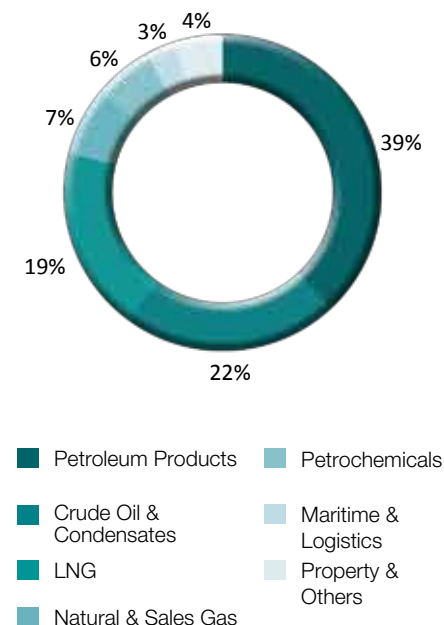
NOPAT for Gas & Power amounted to RM11.2 billion compared to RM8.9 billion in the previous year, representing an increase of 25.8%. The increase was mainly due to higher realised LNG prices and sales volume.

Downstream generated a NOPAT of RM7.2 billion compared to RM4.8 billion in the previous year, representing an increase of 50.0%, driven by improved refining and downstream marketing margins and improved product spreads in the petrochemical business.

NOPAT from Corporate & Others amounted to RM1.4 billion compared to RM0.9 billion in the previous year, representing an increase of 55.6%, as a result of higher profits generated from other business activities.

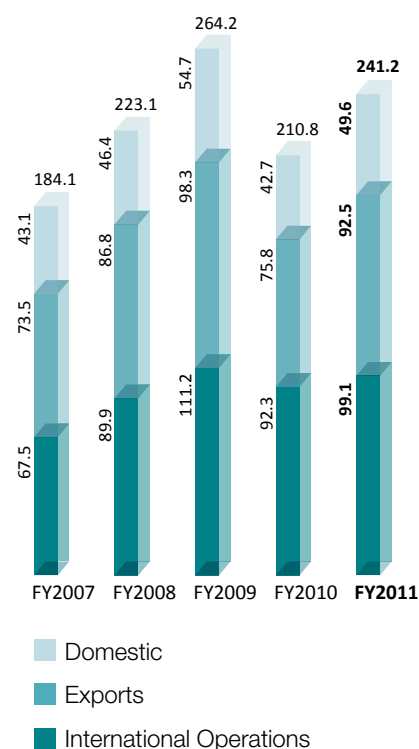
During the year, the Group undertook two IPOs, MHB and PCG on the Bursa Malaysia. Gains arising from these IPOs amounted to RM9.2 billion.

### Revenue by Products



### Revenue by Geographical Trade

In RM billion



# Payments to Governments and Subsidies

PETRONAS' payments to Malaysia's Federal and State Governments in the year under review amounted to RM65.7 billion. This comprised a dividend payment of RM30 billion, taxes of RM25.1 billion, petroleum proceeds of RM9.3 billion and export duties of RM1.3 billion.

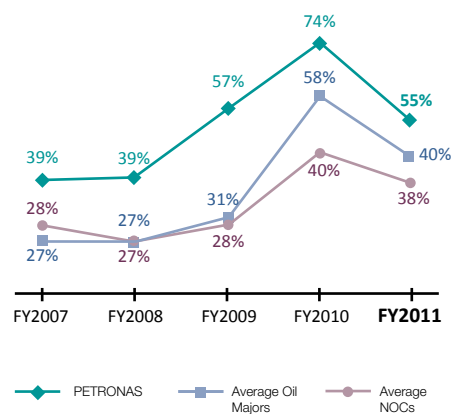
PETRONAS returned RM30 billion as dividend payments to the Federal Government for the year under review. Overall Group's Dividend Payout ratio, which is the fraction of net profits paid out as dividends, was 55%.

In addition to payments to Federal and State Governments, PETRONAS continued with subsidies (representing potential revenue foregone) associated with the supply of gas to the domestic power and non-power sectors at regulated prices. In the year under review, PETRONAS' potential revenue foregone amounted to RM20.1 billion, an increase of 6.3% from the previous year. Potential revenue foregone related to the power sector was higher by 3.6% as a result of higher average marked-

to-market prices despite lower volume off-take by Independent Power Producers (IPPs). Meanwhile, the potential revenue foregone related to the non-power sector increased by 10.4% to RM8.5 billion as a result of higher volume off-take.

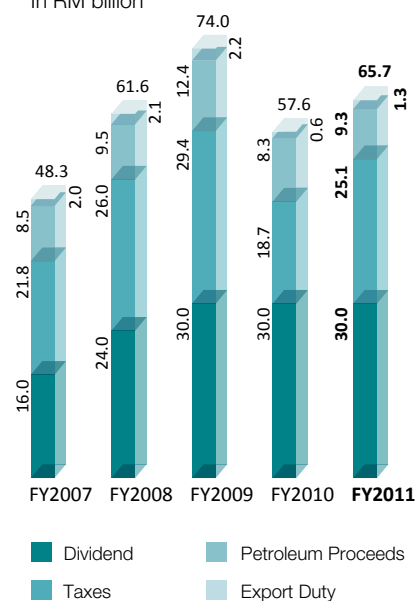
To date, PETRONAS has returned RM594.6 billion to both Federal and State Governments and, in addition, has foregone potential revenue of RM136.5 billion since regulated prices came into effect in May 1997.

## Dividend Payout Ratio



## Payments to the Malaysian Government

In RM billion



Subsidies (Potential Revenue Foregone)	FY2011	+/- (%)	FY2010	Cumulative total since 1997
<b>In RM billion</b>				
<b>POWER SECTOR</b>	<b>11.6</b>	3.6%	11.2	98.2
- Tenaga Nasional Berhad	4.9	-2.0%	5.0	42.2
- IPPs	6.7	8.1%	6.2	56.0
<b>NON POWER SECTOR - including industrial, commercial, residential users and NGV</b>	<b>8.5</b>	10.4%	7.7	38.3
<b>Total</b>	<b>20.1</b>	6.3%	18.9	136.5

# 28.3

billion boe

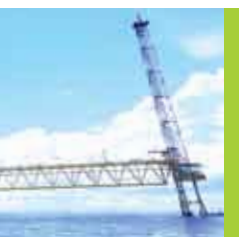
Strong Group total resources of 28.3 billion barrels of oil equivalent (boe) amid robust contribution of 26% from international resources.

# 2.5<sub>x</sub>

Resource Replenishment Ratio (Triple-R) of 2.5 times for the Group, up from 1.1 times in the previous year. About three quarters of those resources reside in Malaysia.



# driving change



# 2.14

million boe per day

Achieved total production of 2.14 million boe per day comprising contribution from international production of 523 thousand boe per day, equivalent to 25% of the Group's total production.

# Exploration & Production Business

The year under review was a year of transition for me and my team. Recognising early that decisions made must be based on sustainable solutions, E&P Business focused on key structural changes at various levels to address the source rather than symptoms of our challenges.

In this regard, I am pleased to report that E&P has progressed well in establishing a performance-driven culture across the business, supported by a value-driven rather than process-driven management system. At the same time, we have set challenging goals for the medium and long term growth. Strategies were put in place to address the production depletion trend in Malaysia and to highgrade our international portfolio. The need for clear plans to strengthen competencies is also recognised.

To achieve our goal of driving production growth of 3.5% for the next five years and replenishing resources, the E&P EXCO and I will need to drive change deeper into the organisation. It is important that collectively and individually, we step up to face the new challenges in PETRONAS' transformation.

**Dato' Wee Yiaw Hin**

*Executive Vice President  
Exploration & Production*



## Highlights

### Malaysia

**11 PSCs, 2 EOR projects and awarded 1st RSC**

Awarded 11 new Production Sharing Contracts in Malaysia compared to 4 in the previous year and sanctioned 2 new Enhanced Oil Recovery (EOR) projects. Awarded the first Risk Service Contract (RSC) for the Berantai Field to a consortium in January 2011.

### International

**Petroleum Contracts Overseas**

Secured 5 new petroleum contracts overseas, including establishing our presence in Venezuela through the Carabobo 1 project.

## Overview

PETRONAS' Exploration & Production (E&P) Business is focused on developing and adding value to our domestic and international oil and gas resources. We promote and undertake exploration, development and production of oil and natural gas activities, as resource owner in Malaysia and a global E&P player.

In Malaysia, PETRONAS has been successfully developing the nation's oil and gas resources for over three decades. Despite maturing fields and challenges posed by poor reservoir

performance, we have endeavoured to maximise upstream value through enhancing production, while increasing the prospectivity of Malaysia acreages through de-risking efforts. PETRONAS carries out upstream activities in Malaysia through partnerships with leading global oil and gas players as well as our wholly-owned E&P subsidiary PETRONAS Carigali Sdn Bhd (PETRONAS Carigali).

In the year under review, three key strategies were established for Malaysia. Firstly, to intensify

focus in sweating our assets by maximising recovery through diligent reservoir management and pursuing EOR potential. Secondly, to drive the development of effective solutions to monetise marginal fields and stranded gas. To support future growth, aggressive exploration is the third strategy, by focusing on maximising remaining potential in our mature basins and pursuing new play types. To achieve our goals, PETRONAS Carigali relentlessly pursued efforts in production enhancement and monetisation of resources this year.

Underlying PETRONAS' revitalised role as an enabler for industry development, new petroleum arrangements such as the RSC and improvements in fiscal terms are some measures that were put in place during the year under review to create a more favourable environment for sustaining investment in the upstream sector. This will in turn spur new exploration activities that will increase production and our resource base in Malaysia.

Our close collaboration with the Government has led to a landmark arrangement in Malaysia with the introduction of new petroleum tax incentives to promote the development of resources from marginal fields, deepwater, high CO<sub>2</sub> content gas fields as well as in EOR and High Pressure High Temperature (HPHT) potential.

In the international arena, E&P will focus in highgrading its portfolio. To enhance asset quality in the geological focus areas, efforts have been intensified on divestment of assets which are not optimum in the portfolio. Simultaneously, continued acquisition of quality assets especially those in development or production stage, is imperative to sustain and grow our business overseas.

The year under review saw PETRONAS divesting three assets while we were successful in acquiring five ventures in three countries. These acquisitions have provided PETRONAS with a foothold in new countries as well as contributing significant growth to the Group's resource base. Meanwhile, efforts continue to ensure delivery and value in our international assets with Iraq making good progress towards First Commercial Production and First Oil achieved in the Pearl and Topaz fields in Vietnam.

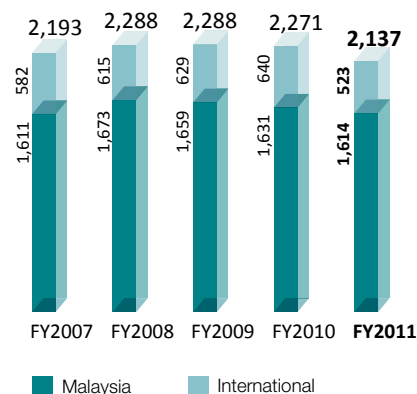
Overall, total production for PETRONAS was lower at 2.14 million barrels of oil equivalent (boe) per day compared to 2.27 million boe per day in the previous year despite various production enhancement efforts. This was due largely to maturing fields, poor reservoir performance and the expiry of petroleum agreements overseas.

Of this, PETRONAS Group's production share amounted to 1.44 million boe per day.

Despite our maturing prospects in Malaysia, we successfully maintained our domestic Resource Replenishment Ratio (Triple-R) at a relatively stable level. At the same time, we have also improved our international Triple-R through organic and inorganic resource growth. For the year under review, Group total new resource addition was 1.7 billion boe, improving our Triple-R significantly to 2.5 times for the Group. It is also worthwhile to note that efforts to augment our resources showed a good balance, with 48% coming from exploration, 20% from recovery efforts and 32% from

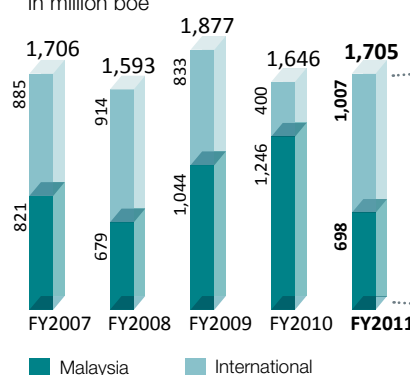
## PETRONAS' Group Oil and Gas Production

In '000 boe per day

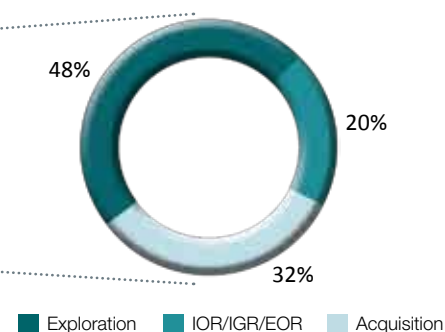


## PETRONAS' Group Resource Addition

In million boe



By Source



## PETRONAS' Group Petroleum Resources

In billion boe

		1 January 2011	+/- (%)	1 January 2010
Crude Oil & Condensate	Reserves (2P)	4.689	0.2%	4.680
	Contingent Resources (2C)	3.879	21.3%	3.197
Natural Gas	Reserves (2P)	8.508	-5.4%	8.996
	Contingent Resources (2C)	10.789	9.5%	9.852
Unconventional	Reserves (2P)	0.233	9.4%	0.213
	Contingent Resources (2C)	0.188	2.2%	0.184
<b>Total Discovered Resources</b>		<b>28.286</b>	<b>4.3%</b>	<b>27.122</b>
<b>PETRONAS Entitlement</b>		<b>8.575</b>		<b>*</b>
<b>Overall Resource Replenishment Ratio</b>		<b>2.5x</b>		<b>1.1x</b>

\* PETRONAS Entitlement disclosed from 1 January 2011



acquisitions. This has resulted in a strong Group oil and gas resource base of crude oil and condensate for 2P and 2C of 4.69 and 3.88 billion barrels, respectively, and natural gas for 2P and 2C of 8.51 and 10.79 billion boe, respectively. This was complemented by reserves and contingent resources of 0.23 billion boe and 0.19 billion boe respectively from unconventional resources. In total, Group oil and gas resource showed an increase of over 4% to 28.3 billion boe from 27.1 billion boe in the previous year, with approximately three quarters of those resources residing in Malaysia. One of the key challenges for us moving forward is to maintain favourable Triple-R as we ramp up production.

## Malaysia's Exploration & Production

As a resource owner, PETRONAS is responsible for managing and sustaining the domestic production of oil and gas. In the year under review, Malaysia's total production decreased marginally by 1% to 1.61 million boe per day from 1.63 million boe per day in the previous year.

The challenge to sustain current production levels is due to maturing fields, and are further compounded by poor reservoir performance from our deepwater field which is a major contributor to oil production. Additionally, ageing facilities necessitated scheduled shutdowns for continued reservoir management and facilities maintenance to ensure asset integrity and safe operations.

Despite these challenges, the production of crude oil and condensates amounted to an average of 627 thousand barrels per day. This

was 5% lower than the previous year's 657 thousand barrels per day.

Natural gas production fared better averaging 5.92 billion cubic feet per day (equivalent to 987 thousand boe per day), 1% higher than the previous year's 5.84 billion cubic feet per day (974 thousand boe per day).

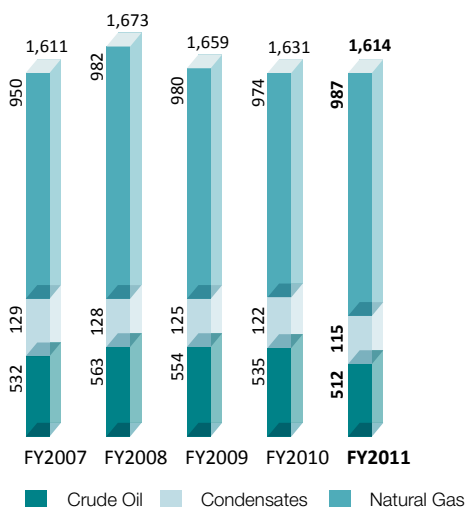
Production was sustained by the addition of one new gas field (Serampang) and two new oil fields (West Belumut & D30) that were brought on-stream during the year under review. This increased the total number of producing fields in Malaysia to 117, comprising 73 oil fields and 44 gas fields.

On the back of higher average oil prices, PETRONAS' share of total average domestic production, inclusive of PETRONAS Carigali's domestic production, accounted for 1.11 million boe per day or 69% of Malaysia's total average production, a slight increase from the previous year's share of 68%.

Our efforts in EOR have resulted in the sanctioning of two major projects, namely

### Malaysia's Average Oil & Gas Production

In '000 boe per day



### Malaysia's Petroleum Resources

In billion boe

		1 January 2011	+/- (%)	1 January 2010
Crude Oil & Condensate	Reserves (2P)	3.572	-1.7%	3.634
	Contingent Resources (2C)	2.286	5.6%	2.165
Natural Gas	Reserves (2P)	6.660	-4.7%	6.989
	Contingent Resources (2C)	8.337	7.2%	7.776
<b>Total Discovered Resources</b>		<b>20.855</b>	<b>1.4%</b>	<b>20.564</b>
<b>Overall Resource Replenishment Ratio</b>		<b>1.5x</b>		<b>1.6x</b>

Tapis and Guntong fields, offshore Peninsular Malaysia. PETRONAS expects to see EOR production from these fields, which are operated by ExxonMobil, within the next three years. We also signed a strategic cooperation agreement with China National Petroleum Corporation (CNPC) as part of efforts to complement internal capabilities and strengthen the implementation of EOR in Malaysia.

As at 1 January 2011, Malaysia's total discovered resource base increased by 1.4% to 20.9 billion boe from 20.6 billion boe in the previous year. This is mainly due to the upward revision of resources in existing fields and more significantly, additions from new discoveries. Among the major discoveries in the year under review were NC3, Spaoh, Bunga Bakawali and Anjung Kecil. Crude oil and condensate resources improved marginally to 5.9 billion boe from 5.8 billion boe, while natural gas resources increased by 1.6% to 15.0 billion boe from 14.8 billion boe previously. The Triple-R for the year was 1.5 times for total oil and gas resources in Malaysia.

Despite maturing acreages, there is still interest shown by companies to bid and operate blocks in Malaysia. Eleven new PSCs were awarded in the year under review, namely PM313, PM315, PM330, 2010 PM6/12 & Sepat Oil for offshore Peninsular Malaysia; SK306, SK313, SK315 & SK317B in offshore Sarawak; and DW Block 2G/2J & SB307/308 in offshore Sabah, bringing the total number of PSCs in operation to 82. A new production sharing contractor on the domestic front was UK-based Nio Petroleum Limited, an independent oil and gas company which was awarded Block SB307/308 jointly with operator Lundin Petroleum BV and partner PETRONAS Carigali.

An area of focus for PETRONAS is the development of marginal and small fields in Malaysia. In this regard, PETRONAS has

awarded the first RSC for the development and production of the Berantai field which is expected to deliver first gas by December 2011. This RSC is expected to unleash the potential of our marginal fields and revitalise Malaysia's upstream sector.

This RSC will enhance the commercial viability of small field development through a new risk sharing model between the contractors and PETRONAS as the resource owner. This mutually-beneficial partnership encourages the participation of niche players to develop small fields more quickly and efficiently, while the resource owner gains by ensuring the oil and gas is monetised. The effort also reflects PETRONAS' far-sightedness in addressing the changing needs of Malaysia's oil & gas landscape and the continued drive to attract investments from key players. To develop the capacity and capability of local oil and gas companies, PETRONAS awarded the RSC to Petrofac Energy Developments Sdn Bhd as lead operator, with Kencana Energy Sdn Bhd and Sapura Energy Ventures Sdn Bhd as full equity partners.

Besides the new petroleum arrangement, a significant milestone was achieved following the announcement of new petroleum tax incentives by the Malaysian Government. These incentives enhance further the fiscal terms and economic viability of developing challenging domestic resources such as small, marginal, deepwater, high CO<sub>2</sub> gas and HPHT fields in order to attract investments from global oil and gas players.

Overall, a total of RM24.0 billion was spent in Malaysia's upstream sector during the year. Of this, RM17.1 billion or 71% was for development projects, RM5.2 billion or 22% for exploration activities, and RM1.8 billion or 7% for operational expenditure.

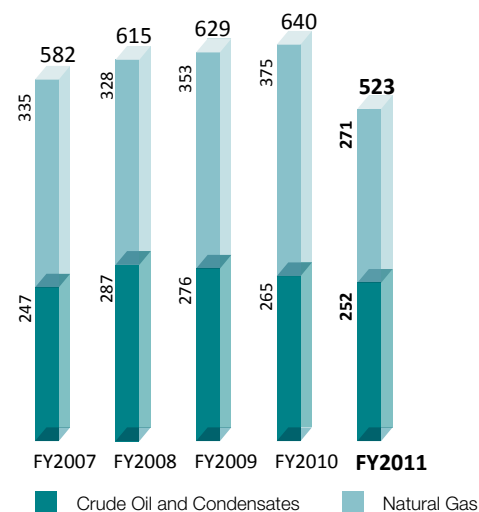
## International Exploration & Production

The Group's international E&P business continued to be strong despite the challenging global operating environment.

Total average production from the Group's international operations was 523 thousand boe per day, a decrease of 18% from the previous year. Crude oil and condensates production decreased to 252 thousand boe per day from 265 thousand boe per day, as a result of depleting fields in the Sudan and Vietnam. Average gas production was 271 thousand boe per day, down from 375 thousand boe per day in the previous year, mainly due to the expiry of our contract in Iran.

### PETRONAS' International Oil and Gas Production

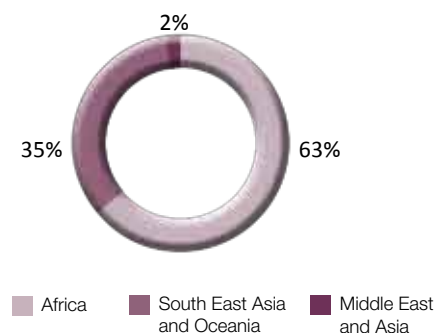
In '000 boe per day



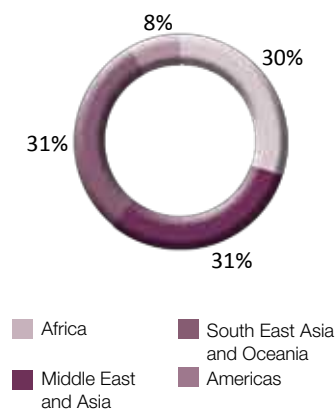
By region, Africa continues to dominate the Group's international portfolio with a contribution of 63% to international production. The year also saw the first production from five of the Group's international projects, namely Pearl and Topaz fields in Vietnam; Teng-Mish Mish in the Sudan; and Phase 1 Muda Jengka and MDD Project in the Malaysia-Thailand Joint Development Area (MTJDA).

The year also saw all four of our ventures in Iraq achieving pre-development plan approval by the government of Iraq, and they are on track to achieving first commercial production by 2012.

### Breakdown of International Production by Region



### Breakdown of International Resources by Region



In the year under review, we strengthened our international resource base which accounted for 26% of total Group resources.

International discovered resources stood at 7.4 billion boe, up from 6.6 billion boe in the previous year, showing an increase of 13% mainly augmented by the successful asset acquisition in Venezuela's Carabobo 1 Project. Crude oil and condensate resources increased significantly by 30% to 2.7 billion boe from 2.1 billion boe previously while our gas resources showed an increase of 5% to 4.7 billion boe from 4.5 billion boe. Our strong international resource base is the result of contribution from new resource addition with 43% coming from exploration and enhanced recovery and the rest coming from acquisitions. Consequently, the Triple-R for our international operations remained strong at 5.6 times for total oil and gas resources. Our resources are mainly located in Africa, Middle East and Asia, and South East Asia and Oceania, and comprise about 30% each.

In the year under review, decisions were made to exit a number of countries – Ethiopia, Pakistan and Timor Lesté – as part of efforts to upgrade our international portfolio.



PETRONAS secured five new international petroleum agreements during the year, namely Venezuela Carabobo 1, Brunei Block CA1 & Block CA2 and Australia WA402P & WA403P. This brings the total of the Group's international E&P ventures to 75 in 23 countries. Of these, PETRONAS is the operator for 27 ventures,

### PETRONAS' International Petroleum Resources

In billion boe

		1 January 2011	+/- (%)	1 January 2010
Crude Oil & Condensate	Reserves (2P)	1.117	6.8%	1.046
	Contingent Resources (2C)	1.593	54.4%	1.032
	Entitlement (2P)	0.471	-	-
Natural Gas	Reserves (2P)	1.848	-7.9%	2.007
	Contingent Resources (2C)	2.452	18.1%	2.076
	Entitlement (2P)	0.766	-	-
Coal Bed Methane	Reserves (2P)	0.233	9.4%	0.213
	Contingent Resources (2C)	0.188	2.2%	0.184
	Entitlement (2P)	0.206	-	-
<b>Total Discovered Resources</b>		<b>7.431</b>	<b>13.3%</b>	<b>6.558</b>
<b>Total PETRONAS Entitlement</b>		<b>1.443</b>	<b>-</b>	<b>-</b>
<b>Overall Resource Replenishment Ratio</b>		<b>5.6x</b>		<b>(0.4x)</b>

joint operator in 14 and an active partner in the remaining 34 ventures.

The most notable signing for a new block in the year was the Carabobo 1 asset which is PETRONAS' first contract in Venezuela. It also signifies our entry into a major development project involving heavy oil while establishing a stronger foothold in the South American region. Our partners in this venture are Repsol YPF, ONGC Videsh Limited, Petroleos De Venezuela SA (PDVSA), Indian Oil Corporation Limited and Oil India Limited.

A total of RM16.6 billion was invested in our international E&P ventures, of which 57% was for development, 6% for exploration activities, while the remaining was for the operation of existing producing assets.

## Outlook

The global upstream sector is expected to remain vibrant in 2011, driven by strong oil prices and lower risk aversion among major E&P companies.

Oil prices are expected to remain bullish in the coming year, thus providing an incentive for E&P companies to invest, with global investments expected to rise from the previous year.

In 2011, we anticipate IOCs and NOCs to continue to post strong financial results.

Continued challenges to access resources will drive investment into newer areas in deepwater, Arctic, and the Middle East, and this is expected to result in greater development of unconventional resources. To thrive in this environment, companies are expected to

strengthen their capabilities and proficiencies in niche technologies.

The wave of consolidation that is currently taking place in the upstream sector is expected to result in the creation of colossal companies that specialise in providing a range of services to the industry. The concentration of skills and expertise in the hands of a few very large companies strengthens their bargaining power and is likely to result in the escalation of fees for services.

Despite this challenging outlook, there are opportunities for companies who are on the lookout to acquire quality assets in the upstream sector and to establish strategic alliances with select partners for sustained growth.

For PETRONAS, our focus will be on intensifying activities in Malaysia and highgrading our international portfolio to ensure improved yields that will commensurate with the risk involved. We will relentlessly pursue our production and resource replenishment targets in the coming year as well as our efforts to improve delivery of projects to acquire quality assets.

In Malaysia our focus will continue to be in pursuing aggressive exploration, especially in exploring new play types and more challenging prospects including deepwater and HPHT plays. We will continue to accelerate developments in marginal fields, leveraging on the new tax incentives announced by the Government, as well as on the new innovative petroleum arrangement solutions such as the RSC. We will also intensify our efforts in EOR and development of gas resources with high CO<sub>2</sub> content. Moving forward, key focus areas will be on new solutions to enhance commerciality of gas development.

To enable this, PETRONAS will continue to harness technology and technical solutions to overcome E&P challenges.

We are fully committed to HSE excellence. We recognise that good HSE performance is essential to our business success and we expect high standards of ethical business conduct from our people while they perform their tasks.

We have put in place several measures to strengthen HSE practices in our work culture and these are designed to support best corporate responsibility practices.



Disclaimer on forward-looking statements: Forward-looking statements involve inherent risks and uncertainties. Should one or more of these or other uncertainties or risks materialise, actual results may vary materially from those estimated, anticipated or projected. Specifically, but without limitation, capital costs could increase, projects could be delayed, and anticipated improvements in capacity, performance or profit levels might not be fully realised. Although PETRONAS believes that the expectations of its management as reflected by such forward-looking statements are reasonable based on information currently available to it, no assurances can be given that such expectations will prove to have been correct. Accordingly, you are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date they are made. PETRONAS undertakes no obligation to update or revise any of them, whether as a result of new information, future developments or otherwise.

# RM11.2

billion

Higher NOPAT of 26% compared to previous year on the back of higher LNG prices and sales volume, which contributed around 21% to the overall Group profit for the year.

# 99.97%

PETRONAS Gas Berhad achieved a 99.97% reliability rate for the Peninsular Gas Utilisation (PGU) system pipeline network, exceeding the world class standard of 99.90%.



# agility





# 24.3

million tonnes

PETRONAS LNG Complex achieved highest ever LNG production volume due to improved plant performance.

# Gas & Power Business

It has been a challenging year for the Gas & Power Business as we strive to strike a balance between our domestic and international strategic growth agendas, both of which are equally important to the sustainability of our business.

Domestically, the Gas & Power Business has been entrusted with the responsibility of building critical gas infrastructure that would guarantee Peninsular Malaysia's security of gas supply to meet growing needs and to prepare the nation in facing challenges of a truly open and competitive gas market. Ambitious targets have been set for the rollout of Malaysia's first LNG Regasification Terminal in Melaka, and we are truly committed to realising the success of this project as envisioned.

Beyond our shores, we are evolving to meet the changing dynamics of the global LNG market, working hard to sustain our strong position in the Asia Pacific region, that we have built over decades, while establishing a foothold in the unconventional gas-to-LNG industry, which promises to be the next wave of industry growth.

**Datuk Anuar Ahmad**

*Executive Vice President  
Gas & Power*



## Highlights

### GLNG

#### **Achieved FID**

The Gladstone Coal Bed Methane (CBM) to LNG project in Australia, with a total capacity of 7.8 million tonnes per annum (mtpa), achieved Final Investment Decision (FID) in January 2011.

### FLNG

#### **FEED contract signed for FLNG project**

Front End Engineering Design (FEED) contract signed for the Floating LNG (FLNG) project in January 2011.

### LNG RGT

#### **EPCIC awarded for RGT**

Engineering, Procurement, Construction, Installation and Commissioning (EPCIC) was awarded for the first LNG Regasification Terminal (RGT) project in Malaysia in January 2011. The project is located in Melaka.

### KIMANIS

#### **EPCC awarded for Kimanis Power Plant project**

Site preparation work has been completed. In March 2011, the Engineering, Procurement, Construction and Commissioning (EPCC) contract was signed and limited notice to proceed issued.



# Overview

PETRONAS' Gas & Power Business is engaged in the processing, liquefaction, transmission, marketing and trading of LNG and gas. It also participates in power generation and utilities business, which adds synergistic value in the integrated gas value chain.

During the year under review, Gas & Power Business contributed around 21% to the Group's profit. The strong financial results for the business were achieved on the back of higher LNG production and prices, coupled with sustained sales gas volume delivered to our customers.

PETRONAS LNG Complex (PLC) production volume of 24.3 million tonnes achieved during the year was the highest ever attained in our history. This is as a result of improvements in plant reliability in the second half of the year under review and debottlenecking efforts in the MLNG Dua plant.

During the year, the Group was able to sustain and ensure continuous sales gas delivery to customers in Peninsular Malaysia. This was also made possible with PETRONAS Gas Berhad (PGB) sustaining its performance throughout the year, exceeding world class operations standards.

Going forward, initiatives are being undertaken to ensure the security of gas supply for Malaysia and positioning PETRONAS as a global LNG player, leveraging on our world class operations and infrastructure facilities.

Significant progress has been achieved on the Group's growth initiatives. The Gladstone CBM to LNG project in Australia, with a total capacity of 7.8 mtpa, achieved FID in January 2011 and is expected to deliver its first LNG cargo in 2015.

FEED contract for our FLNG project was signed in January 2011. The project will enable the monetisation of our marginal and stranded

gas fields to enhance the Group's LNG supply portfolio.

Construction of Malaysia's first LNG RGT and the 300 megawatt Kimanis Power Plant projects have commenced and are expected to be completed by July 2012 and end of 2013 respectively.

The Group is also committed to further grow our power and renewable energy business, leveraging on existing capabilities and by seeking new opportunities.

## Global LNG

In the year under review, the Group's total LNG sales of 26.3 million tonnes was higher by 4.78% compared to 25.1 million tonnes\* in the previous year, mainly driven by higher volume from PLC.

Exports of LNG from PLC were mainly to term customers in Japan (60%), South Korea (18%), Taiwan (13%) and China (5%).

This achievement was only made possible as a result of concerted efforts within the Group and the continuing commitment of our LNG subsidiaries in addressing the various operational challenges during the year under review.

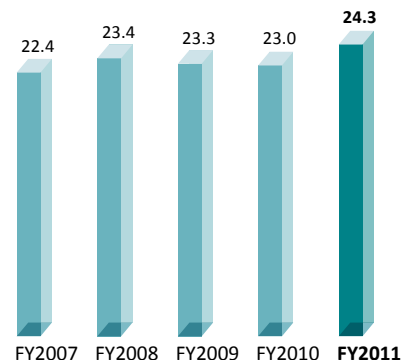
During these challenging times, PETRONAS LNG Ltd (PLL), previously known as Asean LNG Trading Company Ltd (ALTCO) effectively played its role as a system balancer to address shortfalls from the plants towards meeting our contractual obligations. PLL handled 0.8 million tonnes of LNG volume over and above its trading volume of 0.4 million tonnes.

It was with this effort that PETRONAS' LNG business maintained our market position and preserved our reputation as a reliable supplier of LNG.

*\*Adjusted figure to exclude inter-company volumes*

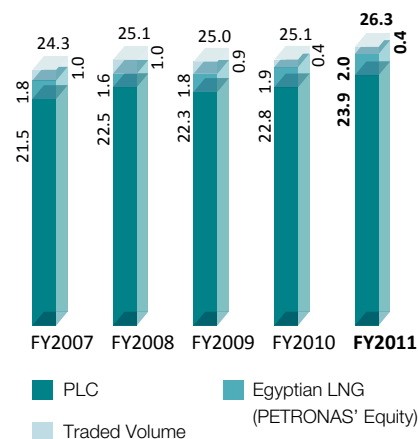
### PLC Production Volume

In million tonnes

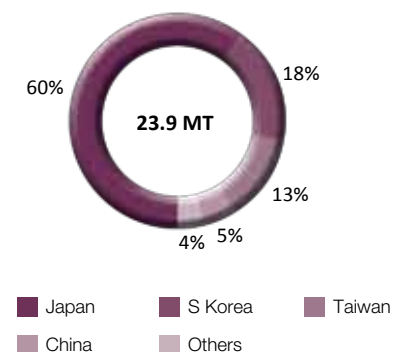


### LNG Sales Volume

In million tonnes

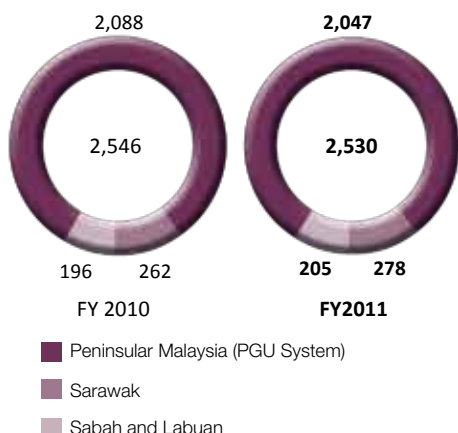


### PLC Sales Volume



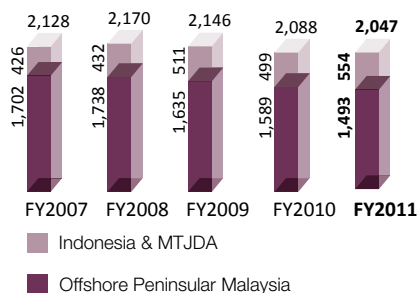
## Average Sales Gas Volume Delivery

In mmscfd



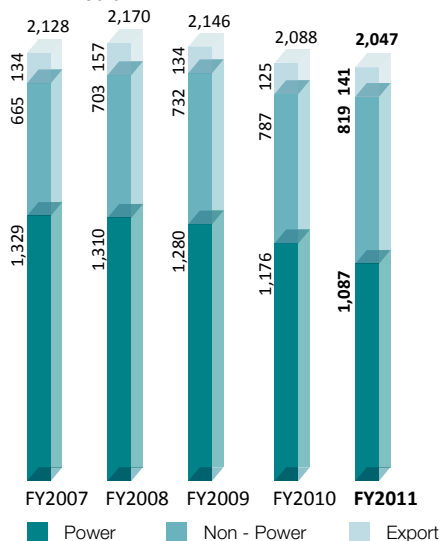
## PGU System Supply Sources

In mmscfd



## Average Sales Gas Through the PGU System

In mmscfd



## Infrastructure, Utilities & Power

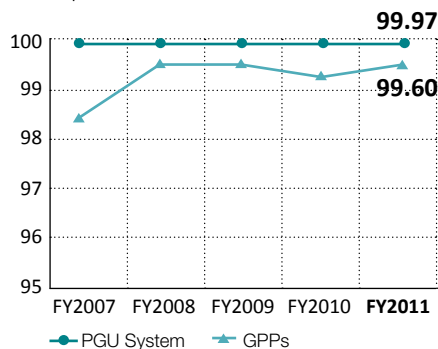
The Group sold an average volume of 2,530 million metric standard cubic feet per day (mmscfd) of gas in Malaysia, a marginal decrease of 0.6% from 2,546 mmscfd delivered in the previous year. Of that, 80.9% or an average of 2,047 mmscfd was sold through the PGU system, a decrease of 2.0% from the previous year of 2,088 mmscfd. This was mainly due to upstream reservoir management and maintenance activities, which affected the feedgas volume processed.

To complement the domestic gas supply portfolio, the Group sourced 554 mmscfd of gas for the PGU system from Indonesia and Malaysia-Thailand Joint Development Area (MTJDA), higher by 11.0% than the previous year's volume of 499 mmscfd. This has ensured continuous sales gas delivery for our customers throughout the year under review.

Sales gas delivery within the PGU system was largely consumed by the power sector with an average of 1,087 mmscfd or 53.1% of the total volume. The non-power sector, comprising industrial, petrochemical and other users, consumed an average of 819 mmscfd or 40.0% of the total volume, while the remaining 141 mmscfd or 6.9% was exported to our customers in Singapore.

## PGU System and GPP Reliability Rate

In percent



PGB, the Group's gas processing and transmission arm, sustained world class operations standards at its gas processing plants (GPPs) and PGU system, with reliability rates of 99.60% and 99.97% respectively. PGB has also embarked on plant rejuvenation and revamp activities on its aging facilities to ensure the sustainability of our operations.

## Major Gas Ventures

### Gladstone LNG (GLNG) in Queensland, Australia

GLNG is a joint venture between PETRONAS (27.5%), Santos (30%), Total (27.5%) and Kogas (15%).

The project includes the development of CBM resources in the Bowen and Surat Basins in south-east Queensland, construction of a 420 km gas transmission pipeline from the gas fields to Gladstone, and two LNG processing trains with a combined nameplate capacity of 7.8 mtpa.

On 13 January 2011, FID was achieved for the project and subsequently the Engineering, Procurement and Construction (EPC) contract was awarded for the upstream surface facilities, development of the LNG plant and gas transmission pipeline.



GLNG's first LNG cargo is expected to be delivered in 2015 with PETRONAS' minimum contracted off-take volumes of 3.5 mtpa. This strategic venture will further enhance PETRONAS' global LNG supply portfolio.

## Regasification Terminal in Melaka

PETRONAS is developing the first LNG RGT in Malaysia, which will allow for the importation of LNG and ensure continuous and sustainable gas supply for the nation in the future.

The LNG RGT is located in Melaka and designed to receive, store and regasify LNG with a maximum capacity of 3.8 mtpa.

In December 2010, PGB signed a Heads of Agreement with PETRONAS for the development of LNG RGT. Subsequently, PGB awarded the contract for the EPCIC for the construction of an island jetty with a regasification system and subsea pipeline.

The LNG RGT project is targeted for completion in July 2012.

## Outlook

Gas demand is projected to remain positive during this decade, primarily driven by the resumption of economic recovery and growth in Asian countries, notably in China and India. The recent earthquake and tsunami in Japan have led to heightened demand for LNG in the short to medium term, although the magnitude of the global impact remains uncertain. The current oversupply in the gas market is expected to shift to a balanced market before the middle of this decade.

Apart from North America and Australia where the shale gas and CBM developments are extensive, unconventional gas development is expected to be moderate over the next five years. PETRONAS will continue to assess opportunities within this sector, beyond the Gladstone CBM to LNG venture, to strengthen our resource position for the medium to long term growth.

Gas pricing remains non-uniformed based on geographical market dynamics, with gas contracts in Asia and much of Europe to remain oil-indexed. In contrast, gas prices in North America and to some extent Europe will be heavily influenced by the regional price benchmark. Amidst this gas price fragmentation, PETRONAS will continue to leverage on the long term oil-indexed LNG supply contracts, supplying primarily to the traditional buyers in East Asia. At the same time, PETRONAS will continue to strive to be a global LNG player through trading activities, diversification of supply sources and market expansion, including increasing its presence in the Atlantic Basin.

On the domestic front, ensuring the security of gas supply to meet rising demand remains the main focus. Gas importation into Peninsular

Malaysia is inevitable and PETRONAS is undertaking several measures to address the long term domestic supply needs, including the construction of an LNG RGT and the introduction of third-party access to facilitate the importation of LNG and the transportation of gas through the PGU network.

The demand for power generation is also expected to be steady in line with global economic growth, especially in the emerging markets. The push for renewable energy for power generation, driven by environmental and energy security considerations, is gaining momentum as more governments are promoting green policies. PETRONAS will continue to explore growth opportunities in this sector via an integrated play through monetisation of gas reserves and future positioning in selected renewable energy ventures.



Disclaimer on forward-looking statements: Forward-looking statements involve inherent risks and uncertainties. Should one or more of these or other uncertainties or risks materialise, actual results may vary materially from those estimated, anticipated or projected. Specifically, but without limitation, capital costs could increase, projects could be delayed, and anticipated improvements in capacity, performance or profit levels might not be fully realised. Although PETRONAS believes that the expectations of its management as reflected by such forward-looking statements are reasonable based on information currently available to it, no assurances can be given that such expectations will prove to have been correct. Accordingly, you are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date they are made. PETRONAS undertakes no obligation to update or revise any of them, whether as a result of new information, future developments or otherwise.

## Enhanced Governance

Restructuring of PETRONAS' global marketing and trading of crude oil & petroleum products under a single entity, supported by an enhanced risk management system.

## Innovative

### product value proposition

Spearheading the development of Fluid Technology Solutions™ for the Mercedes GP PETRONAS Team and the introduction of improved product offerings such as PRIMAX 95 Xtra, PETRONAS Nautimar Fishing Boat Oil and NGV Lube.



# focus



# Collaboration

with BASF

PETRONAS initiated a study together with international petrochemicals player BASF towards our expansion into producing high-value specialty chemicals.



# Downstream Business

The year under review was indeed an exciting year for Downstream Business as our focus was mainly in the area of organisational and business enhancement with emphasis on governance as well as driving strategic growth initiatives to position our business to deliver higher sustainable value. Moving forward, we will continue to focus on the business enhancement initiatives for safe and reliable operations which remain a top priority. Active portfolio management with focus on quality assets in selected geographies will continue to be undertaken. Business growth will be underpinned by strategic investments such as a Refinery and Petrochemical Integrated Development (RAPID) project in Southern Johor, a fertiliser plant in Sabah and expanding the lubricants business in selective high growth markets.

Supporting our vision for Downstream to be a Merit Based High Performing Business, we are committed to enhance performance tracking focusing on execution, strengthening competencies and continuously benchmarking with our peers. I would like to take this opportunity to thank our dedicated team in Downstream Business for all their professionalism, determination and commitment in making this year a significant success.

**Datuk Wan Zulkiflee  
Wan Ariffin**  
*Executive Vice President  
Downstream*



## Highlights

### Successful

#### Listing of PCG

PETRONAS Chemicals Group Berhad (PCG) was successfully listed on Bursa Malaysia and was acclaimed as the largest Initial Public Offering in South East Asia in 2010.

### Growth

#### Expansion in Africa and China

Engen Petroleum Limited acquired Chevron's assets in seven countries across Africa and PETRONAS Lubricants International builds on presence in China through the acquisition of Shandong St Maria Lubricating Oil Company Limited.

## Overview

PETRONAS' Downstream Business plays a strategic role in enhancing the value of Malaysia's oil and gas resources through its integrated operations in refining and trading, marketing of crude oil and petroleum products locally and internationally, as well as through manufacturing and marketing of petrochemical products.

PETRONAS owns and operates three refineries in Malaysia and one in South Africa with a total refining capacity of 500,000 barrels per day. Two of the Malaysian refineries are located in

Melaka and comprises PETRONAS Penapisan (Melaka) Sdn Bhd (PPMSB), a 100% owned PETRONAS entity and Malaysian Refining Company Sdn Bhd (MRC), a joint venture refinery with ConocoPhillips. The other refinery is located on the East Coast of Malaysia in Kertih. PETRONAS also owns the Engen Refinery (Enref) in Durban, South Africa through its majority shareholding in Engen Petroleum Ltd. Through its wholly-owned global trading and marketing subsidiary PETRONAS Trading Corporation Sdn Bhd (PETCO), PETRONAS further enhances the value of its own equity crude and petroleum products.

In Malaysia, PETRONAS Dagangan Berhad (PDB) manages all domestic marketing and retailing activities of a wide range of petroleum products. PETRONAS also operates service stations in various international markets including Indonesia, South Africa, the Sudan and Thailand. PETRONAS is the leading marketer of petroleum products in Malaysia with a total market share of 42.7%. Through its South African subsidiary Engen, PETRONAS is the leading retailer and marketer of petroleum products in Southern Africa.

PETRONAS Lubricants International Sdn Bhd (PLISB) has manufacturing and marketing infrastructure and presence in more than 20 countries globally. The PLISB product range includes lubricants and system fluids for both the automotive and industrial markets as well as a range of car care products.

PETRONAS' petrochemicals arm, PCG, is the leading petrochemical producer in Malaysia and one of the largest producers in Southeast Asia, involved primarily in manufacturing, marketing and selling a diversified range of petrochemical products, including olefins, polymers, fertilisers, methanol and other basic chemicals and derivative products. PCG has over 25 years of combined experience in the petrochemical industry.



## Refining & Trading

PETRONAS owns and operates four refineries with a total refining capacity of about 500,000 barrels a day. Our crude oil and petroleum products marketing and trading activities span the globe and our crude oil portfolio includes a range of significant grades from several regions.

### Crude Oil Refining

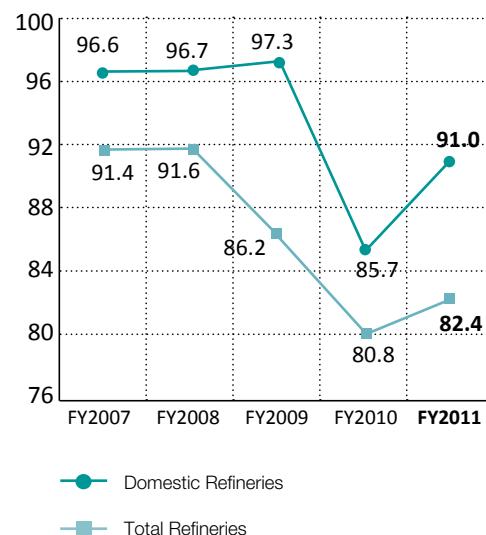
The Group's domestic refineries continue to play a strategic role in adding value to the nation's petroleum resources, as well as enhancing the security of its energy supplies. During the year under review, the Group's domestic refineries collectively achieved a higher throughput volume of 107.6 million barrels and reflected a higher utilisation rate of 91.0% after bouncing back from a plant revamp and turnaround exercise of subsidiary MRC in 2010. Post revamp, MRC has strengthened its refining capability to an average of 154 thousand barrels per day, higher than the average of 110 thousand barrels per day in the preceding year. The revamp has also provided greater flexibility to MRC in the sourcing of imported crudes.

The overall reliability rate of the domestic refineries at 98.3% is testimony to the Group's continued operational excellence. The strong emphasis on safe operations was recognised with both PPMSB and PETRONAS Penapisan (Terengganu) Sdn Bhd, winning major awards in the oil and gas sector – Malaysian Society of Occupational Safety & Health (MSOSH) Awards 2009 and Chemical Industries Council of Malaysia (CICM) Awards 2009, in the year under review.

The Group's refinery in Durban, South Africa, recorded a lower throughput volume of 26.8 million barrels from 34.1 million barrels in the previous year mainly due to a plant shutdown. As a result, refinery utilisation and reliability rates have decreased to 60.0% and 94.1% from 68.0% and 95.6% respectively in the preceding period. The shutdown is part of a

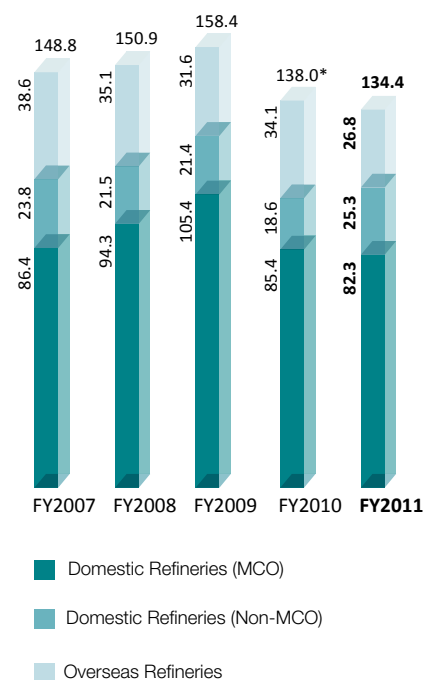
### Utilisation Rate for Group's Refineries

In percent



### Refining Throughput

In million barrels



\*Adjusted figures due to reclassification of volumes



safety programme to ensure plant integrity and safe operations. The refinery has also received awards in the Chemical Manufacturing category and for Innovation, at the KwaZulu-Natal Waste Management Awards 2010 in South Africa.

## Crude Oil & Petroleum Products Marketing

The Group's crude oil and petroleum products marketing activities increased in the year under review to 170.9 million barrels backed by higher exports of Malaysian Crude Oil (MCO). PETRONAS' MCO entitlement grew 16% year on year to 69.6 million barrels amid higher crude oil prices.

The Group, however, exported lower volumes of petroleum products of 51.4 million barrels mainly due to lower products available for export resulting from higher Malaysian domestic consumption.

Similarly, the Group's sales of Foreign Equity Crude Oil decreased by 5% to 49.9 million barrels, reflecting lower entitlements from the Group's International Operations amid higher global crude oil prices.

## Crude Oil & Petroleum Products Trading

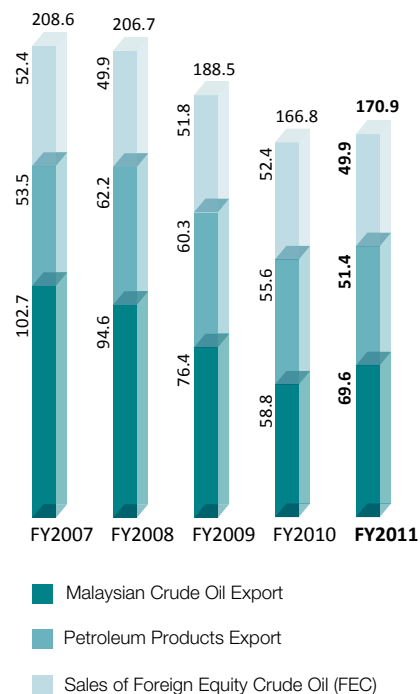
The Group's volume of crude oil and petroleum products traded for the year under review decreased by 14.6% to 162.6 million barrels.

The total volume of crude oil and petroleum products traded decreased to 79.1 million barrels and 83.5 million barrels respectively. The decrease in crude volume was generally due to lower risk trading appetite in the Group's West of Suez trading region caused by lower crude demand, while the decrease in products volume was mainly caused by geopolitical events particularly in the Middle East that led to trading risk exposures.



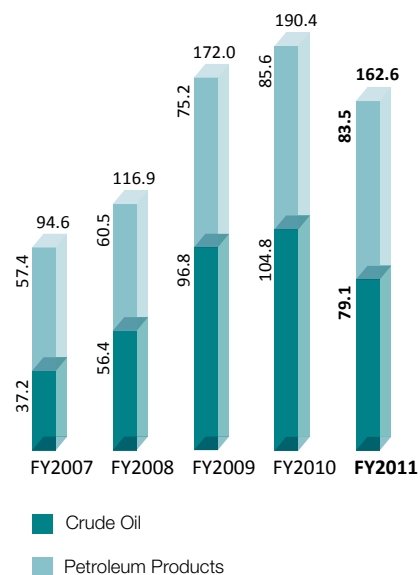
### Marketing Volumes

In million barrels



### Trading Volumes

In million barrels



# Downstream Marketing

## Petroleum Products Retail

PETRONAS' subsidiaries, PDB and Engen Petroleum Ltd are retail market leaders in Malaysia and South Africa respectively. PETRONAS also supplies aviation fuel in the Asia and Africa regions.

PETRONAS operates a network of more than 2,700 retail stations through PDB as the domestic retail arm and Engen as the main international retail arm in addition to PETRONAS Marketing Sudan Limited (PMSL), PT PETRONAS Niaga Indonesia (PTPNI) and PETRONAS Retail Thailand Co Ltd. In terms of business growth, Engen achieved another major step forward in its growth strategy with the acquisition of Chevron's downstream interest in Sub-Saharan Africa.

PETRONAS' sales volume grew by 7.58% in tandem with the global economic recovery, with international subsidiaries contributing 49.6% of total sales volume. By segment, retail was the largest contributor to total sales volume at 41.5%.

In the year under review, PDB registered a higher sales volume of 85.2 million barrels of petroleum products with a total market share of 42.7%. PDB has also increased its retail station network to 955 stations and has the largest network of convenience stores at retail stations in Malaysia with more than 600 *Kedai Mesra* convenience stores opened to-date.

As part of the on-going commitment to improve its value proposition to its customers

and position the Company at the forefront of innovation, PDB has launched a number of new products including PRIMAX 95 Xtra, PETRONAS Nautimar Fishing Boat Oil and NGV Lube.

PRIMAX 95 Xtra, which was developed in the year under review, was launched in April 2011. PRIMAX 95 Xtra is a new fuel inspired by F1 technology, proven to deliver more power, better acceleration and enhanced fuel economy, replacing the previous PRIMAX 95.

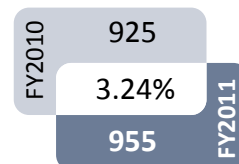
PDB has also entered into partnership and collaboration with several partners such as the agreement to become the Exclusive Partner and Lubricant Supplier to national car distributor PROTON Edar Sdn Bhd.

In South Africa, Engen maintained its market dominance. The acquisition of 100% of Chevron's interest in Malawi, Mauritius, Mozambique, Réunion, Tanzania, Zambia, and Zimbabwe has increased the number of affiliates outside South Africa to 410 service stations bringing the total of its retail stations throughout the African continent to 1,572.

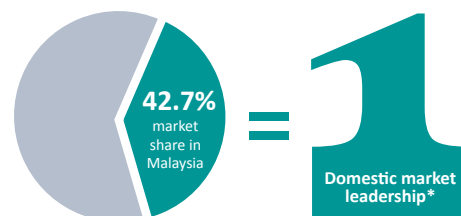
The commercial business also made great strides by winning some significant supply contracts, particularly to the mining industry.

In conjunction with the FIFA World Cup 2010 in South Africa, Engen rolled out its dynamic African Welcome programme to internal and external stakeholders over a six-month period leading up to the event. This programme focused on providing a superior level of service at all Engen sites, while welcoming visitors to Africa and South Africa in particular, reflecting Engen's brand promise of "With Us You Are Number One".

### NUMBER OF RETAIL STATIONS IN MALAYSIA

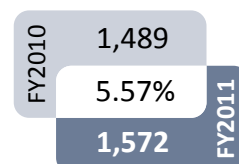


### Petroleum Products Retail in Malaysia



\* Combined retail, commercial and LPG sectors

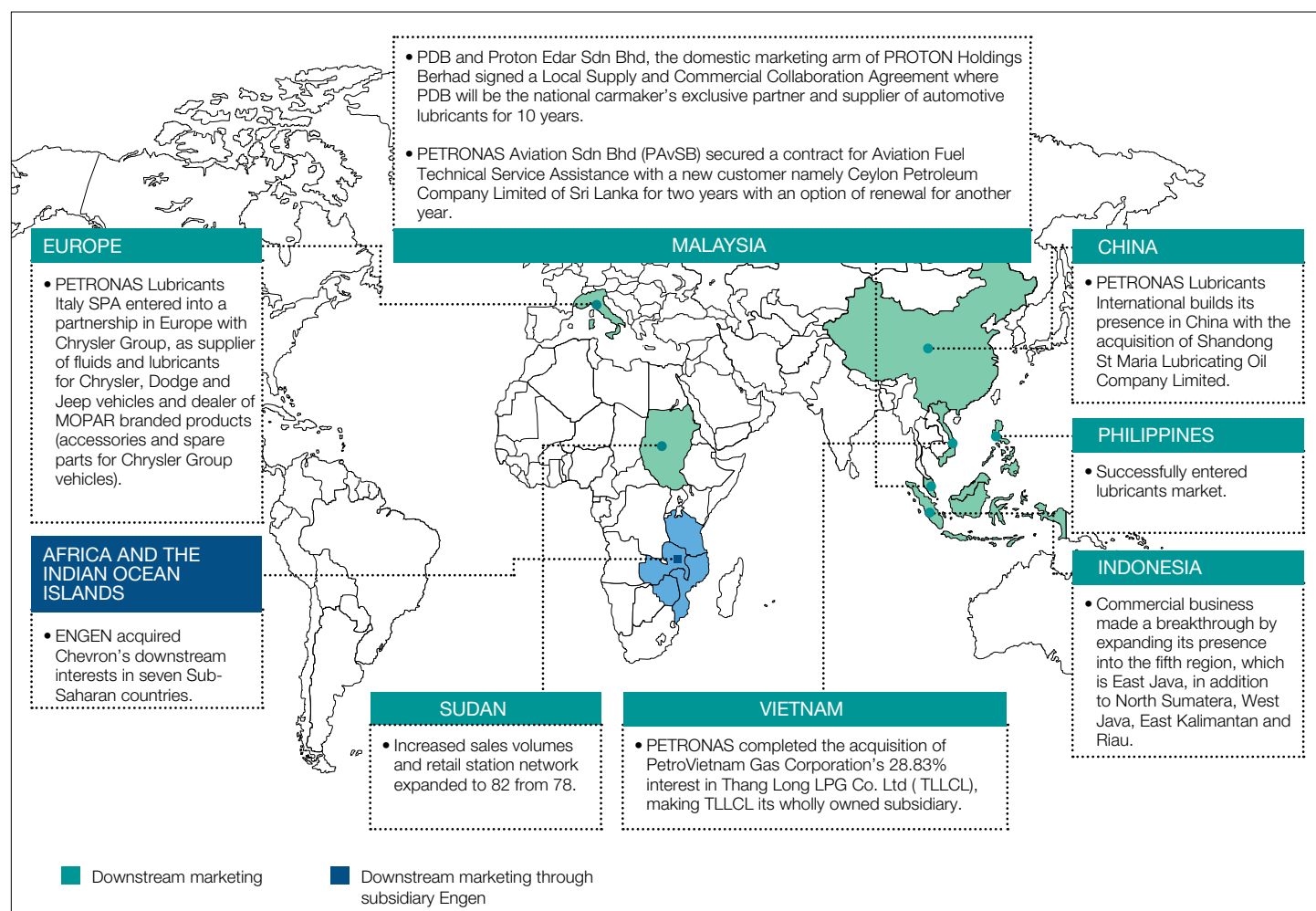
### NUMBER OF RETAIL STATIONS ACROSS AFRICA



In the Sudan, PMSL achieved higher sales volumes reflecting improved performance of its retail operations, as well as increased sales to support the United Nation's operations in the country. During the year, PMSL also expanded its network reach, which now boasts a total of 82 stations.

In Indonesia, the number of retail stations under PTPNI was maintained at 19. PTPNI's retail business continues to supply subsidised fuel in Medan. Its commercial business made a breakthrough by expanding its presence into the fifth region, which is East Java, in addition to North Sumatera, West Java, East Kalimantan and Riau.

## Downstream Marketing Highlights for the Year under Review



## Lubricants

The Group's lubricants business, led by PLISB, continued to deliver a resilient performance during the year. Through acquisition and strategic partnerships, PLISB aspires to be a leading lubricants and functional fluids company with a global market share and recognised as among the top players.

PLISB has made its first acquisition in China by acquiring Shandong St Maria Lubricating Oil Company Limited.

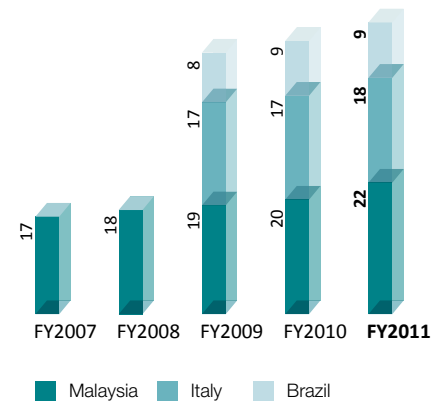
The Company also took another significant step forward by signing long-term exclusive technical and supply agreements with Daimler AG and Mercedes GP respectively in September 2010 for the development and supply of Fluid Technology Solutions™ for the Mercedes

GP PETRONAS Team which includes fuel, engine oils, hydraulic and gear oils as well as transmission fluids for Formula 1 application. This opportunity will help to further enhance PETRONAS' credibility and image as a serious, competent and reliable partner in motorsports and in the automotive world.

PETRONAS aims to be the lubricant market leader in Malaysia in five to 10 years by introducing enhanced lubricant products and rolling out aggressive marketing campaigns. Currently, PETRONAS controls 22% of the local lubricants market. The Company has also signed an exclusive lubricants agreement to supply Syntium to all Chevrolet and six Cycle & Carriage service outlets throughout Malaysia.

## Lubricants Market Share

Percentage market share



# Petrochemicals

The year under review saw the recovery of the olefins and polyolefins market from the residual effects of the economic crisis of 2009. Low density polyethylene (LDPE) prices increased by 17% compared to the previous year due to the tightening of supplies. Polypropylene prices gained 19% year-on-year on the back of healthy demand from emerging economies. The aromatics spot market had been bullish, driven mainly by strong demand for paraxylene, which is used in the production of purified terephthalic acid. The monoethylene glycols market had also been strong during the year under review supported by the rally in fibre intermediate product prices. The market for vinyls also picked up steadily throughout the year.

Average annual price for methanol was higher by 27% compared to the previous year. The methyl tertiary butyl ether (MTBE) market also strengthened throughout the year. In addition, agricultural commodity prices soared to record highs in view of improved demand, leading to stronger prices for urea and ammonia globally.

Overall, petrochemical product prices have improved tremendously across the board from the low levels seen in the second half of 2009. Most petrochemical products demonstrated

strong growth momentum buoyed by improved economic growth and demand from the Asia Pacific markets, especially from China and India, as well as the continuous upward movement in crude oil prices.

As a result, PETRONAS' petrochemical business arm, PCG performed well, with total production reaching 8.2 million tonnes compared to 7.8 million tonnes in the previous financial year. PCG sold 3.3 million tonnes of olefins and derivatives and 3.4 million tonnes of fertilisers and methanol, representing increases of 10% and 6% respectively compared to the previous year. Higher sales volume was achieved for the year mainly due to additional volume from newly acquired subsidiaries, Optimal Glycols (Malaysia) Sdn Bhd, Optimal Chemicals (Malaysia) Sdn Bhd and Polyethylene (Malaysia) Sdn Bhd.

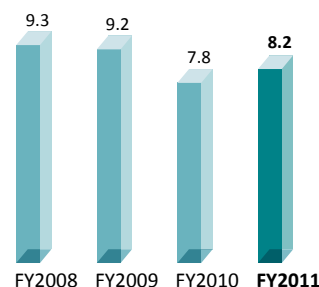
Overall, plant utilisation rate for the year was slightly lower at 81% compared to 82.5% in the previous financial year mainly due to maintenance shutdowns of some plants.

In running a petrochemical complex, it is vital that the facilities are well maintained. Hence, PCG's production facilities are periodically shut down for scheduled maintenance. Compliance with maintenance and regulatory requirements is in line with its commitment to PETRONAS'

Health, Safety and Environment (HSE) policy. PCG follows a stringent maintenance schedule, which would in turn enhance product yields and quality, increase plant efficiency and safety, reduce the possibility of future unscheduled plant shutdowns and allow required regulatory equipment inspections to be performed.

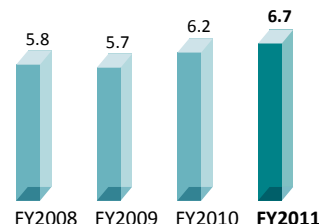
## Production Volume

In million tonnes



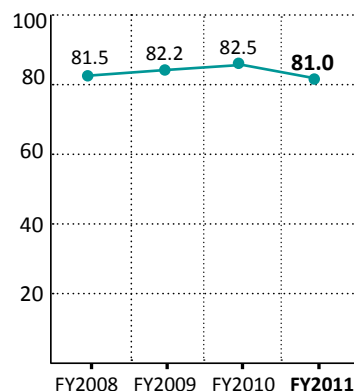
## Sales Volume

In million tonnes



## Utilisation Rate

In percent





## Outlook

The global economic recovery is underway witnessed by a gradual recovery in the developed world to pre-crisis levels, while the developing world continues to surge ahead although at a slower pace. Despite what appears to be a rebound, concerns over increasing inflation levels, particularly in China and India, coupled with increasing interest rates, withdrawal of government stimulus packages and increasing sovereign debt concerns in Europe, can dampen a robust recovery.

In the light of supply disruptions in key oil producing countries such as Libya, OPEC will be expected to take the lead in the control and re-balancing of global oil prices. However, delays in OPEC's response to current oil prices portray its reluctance in boosting production as OPEC is of the opinion that the high oil prices are driven by speculation, rather than fundamentals.

The outlook for refiners in the East outshines that for the West in 2011 as demand in mature markets remain fairly weak. Global oil demand is expected to rise by 1.8 million barrels per day while global refinery throughput will grow 200,000 barrels per day less than that. This gap will easily be substituted by alternative fuels and might even lead to an increase in product inventories. In Asia where end product demand is high and capacity addition slows significantly, refining margins are expected to remain strong.

Capitalising on the opportunity to expand and enhance our Downstream Business, in May 2011, PETRONAS announced the RAPID project in Pengerang, Johor. With a potential cost of US\$20 billion, the components include a 300,000 barrels per day refinery and petrochemical complex with a total three million tonne per annum olefins capacity. If sanctioned, the RAPID project provides, among others, the opportunity for PETRONAS to further expand its petrochemical business through volume growth and a more diversified products portfolio by moving into high value and premium specialty chemicals.

In addition, a joint feasibility study between PETRONAS and BASF to produce specialty chemicals in Malaysia is currently underway and is expected to be completed by December 2011. As the petrochemical business arm of PETRONAS, PCG will evaluate the outcome of the feasibility study and will undertake the collaboration with BASF going forward, if viable.

Also, PETRONAS is in the final stage of assessing the viability of a greenfield ammonia and urea plant in East Malaysia. If sanctioned, this will position PETRONAS as the largest urea exporter in South East Asia.

Growth opportunities remain as demand for petrochemicals in the Asia Pacific is expected to strengthen in line with population growth, increasing living standards and improving regional economies. PCG, with its strong

integration, diversified product portfolio and advantaged feedstock cost structure, is well-positioned to benefit from an up-cycle in the petrochemical industry.

The plans outlined are in line with PETRONAS' determination to ensure that our Downstream Business remains resilient. We will continue to maximise value creation and selectively expand our business presence in predefined growth markets, while continuously assessing the quality of our portfolio of assets in order to optimise and maximise returns for the Group.



Disclaimer on forward-looking statements: Forward-looking statements involve inherent risks and uncertainties. Should one or more of these or other uncertainties or risks materialise, actual results may vary materially from those estimated, anticipated or projected. Specifically, but without limitation, capital costs could increase, projects could be delayed, and anticipated improvements in capacity, performance or profit levels might not be fully realised. Although PETRONAS believes that the expectations of its management as reflected by such forward-looking statements are reasonable based on information currently available to it, no assurances can be given that such expectations will prove to have been correct. Accordingly, you are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date they are made. PETRONAS undertakes no obligation to update or revise any of them, whether as a result of new information, future developments or otherwise.

# Maritime & Logistics Business

## Highlights

### MHB

#### Initial Public Offering

Raised RM2.03 billion from the listing of Malaysia Marine and Heavy Engineering Holdings Bhd (MHB) during the year.

### Global

#### tank terminal business

Acquisition of 50% in Vitol Tank Terminals International (VTI) BV gives us presence in 11 locations in 10 countries.

### Foothold

#### in South America

Secured 15 year time-charter with Petrobras for 2 Dynamic Positioning (DP) Aframax shuttle tankers.

## Overview

Led by subsidiary MISC Berhad, PETRONAS' maritime and logistics business is involved in the business of ship owning, ship operating, owning and operating of tank terminals and offshore floating facilities as well as marine repair, marine conversion and engineering and construction works.

MISC, with more than 100 vessels and a combined tonnage of more than 10 million deadweight tonnes (dwt), is the leading owner operator of Liquefied Natural Gas (LNG) carriers and the third largest owner of Aframax fleet in the world.

### Fleet Size

MISC-Owned Fleet by Business	FY2011	FY2010
<b>LNG Carriers</b>	<b>29</b>	29
<b>Petroleum Tankers</b>	<b>50</b>	44
<b>Chemical Tankers</b>	<b>19</b>	17
<b>Liner</b>	<b>18</b>	18
<b>Offshore Facilities</b>		
FPSO	5	4
FSO	5	5
MOPU	1	-
<b>Total Fleet Size</b>	<b>127</b>	<b>117</b>



# The Year in Review

MISC continued to experience a challenging operating environment amidst the backdrop of unpredictable and volatile global economic and geopolitical conditions. In particular, shipping rates remained under pressure as record new deliveries continued to put pressure on an industry already weighed down by excess tonnage.

Despite the difficult operating conditions, the period under review saw the achievement of two significant milestones. Firstly, the acquisition of a 50% stake in VTTI BV completed in September 2010, effectively propelled MISC into the global tank terminal business arena with immediate access to 11 locations in 10 countries. Secondly, MISC undertook the listing of its wholly-owned heavy engineering business, MHB on Bursa Malaysia. The public listing of MHB was one of the most successful and best performing IPOs for the year in Malaysia.

MISC's LNG business safely delivered 22.34 million tonnes of LNG cargo, comprising 10% of global demand. Cumulatively, since its maiden voyage in 1983, MISC's LNG vessels have now made 6,234 voyages carrying 311.76 million tonnes of LNG for an expanding portfolio of clients. MISC also recently secured medium-term contracts with BG Group plc and International Gas Transportation Co for the North West Shelf project.

MISC's wholly owned subsidiary, AET Tanker Holdings Sdn Bhd, faced one of the more difficult operating environments during the year as the petroleum tanker segment was

besieged by heavy delivery of new vessels. With half of its vessel portfolio under term contracts which offered rate protection, AET dynamically managed contract renewals during the year to mitigate the impact of low spot rates. However, amid the challenging environment, AET scored several successes. First, it secured a new 15-year time charter for two DP Aframax shuttle tankers with Petrobras commencing 2012. In addition, several term contracts were also renewed for longer tenures, providing longer term earnings stability. AET also took delivery of three Aframax tankers as part of its fleet rejuvenation and expansion programme, bringing the number of Aframax tankers in its fleet to 37.

In the year under review, MISC took delivery of 10 new chemical vessels of between 19,000 and 45,000 dwt and returned four in-chartered vessels. The last five newbuildings (4 x 19,000 dwt from Fukuoka Shipbuilding Co Ltd and 1 x 45,000 dwt from SLS Shipbuilding Co Ltd) from its fleet rationalisation programme which started in 2007, are scheduled for delivery within the next 12 months. By then, the chemical tanker fleet will comprise 29 vessels, totaling 898,117dwt, of which 19 vessels are owned.

While enjoying initial success in the turning around of the liner business during the early part of the year following the new focus on Intra-Asia trade services, operating conditions in the second half of the year deteriorated, greatly impacted by natural disasters such as the earthquake in New Zealand and floods in Queensland, Australia as well as weather disruptions in North Asia. Port calls were disrupted which affected the volume of liftings.

In the offshore business, MISC saw maiden contributions from two new assets, namely, FPSO Ruby II and MOPU Satu. FPSO Ruby II, operating on Block 01 and 02 of the Ruby

Field, offshore Vietnam officially received First Oil on 9 June 2010, marking MISC's second asset deployed in the waters off Vietnam, in collaboration with our strategic partner, PetroVietnam Technical Services Corporation. This FPSO is owned and operated by Vietnam Offshore Floating Terminals Ruby Ltd, a joint venture between MISC and PTSC, of which MISC has a 40% equity stake.

MISC's other subsidiary, MHB was successfully listed on Bursa Malaysia in October 2010, raising a total of RM2.03 billion for the Company. In conjunction with the IPO, Technip SA, a renowned project management, engineering and construction service provider in the oil and gas industry, was invited to participate as an 8% strategic shareholder. This further strengthens both parties' previous collaboration in Turkmenistan but more importantly, provided MHB with the technical platform to expand and develop its capabilities to compete with the best in the world.

MHB successfully completed three major projects, namely, the 14,505 metric tonne Tangga Barat Central Platform for a cluster of gas fields offshore Terengganu, Malaysia; the Magtymguly Collector Riser Platform for Turkmenistan Block 1 Phase 1 Gas Development Project; and the BP Angola External Turret System. Construction of the 38,000 metric tonne Gumusut-Kakap semi-submersible Floating Production System (FPS) (Gumusut) will be MHB's biggest project on site this year. Designed to process 150,000 barrels per day from 19 subsea wells and operating in up to 1,200 metres water depth, Gumusut will be Asia's first deepwater semi-submersible FPS. MHB's orderbook stands at RM3.1 billion.



# Our People

## Highlights

# 41,628

staff

PETRONAS employees Group-wide increased by 1.6% to 41,628, as at 31 March 2011, reflecting the expansion of the business.

## Nurturing High Performance Culture

PETRONAS emphasises on building a high performance culture. We are constantly improving our people practices in our efforts to motivate employees to deliver their best and bring real change that will add value to the organisation.

## Overview

As PETRONAS continues to expand its business at home and around the world, people remain at the heart of our agenda. We believe that nurturing a high-performance culture is crucial in managing, motivating and inspiring our employees to produce extraordinary results.

In the year under review, several key initiatives to harness the talent and commitment of our people have been implemented to elevate talent management to a more strategic level.



## Talent Attraction & Sourcing

As the organisation continues to grow rapidly, timely and effective talent sourcing is critical. As a result, PETRONAS is empowering the businesses to make their own decisions over recruitment matters. All Business Heads will drive talent management within their respective businesses to identify the right candidate for the job as well as to put in place a clear succession plan.

Meritocracy is the basis for talent management in PETRONAS. In sourcing talents, selection is based not just on performance but also on soft skills, and potential. During the year under review, a total of 1,382 candidates were recruited, of which 1,283 are locals and 99 are international hires.

## Talent Development

In the year under review we established People Development Committees (PDCs) at various levels in the organisation to provide greater line ownership and better talent management. The committee members in the PDCs are well represented to ensure balanced, objective and fair decisions are made in talent development, performance and consequence management, and mobility.

The PETRONAS Leadership Development Framework has also been implemented to ensure that we are able to identify and develop more top talents in the organisation to support our business growth and expansion.

As at 31 March 2011, a total of 131 Corporate Top Talents and 282 Business Top Talents were identified to fill corporate critical positions and business critical positions, respectively.

## Talent Retention

The young talents of today in PETRONAS will determine our direction tomorrow. With the younger generation representing about 70% of the workforce in PETRONAS, our investments in people are focused on developing and managing our young talents and our mid-career staff.

To ensure that our young and mid-career staff are committed to the organisation for the long-term, we have implemented a differentiated remuneration package in the year under review.

Rewards are now distinguished through differentiated remuneration to enable the recognition of an individual staff's performance, skills and competencies.

To further motivate staff, we also embarked on flexible working arrangements and introduced Smart-Casual Fridays as part of our commitment to ensure a better working environment and to increase productivity.

With the implementation of these and other initiatives, we hope to create a more conducive working environment for our people in our effort to cultivate a high performance culture within the organisation.

## Enhanced HR Operating Model

To improve the efficiency and effectiveness of managing our workforce, and to ensure consistent and measurable services to our employees, we have strengthened our Human Resource (HR) Operating Model. With the implementation of this enhanced model in the year under review, HR professionals will be able to focus more on the formulation of strategies and development while the routine

transactional and administrative HR activities will be undertaken by various other units.

In the year under review, PETRONAS introduced Project SAPPHIRE, a global integrated system which will include a Shared Services Centre to manage HR services, applications, processes, people and innovations. Project SAPPHIRE will also introduce myPASSPORT as a self-service portal for staff. This will support the Enhanced HR Operating Model in line with HR's role of becoming a strategic partner to the Group.

## Education & Sponsorship

In the year under review, we have streamlined our education efforts following the implementation of the Education Transformation initiative where our learning institutions will now play a greater role in developing and nurturing talents for the organisation, as well as for the industry.

Our Universiti Teknologi PETRONAS, which offers undergraduate and post-graduate courses related to the oil & gas industry, is on track to achieving Research University (RU) status by 2013, obtaining 62% of the RU score in 2010 compared to 57% in the previous year. The research university status is granted by the Malaysian Ministry of Higher Education and it provides access to much needed funding and grants for research, development and commercialisation activities.

In the year under review, a total of 15,500 employees from the PETRONAS Group and its affiliates attended various leadership development programmes at the PETRONAS Management Training centre while at Institut Teknologi Petroleum PETRONAS (INSTEP), more than 11,500 engineers and technicians attended various upgrading programmes. INSTEP also produces skilled technicians and

operators through its Petroleum Technology Programme.

Akademi Laut Malaysia (ALAM) continues to provide quality maritime education for the shipping industry. In December 2010, 416 students graduated from ALAM.

### Graduates

Institution	No. of Graduates in 2010	No. of Graduates in 2009
UTP	1190	1167
INSTEP	613	797
ALAM	416	427

Each year, PETRONAS provides sponsorship to deserving tertiary students. Sponsorships are given for critical disciplines relevant to PETRONAS' business needs.

To ensure that the scholars are well-rounded, PETRONAS continually monitors their academic performance and organises student development programmes that focus on strengthening academic, as well as soft skills.

In the year under review, PETRONAS sponsored a total of 278 students to institutions of higher learning, 211 locally and 67 overseas. During the same period, a total of 411 graduates were recruited to join PETRONAS' workforce.

In line with our aspiration of becoming the Regional Education and Learning Hub for the oil & gas industry, PETRONAS' education approach focuses on academy-industry partnerships that emphasise industry-oriented learning and research excellence. Our education and R&D centres focus on technology development, knowledge management, leadership and capability building in our quest to compete globally.

# Technology & Engineering

## Overview

Technology plays a fundamental role in the development of the oil and gas industry. For PETRONAS, technology is an enabler that drives our growth and helps us remain competitive. In an industry environment increasingly fraught with challenges such as depleting resources, more complex and difficult to monetise unconventional hydrocarbon resources, gas fields with high CO<sub>2</sub> content and crudes and gas with high contaminants, we are committed to delivering integrated, innovative and value-adding technology solutions and projects across the Group. Developing and applying appropriate technology solutions are central to the success of our projects and operational excellence.

PETRONAS has identified Enhanced Oil Recovery (EOR) and CO<sub>2</sub> Management as critical Exploration & Production (E&P) areas to build capability that will extend the life of our current assets, improve hydrocarbon recovery and enable the development of challenging assets. With this in mind, PETRONAS is setting up an Exploration & Production (E&P) Technology Centre to focus on developing EOR and CO<sub>2</sub> Management technologies.

In the year under review, our Technology & Engineering (T&E) Division has taken on an additional portfolio to deliver downstream capital projects to support PETRONAS' business expansion. These projects will be carried out in compliance with the PETRONAS Project Management System which ensures that capital projects are delivered within cost, on schedule, comply with HSE requirements and will assure operability.

Integrated teams comprising experienced project managers and engineers, equipment & material category managers and technical solution experts are responsible for the full spectrum of a project, from engineering design, identifying cost and value engineering opportunities to executing the project to meet best-in-class asset delivery performance.

Our T&E Division has also put together a team of technical professionals to provide innovative and value-adding technology solutions, enhance technical standards and governance, and drive the technical capability development for Group-wide sustainable plant operations in helping us strengthen Operational Excellence. Focus areas include process safety management, asset integrity and reliability programmes where solutions and services have progressively shown results in increasing production.

Over the years we have significantly reduced our dependency on third party technical services, reflecting the strength of our in-house technical capabilities to deliver value to the Group.



## EOR & CO<sub>2</sub> Management

Faced with the prospects of depleting oilfields, EOR is being pursued by PETRONAS to increase the recovery factor (RF) of existing fields. The RF for Malaysia's oil producing fields is targeted to reach 45% and we are well on our way to achieving this target. As at 1 January 2011, our RF was 39%. EOR technology programmes focusing on Water Alternating Gas, Chemical EOR (CEOR) and Thermal EOR have been planned for implementation at our oil fields in Malaysia and the Sudan. CEOR has been successfully applied at the Angsi field, off Terengganu in Peninsular Malaysia.

In the year under review, PETRONAS collaborated with China National Petroleum Corporation (CNPC) to develop CEOR in four phases. The first phase was completed with the development of low-cost super surfactants and polymers that are capable of withstanding high temperature and high salinity. The application of this technology is targeted for Peninsular Malaysia's Dulang field and other potential fields.

In managing high content of CO<sub>2</sub> in gas fields, PETRONAS is pursuing CO<sub>2</sub> management technology in collaboration with Universiti Teknologi Malaysia for the development of membrane technology to remove CO<sub>2</sub> at offshore platforms. In addition, together with US-based Cameron International Corporation, PETRONAS has successfully developed and



tested a new multi-fibre membrane separation technology for more efficient and cost-effective removal of CO<sub>2</sub> from natural gas.

Unlike current membrane designs made with the same type of fibre materials with a single set range of performance characteristics, the new multi-fibre design uses two or more different types of membrane fibres with different performance characteristics. This allows for, among others, reduction in CO<sub>2</sub> separation stages, increase in separation performance and maximisation of overall gas processing capacity. The main benefit of this technology is the significant reduction in the total deck footprint and weight of the membrane skids used offshore which would be translated into lower costs.

This technology has been tested at PETRONAS' operations at the Cakerawala field with results meeting the test's stated parameters. The technology will be commercially applied at the JDA-GBE Project undertaken by PETRONAS Carigali Sdn Bhd. With the recent establishment of PETRONAS' E&P Technology Centre, other specific developments relating to the capture, transport, storage and utilisation of CO<sub>2</sub> will be undertaken with the aim of developing target application in PETRONAS' high CO<sub>2</sub> gas fields.

## Ionic Liquids

Some of our oil and gas fields have higher levels of contaminants. These challenging environments require new and effective technologies to remove the impurities.

Since 2007, PETRONAS has been collaborating with Queen's University of Belfast in Northern Ireland, and our own Universiti Teknologi PETRONAS to develop Ionic Liquids which are capable of removing the impurities. The performance of Ionic Liquids in removing mercury from gas and condensates are five to six times better than that of existing commercially available technology. The development of Ionic Liquids in general, has produced results which have far exceeded our plant operation requirements. These Ionic Liquids will be deployed at PETRONAS Gas Berhad plants and facilities, PETRONAS Carigali Sdn Bhd On-Shore Gas Terminal and at our Melaka Refinery.



## Pipeline Integrity

PETRONAS is actively rejuvenating our subsea infrastructure including our pipeline systems. In this regard, PETRONAS has collaborated with Australia's Commonwealth Scientific & Industrial Research Organisation (CSIRO) and successfully developed a novel pipeline repair system that uses composite material consisting of a fibreglass reinforcement saturated in a resin matrix.

Unlike other available technologies in the market, the system, trademarked PIPEASSURE™, is highly durable and resistant to moisture and is capable of withstanding conditions subsea pipelines are exposed to. The technology functions as an overwrap to protect and repair damaged sections of oil and gas pipelines.

PIPEASSURE™ allows repairs to be performed efficiently and in a cost-effective manner, avoiding lengthy pipeline shutdowns. PIPEASSURE™ also extends the lifespan of compromised pipelines, enabling operators to schedule installation of a replacement pipeline at a later date, with minimum downtime.

To date, PIPEASSURE™ has been applied at PETRONAS' offshore facilities in Sarawak with satisfactory results. The development of other smart pipeline materials and repair systems are ongoing with targeted usage in PETRONAS' operations in the near future.



## Renewable Energy

In line with our commitment to operate in a sustainable manner, PETRONAS has taken steps to explore the application of solar and waste-to-energy technologies. In collaboration with Mitsubishi Corporation, we have embarked on a Solar Photovoltaic project for the installation of solar panels at various PETRONAS facilities in Malaysia.

PETRONAS has also collaborated with technology provider Waztec Pte Ltd and with solid-waste management company Alam Flora Sdn Bhd for a detailed feasibility study to design, build and operate a waste-to-energy plant which will convert organic waste to electricity. The project will move to engineering design stage, once the feasibility study has been completed.

## Project Management & Delivery

By applying the PETRONAS Project Management System (PPMS) which was established in 2009, a consistent and transparent project delivery could be achieved, resulting in a greater level of project planning and definition in line with best-in class performance for PETRONAS.

PPMS is a key enabler to attain project excellence in both upstream and downstream projects by adoption of best practices to ensure schedule effectiveness and project cost optimisation.

To ensure the successful delivery of projects, execution of category management for equipment and materials is critical to achieve cost and delivery advantages. This strategic sourcing consolidates purchases of high value

and/or high impact items and establishing alliance with suppliers and service providers. Hence, T&E undertakes engineering category management for material and equipment to achieve cost and delivery advantage for projects.

As the front-end design determines the success of delivery, T&E strengthens its capability development in Front End Engineering Design (FEED) through various initiatives which include collaboration with third party vendors and engineering contractors to acquire the relevant capabilities. Due to knowledge and technical transfer, many of our engineers have become FEED experts in various projects and have built in-house FEED capabilities.

Among the key projects are the Refinery and Petrochemical Integrated Development (RAPID), Sabah Ammonia Urea Project, PETRONAS Floating Liquefied Natural Gas (FLNG) and Sabah Oil & Gas Terminal (SOGT).



## Operational Excellence

To ensure Operational Excellence, PETRONAS in 2006 established the Group Technical Solutions (GTS) to provide technical solutions and enhance technical standards for the Group.

With GTS becoming a centre of excellence, PETRONAS has successfully deployed the right technical solutions and best-in-class technical standards for operational requirements. There has been an increase in demand for technical solutions and services provided to the PETRONAS Group of Companies by PETRONAS engineers, resulting in a chargeable manhour utilisation of 72%, which exceeded the industry level of 65%.

In attaining a competitive level of Operational Excellence, PETRONAS has developed the Integrated Plant Operations Capability System (iPOCS) which provides a comprehensive and systematic approach to drive consistent and quality improvement across the businesses. iPOCS also ensures technical governance, optimisation of operations and business processes which have increased PETRONAS' plant performance through high reliability and utilisation. A total of 13 operating units (OPUs) have been assessed since September 2009, of which seven OPUs were assessed in 2010. The assessment of the remaining six OPUs will be completed by 31 December 2011.

In the year under review, PETRONAS has intensified efforts to undertake optimisation and reliability programmes to ensure asset reliability and integrity. This includes platform optimisation programmes that are being applied at various fields in Malaysia, which has led to a significant increase in oil production and reduction in deferment values.





The PETRONAS Risk Based Inspection (PRBI), which essentially is a tool implemented within the PETRONAS Group, manages the integrity of our assets through an effective and optimised inspection programme. It was successfully deployed at several key OPU's which include the PETRONAS LNG Complex, PETRONAS Gas Berhad and PETRONAS Fertilizer (Kedah) Sdn Bhd. The commercial and industrial viability of PRBI was effectively demonstrated on the global front through its deployment at the Engen Refinery in South Africa in 2010. In addition, PRBI has been accepted by the Department of Occupational Safety and Health (DOSH) as the equipment integrity system in managing Certificate of Fitness (CoF) for DOSH's registered equipment.

The deployment of technical services solutions implemented Group-wide has resulted in value creation of about RM1 billion for the Group in the year under review through yield improvement, cost savings and opportunity loss avoidance. At the same time, less than 10% of technical services were outsourced to third party contractors in regards to technical solutions deployed Group-wide.

## Technology Commercialisation & Intellectual Property Management

The commercialisation of Technology has paved the way for PETRONAS to generate returns on investments made from our proprietary technology. PETRONAS has collected RM1.38 million in royalties from previously commercialised technologies and has also filed 12 patents in the year under review.

We have also commercialised the NE01 engine with Star Power Engine Inc for the China market. The start of production for the first engine variant is expected in March 2013.

In the year under review, four more technological breakthroughs have been endorsed for commercialisation and they are:

- Mass Transfer Technology for gas and liquid separation.
- Multi Layer Fibre Membrane for CO<sub>2</sub> removal process.
- Aqua Magnetometry Tomography Methods (MTM) for non-intrusive subsea pipeline inspection.
- SmartCen, an online real-time metering supervisory system.

## Technical Capability Building

PETRONAS continues to build a sufficient pool of technical professionals (TP), technical executives and technical trade specialists through a concerted effort for technical capability development. TPs are expected to drive superior business performance through their technical leadership and expertise.

The Accelerated Capability Development (ACD) programme introduced since 2006, has reduced the duration for technical executives to reach the desired competency level while strengthening their ability to work independently, known in the industry as time to autonomy (TTA). For the year under review, the TTA was 8.4 years compared to 9.2 years in the previous year. PETRONAS is well on the way to meeting our target of 7 years.



# Health, Safety & Environment (HSE)

## Highlights

### OSRL

#### membership

Became a Participant Member of the Oil Spill Response Limited (OSRL), a specialist that provides spill response support and services internationally, in June 2011.

### 90%

#### coverage

Health Risk Assessment (HRA) completed for Malaysia operations.

### 22.2

#### million mmBtu

Cumulative energy savings for domestic downstream operations.

## Overview

As a good corporate citizen PETRONAS is committed to responsible HSE management practices in every aspect of our operations. Cultivating a culture of HSE Excellence is central to the Company's long-term sustainability.

In the year under review PETRONAS continued to place strong emphasis on HSE in all aspects of our operations by integrating essential practices into our business activities in line with international standards and practices.

The Deepwater Horizon disaster last year is an important reminder for us to be constantly on guard in observing HSE standards and best practices. The key lessons from such incidents are systematically shared Group-wide to ensure that we understand the catastrophic impact to business as well as reputation and address key HSE concerns by taking preventive measures

at all levels of our operations. At the same time we continue to ensure that our operations are governed by HSE environmental standards that are based on industry best practices.

To safeguard our people, environment, assets and reputation, PETRONAS' HSE strategies are focused on strengthening HSE leadership, culture and mindset, and enhancing HSE risk management and HSE governance.



# Initiatives

## HSE KPIs for Senior Management

To strengthen and elevate a commitment to HSE among PETRONAS' senior management, HSE Key Performance Indicators (KPIs) have been incorporated into their scorecards. Senior management will be assessed based on the performance of their respective businesses' Fatal Accident Rate (FAR), Lost Time Injury Frequency (LTIF), major Loss of Primary Containment (LOPC) incidents and major fires. The inclusion of these KPIs will help drive improvement in the Group's safety, sustainable development and capability performance.

PETRONAS has also aggressively strengthened its HSE organisation Group-wide by employing experienced and competent HSE experts to enhance the governance of HSE compliance. This initiative, which shall be continued consistently, reflects the seriousness of the management and business in improving the Group's HSE capability and performance.

## Risk Management

HSE risk management is reinforced through the implementation of ZeTo or Zero Tolerance Rules for high-risk activities, land transport safety programme, formulation of guidelines for occupational health and measurement of product carbon footprint by inventorising greenhouse gasses throughout the lifecycle of a product.

Launched in 2010, ZeTo Rules aim to improve the safety performance of the Group by enforcing consequence management on employees and contractors who violate the rules. During the year under review there were 52 cases of ZeTo Rules violations and consequence management was carried out on the 25 staff and 27 contractors involved.

Fire risk assessments were conducted in more than 40 sites since 2006 with three assessments conducted during the year under review with the objective of identifying issues on fire prevention, detection and protection.

Another area of focus is process safety which is balanced with the need for personal safety. Process safety means making sure our facilities are well designed, safely operated and properly maintained. In this respect, three management workshops for process safety leadership were organised, one in August 2010 and two in February 2011, to reinforce understanding among senior leaders of their role in preventing major process safety incidents.

These sessions will be expanded to improve their effectiveness in inculcating process safety behaviour into the PETRONAS safety culture.

In line with our focus on managing growing health risks and to ensure a healthy workforce PETRONAS completed 90% of HRA for our domestic operating units in the year under review and we have received authority approval to conduct Chemical Health Risk Assessment using the HRA methodology. In addition, we have developed best practices in fatigue management and fitness to work as well as organised personal health management programmes to reduce lifestyle-related health problems among employees.



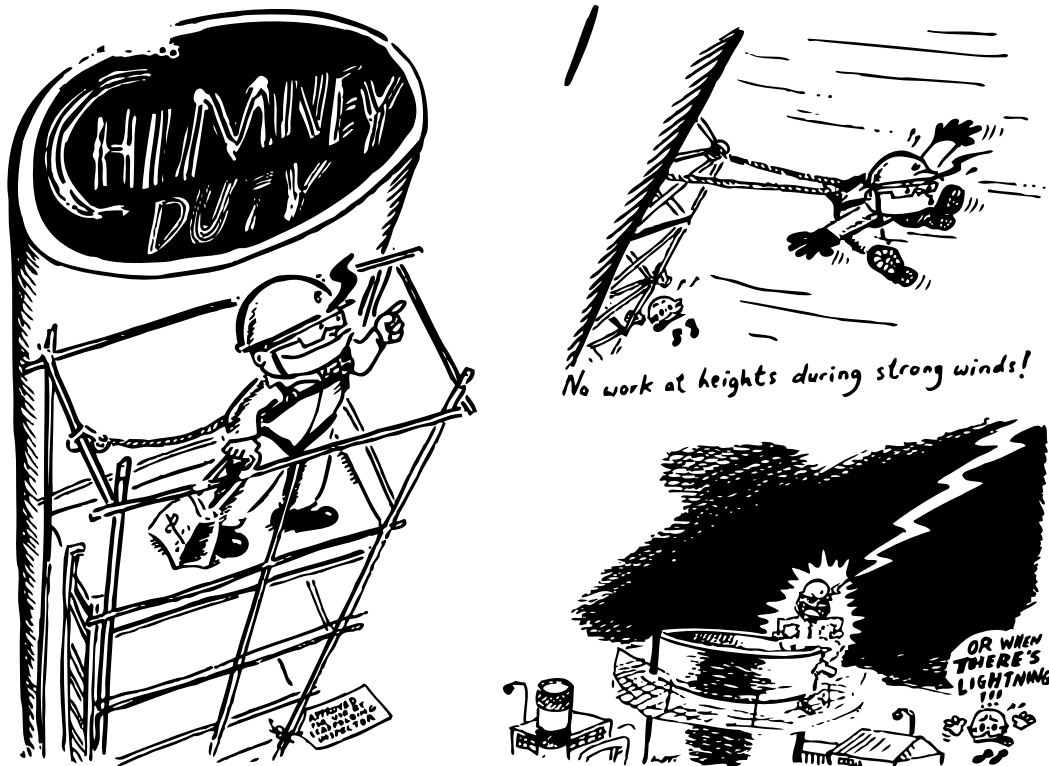
## Oil Spill Preparedness and Response

Recognising the potential catastrophic impact of major oil spills on the environment, PETRONAS embarked on a programme to reassess the effectiveness of our oil spill preparedness and response. The outcome of the assessment will also be used to establish a longer term strategy in oil spill preparedness and response. As part of ensuring effective preparedness and response, PETRONAS became a Participant Member of the OSRL in June 2011. One of the key benefits of being a Participant Member of this organisation, apart from round the clock response for all our operations globally, is access to rapid aerial dispersant spraying facilities, one of the most effective methods for combating major oil spills.

In collaboration with the International Maritime Organisation (IMO), International Petroleum Industry Environmental Conservation Association (IPIECA) and Petroleum Industry of Malaysia Mutual Aid Group (PIMMAG), PETRONAS organised a two-day workshop on Dispersant in Oil Spill Response, in February 2011. The workshop brought together oil spill response practitioners from the Malaysian government and from around the region to help enhance the industry's understanding of the dispersants to combat oil spills more effectively. PETRONAS continues to play an active role in PIMMAG which we initiated in 1993.

## Waste Minimisation Programme

The establishment of a waste minimisation programme helps PETRONAS to reduce our environmental footprint. Some of the hazardous and domestic waste minimisation initiatives include the recovery of spent catalysts by PETRONAS Penapisan (Melaka) Sdn Bhd refinery, establishment of an integrated waste management plan at the Engen Refinery in Durban, South Africa, recovery of copper slag and domestic and office waste reduction campaigns at the PETRONAS Twin Towers in Kuala Lumpur, Universiti Teknologi PETRONAS in Perak and other operating units. The Group will continue to look into other waste minimisation opportunities across our various businesses within the Group globally.



*Protect yourself against a fall  
when working at height.*

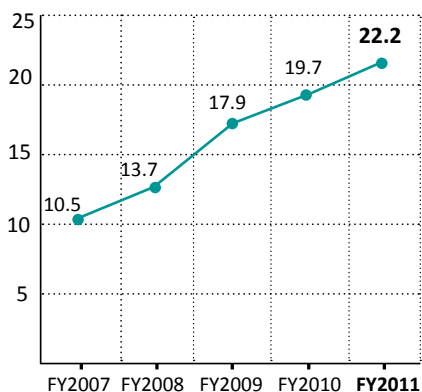
## Energy Savings

PETRONAS continued to improve the energy efficiency of our upstream and downstream operations through an Energy Loss Management (ELM) initiative. Increased energy efficiency reduces the greenhouse gas (GHG) footprint of our operations while using natural resources more prudently.

In the year under review, PETRONAS registered energy savings of 2.5 million mmBtu from its domestic downstream operations. This takes the cumulative savings to 22.2 million mmBtu as at 31 March 2011. The savings were achieved primarily through energy efficiency projects carried out at PETRONAS LNG Complex and PETRONAS Gas Berhad facilities. These projects, which include the Strategic Energy Review at PETRONAS LNG Complex, contributed to more than 60% of total downstream savings achieved. In the domestic upstream sector, energy efficiency initiatives have contributed to savings of 0.5 million mmBtu.

### Cumulative Energy Savings in Domestic Downstream Operations

In million mmBtu



## HSE Performance

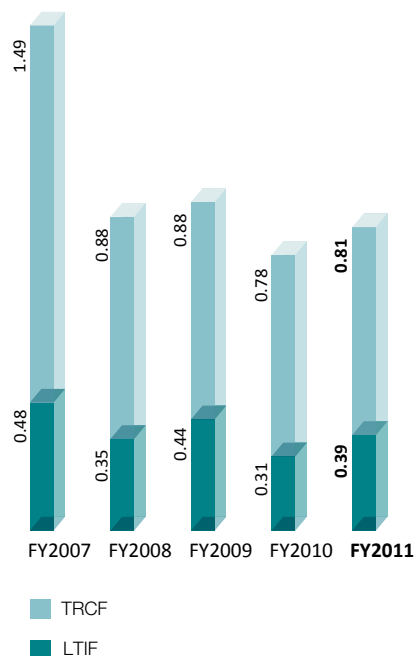
Overall, the Group recorded an improvement in our FAR to 2.58 in the year under review from 3.36 in the previous year. This was attributed to a 23% reduction in the number of fatalities despite a 1.49% increase in the total man hours recorded.

However, regrettably, seven people lost their lives in the year under review, all involving contractors working on PETRONAS projects. This was two less than in the previous year. The fatalities were due to road accidents, falling from heights at the workplace and being hit by objects.

The Group's LTIF rose to 0.39 during the financial year, from 0.31 in the previous year. A similar trend was also demonstrated by the Group's Total Reportable Case Frequency (TRCF) of 0.81 in the year under review compared to 0.78 in the previous year.

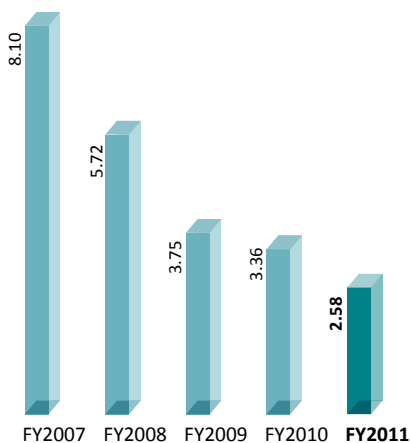
### LTIF and TRCF for the Group

No. of cases per one million man hours



### Fatal Accident Rate

Reportable Fatalities per 100 million man hours





# Awards & Recognitions

Awards and recognitions are a testimony to the Group's continuous search for excellence. We are delighted to have been bestowed with numerous awards and recognitions in the year under review by our peers, authorities and others in recognition of our accomplishments.

## Royal Society for the Prevention of Accidents (RoSPA) Occupational Health and Safety Awards 2010

Since 1956, RoSPA has organised this prestigious national award scheme to recognise excellence in work-related health and safety performance by private and public sector organisations. The scheme is based on an assessment of a broad portfolio of evidence on the level of development and performance of an entrant's occupational health and safety management system, and also takes into account the entrant's reportable accident rate and enforcement experience.

## Sector Awards

### Winner

Category - Oil & Gas

- PETRONAS Penapisan (Melaka) Sdn Bhd

### Highly Commended

Category - Transport, Storage & Distribution

- Kertih Terminals Sdn Bhd

## Achievement Awards

### Winners

#### Gold

- PETRONAS Ammonia Sdn Bhd
- Star Energy Group Limited
- Asean Bintulu Fertilizer Sdn Bhd
- Egyptian LNG

#### Silver

- PETRONAS Fertilizer (Kedah) Sdn Bhd
- Petlin (Malaysia) Sdn Bhd



## Malaysian Society for Occupational Safety and Health (MSOSH) Awards 2010

The MSOSH Award is an annual award presented to companies in Malaysia with proven outstanding Occupational Safety and Health (OSH) performance. Identified companies are subjected to stringent document and site verification audits by MSOSH Panel of Auditors in order to be considered for the award. The panel members comprise representatives from the Department of Occupational Safety and Health (DOSH), Social Security Organisation (SOCSO), National Institute for Occupational Safety and Health (NIOSH), SIRIM Berhad, QAS International and Federation of Malaysian Manufacturers (FMM).

### Winners

Category - Petroleum, Gas, Petrochemical and Allied Sectors

#### Grand

- PETRONAS Ammonia Sdn Bhd
- PETRONAS Fertilizer (Kedah) Sdn Bhd
- PETRONAS Penapisan (Melaka) Sdn Bhd
- Polypropylene Malaysia Sdn Bhd
- Asean Bintulu Fertilizer Sdn Bhd
- PETRONAS Gas Berhad, Centralised Utility Facilities Gebeng
- PETRONAS Gas Berhad, Gas Processing Plant, Complex B
- PETRONAS Gas Berhad, Technical and Facilities Development Division
- Petlin (Malaysia) Sdn Bhd

#### Gold Merit

- MTBE/Polypropylene Malaysia Sdn Bhd
- PETRONAS Carigali Sdn Bhd, Sabah Operations
- Vinyl Chloride (Malaysia) Sdn Bhd
- PETRONAS Gas Berhad, Centralised Utility Facilities Kertih
- PETRONAS Gas Berhad, Export Terminal
- PETRONAS Gas Berhad, Kertih Regional Office
- PETRONAS Gas Berhad, Transmission Operations Division, Segamat Regional Operations
- Kertih Terminals Sdn Bhd
- BP PETRONAS Acetyls Sdn Bhd

#### Gold (Class I)

- PETRONAS Carigali Sdn Bhd, Peninsular Malaysia, Onshore Gas Terminal
- PETRONAS Carigali Sdn Bhd, Peninsular Malaysia, Terengganu Crude Oil Terminal
- PETRONAS Penapisan (Terengganu) Sdn Bhd
- Aromatics Malaysia Sdn Bhd
- PETRONAS Gas Berhad, Bintulu Operations

#### Gold (Class II)

- PETRONAS Methanol (Labuan) Sdn Bhd
- MISC Integrated Logistics Sdn Bhd

## Chemical Industries Council of Malaysia (CICM) Responsible Care Awards 2009

The Chemical Industries Council of Malaysia or CICM, is the umbrella body representing the various sub-sector chemical groups ranging from oleochemicals, paints, fertilisers, petrochemicals, agriculture chemicals, industrial gases, coating resins and biodiesel sectors.

The Responsible Care Awards is organised annually to promote greater awareness of the Responsible Care Programme and its principles and to give recognition to those organisations that have made most progress in implementing the Responsible Care's Six Codes of Management Practices in Malaysia. The Codes developed are the Distribution Code, Process Safety Code, Pollution Prevention Code, Product Stewardship Code, Community Awareness and Emergency Response Code and the Employee Health and Safety Code.

### Winners

#### Category - Petrochemicals

#### Platinum

- BASF PETRONAS Chemicals Sdn Bhd

#### Gold

- MTBE/Polypropylene Malaysia Sdn Bhd
- PETRONAS Penapisan (Melaka) Sdn Bhd
- PETRONAS Penapisan (Terengganu) Sdn Bhd
- Aromatics Malaysia Sdn Bhd
- BASF PETRONAS Chemicals Sdn Bhd

#### Silver

- MTBE/Polypropylene Malaysia Sdn Bhd
- OPTIMAL Chemicals (Malaysia) Sdn Bhd
- Ethylene/Polyethylene Malaysia Sdn Bhd
- BASF PETRONAS Chemicals Sdn Bhd

#### Merit

- MTBE/Polypropylene Malaysia Sdn Bhd
- OPTIMAL Chemicals (Malaysia) Sdn Bhd
- PETRONAS Penapisan (Melaka) Sdn Bhd
- PETRONAS Penapisan (Terengganu) Sdn Bhd
- Ethylene/Polyethylene Malaysia Sdn Bhd
- Aromatics Malaysia Sdn Bhd
- Petlin (Malaysia) Sdn Bhd
- BASF PETRONAS Chemicals Sdn Bhd

## National Occupational Safety and Health Excellence Award

The National Occupational Safety and Health Excellence Award is an initiative by the National Council of Occupational Safety and Health, Ministry of Human Resources. It is intended to give credit and acknowledgement to organisations, employers and employees in various sectors in the industry that have achieved excellence in managing safety and health systems in their workplace.

### Winners

#### Category - Heavy Industry Sector (Petroleum/Gas/Chemical)

- PETRONAS Fertilizer (Kedah) Sdn Bhd

#### Category - Gas Utilities

- PETRONAS Gas Berhad, Transmission Operations Division, Kuantan Regional Operations

#### Category - Storage

- Kertih Terminals Sdn Bhd

## International Association of Oil & Gas Producers (OGP)

The International Association of Oil & Gas Producers (OGP) is a unique global forum in which members identify and share best practices to achieve improvements in every aspect of health, safety, the environment, security, social responsibility, engineering and operations.

OGP encompasses most of the world's leading publicly-traded, private and state-owned oil & gas companies, industry associations and major upstream service companies.

## Recognition

PETRONAS Carigali Sdn Bhd (PETRONAS Carigali) ranked second among the 41 Exploration and Production companies in OGP for recording Total Reportable Case Frequency (TRCF) of 0.54. The average TRCF for OGP is 1.68.

PETRONAS Carigali also achieved a Lost Time Injury Frequency of 0.23, better than OGP's average of 0.42 and ranked seventh among other players.

## 19th Annual National Irish Safety Organisation (NISO)/ Northern Ireland Safety Group (NISG) Safety Awards

This award is given to the winners of the Supreme Safety Award which have demonstrated continued commitment to health and safety.

Winners are assessed on how they have maintained and improved their HSE Performance under the following categories:-

- Health and Safety Management
- Hazard Identification and Risk Assessment
- Implementation and Operation of Health and Safety Policies and Procedures
- Emergency Preparedness and Response
- Health and Safety Communication, Consultation and Promotion
- Health and Safety Training
- Proactive Health and Safety Management
- Reactive Health and Safety Management
- Demonstration of Superior Performance in Health and Safety

## Platinum Award Winner

- PSE Kinsale Energy Limited

## Wall Street Journal Asia 200 Survey

The Asia 200 Survey, conducted by the Wall Street Journal, is the ultimate performance review of Asia's leading companies. Winners are determined by the readers of the magazine.

### **Winner**

Top Ten Companies in Malaysia

- PETRONAS Gas Berhad

## Anugerah Sumbangsih Jabatan Pelajaran Negeri Kedah

The Sumbangsih Award, which is the sole award in the Corporate Category is in recognition of the corporate sector's contribution in the field of education in Kedah.

### **Winner**

- PETRONAS Fertilizer (Kedah) Sdn Bhd

## NACRA 2010

The National Annual Corporate Report Awards (NACRA) is a collaborative effort of Bursa Malaysia Berhad, Malaysian Institute of Accountants (MIA), and the Malaysian Institute of Certified Public Accountants (MICPA). Winning the prestigious NACRA award has increasingly become a target of many organisations, which clearly demonstrates the wide recognition of NACRA as the benchmark for excellence in corporate reporting. The awards aim to promote greater corporate accountability and more effective communication by organisations through the publication of timely, informative, factual and reader-friendly annual reports.

## Industry Excellence Award

### **Winner**

Category - Industrial Product and Technology

- PETRONAS Gas Berhad

## Malaysian Business-CIMA Enterprise Governance Award

The Award confers due recognition for excellence in enterprise governance among Malaysian companies. The winners were evaluated based on business and corporate governance principles and best practices.

## Overall Merit Award

### **Winner**

Category - Best Return to Shareholders Award

- PETRONAS Gas Berhad

## The Platts Global Energy Awards 2011

The Energy Efficiency Programme of the Year category aims to recognise a long-term, systematic commitment to energy efficiency. The strongest entries here will have embraced efficiency in a way that seeks to make it work now and for the foreseeable future.

## Award of Excellence

### **Finalist**

- PETRONAS

## The Oil Council's Awards of Excellence 2010

The awards, which were held for the first time, aim to recognise the industry's best performing companies and executives in the areas of operations, corporate governance, shareholder return and track record for the year 2010.

## National Oil Company of the Year

### **Nominee**

- PETRONAS

# Corporate Social Responsibility

## Highlights

### 33%

increase in consumer participation

Percentage increase in participation in the National Consumer Campaign (3K) across Malaysia.

### 22%

improvement in UPSR exam results

Percentage increase in the number of students scoring As in their UPSR exams as a result of Program Bakti Pendidikan PETRONAS.

## Program Sentuhan Harapan PETRONAS

launched for hardcore poor families

5,000 families to receive food aid and skills training from PETRONAS.

## Imbak Canyon

Conservation Area in Sabah

Support and commitment to environmental conservation, in partnership with Yayasan Sabah.

## Community

PETRONAS supports community development programmes that provide the skills and resources to help make a positive and lasting difference to the lives and prospects of people and communities that we come in contact with, in places where we operate.

Our long-term engagement programmes, carried out in partnerships with local communities, industries, government and non-governmental organisations, are in line with our mission to ensure that the development of the earth's precious natural resources is conducted responsibly and in a manner that would bring robust and sustainable shareholder returns so

as to allow us to contribute to the well-being of peoples, communities and nations where we operate.

## Program Bakti Pendidikan PETRONAS

Introduced in 2002 in partnership with schools nationwide, this outreach programme is targeted at providing underprivileged and academically challenged children in communities where PETRONAS operates, with a strong academic foundation. In support of the Government's efforts to improve the levels of academic achievement in Science, Mathematics and the



English language among students, the focus of this programme is on these core subjects, taught through academic and non-academic activities conducted weekly by professional teachers, and once a month, by PETRONAS staff facilitators.

In the year under review, 39 schools participated in this programme. Over 1,000 academic and fun learning sessions were held in the respective schools nationwide, benefiting over 3,000 Year 4 to Year 6 pupils. This programme is made possible through the participation of over 700 PETRONAS staff facilitators. There was a 22% increase in the number of students who achieved As in their examinations compared to the previous year. Some 402 students under this programme achieved three to five As in the core subjects.



## National Consumer Campaign

In partnership with the Federation of Malaysian Consumers Association, PETRONAS sponsored the 3K Campaign in support of efforts to educate and raise consumer awareness about smart and sustainable consumerism.

In the year under review, over 200 talks and workshops were carried out reaching over 20,000 Malaysians nationwide, a 33% increase from the previous year.

## Kempen Kenali Anak Kita

In partnership with PENGASIH, a non-Governmental organisation and self-help group affiliated with the World Federation of Therapeutic Communities that addresses drug, alcohol and other substance abuse, PETRONAS launched this programme in 2009 to support the Government's effort to combat the use and abuse of illegal drugs.

While raising awareness on the dangers of substance abuse, this programme also equips parents with the knowledge to help prevent children from substance use and abuse and promote a healthy lifestyle. Over 5,000 parents attended a series of dialogue sessions, seminars and workshops conducted in 2010 on the dangers of substance abuse.

An informal survey in 2010 showed that the programme was well received by more than 86% of those who participated.



## Sahabat Pendidikan Pencegahan Dadah (PPDa) PETRONAS

While PETRONAS works closely with parents in the Program Kempen Kenali Anak Kita, the Sahabat PPDa PETRONAS is aimed at raising awareness among students and teachers about substance use and abuse. Various initiatives under this programme were organised in collaboration with Malaysia's Ministry of Education. In 2010, Sahabat PPDa PETRONAS was the Ministry's sole nationwide drug awareness and prevention programme. The programme has reached out to more than 10,000 students and teachers who are currently playing a role as drug awareness change agents in their respective schools.



## Program Sentuhan Harapan PETRONAS

Launched in 2010, this programme involves the distribution of food aid to selected hardcore poor families through PETRONAS *Mesra* stores in places where we operate. Sentuhan Harapan (A Touch of Hope) aims to enable recipient families to overcome poverty through various programmes to assist them to transform their lives socially and economically. In 2010, PETRONAS contributed RM572,460 in food aid to families in 10 states - Johor, Kedah, Kelantan, Melaka, Pahang, Perak, Sabah, Sarawak, Selangor and Terengganu.



## Sentuhan Kasih

During Hari Raya, Chinese New Year, Deepavali, Hari Gawai (Sarawak) and Tadau Ka'amatan (Sabah) festivals in the year under review, PETRONAS hosted a series of gatherings for underprivileged children from orphanages and shelter homes in and around our areas of operations, in the spirit of sharing and caring. Between 300 and 500 staff volunteers provided cash donations and engaged with more than 1,000 children who participated in the programme in 2010.

## Merdeka Award

The Merdeka Award was founded in 2007 by PETRONAS, ExxonMobil and Shell as a symbol of the oil and gas industry's contribution to Malaysia's enduring legacy, and to celebrate half-a-century of our growth and progress as an independent nation. Each year, the Merdeka Award is presented for outstanding achievements in five categories - Education and Community; Environment; Health, Science and Technology; Outstanding Scholastic Achievement; and Outstanding Contribution to the People of Malaysia. These categories represent key areas which are critical to Malaysia's continued growth and development. These categories are also development areas which are supported by the Founding Members through their various Corporate Social Responsibility initiatives in Malaysia. In 2010, four outstanding individuals received the Merdeka Award from the Patron, the Prime Minister of Malaysia.



## Imbak Canyon Conservation Area

PETRONAS, in partnership with Yayasan Sabah, has contributed substantial funds in support of the Imbak Canyon Conservation Area, a region of unexplored and pristine jungle with a potential for rich biodiversity. This is in line with our commitment to environmental conservation. Our contribution will be used to set up the Imbak Canyon Study Centre which will manage the area and conduct various activities including research, environmental education and outreach programmes. Imbak Canyon serves as a wildlife corridor linking the Danum Valley and Maliau Basin, areas which also fall under the purview of Yayasan Sabah. Imbak Canyon is expected to play a key role in future forest rehabilitation, while at the same time promote greater interest in environmental education and nature tourism for Sabah and Malaysia in general.



PETRONAS also continued to actively contribute to community projects abroad via our international operations.

## Myanmar

In Myanmar, PETRONAS continues to manage our socio-economic and humanitarian projects under the Yetagun Socio-Economic Development Programme. In 2010, PETRONAS organised computer skills and capability development training programmes for more than 3,200 students. These programmes are designed to help improve the students' chances of gaining employment.



## South Sudan

PETRONAS extended support for school refurbishment projects in Juba, South Sudan. In addition to some restoration work for selected schools, PETRONAS also supplied the schools with new tables, desks and chairs for students and teachers. To usher in the new academic year in South Sudan, PETRONAS also distributed new school bags and stationery under the Back-To-School programme. More than 1,800 students received assistance under this project.

## Sudan

In the Sudan, PETRONAS' ongoing community programmes continued to gain momentum in the year under review. The PETRONAS Mobile Library has reached 56 schools, up from 44 in the previous year and has spread the joy of reading to 57,000 students, up from 55,000 a year earlier.



# Main Events

## CORPORATE

### 1 September 2010

An agreement was signed with the Formula One Group to extend PETRONAS' title sponsorship of the Malaysian round of the FIA Formula One World Championship for another five years. The partnership will also see a change in name, which from 2011 will be known as Formula One PETRONAS Malaysia Grand Prix.

### 4 October 2010



The PETRONAS Group's first quarterly financial results was announced to the media for the first time in the Company's history in line with reporting practices by public listed companies. Net Profit after Minority Interest soared 59.7% year-on-year to RM12.3 billion. The achievement was due to enhanced operational efficiencies and cost optimisation initiatives executed by the Group despite operating in a challenging and dynamic environment.

### 9 December 2010



PETRONAS Group Corporate Affairs played host to some 20 journalists from Malaysia, Brunei, the Philippines, Indonesia, Mongolia and Uzbekistan in a tour of the PETRONAS Twin Towers, Galeri PETRONAS and Petrosains. The annual programme is designed to bring together early-career journalists from across the globe to be trained in Kuala Lumpur, fostering relationships and exchanging ideas, experience and knowledge among the participants.

### 26 January 2011



A Technology Commercialisation Agreement was signed between PETRONAS Technical Services Sdn Bhd and AMT International Inc. The signing commemorates another milestone in achievement between the two parties which further enhances the current strategic alliance in Mass Transfer Technology.

### 7 February 2011

PETRONAS debuted the new Silver Arrow Mercedes GP PETRONAS Formula One Team car in Kuala Lumpur City Centre and subsequently launched the 2011 Motorsports campaign.



### 11 February 2011

PETRONAS organised a *Majlis Ramah Mesra* to bolster ties with the Melaka State Government for future oil and gas developments. The event underscored the need for PETRONAS and the Melaka State Government to foster closer ties to drive major oil and gas projects planned under the National Key Economic Areas as well as to foster socio-economic development in the State.



## EXPLORATION & PRODUCTION

### 11 March 2011

A SmartCen™ agreement between PETRONAS Technical Services Sdn Bhd and Spirit IT BV was signed in an effort to upgrade all metering systems in both onshore and offshore operations for controlling, monitoring, diagnosing and troubleshooting matters.

### 24 March 2011

PETRONAS signed contracts for the provision of external Creative Advertising Above the Line initiatives, Below the Line initiatives and Media Specialist Services to the Group.



### 5 April 2010

PETRONAS and China National Petroleum Corporation (CNPC) signed a Memorandum of Understanding (MoU) to collaborate in the area of Enhanced Oil Recovery (EOR). This MoU will enable PETRONAS to enhance its EOR technology and capability by tapping into CNPC's expertise.

### 13 May 2010

PETRONAS, together with partners Repsol YPF, ONGC Videsh Limited, Indian Oil Corporation Limited and Oil India Limited, signed a joint venture agreement with Petroleos De Venezuela SA for the development and production of hydrocarbons from the Carabobo Project in the Orinoco Region of Venezuela. The award of the project to the joint venture company followed an extensive international selection process conducted by Venezuela's Ministry of Energy and Petroleum from late 2008 to 2009.

### 20 May 2010



PETRONAS awarded Blocks SB307 and SB308 offshore Sabah under a single Production Sharing Contract to a partnership comprising Lundin Malaysia BV, Nio Petroleum

Ltd and PETRONAS Carigali Sdn Bhd. Under the terms of the PSC, Lundin Malaysia, with a participating interest of 42.5%, will operate both Blocks. Nio Petroleum, a newcomer to the Malaysian E&P scene, will own another 42.5% interest whereas PETRONAS Carigali, the exploration and production arm of PETRONAS, will own the remaining 15%.

### 20 August 2010

PETRONAS Carigali Overseas Sdn Bhd made a commercial declaration for the Ham-Rong field discoveries to Petrovietnam and the Vietnam Host Authority.

### 13 September 2010

The signing ceremony of a Technical and Operating Services Agreement between PETRONAS Technical Services Sdn Bhd and PETRONAS Carigali Iraq Holding BV (PCIHBV) saw the ratification of a comprehensive agreement in providing the required technical and business support to PCIHBV in delivering its major tasks in Iraq in the Garraf, Halfaya, Badra and Majnoon fields.

### 8 November 2010

PETRONAS Carigali Vietnam Limited celebrated First Oil from the Topaz field which reached the Ruby II FPSO on schedule. It marked another major milestone after the successful start-up of the new Ruby II FPSO in early June 2010 and the Pearl field's First Oil in early August 2010.

**19 November 2010**



PETRONAS awarded a Production Sharing Contract (PSC) for offshore Sarawak deepwater Block SK317B to Total E&P Malaysia, a subsidiary of Total SA, and PETRONAS Carigali Sdn Bhd. Under the terms of the PSC, Total E&P Malaysia, with a participating interest of 85%, will operate the Block whereas PETRONAS Carigali Sdn Bhd will own the remaining 15% interest.

**31 January 2011**

PETRONAS awarded a Risk Service Contract (RSC) to Petrofac Energy Developments Sdn Bhd, Kencana Energy Sdn Bhd and Sapura Energy Ventures Sdn Bhd for the development and production of the Berantai field, offshore Peninsular Malaysia. The Berantai RSC is the first contract awarded by PETRONAS under this new petroleum arrangement in Malaysia. The RSC model strikes a balance in the sharing of risks with fair returns for the development and production of already discovered fields.



## GAS & POWER

**5 October 2010**

PETRONAS signed a Sales and Purchase Agreement with Industrial Gas Solution Sdn Bhd and Mox-Linde for the supply of 100,000 tonnes per annum of raw carbon dioxide for a period of 15 years beginning 1 August 2010.

**18 October 2010**

PETRONAS signed an agreement with Mitsubishi Corporation for the launch of its maiden solar project, which will test different solar technologies and provide data on their respective performances in Malaysia's climate. It also acts as a catalyst for PETRONAS to explore further opportunities in renewable energy that offers synergy with PETRONAS' existing core businesses. The installation of the solar photovoltaic system will take place at the roof top of Suria KLCC and a new PETRONAS Dagangan Berhad service station in 2011.

**9 November 2010**



PETRONAS Gas Berhad (PGB) and PFC Engineering Sdn Bhd signed an Engineering, Procurement, Construction and Commissioning Contract for the Plant Rejuvenation & Revamp 2 project. The project will look to rejuvenate and



revamp PGB facilities which have passed their 20-year life span, and is aimed for completion by 2013.

### 13 January 2011

PETRONAS, Santos, Total and Kogas have taken the final investment decision for developing the Gladstone LNG project near Gladstone in Queensland, Australia. The approval paves the way for major works for upstream field development, a pipeline and LNG plant facilities at Gladstone.

### 26 January 2011



PETRONAS announced the development of Liquefied Natural Gas Regasification Facilities by PETRONAS Gas Berhad. The project will be located in the vicinity of Sungai Udang Port, Melaka. The project is expected to be completed by July 2012.

### 28 January 2011



PETRONAS signed a Front End Engineering Design contract with MISC Berhad and a consortium of Technip France SAS, Technip Geoproduction (M) Sdn Bhd and Daewoo Shipbuilding & Marine Engineering Co Ltd, for the Floating LNG (FLNG) project. The FLNG project scope involves developing floating facilities as a strategic solution to monetise marginal and stranded gas fields.

### 30 March 2011

Kimanis Power Plant Sdn Bhd, a joint venture company between PETRONAS and Yayasan Sabah, signed an Engineering, Procurement, Construction and Commissioning contract for the power plant project in Kimanis Bay, Papar, Sabah.

## DOWNSTREAM

### 6 April 2010

PETRONAS Ammonia Sdn Bhd received the RoSPA Gold award, which is the highest award in the achievement category of RoSPA's Occupational Health and Safety Awards 2010.

### 30 July 2010

PETRONAS Penapisan (Melaka) Sdn Bhd (PPMSB) was accorded the Malaysian Society for Occupational Safety and Health, Occupational Safety and Health Grand Award Winner for 2009 under the category Petroleum, Gas, Petrochemical and Allied Sectors. This is the very first time PPMSB has clinched the Grand Award in this category after 15 years in operation.

### 22 September 2010



PETRONAS Dagangan Berhad (PDB) and Proton Edar Sdn Bhd (PESB) signed an agreement, appointing PDB as an exclusive partner and lubricant supplier for PESB. It is estimated to generate a total revenue of RM260 million for PDB's Syntium range of lubricants.

#### 2 November 2010



PETRONAS Chemicals Group Berhad launched the prospectus for its landmark Initial Public Offering on the Main Market of Bursa Malaysia. Held at the Kuala Lumpur Convention Centre, the launch was officiated by Deputy Prime Minister Tan Sri Muhyiddin Mohd Yassin, who represented Prime Minister Dato' Sri Mohd Najib Tun Haji Abdul Razak.

#### 26 November 2010

PETRONAS Chemicals Group Berhad (PCG) closed 2.1% higher on its trading debut on Bursa Malaysia. During the day, PCG was the most actively traded stock on Bursa Malaysia, with 637 million shares changing hands, reflecting investors' strong interest in the stock.



#### 6 December 2010



PETRONAS and BASF inked a Memorandum of Understanding to conduct a joint feasibility study for producing specialty chemicals in Malaysia. The development of new specialty chemicals products portfolio will be an important component of PETRONAS' long-term plan to further grow the downstream petrochemical business as part of its integrated plan to be a key player in the region as well as to spur domestic investments in the oil, gas and petrochemicals industries.

#### 22 December 2010



PETRONAS launched the 'Gas PETRONAS: Order Here' Campaign at selected PETRONAS Service Stations in the Klang Valley. The effort is in line with the Company's objective to further expand and strengthen its line of services as

the leading Liquefied Petroleum Gas or cooking gas retailer in the domestic downstream petroleum products market. With this new service, customers can now conveniently place orders for and purchase Gas PETRONAS cylinders at 50 selected PETRONAS Service Stations in the Klang Valley, and have them delivered to their homes.

#### 21 February 2011

PETRONAS Aviation Sdn Bhd successfully secured a contract for Aviation Fuel Technical Service Assistance to a new customer, Ceylon Petroleum Company Limited of Sri Lanka, for two years with an option of renewal for another year.

#### 29 March 2011



Malaysian Prime Minister Dato' Sri Mohd Najib Tun Haji Abdul Razak received a courtesy call by a delegation comprising senior executives of BASF and PETRONAS to explore avenues for boosting BASF's investment in Malaysia, among other matters.

## MARITIME & LOGISTICS

### 10 May 2010

MISC Berhad held a joint-naming ceremony of two 38,000 deadweight tonnes chemical tankers, Bunga Aster and Bunga Azalea in Korea. Bunga Aster was named by our Lady Sponsor, Datin Sharifah Salwa Syed Kamaruddin, wife of the Guest of Honour, President & CEO of PETRONAS and Chairman of MISC Dato' Shamsul Azhar Abbas. Bunga Azalea was named by Lady Sponsor Dato' Halipah Esa, a member of the MISC Board.

### 17 May 2010



MISC signed a Sales and Purchase Agreement via subsidiary MTTI Sdn Bhd (MTTI), to acquire 50% of the shares in VTTI BV (VTTI), a wholly-owned subsidiary of Vitol. VTTI owns and operates a network of petroleum products terminals with a gross combined capacity of nearly 6 million cubic metres, which is set to expand to nearly 8 million cubic metres by 2012.

### 10 August 2010

AET, a subsidiary of MISC signed a contract with Brazil state-owned oil & gas company Petrobras for the 15-year time charter of two new sophisticated Dynamic Positioning Aframax tankers for shuttle tanker operations off the coast of Brazil. This contract, scheduled to commence in spring 2012, significantly strengthens the partnership between AET and Petrobras, and, more importantly, heralds MISC's entrance into the shuttle tanker market.

### 6 October 2010



Malaysia Marine and Heavy Engineering Holdings Berhad (MHB) launched its Prospectus for its initial public offering (IPO) on the Main Market of Bursa Malaysia. The launch was officiated by PETRONAS President & CEO, Dato' Shamsul Azhar Abbas.

### 29 October 2010



Malaysia Marine and Heavy Engineering Holdings Bhd (MHB), a subsidiary of MISC debuted strongly on Bursa Malaysia marking a successful listing exercise with 1.42 billion shares changing hands on the first day of trading against Bursa Malaysia's total trading volume of 1.62 billion shares.



## CORPORATE SOCIAL RESPONSIBILITY

**22 July 2010**



PETRONAS successfully launched its community outreach initiative, Program Sentuhan Harapan, in Miri, Sarawak. The Prime Minister of Malaysia Dato' Sri Mohd Najib Tun Haji Abdul Razak, accompanied by PETRONAS President & CEO Dato' Shamsul Azhar Abbas, presented hampers comprising basic food items to the representatives of 50 deserving families.

**3 August 2010**



Two teams from PETRONAS participated in The Edge™ – Bursa Malaysia KL Rat Race® co-organised by The Edge and Bursa Malaysia. In the 4.5 km race, participants had to run through the streets of Kuala Lumpur.

**1 September 2010**

More than 200 underprivileged children from five homes and organisations in the Klang Valley enjoyed a day of fun and merriment at PETRONAS' annual Sentuhan Kasih Programme held in Kuala Lumpur.



**26 October 2010**

Four recipients were honoured at the Merdeka Award 2010 presentation ceremony to celebrate and acknowledge Malaysians and non-Malaysians who have made outstanding achievements and contributions to the nation and people.



**7 November 2010**



The Terry Fox Run - Kuala Lumpur, an annual charity event held in aid of cancer research, which was attended by staff from PETRONAS, continues to inspire Malaysians after 30 years. The run is non-competitive, as its primary objective is for participants to have fun whilst contributing meaningfully towards cancer research initiatives.

**12 November 2010**



Children from schools adopted under Program Bakti Pendidikan PETRONAS (Program Bakti) were treated to a fun-filled annual camp where students were provided motivational and fun activities for them to excel in studies as well as build self-confidence and character. Themed

"Children around the World", the camp gave the children the opportunity to 'venture' into several countries where PETRONAS is present. These include Egypt, India, Ireland, Japan, Nigeria, Russia, the Sudan and Vietnam.

#### **16 November 2010**



The F1 in Schools Technology Challenge at the PETRONAS National Finals 2010 was held with the aim of producing a new generation of skilled engineers, while bridging the technology gap between urban and rural schools. A rookie team, VelospeedF1 from Sekolah Menengah Sains Hulu Selangor took home the overall champion's trophy. The team also won four additional awards for Best Newcomer, Best Portfolio, Best Booth Display and the PETRONAS Knockout Champion award.

#### **23 November 2010**

PETRONAS continued its commitment to cancer research in Malaysia by contributing RM3 million to the Cancer Research Initiatives Foundation (CARIF) for the study, prevention, treatment and cure of the disease.

#### **20 December 2010**



More than 70 children together with staff of the Juba Orphanage in South Sudan celebrated Christmas with senior officials from PETRONAS and the Government of South Sudan.

# Glossary

Industry terms as generally understood

- **Additives**

Chemicals added in small quantities to fuel or lubricants to control engine deposits and improve lubricating performance.

- **Barrel**

A standard unit of measurement for oil production. There are 159 litres in a barrel.

- **Barrels of oil equivalent (boe)**

A unit of measure to quantify crude oil, condensates and natural gas amounts using the same basis. Natural gas volumes are converted to barrels on the basis of energy content.

- **Base oil**

An oil to which other oils or additives are added to produce a lubricant. This includes Group III base oil that has been subjected to the highest level of refining of the base oil groups, offering very high viscosity index to produce premium quality lubricants.

- **Basin**

A low-lying area beneath the Earth's surface accumulated with thick layers of sediment, often a source of valuable hydrocarbons.

- **Brent price**

The benchmark crude oil price in Europe, as traded on the International Petroleum Exchange in London. Brent crude refers to a particular grade of crude oil, which is slightly heavier than WTI crude. See WTI price.

- **CO<sub>2</sub>**

Carbon dioxide, one of the primary greenhouse gases.

- **Coal bed methane**

A form of natural gas extracted from coal beds, as opposed to more conventional natural gas occurring in reservoirs.

- **Condensates**

Liquid hydrocarbons produced with natural gas, separated by cooling and other means.

- **Deadweight tonne (dwt)**

A ship's maximum carrying capacity in tonnes of cargo, including passengers, crew, stores, ballast and fuel.

- **Deepwater**

In offshore exploration, deepwater is demarcated at water depths exceeding 200 m. Unique methods are required to produce the oil and gas from the ocean bed at such depths. See Floating Production Unit.

- **Development**

Drilling, construction and related activities following discovery that are necessary to begin production and transportation of crude oil and natural gas.

- **Downstream**

All segment of a value chain that adds value to the crude oil and natural gas produced, for example, oil refining, gas processing, gas liquefaction, petrochemical manufacturing, marketing of petroleum and petrochemical products, storage and transportation.

- **Energy Loss Management (ELM)**

An initiative to improve energy efficiency and reduce greenhouse gas (GHG) emissions.

- **Enhanced oil recovery (EOR)**

A technique to increase the amount of crude oil and natural gas that can be extracted from an oil and gas field. EOR is also referred to as improved oil recovery or tertiary recovery.

- **Exploration**

The search for crude oil and/or natural gas by utilising geologic and topographical studies, geophysical and seismic surveys, and drilling of wells.

- **Field**

A geographical area overlying a hydrocarbons reservoir.

- **Floating Liquefied Natural Gas (FLNG)**

Either a ship or barge that can sail or be towed to offshore gas fields, extract gas, freeze it to liquefied natural gas (LNG) and offload the LNG to tankers for shipping

- **Floating Production Unit (FPU)**

Floating structures of various designs used in deepwater production. These 'floaters' replace traditional offshore shallow water platforms that are able to sit on the ocean bed. See Deepwater.

- **Floating Production, Storage and Offloading (FPSO)**

A converted or custom-built ship-like structure, with modular facilities to process oil and gas and for temporary storage of the oil prior to transfer to tankers.

- **Gas Processing**

An activity to turn streams of natural gas into saleable products, in addition to treating gas deposits.

- **Gas to liquids (GTL)**

A refinery process to convert natural gas or other gaseous hydrocarbons into longer chain hydrocarbons, such as gasoline or diesel fuel. It is used predominantly in the creation of high-quality transportation fuels.

- **Greenhouse gases (GHG)**

Gases that trap heat in the Earth's atmosphere, e.g. carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

- **Heavy Oil/Bitumen**

Unlike conventional crude oil that can be pumped without being heated or diluted, heavy oil is oil that cannot be extracted in its natural state via a well and conventional production method. This definition is also applicable to bitumen.

- **High Pressure High Temperature well**

Well with a surface shut-in pressure greater than 10,000 psi and a bottomhole temperature greater than 150°C.

- **Integrated oil and gas company**

A company engaged in all aspects of the oil and gas industry - exploring for and producing crude oil and natural gas (upstream); refining, marketing and transporting crude oil, natural gas and refined products (downstream); as well as manufacturing and distributing petrochemicals.

- **Ionic liquids**

Liquids that consist entirely of positive and negatively charged ions. Ionic liquids are being explored for an array of applications, e.g. as environmentally friendly substitutes for volatile organic compounds in the oil and gas industry.



- **Joint venture**

A partnership between two or more companies to undertake a specific project and share the resulting profit and loss.

- **Liquefied natural gas (LNG)**

Natural gas that is liquefied under extremely cold temperatures of about minus 260 degrees Fahrenheit to facilitate storage or transportation in specially designed vessels.

- **Liquefied petroleum gas (LPG)**

Light gases, such as butane and propane that can be maintained as liquids while under pressure.

- **Lubricant**

A substance to reduce friction and wear among moving surfaces, resulting in improved efficiency. It contains about 90% base oil and about 10% additives.

- **mmBtu**

Million metric British thermal unit.

- **mmscfd**

Million metric standard cubic feet per day.

- **mtpa**

Million tonnes per annum.

- **Natural gas**

A clean burning, odourless, colourless, highly compressible mixture of hydrocarbons occurring naturally in gaseous form. Natural gas is made up of methane but can also include ethane, propane and butane.

- **NOPAT**

Net operating profit after tax is derived from net profit after tax excluding financing cost, share of profits of associates and jointly controlled entities and other non-operating income and expenses.

- **OEM**

Original Equipment Manufacturer. Refers to the company that acquires a product or component and reuses or incorporates it into a new product with its own brand name.

- **Olefins**

Any from a class of unsaturated open-chain hydrocarbons such as ethylene, having the

general formula  $C_nH_{2n}$ ; an alkene with only one carbon-carbon double bond.

- **Operational Performance Improvement (OPI)**

A set of tools and methodologies that emphasise on instilling operational discipline, with the aim of improving operational excellence of PETRONAS' producing assets.

- **Peninsular Gas Utilisation (PGU)**

The PGU system was developed to spearhead the use of natural gas in Malaysia. The natural gas produced from offshore Terengganu is processed in six Gas Processing Plants in Kertih and are then fed into a 2,505 km pipeline system that delivers natural gas to the power, industrial, petrochemical and other sectors throughout the Peninsular.

- **Petrochemicals**

Organic and inorganic compounds and mixtures derived from petroleum, used principally for the manufacture of chemicals, plastics and resins, synthetic fibres, detergents, adhesives and synthetic motor oils.

- **Production Sharing Contract (PSC)**

A contractual agreement between a company and a host government, whereby the company bears all exploration, development and production costs in return for an agreed-upon share of production.

- **Regasification Terminal (RGT)**

Also known as a receiving terminal, an RGT is usually a coastal plant that accepts deliveries of liquefied natural gas and processes it back into gaseous form for injection into the pipeline system.

- **Refining**

A purification process for natural resources, which include hydrocarbons, using distillation, cooling and/or compression.

- **Renewable energy**

Energy derived from natural sources that are replaceable.

- **Reserves**

Crude oil or natural gas contained in underground rock formations called reservoirs.

- **Reservoir**

A subsurface pool of hydrocarbons predominantly trapped in porous or fractured rock formations.

- **Resources**

Resources in this case refers to 2P+2C estimates.

- **Resource Replenishment Ratio**

Figures reported are calculated based on  $(\text{Difference of Resource Base of current year and previous year} + \text{Production Volume of previous year}) / (\text{Production Volume of previous year})$ .

- **Risk Service Contract (RSC)**

A contract between the host authority and contractors where the host authority is the project owner and the contractors will recover the development cost and are paid a fixed fee for services rendered, based on their performance, relevant to the development execution and subsequent production.

- **Seismic data**

Visual rendering of the sub-surface geology of an area composed by reflecting sound waves off underground strata; useful in determining the possible existence of hydrocarbons.

- **Throughput**

The amount of output that is produced by a system, e.g. a refinery, plant, or pipeline, in a given period of time.

- **Unconventional oil and gas**

Oil and gas that cannot be produced or extracted using conventional methods.

- **Upstream**

Segment of value chain pertaining to finding and producing crude oil and natural gas. These include oil and gas exploration, development and production operations; also known as Exploration & Production (E&P).

- **WTI price**

Stands for West Texas Intermediate, the benchmark crude oil price in the US measured in USD per barrel, which refers to a type of high quality, light in gravity crude oil.

This page has been intentionally left blank.

**Petroleum Nasional Berhad** (Company No. 20076-K)

Registered Office: Tower 1, PETRONAS Twin Towers,  
Kuala Lumpur City Centre, 50088 Kuala Lumpur Malaysia

Telephone : +603 2051 5000

Fax : +603 2026 5050

[www.petronas.com](http://www.petronas.com)

