
Scope For Improvement: Malaysia's Oil And Gas Sector

The low levels of transparency and accountability prevalent in the industry are being fed by extremely low awareness of the oil & gas (O&G) sector and its governance in Malaysia. Revenue transparency, accountability, and good governance are basic expectations that Malaysians should have of their government and the corporations in the O&G sector. REFSA's goal is to convince Malaysia to join the Extractive Industries Transparency Initiative (EITI) which would commit the O&G industry and the government to considerably higher standards of transparency and accountability than currently exist.

Author: Eugene Thean Hock Lee

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EXECUTIVE SUMMARY

The oil and gas (O&G) industry in Malaysia contributes about 40% of the nation's total revenues and has been identified as a key sector to fuel national growth under Malaysia's Economic Transformation Programme. It is also a major contributor to various subsidy programmes. The national oil company, PETRONAS, is owned by the Malaysian government and reports directly to the Prime Minister, bypassing parliament. Rights to oil are centralised under the federal government in the form of PETRONAS, which has exclusive ownership and control over the country's petroleum resources, including exploration and production, and negotiating with oil companies wishing to operate in Malaysia. However, information on this economically important sector is scant. Very little information on contracts, agreements, revenue redistribution and usage, and negotiated terms for exploration and production is in the public domain because there is no active legislation to compel such disclosures in the O&G sector.

The low levels of transparency and accountability prevalent in the industry are being fed by extremely low awareness of the O&G sector and its governance in Malaysia. Revenue transparency, accountability, and good governance are basic expectations that Malaysians should have of their government and the corporations in the O&G sector. REFSA's goal is to convince Malaysia to join the Extractive Industries Transparency Initiative (EITI) which would commit the O&G industry and the government to considerably higher standards of transparency and accountability than currently exist. Towards this goal, REFSA has taken the first step by producing this report which has the dual purpose of establishing a baseline of knowledge on the O&G industry in Malaysia and highlighting the issues pertaining to transparency and accountability in the sector.

Malaysia ranks 29th globally in terms of quantity of crude oil produced (2011 estimates) and 14th in terms of natural gas produced (2010 estimates). Based on O&G production quantities in 2012, the three largest oil companies in Malaysia are PETRONAS Carigali, Shell, and ExxonMobil. However, total O&G production in Malaysia has been declining due to natural depletion at maturing fields and is compounded by reservoir issues at both deepwater and shallow water fields. As domestic oil supplies shrink, PETRONAS has been expanding abroad and now has a presence on six continents and more than 60 countries. Based on 2010 worldwide oil equivalent reserves, PETRONAS is ranked 28th in the world in total O&G reserves.

Oil exploration and production were under the jurisdiction of the 13 individual states until the Petroleum Development Act 1974 (PDA) came into force. The PDA transferred the ownership of oil rights "whether lying onshore or offshore of Malaysia" from the states to the federal government in the shape of PETRONAS in return for cash payments or annual royalties

equivalent to 5% of the value of petroleum produced. This centralisation of power and rights over petroleum resources has had important repercussions on the development of the oil industry and federal-state relations, and has triggered conflicts between the states and the federal government over oil revenues.

Sabah, Sarawak, and Terengganu currently receive 5% annual royalty payments for their respective oil resources but have been demanding a higher percentage. Oil royalty payments to Terengganu were actually halted from 2000-2004 when the state was under the PAS-led government, on the orders of then Prime Minister, Mahathir Mohammad, on the grounds that the PAS-led government was incapable of managing the annual funds amounting to over half a billion ringgit. During that time, the state only received gratuity payments or “wang ehsan” at a fraction of the customary oil royalties due it, through government agencies. Kelantan, also under a PAS-led government, has been embroiled in a fractious legal dispute with the federal authorities over non-payment of its oil royalties – claimed by the state to be worth RM12 billion – because the federal government insists the oil is drilled outside the state’s boundaries.

Malaysia switched to production sharing contracts (PSCs) from the concession system in the mid-1970s. In Apr 2012, there were 83 PSCs in operation in Malaysia. To arrest declining production levels, three key strategies are being employed: 1) Rejuvenation of existing fields through Enhanced Oil Recovery (EOR), 2) development of marginal fields through innovative solutions, and 3) intensification of exploration activities. EOR employs external energy to increase production rates and improve recovery factors at mature oil fields which can consequently increase the amount of oil recovered from industry norms of 20-35% to 30-50%. In Nov 2011, Malaysia embarked on the world’s biggest offshore EOR project with the signing of a US\$12 billion Heads of Agreement for two 30-year PSCs using EOR technologies in two oil fields offshore East Malaysia. Taking advantage of new tax incentives, PETRONAS also launched risk service contracts (RSCs) in early-2011 to stimulate the development of marginal O&G fields and increase the recovery of hydrocarbon resources through innovative solutions. To date, three RSCs have been signed.

Since its incorporation in 1974 until the end of 2011, PETRONAS had contributed RM653 billion to the federal and various state governments. It paid almost half of that over the last five years alone, with about 45% of that being dividend payments. In 2010, the dividend paid to the government was almost three-quarters of PETRONAS’ net profit of RM40.3 billion. This was clearly unsustainable for PETRONAS’ investment and reinvestment needs and the corporation has proposed capping its dividend payout at a fixed 30% of net profit instead, which is more in line with the practices of other national oil companies.

In the 2013 Resource Governance Index, Malaysia placed 34th out of 58 countries with a “weak” score of 46 (out of 100) for the quality of its governance in the O&G industry, while in the 2010 Revenue Watch Index, Malaysia was placed in the “Partial Revenue Transparency” category, amassing an inferior score of 48.4 (out of 100) versus the average score of 50.1 for the Asia Pacific region. In both the 2010 and 2012 Open Budget Surveys by the International Budget Partnership, Malaysia obtained identical scores of 39 (out of 100) to earn a place in the “minimal” category along with other countries that provide the public with minimal budget transparency. In the publication *Promoting revenue transparency: 2011 report on oil and gas companies* by Transparency International and The Revenue Watch Institute, PETRONAS scored below the average in the three main categories examined. Elsewhere, a 2011 World Bank working paper on governance and performance of national oil companies ranked PETRONAS slightly above the global average.

PETRONAS has instituted some positive changes in the way it operates in terms of transparency, governance, and accountability. In addition to establishing its Corporate Governance & International Compliance unit in 2011 and launching a Code of Conduct and Business Ethics (CoBE) in 2012, it also established a new senior position of Chief Integrity Officer (CIO) within the corporation in Jun 2012. The CIO is responsible for implementing systems to promote good governance and detect corruption risks. PETRONAS also implemented a no-gifts policy for its staff effective 2012.

In interviews conducted by REFSA with industry professionals and civil society organisations, the general consensus was that there was likely little to no leakage in what O&G companies in Malaysia pay to the federal government and what the federal government receives from O&G companies. But what happens to those revenues once they are in the government’s coffers and how they are utilised is less clear, and leakages are more likely to be in the form of favouring particular parties in procurement processes, leading to uncompetitive practices. There were references to a general lack of transparency in the competitive bidding process in the domestic O&G industry and there were concerns regarding PETRONAS’ ventures into non-core sectors such as healthcare, Formula One (F1), property investments, and facility management services, as these are potential additional avenues for leakages.

The fact that PETRONAS reports directly to the Prime Minister and parliament has absolutely no oversight of PETRONAS, not even to review its operations and financial accounts, was identified by several as a critical weakness in the system that is a huge challenge to transparency and accountability in the Malaysian O&G industry. PETRONAS should report to parliament and be independent of the Prime Minister as this would provide an effective check on executive powers over PETRONAS that are virtually unrestricted under the current arrangement. This is critical given the enormous contributions to national revenue from PETRONAS and the potential for abuse or misuse of these funds.

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1. INTRODUCTION

Malaysia is blessed with abundant natural resources. At various times in the past, national development had depended largely on natural resources such as tin, rubber, and palm oil. However, this had diminished gradually with the diversification of Malaysia's economy and an increased emphasis on manufacturing and services. Oil became an important resource in the mid-1970s and has become increasingly important to the nation's economy since the late-1980s, and has been helping to finance the government's five-year development plans and industrial programmes¹.

Today, PETRONAS is Malaysia's largest single taxpayer and biggest source of revenue. Oil and gas (O&G) contributes about 40% of Malaysia's total revenues currently, making this sector the golden goose of the economy and key to national development. Since 1974, PETRONAS has contributed RM¹653 billion to the federal and various state governments².

1.1 Why this study?

O&G revenues are critical to fund our extensive subsidy programmes and national development and must be responsibly managed. As O&G is a national resource that effectively belongs to the citizens, the industry should be run transparently and its derived revenues allocated for the purpose of enhancing the well-being of the country and its people. As information on this economically important sector is limited, this scoping study aims to present a current snapshot of the O&G sector in Malaysia and serve as a baseline to push for more responsible resource stewardship and greater transparency and accountability in the industry. The long-term goal is for Malaysia to become an EITI-compliant country under the Extractive Industries Transparency Initiative (EITI). The EITI is an international initiative among governments, companies, and civil society organisations (CSOs) to enhance transparency and accountability in the extractive industries through the dual and reciprocal actions of governments releasing information on revenues received from extractive companies and extractive companies publishing information on payments made to governments. More information on the EITI can be found at <http://eiti.org>.

¹ RM = Ringgit Malaysia, the official currency of Malaysia. On 5 Jun 2013, US\$1=RM3.08, according to Oanda's Currency Converter (www.oanda.com)

Implementing the EITI could bring potentially lucrative benefits to Malaysia, including:

- **Greater investment:** The EITI can help reduce political and social risks to O&G investors and companies concerned about governance and political stability, thus encouraging foreign investment
- **Collaboration and accountability:** The EITI is a solid platform for stakeholders (governments, O&G companies, and CSOs) to interact and communicate to mutually address any pressing issues. This fosters a collaborative spirit, reduces the likelihood of conflict between stakeholders, and engenders accountability
- **An improved image:** Implementing the EITI would demonstrate a national commitment to greater transparency, which would enhance Malaysia's image in the eyes of the world and add to the set of allegedly positive reforms overseen by Prime Minister Najib Razak during his tenure
- **Reduced corruption:** Malaysians have become increasingly intolerant of corruption. An effective EITI programme will make it more difficult for corruption to occur in the extractive industries and build citizens' trust in the government's efforts to stamp out corruption

Malaysia is endowed with more than 30 mineral types, but the mining industry is sluggish due to a lack of exploration, mine development, and capacity expansion. It is essentially overshadowed by the O&G sector, which is now a major contributor to the country's revenues and has long since unseated tin as Malaysia's primary mineral resource, especially after the tin market crashed in the 1980s. As a result, this study will focus on O&G.

2. MALAYSIA'S OIL AND GAS RESOURCES: AN OVERVIEW

Quick facts³

- O&G contributes RM111 billion (16.6%) to Malaysia's GDP (Gross Domestic Product). Of this, RM87 billion is from upstream O&G production, while downstream activities, including refining, contribute RM24 billion
- Malaysia has the 27th largest crude oil reserves in the world. At the end of 2010, Malaysia had 5.8 billion barrels of proven oil reserves (0.4% of global reserves)
- In 2010, Malaysia produced an average of 664,800 barrels of crude oil per day and exported 234,000 barrels per day (bpd), about 35% of its crude oil production
- Malaysia held 2.35 trillion m³ of proven natural gas reserves as of Jan 2011, the fourth largest natural gas reserves in the Asia-Pacific region behind Australia, China, and Indonesia
- Natural gas resources are distributed almost equally between Peninsular Malaysia in the west and Sabah and Sarawak in the east
- Gas production totalled 76.45 billion m³ in 2010
- PETRONAS' LNG Complex in Bintulu, Sarawak, is the world's largest production facility of liquefied natural gas (LNG) at a single location, with a production capacity of 24.2 million metric tonnes per year
- In 2010, Malaysia exported almost 30 billion m³ of gas (making it the world's 9th largest gas exporter) and over 28 billion m³ of LNG (10% of global LNG exports, making it the third largest exporter of LNG in the world behind Qatar and Indonesia)

2.1 Geography: Where are Malaysia's hydrocarbon resources?

Malaysia has approximately 615,100 km² of acreage available for O&G exploration, an area that is almost the size of Myanmar. Of this, 218,678 km² (36%) is currently covered by production sharing contracts (PSCs). Exploration drilling in Malaysia by the production sharing

contractors has led to the discovery of 163 oil fields and 216 gas fields. There were significant discoveries in shelfal shallow waters as well as in deepwaterⁱⁱ environments⁴.

O&G resources are concentrated in Sabah and Sarawak in East Malaysia, and Terengganu and Kelantan on Peninsular Malaysia's east coast. Oil reserves were also discovered in late-2012 at Block PM307 of the Bertam oil field, some 160 km off the coast of Pahang⁵. Block PM307 is 6,126 km² in area⁶ and is expected to produce between 17,500 and 20,000 bpd⁷.

The lion's share of Malaysia's oil comes from offshore fields. Malaysia has three producing sedimentary hydrocarbon basins: 1) The Malay basin (shallow-mid-water) off the eastern coast of Peninsular Malaysia, 2) the Sarawak basin (shallow-deepwater), and 3) the Sabah basin (deepwater) (see Figure 1).

Figure 1: Location of Malaysia's offshore basins - the thicker the sediment, the greater the likelihood of finding oil and a larger reserve

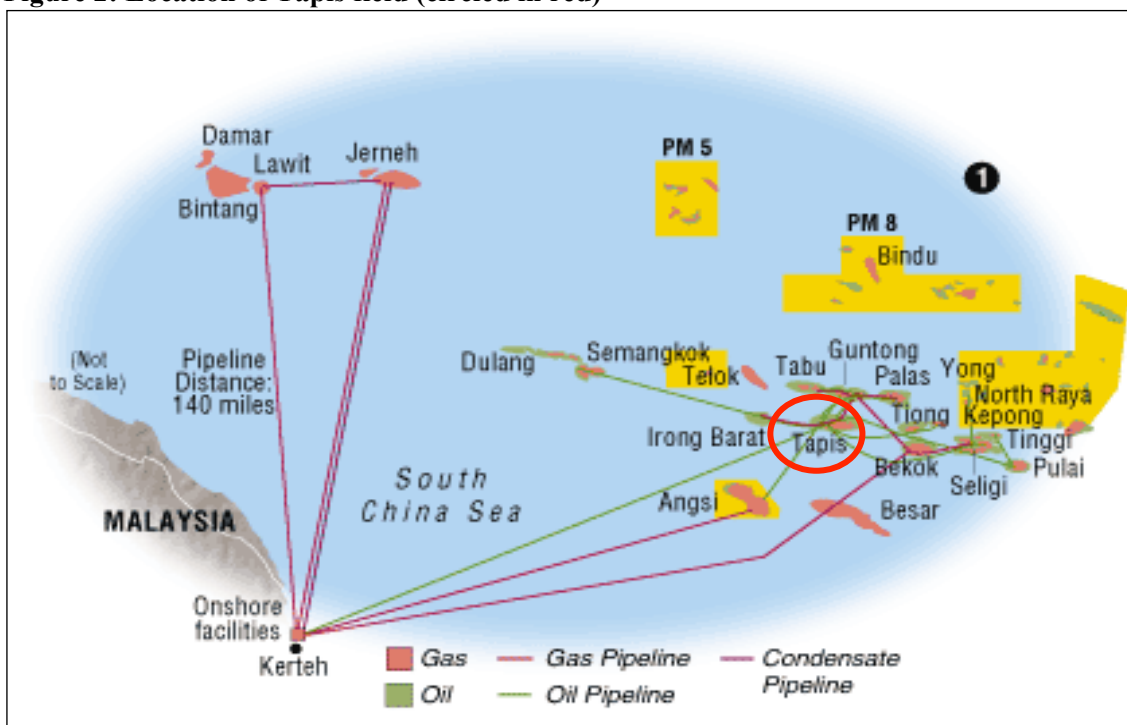


Source: PETRONAS, as cited in DnB NOR's Sector report on offshore supply by Lunder & Lim, 26 May 2010

Most of Malaysia's oil reserves are found in the Malay basin – one of the most prolific hydrocarbon-producing basins in Malaysia, covering over 75,000 km² (slightly larger than the Republic of Ireland) – and are low-sulphur, high quality crude. This includes the country's benchmark crude oil, Tapis Blend, a light and sweet variety with an API gravity of 44° and sulphur content of 0.08% by weight. In fact, over half of Malaysia's oil production comes from the Tapis field (see Figure 2) which lies approximately 200 km off the Terengganu coastline and within the Malay basin⁸.

ⁱⁱ Defined as being in water depths of more than 200m

Figure 2: Location of Tapis field (circled in red)



Source: <http://www.matthieuthery.com/energy/fossil-energy/crude-oil/crude-oil-geography/asia/?lang=en>

Oil & Gas 101 (courtesy of *Oil Contracts - How to read and understand them* by OpenOil – <http://openoil.net>):

API gravity is a measurement denoting how “light” or “heavy” a grade of crude oil is. The higher the API gravity, the lighter the crude oil is. “Light” crudes are 35° and above; “heavy” grades are below 30°

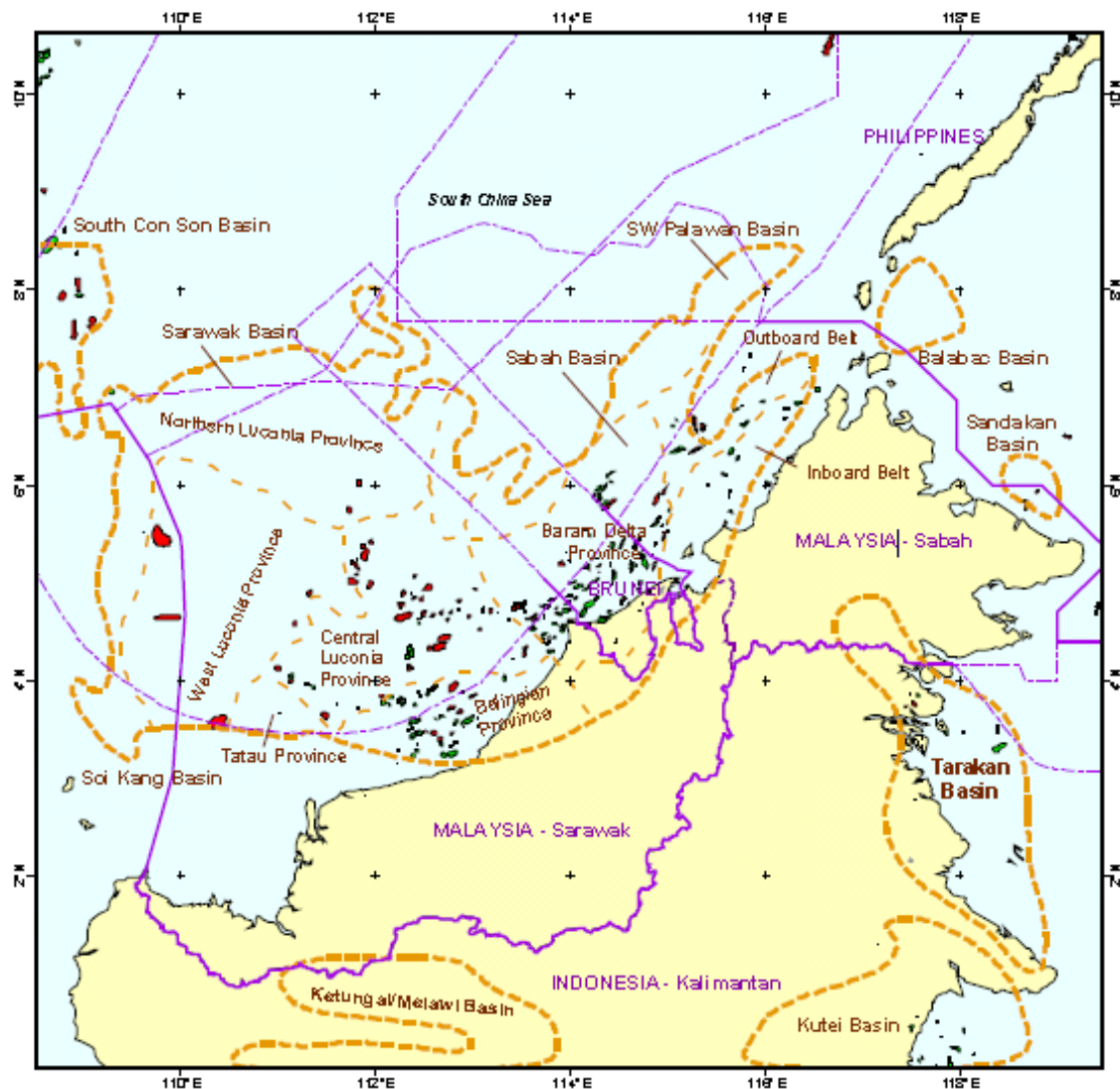
Light crude oil consists of smaller molecules than heavy crude oil, thus producing a higher percentage of commercially valuable products (e.g., gasoline and diesel) when refined, therefore fetching a higher price

Sweet crude oil has low sulphur content, increasing its market value, in contrast to sour oil. Crude oil with less than 0.42% sulphur is classified as sweet by The New York Mercantile Exchange

The Sarawak basin consists of eight key provinces, of which four – Baram Delta, Balingian, Central Luconia, and Southwest Luconia (Figure 3) – currently produce commercial quantities of hydrocarbons. Most of Malaysia’s natural gas reserves lie offshore Sarawak and Sabah. Wood Mackenzie estimates 46% of the country’s remaining commercial gas reserves lie offshore Sarawak, in both shallow and deepwater areas⁹.

The Malaysia-Thailand Joint Development Area (MTJDA), located in the lower part of the Gulf of Thailand, is another active area for natural gas exploration and production. It is reported to possess 9.5 Tcf (trillion cubic feet) of proven plus probable natural gas reserves¹⁰. This is equivalent to what the United States of America used in a little more than four-and-a-half months in 2011¹¹. As a comparison, total global proven natural gas reserves were 7,361 Tcf at the end of 2011, which at current rates of production, would be exhausted in 64 years¹². In another comparison, 1 Tcf of gas could power the average family car around the earth (a distance of 40,000 km) more than 10 million times¹³.

Figure 3: East Malaysia basins



Source: Wood Mackenzie's South East Asia Upstream Service: Malaysia Country Overview, Jul 2012

2.2 Production numbers

According to 2011 estimates, Malaysia ranks 29th globally in terms of quantity of crude oil produced (603,400 bbl/day)¹⁴ and 14th globally as a natural gas producer (66.5 billion m³)¹⁵ according to 2010 estimates.

However, total O&G production in Malaysia has been on the decline due to natural field depletion at maturing fields, compounded by reservoir issues at both deepwater and shallow water fields (see Table 1 and Figure 4).

Table 1: Declining oil and gas production in Malaysia

Year ending 31 Mar (except where stated otherwise)							
Resource (kboe per day)	2008	2009	2010	2011	9M (Apr-Dec 2010)	PE2011 (Apr-Dec 2011)	2012 (Annualised figures for comparison purposes) ⁱⁱⁱ
Crude oil	563	554	535	512	518	451	446
Condensates	128	125	122	115	112	106	109
Natural gas	982	980	974	987	972	971	986
Total	1,673	1,659	1,631	1,614	1,602	1,528	1,541

Source: Original numbers from PETRONAS' PE2011 Annual Report except 2012 figures which were derived from applying ratios between 9M and 2011 numbers to the PE2011 numbers

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Barrel of oil equivalent (boe) refers to the amount of energy that is equivalent to that found in a barrel of crude oil. 1,000 boe = 1 kboe

(Crude) oil barrel is equivalent to 42 US gallons/159 litres/35 imperial gallons and would fill 3.5 petrol tanks in a typical sedan car

O&G production dropped a total of 7.9% between 2008 and 2012. The biggest annual drop of 4.6% was seen in the latest figures released by PETRONAS for the 9-month period from 1 Apr 2011-31 Dec 2011^{iv} (hereinafter referred to as “PE2011” (Period Ending 2011) and represented

in the bar chart as “PE2011”). During this period, total O&G production in Malaysia fell to 1,528 kboe per day from 1,602 kboe per day in the previous corresponding period (represented in the bar chart as “9M”^v). Comparing full years, the largest annual drop in O&G production was from 2011 to 2012 (where production dropped by 4.5%).

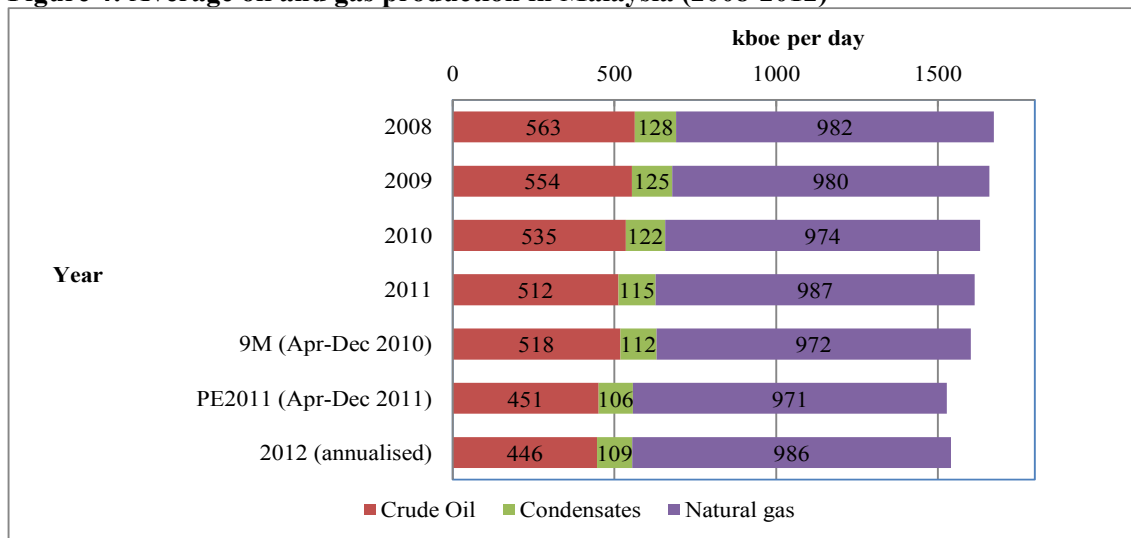
It is noteworthy that the decline in total O&G production during the 2008-2012 period can be attributed mainly to a decrease in the production of crude oil and condensates. During this period, natural gas production largely remained constant while the output of crude oil and condensates declined 20.8% and 14.8%, respectively. Of particular note is the sizeable 11.6% reduction in the production averages of crude oil and condensates between 9M (630 kboe per day) and PE2011 (557 kboe per day).

ⁱⁱⁱ Figures were annualised by taking the ratio of the figures from 9M (Apr-Dec 2010) and 2011 and dividing the numbers from PE2011 with those ratios to extrapolate the values of PE2011 into a 12-month period, i.e., 2012. This is to facilitate comparisons between periods of similar lengths, i.e., 12 months. E.g., for crude oil, the ratio of 9M:2011 is 518:512 = 1.01171875. Dividing the figure for crude oil in PE2011 with this ratio (451/1.01171875) gives a result of 445.78 which was rounded up to 446. The same operation was repeated for the condensates and natural gas figures

^{iv} PETRONAS changed its financial year end from 31 Mar to 31 Dec at the end of the financial year that ended on 31 Mar 2011

^v 9M – Unaudited nine-month period from 1 Apr 2010-31 Dec 2010, used for comparisons with audited PE2011 results

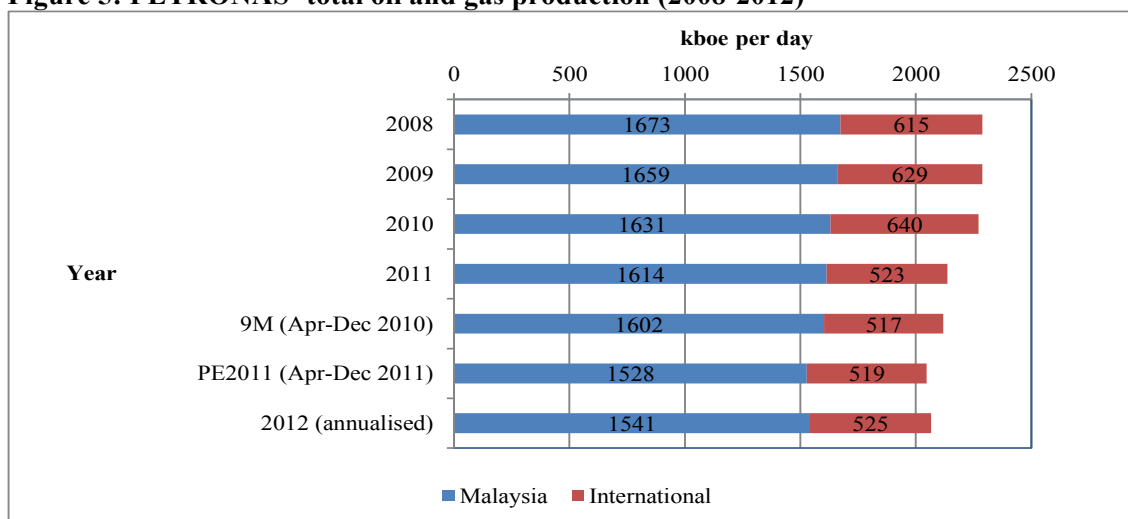
Figure 4: Average oil and gas production in Malaysia (2008-2012)



Source: Numbers from PETRONAS' PE2011 Annual Report except 2012 figures which were derived from applying ratios between 9M and 2011 numbers to the PE2011 numbers

Overall production was sustained by the addition of three new gas fields and three new oil fields that came onstream during PE2011, increasing the total number of producing fields in Malaysia to 76 oil fields and 48 gas fields¹⁶. Total average production from PETRONAS' international operations for PE2011 was 519 kboe per day, consisting of 249 kboe per day of crude oil and condensates and 270 kboe per day of gas¹⁷. Combining domestic and international O&G production, total production for PETRONAS amounted to 2,047 kboe per day with 25% (519 kboe per day) coming from its international operations (Figure 5). International production consistently contributed between 24-28% of PETRONAS' total O&G production over the 2008-2012 period, with 27-28% from 2008-2010 and 24.5-25.5% from 2011-2012.

Figure 5: PETRONAS' total oil and gas production (2008-2012)



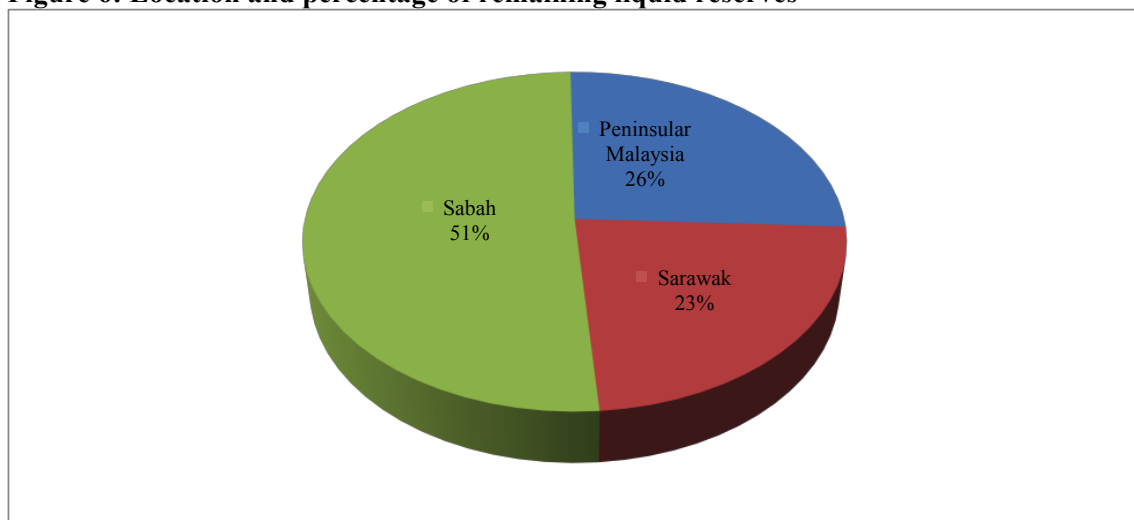
Source: Numbers from PETRONAS' PE2011 Annual Report except 2012 figures which were derived from applying ratios between 9M and 2011 numbers to the PE2011 numbers

2.3 PETRONAS' oil and gas resources

As at 1 Jan 2012, Malaysia's total discovered petroleum resources increased by over 2% to 21.3 billion boe from 20.9 billion boe in 2011. The oRRR (Overall Resource Replenishment Ratio, aka Reserve Replacement Ratio)^{vi} for the year was 1.6x for total O&G in Malaysia. Exploration discoveries contributed to over 60% of the new resources added in Malaysia, while the rest were from efforts in IOR (Improved Oil Recovery) and EOR (Enhanced Oil Recovery)¹⁸. Malaysia's total discovered petroleum resources from 2008-2012 showed a consistent trend, increasing by an average of 1.44% each year (Table 2).

According to Wood Mackenzie, about 78% of Malaysia's initial 2P^{vii} commercial liquid (oil and condensates) reserves had been extracted and the bulk of the remaining liquids is contained in fields of under 100 million barrels field size with around 20% of liquid reserves estimated to be in the form of condensates. Excluding deepwater areas, the country's mature status in exploration terms means that major oil reserve additions are rather unlikely¹⁹. Sabah has approximately half of the liquid reserves in the country (Figure 6).

Figure 6: Location and percentage of remaining liquid reserves



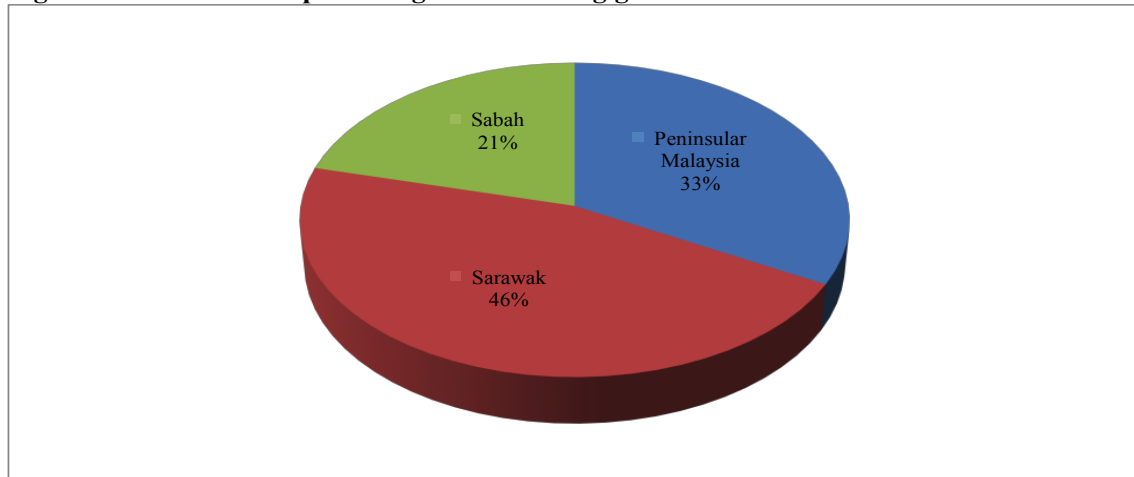
Source: Wood Mackenzie's South East Asia Upstream Service: Malaysia Country Overview, Jul 2012

^{vi} The oRRR is the ratio of the amount of oil added to a company's proven reserves to the amount extracted, an indication of a company's track record in maintaining a stable reserve of O&G. A ratio of 1 means current production is sustainable, a ratio exceeding 1 means it can grow, and anything below 1 means a company is tapping into its reserves and will eventually run dry

^{vii} 2P combines probable and proven reserves of oil and is a way to assess the amount of oil a field is likely to produce. Probable reserves have a 50% certainty of being produced under current market conditions while proven reserves are classified as having a 90% certainty of being produced at current prices, with current commercial terms and government consent

About two-thirds of Malaysia's remaining commercial hydrocarbon reserves base consists of gas, with an estimated total remaining reserve of 31 Tcf. Of this, about 46% lies offshore Sarawak in both shallow and deepwater areas²⁰ (Figure 7).

Figure 7: Location and percentage of remaining gas reserves



Source: Wood Mackenzie's South East Asia Upstream Service: Malaysia Country Overview, Jul 2012

As Malaysian hydrocarbon basins mature, PETRONAS has intensified exploration activities domestically to sustain production and augment its resource base. In PE2011, 14 of 22 exploration wells drilled showed positive results. PETRONAS also awarded two new exploration PSCs and finalised eight others by the end of 2011²¹. New technologies are also contributing significantly to exploration successes, particularly in deepwater areas²².

On 1 Jan 2012, PETRONAS' total discovered international petroleum resources were 7 billion boe (Table 2), a drop of 5% compared with the previous year. The decrease reflects the effect of de-booking resources for relinquished assets in 2010 and 2011 in Ethiopia, Pakistan, and Sudan^{viii}.

In total, at the beginning of 2012, PETRONAS possessed an overall petroleum resource base of almost 28.4 billion boe (Malaysia 21.3 billion boe, international 7.0 billion boe), while maintaining a three-year rolling average oRRR of 1.7x with domestic oRRR at 1.6x and international at 1.97x (Table 2). New resource additions of 1.2 billion boe were contributed by exploration discoveries, accounting for 70%, with the remainder resulting from EOR, IOR, and IGR (Improved Gas Recovery) efforts in both Malaysian and international operations²³.

^{viii} We are cognisant of the fact that assets relinquished in 2010 should not be in the comparative base year, but are quoting directly from PETRONAS' PE2011 Annual Report

Table 2: PETRONAS' total discovered petroleum resources (Malaysia + international) as at 1 Jan of each year (2008-2012)

Bboe (billion barrels of oil equivalent)

	1 Jan 2012			1 Jan 2011			1 Jan 2010			1 Jan 2009 [#]			1 Jan 2008 [#]		
	M'sia	Int'l	Total	M'sia	Int'l	Total	M'sia	Int'l	Total	M'sia	Int'l	Total	M'sia	Int'l	Total
Crude oil & Condensates															
Reserves (2P)	3.739	1.114	4.853	3.572	1.117	4.689	3.634	1.046	4.680	5.520	2.200	7.720	5.460	2.420	7.880
Contingent Resources (2C)	2.215	1.663	3.878	2.286	1.593	3.879	2.165	1.032	3.197						
Natural Gas															
Reserves (2P)	6.815	1.581	8.396	6.660	1.848	8.508	6.989	2.007	8.996	14.660	4.280	18.940	14.670	3.820	18.490
Contingent Resources (2C)	8.539	2.305	10.844	8.337	2.452	10.789	7.776	2.076	9.852						
Unconventional															
Reserves (2P)		0.239	0.239		0.233	0.233		0.213	0.213		0.360	0.360			
Contingent Resources (2C)		0.145	0.145		0.188	0.188		0.184	0.184						
Total Discovered Resources	21.308	7.047	28.355	20.855	7.431	28.286	20.564	6.558	27.122	20.180	6.840	27.020	20.130	6.240	26.370
oRRR (3 yr ave)	1.6x	1.97x	1.7x	1.5x	5.6x	2.5x	1.6x	(0.4x)	1.1x	1.1x	4.1x	1.8x	0.9x	0.6x	0.9x

[#] - Petroleum resources not broken down into Reserves (2P) and Contingent Resources (2C) in PETRONAS' annual report for this year
Source: PETRONAS Annual Reports (various years)

As domestic oil supplies shrink due to maturing fields, PETRONAS has been expanding abroad, investing in Sudanese oil, South African petrol stations, and European liquefied natural gas²⁴. More than 80% of its international O&G resources are located in the Middle East and Asia, Africa, and South East Asia²⁵. Its corporate operations map shows a presence on six continents and in more than 60 countries (Figures 8 and 9). At this juncture, information on the relative importance of the countries in terms of hydrocarbon production or resources is unavailable. PETRONAS does not disclose country-by-country data in its annual reports.

Figure 8: The bulk of PETRONAS' hydrocarbon resources are in the developing world



Source: PETRONAS' PE2011 Annual Report

Figure 9: PETRONAS' global operations

Exploration & Production (E&P)	
Africa	- Algeria – Development - Cameroon – Exploration & Development - Chad – Development & Production - Egypt – Exploration, Development & Production - Mauritania – Exploration & Production - Mozambique – Exploration - Republic of South Sudan – Exploration, Development & Production - Republic of Sudan – Exploration, Development & Production
Asia Pacific	- Australia – Exploration, Development & Production - 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
Central Asia	- Turkmenistan – Exploration, Development & Production - Uzbekistan – Exploration, Development & Production
Latin America	- Cuba – Exploration - Venezuela – Development
Middle East	- Iraq – Exploration, Development & Production - Oman – Exploration & Development
North America	Canada – Development & Production
Gas & Power	
Africa	Egypt – LNG
Asia Pacific	- Australia – LNG & Infrastructure - Indonesia – Infrastructure - Malaysia – LNG, Infrastructure, Utilities & Power, Trading - Singapore – Power - Thailand – Infrastructure
Central Asia	Uzbekistan – Gas-to-Liquid
Europe	- Ireland – Infrastructure - United Kingdom – Infrastructure, Utilities & Trading
North America	Canada – LNG
Downstream*	
Africa	- Botswana – Oil Business - Burundi – Oil Business - Democratic Republic of the Congo – Oil Business - Gabon – Oil Business - Ghana – Oil Business - Guinea Bissau – Oil Business - Kenya – Oil Business - Lesotho – Oil Business - Malawi – Oil Business - Mauritius – Oil Business - Mozambique – Oil Business - Namibia – Oil Business - Nigeria – Oil Business - Réunion – Oil Business - Rwanda – Oil Business - Swaziland – Oil Business - South Africa – Oil Business - Republic of South 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 - 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	- Argentina – Oil Business - Brazil – Oil Business
North America	United States of America – Oil Business
*Includes Engen subsidiaries and marketing and trading offices.	
©2012 PETROLIAM NASIONAL BERHAD (PETRONAS)	

Source: PETRONAS' PE2011 Annual Report

In order of 2010 worldwide oil equivalent reserves, PETRONAS is ranked 28th in the world in total O&G reserves (Table 3), according to data from PetroStrategies in Plano, Texas, ahead of some better-known players such as Norway's Statoil and CNOOC (China National Offshore Oil Corporation)²⁶.

Malaysia's reserves of crude oil and condensates are estimated to last 29 years at current production levels while its natural gas reserves will be exhausted in 37 years at current rates of production²⁷.

Table 3: PETRONAS' global standing in terms of total oil and gas reserves

Rank by 2010 oil equivalent reserves	Company	Worldwide liquids reserves, million barrels	Worldwide natural gas reserves, billion cubic feet	Total reserves in oil equivalent barrels, million barrels
1	National Iranian Oil Company (Iran)	137,010	1,045,670	315,757
2	Saudi Arabian Oil Company (Saudi Arabia)	260,100	275,200	307,143
3	Petroleos de Venezuela S.A. (Venezuela)	211,170	178,860	241,744
4	Qatar General Petroleum Corporation (Qatar)	25,380	895,800	178,508
.				
28	PETRONAS (Malaysia)	2,080	22,848	5,986
29	Statoil (Norway)	2,124	17,965	5,195
.				
32^	Pertamina (Indonesia)	903	20,538	4,414
.				
35	China National Offshore Oil Corp. (China)	1,915	6,458	3,019
.				
45	Myanma Oil & Gas Enterprise (Myanmar)	50	10,000	1,759

Source: PetroStrategies, Inc. at [www.petrostrategies.org/Links/worlds largest oil and gas companies.htm](http://www.petrostrategies.org/Links/worlds_largest_oil_and_gas_companies.htm)

^ - Prior year reserve figures used because data was unavailable

3. THE LEGAL BACKDROP

3.1 The Petroleum Development Act 1974 and the birth of PETRONAS

The petroleum industry in Malaysia really began stirring in the 1970s. Pre-1974, Esso was the largest concessionaire in Peninsular Malaysia, while Shell dominated in East Malaysia. World crude oil prices tripled in response to the world oil crisis in 1973 when Arab members of the Organization of the Petroleum Exporting Countries (OPEC) embargoed oil supplies for six months. This incident led to a rethinking of the control and ownership of oil resources in Malaysia. In mid-1974, Malaysia introduced the Petroleum Development Act (PDA) which triggered significant changes in the domestic oil industry and in the nature of the relationships with oil companies operating in-country²⁸.

Following the enactment of the PDA, the National Oil Corporation, better known as PETRONAS (which is a contraction of “Petroleum Nasional Berhad”, its name in the Malaysian language), was established in Aug 1974 as a state-owned enterprise incorporated under the Companies Act 1965. Under section 2(1) of the PDA, PETRONAS was granted exclusive ownership and control of the country’s petroleum resources, including exploration and production. Rights to oil became centralised and the oil-producing states in the country ceded their oil rights and powers to the federal government in the form of PETRONAS. PETRONAS is responsible for negotiations with oil companies wishing to operate in Malaysia, and as of Apr 2012, had 83 production sharing contracts (PSCs) with international petroleum companies involved in exploration, development, and production of O&G in the country²⁹.

PETRONAS, incorporated as a private company, is wholly-owned by the Malaysian government and has political support at the highest level as it is accountable and responsible to the Prime Minister who has ultimate control and direction of it. Section 3(2) of the Act states that “The Corporation shall be subject to the control and direction of the Prime Minister who may from time to time issue such direction as he may deem fit”, while Section 5 establishes that the National Petroleum Advisory Council and all its members, including from the states, are appointed by the Prime Minister. The Council advises the Prime Minister on national policy and matters pertaining to petroleum industries, energy sources, and their utilisation. Other provisions of the Act outline the powers of the Prime Minister who is able to delegate powers “to any person”, whilst other provisions require his explicit approval. As an off-budget agency, PETRONAS’ accounts are not required to be disclosed to parliament. In 1985, the PDA was amended by the Petroleum Development (Amendment) Act, retroactive to Oct 1974, allowing PETRONAS to enter into any commercial activity or undertaking.

3.2 PETRONAS' disclosures

PETRONAS publishes annual reports which incorporate its financial statements. These reports – currently going back to 2008 – can be downloaded from its website at www.petronas.com.my (under the “Investor Relations” link). The annual reports offer a fairly detailed look at PETRONAS’ operations, activities, and financial accounts, and are a commendable effort at disclosure and transparency, considering it is not required to release an annual report as it is not a public-listed company.

PETRONAS files audited annual financial statements with the Companies Commission of Malaysia (CCM). Copies of these are available to the public at RM1/page plus a charge of RM10 for the issuance of a temporary account to search the CCM database. The same financial statements are also available in PETRONAS’ annual reports. PETRONAS’ financial statements are audited by Messrs KPMG Desa Megat & Co in accordance with Financial Reporting Standards and the Companies Act 1965 in Malaysia.

3.3 Oil-producing states and oil royalty

Oil exploration and production were under the jurisdiction of the 13 individual states until the PDA came into force and transferred the ownership of oil rights from the states to the federal government in the shape of PETRONAS under 13 identical Assignment Deeds and Vesting Grants signed between each of the states and PETRONAS between 1975 and 1976. These vested rights to “petroleum whether lying onshore or offshore of Malaysia” to PETRONAS, in return for cash payments in the form of a yearly sum equivalent to 5% of the value of petroleum produced³⁰. Clearly, it was not the intention of any of the states to give up for free their ownership rights to petroleum³¹. The federal government also signed an Assignment Deed and Vesting Grant.

PETRONAS effectively became a monopoly which then entered into negotiations with the oil companies operating in the country. Initial negotiations took about two years to conclude, in Nov 1976³². The centralisation of power and rights over petroleum resources had important repercussions on the development of the oil industry and federal-state relations, and ultimately led to conflicts over oil revenues between the states and the federal government. Section 4 of the PDA (reproduced verbatim below) mentions the sharing of oil revenues but does not dictate a specific quantitative amount or percentage, leaving the actual payment amounts to be determined by “the parties concerned”.

Petroleum Development Act 1974: Section 4. Cash payment by the Corporation.

In return for the ownership and the rights, powers, liberties and privileges vested in it by virtue of this Act, the Corporation shall make to the Government of the Federation and the Government of any relevant State such cash payment as may be agreed between the parties concerned.

The payments from PETRONAS to the federal and state governments as referred to in Section 4 of the PDA in return for ownership rights to the oil resources are in the form of royalties. This is contained in the PSCs and royalties amounting to 10% of gross revenue are subtracted (before any other considerations such as allowances for cost oil, for example) upon commercial production and divided equally between the federal and state governments (each receiving 5% royalty).

Sabah, Sarawak, and Terengganu currently receive a 5% annual royalty for their respective oil resources but have demanded a higher percentage. Meanwhile, Kelantan (incidentally governed by an opposition party at federal level) has been embroiled in a fractious dispute (and has filed a lawsuit against PETRONAS seeking redress) with the federal authorities over non-payment of its oil royalties since 2005 – estimated by the state at US\$261.4 million/year^{ix} – because the federal government insists the oil is drilled outside the state’s boundaries.

It is ironic that the four states that possess oil reserves are also among the states with the highest poverty rates in the country. In 2009, Sabah had the highest incidence of poverty in the country at 19.7%, the only state with a double digit percentage and more than five-fold the national average of 3.8%, while Kelantan’s mean monthly gross household income was the lowest in the country at just RM2,536 versus the national average of RM4,025³³. This issue of oil royalties to the states became highly politicised prior to Malaysia’s last two general elections in 2008 and 2013. In fact, the federal opposition coalition, Pakatan Rakyat, has even called for a review and subsequent increase in the oil royalties to up to 15-20%. PETRONAS, then Minister of Finance II Ahmad Husni Mohamad Hanadzlah, and Prime Minister Najib Razak, have claimed that the increased oil royalties would harm PETRONAS’ economic viability and curtail its ability to invest and reinvest, as well as adversely impact the nation’s development and economy.

^{ix} On 5 Jun 2013, US\$1=RM3.08, according to Oanda’s Currency Converter (www.oanda.com)

3.4 Conflicts over oil royalty

Of the four current oil-producing states, Sabah and Sarawak have been receiving their 5% share of oil royalties without any problems although both have stated their wishes for a higher payment³⁴. When the PDA came into force in 1974, Sabah and Sarawak were the only petroleum-producing states and thus became the first states to receive 5% cash payments for petroleum produced hundreds of miles offshore³⁵. Until 2010, Sabah had received a total of RM7.2 billion in oil royalties while Sarawak receives approximately RM600 million per year currently³⁶. In addition to royalties, both Sabah and Sarawak (but not Kelantan or Terengganu) are constitutionally entitled to export duties on “mineral oils”, which petroleum qualifies for. Both royalty and duties total 10%³⁷. However, in the states of Terengganu and Kelantan, the issue of oil royalties has not been short of controversy.

3.4.1 Terengganu

Petroleum was first discovered hundreds of miles offshore Terengganu in 1973 and the state began receiving the associated cash payments provided for under the PDA in 1978 with the initiation of petroleum production. From then to 2000, Terengganu received RM7.13 billion in oil royalties³⁸. Benefits from the discovery of oil in the state went beyond cash payments in the form of royalties. Terengganu also benefited economically from the formation of petroleum townships such as Rantau PETRONAS in Kerteh.

The system hummed along smoothly until the political status quo in the state was upset when the opposition Pan-Islamic Malaysian Party, better known as PAS, swept into power during the general elections in Nov 1999, taking over the state government from the Barisan Nasional (BN) coalition that has been in power at the federal level since Malaysia’s independence in 1957. Oil royalty payments to the state were subsequently halted in Sep 2000 during the PAS government’s tenure at the helm of the state, on the orders of then Prime Minister, Mahathir Mohammad, on the grounds that the PAS-led government was incapable of managing the funds of over half a billion ringgit annually³⁹. For the remainder of PAS’ term as the Terengganu state government until 2004, the state received only gratuity payments or “wang ehsan” at a fraction of the oil royalties due. These were paid through government agencies and not PETRONAS⁴⁰. Wang ehsan payments are left to the discretion of the federal government without any time frame or set percentages. PAS claims to have received only RM432 million in wang ehsan during its tenure as the state government from 1999 to 2004⁴¹.

The PAS-led government of Terengganu sued PETRONAS and the federal government in Mar 2001 over the loss of its oil royalties, insisting the federal government's orders were illegal as the state's agreement was exclusively with PETRONAS⁴². It was at this time that the federal government and PETRONAS made their stand for the first time that cash payments were not due to Terengganu for oil produced outside its territorial waters, i.e., outside the three nautical mile limit⁴³. Royalty payments resumed in 2009 when the state had already returned to BN rule, even though production was from areas located beyond three nautical miles from the state shoreline. This complicated the issue of whether or not Terengganu should receive royalties, considering royalty payments were stopped when it had a different ruling state government but resumed once BN was back in power in the state, seemingly dismissing altogether the question of distance offshore of Terengganu where O&G was being produced.

Terengganu's civil suit, originally filed by the PAS government, was eventually withdrawn by the BN-led state government in Mar 2012, but details of the out-of-court settlement between the federal government, the state government, and PETRONAS, have yet to be revealed despite public outcry⁴⁴. Husam Musa, a PAS Vice-President and Kelantan state assemblyman, believes that the decision to stop oil royalty payments to Terengganu during PAS' rule from 1999-2004 was illegal, politically motivated, and designed to punish the state for electing PAS into government⁴⁵.

3.4.2 Kelantan

Petroleum was first discovered off the shores of Kelantan in the 1990s, approximately 81 nautical miles from Kota Bahru or within the free economic zones shared with Thailand and Vietnam. During this time, the state was under PAS rule and the PDA, Vesting Grant, and Assignment Deed had stood unquestioned until then⁴⁶. While the federal government received its share of the royalty payments for production offshore Kelantan, the state itself got nothing. To rub salt into the wound, Kelantan does not even benefit from spillover economic developments such as a supply base, processing, or transportation activities. On the contrary, gas from the MTJDA offshore Kelantan bypasses Kelantan and is directly funnelled to Thailand even though it is less economical to do so⁴⁷.

When the PAS-led state government sought payment from PETRONAS for petroleum produced "offshore" Kelantan, it was roundly rejected. The federal government argued on the basis of the Federal Constitution: Kelantan could not claim royalties for rights over areas it did not own in the first place since the O&G offshore Kelantan was being produced well **beyond three nautical miles** from the state's shores, the limit specified in the Federal Constitution to which a state's territorial waters would extend. Thus, the federal government's stand hinged on one specific argument – jurisdiction over all areas beyond three nautical miles of state shores is handed over to the federal government.

Section 4 of the Emergency Ordinance 1969 also defines territorial waters as three nautical miles, subject to some exceptions, including the newer states of Sabah and Sarawak⁴⁸ and the federal government has hitherto relied on the Emergency Ordinance to back its decision to deny Kelantan any oil royalties as the petroleum resources lie beyond three nautical miles from its shores⁴⁹. Conversely, Kelantan's claim for oil royalties centred on the sanctity of the PDA, the Assignment Deed, and the Vesting Grant, as well as the fact that in these documents, the generic term "onshore or offshore of Malaysia" was used in the case of petroleum with no specific distance from state shores explicitly identified and no territorial provisions nor references to the Federal Constitution's "three nautical miles" component mentioned⁵⁰. Currently, Sabah, Sarawak, and Terengganu receive oil royalties despite the fact that their hydrocarbon resources lie beyond three nautical miles of their respective shorelines.

In Aug 2010, the PAS government of Kelantan filed a lawsuit against PETRONAS for violating the PDA, the Vesting Grant, and the Assignment Deed for failing to pay the state royalties. The state pleaded "unfair discrimination" as Sabah, Sarawak, and Terengganu continued to enjoy oil royalty payments⁵¹. The federal government successfully applied to intervene, even though Kelantan had no claim (monetary or otherwise) against it, and set up a special study panel in response. The panel has yet to reach a conclusion and the lawsuit is still making its way through the courts.

In Nov 2009, Prime Minister Najib Razak announced that the federal government would pay wang ehsan to Kelantan instead of oil royalties despite objections from the state regarding the opacity of this practice as wang ehsan is paid at the discretion of the federal government, does not require approval from the Kelantan state assembly, is not recorded in the state's consolidated funds, and is simply not what was agreed⁵². The federal government channels the wang ehsan to the Federal Development Department of Kelantan to fund various development and infrastructure projects in the state, taking the decision-making out of the state's hands and denying it oil royalties. This, argues the state government, violates the PDA which clearly states that oil royalties in the form of cash payments would be paid by PETRONAS directly to the state governments. According to a statement from the Prime Minister's Office aired on the local TV3 nightly news bulletin at 8 p.m. on 2 Apr 2013, a total of RM142.6 million had been paid to Kelantan in the form of wang ehsan up to Feb 2013.

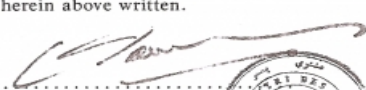
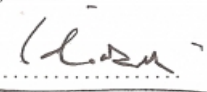
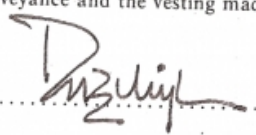
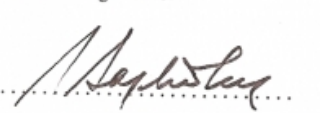
In Nov 2012, PETRONAS president and CEO, Shamsul Azhar Abbas, said that the corporation did not owe Kelantan any oil royalties and that the federal government was in charge of distributing the same. This led the Kelantan state government to file an application at the Kuala Lumpur High Court two months later for an injunction to stop PETRONAS from paying the state's portion of oil royalties to the federal government⁵³. The state at that point in time also considered filing a winding-up petition against PETRONAS by invoking Section 218(1)(e) of the Companies Act 1965, which provides for a company that is unable to pay its debts to be wound up by the court, although it acknowledged that that was unlikely to happen. The Kelantan government was also planning to appeal to the Federal Court judgements by

subordinate courts denying the state access to documents from PETRONAS and ordering the matter to be heard on points of law instead of going for full trial⁵⁴. Kelantan claims that it is owed RM12 billion in unpaid oil royalties⁵⁵.

Kelantan's demands are based on the PDA and a signed agreement dated 9 May 1975, between the state government and PETRONAS (Figure 10). The agreement set the terms for Kelantan vesting its ownership, rights, powers, liberties, and privileges to PETRONAS for the purpose of obtaining petroleum in the state and allegedly stipulated that PETRONAS shall pay the Kelantan government 5% of the value of petroleum produced in the state. However, this was not found in the copy of the agreement reproduced below. PETRONAS signed a similar agreement with the federal government on 26 Mar 1975, committing it to pay the federal government a 5% royalty for oil produced in Malaysia⁵⁶.

The dispute essentially boils down to opposing interpretations of the Constitution versus the PDA, Vesting Grant, and Assignment Deed.

Figure 10: Agreement between the Kelantan state government and PETRONAS, transferring the state's ownership and rights to petroleum resources to the latter

PETROLEUM DEVELOPMENT ACT, 1974 SCHEDULE (Section 2 (2)) GRANT OF RIGHTS, POWERS, LIBERTIES AND PRIVILEGES IN RESPECT OF PETROLEUM I, DATO' HAJI MOHAMED BIN NASIR, Menteri Besar of Kelantan, on behalf of the Government of Kelantan on this 9th day of May, 1975 hereby grant in perpetuity and convey to and vest in PETRONAS the ownership in and the exclusive rights, powers, liberties and privileges of exploring, exploiting, winning and obtaining petroleum whether lying onshore or offshore of Malaysia. The grant, conveyance and vesting made hereunder shall be irrevocable and shall endure for the benefit of PETRONAS and its successor. IN WITNESS whereof I on behalf of the Government of Kelantan hereunto set my hand the day and year first herein above written.   on behalf of the Government of Kelantan Witness's signature: 	I, TENGKU RAZALEIGH BIN TENGKU MOHD. HAMZAH, Chairman and Chief Executive of PETRONAS, on behalf of PETRONAS hereby accept the grant, conveyance and the vesting made above.  Witness's signature:  Done at Kota Bahru this 9th day of May, 1975.
---	--

Source: Royalti, aka "R" – an NGO demanding that PETRONAS and the federal government pay outstanding oil royalties to the Kelantan state government (<http://royaltikelantan.com/archive/2011/11/dokumen-asal-akta-kemajuan-petroleum-1974/>)

4. RESOURCE EXTRACTION RIGHTS

With the enactment of the PDA, the governance of petroleum resources reached a turning point when relevant provisions in the Constitution were amended. This led to changes in the distribution of power and rights over resources and the power to enter into contracts, resulting in greater centralisation of those rights to the federal government at the expense of state governments. The PDA established PETRONAS as the national oil company with exclusive rights of ownership, exploration, and production of Malaysia's petroleum resources.

4.1 The concession system

Before the creation of the PDA in 1974, the preferred approach in the sale of resource extraction rights was through concessions, and the mining enactments of the individual states governed oil exploration and production⁵⁷. A concession is similar to a lease agreement which gives an oil company the exclusive right to mine oil in a given area – ownership of the oil is ceded by the state or landowner to the lease-holder at the wellhead. Concessions were common in the early days of the oil industry but have since been mostly replaced by production sharing contracts (PSCs)⁵⁸.

PETRONAS had assessed the experiences of other countries in designing oil contracts around the time it commenced negotiations with oil companies in Malaysia in the mid-1970s. The PSC model – first developed in Indonesia in the early 1960s – was derived from the share-cropping model where agricultural leases were traditionally based on a straightforward production sharing between the landowner and tenant. It was viewed as an alternative to the long-term oil concession and determines the rights and responsibilities of the parties by regulating the relationship between the resource owner (e.g., PETRONAS) and an investor (contractor) by defining the conditions governing the exploration, development, and production of petroleum⁵⁹.

4.2 The production sharing contract

Oil & Gas 103:

Cost oil is the cost of compensating permitted expenditures incurred by an operator in exploring, developing, and producing oil. It is deducted from the oil produced before any profit-sharing occurs. It is commonly capped at a certain percentage of the value of production in any given year

Profit oil is the revenue remaining from the oil produced after the operator has recouped its investment by deducting cost oil. Profit oil is divided between participating parties and the host government according to the proportions agreed to in the PSC

Malaysia switched over to the PSC model from the concession system in the mid-1970s. The ideal PSC provides incentives for foreign oil companies to continue to produce oil and invest in exploration while simultaneously preventing a high level of rent capture by the foreign oil companies⁶⁰.

At the time, Malaysian PSCs were widely considered to be more stringent than those in Indonesia and the Philippines, largely due to the 20% ceiling for cost oil and relatively high profit capture by the federal government which was estimated annually at being “more than two-thirds” of profit oil. Consequently, Continental Oil and Aquitane Petroleum pulled out of Malaysia. However, Sabah Shell, Sarawak Shell, and Esso signed PSCs by 1976⁶¹.

PETRONAS’ PSCs today require contractors to provide all financing and insulate PETRONAS from risks, except for PETRONAS Carigali Sdn. Bhd. (PCSB), its wholly-owned exploration and production subsidiary. PCSB was established in May 1978 and has the right to a negotiable carried interest (usually between 15-25%) in any exploration block. Once a commercial discovery is made, PCSB becomes a working partner in any development⁶². The contractor bears all upfront expenses and risks of exploration, development, and production, and is only compensated upon successful production of petroleum with a share of output called the “Contractor’s Entitlement”, to which it has the right of ownership.

This Entitlement consists of:

- 1) Cost oil/gas; and
- 2) Profit oil/gas (divided between the contractor, state and federal governments, and PETRONAS according to the percentages contained in the PSC)

There are two types of profit-sharing and cost recovery models for PSCs⁶³:

- 1) Based on production rate/volume (i.e., 1976, 1985, and Deepwater PSCs) where the resource owner's take increases along with production rate/volume; and
- 2) Profitability-based (i.e., R/C PSC (Revenue over Cost PSC)) where the resource owner's take increases as the economic health of the project improves (indicated by a R/C index)

4.2.1 A typical PSC

According to various sources⁶⁴, PETRONAS PSCs would typically stipulate, among other things:

- The contract duration in years, broken down into exploration, development, and production periods
- Commencement of production
- State participation
- Management of operations
- Cost recovery (cost oil) and cost recovery ceiling
- Division of profits (profit oil)
- Financial obligations such as royalties (10%: 5% to the state government and 5% to the federal government), taxes, and export duties (10%)
- Excess proceeds
- Research cess (0.5%)
- Abandonment cess
- Participation of PCSB
- Obligations of parties
- Liability
- Possibility of extension for recovery beyond the production period
- Oil sale rights
- Supplementary payments by ratio

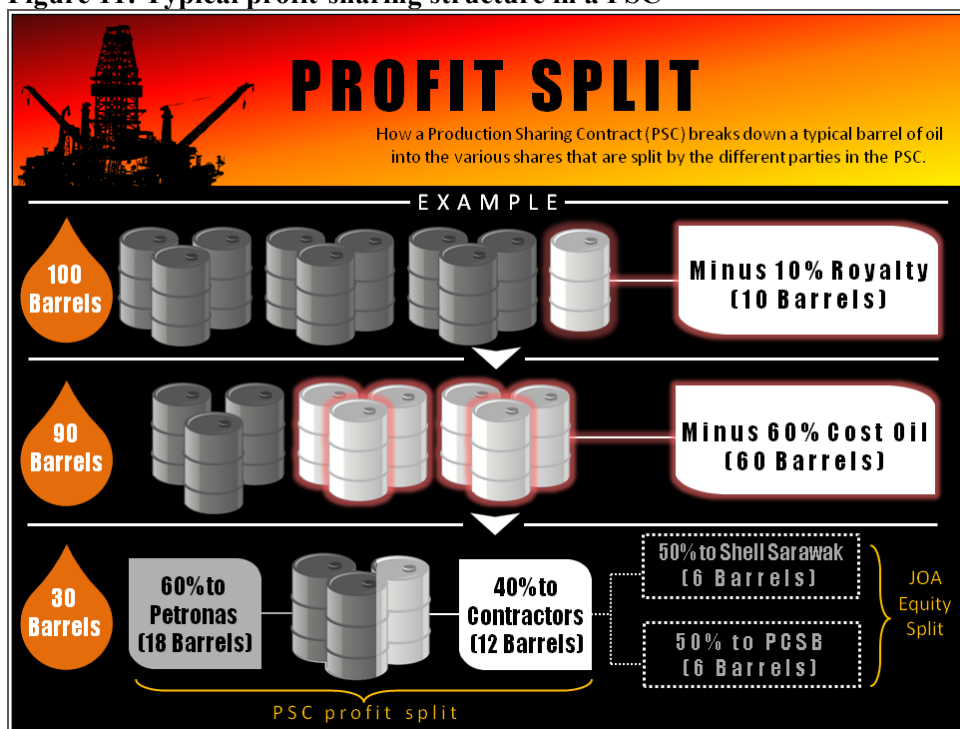
It would typically be organised under various Articles, the more prominent of which include:

- Article 1 – non-cost-recoverable items
- Article 2 – contract area, contract duration, and relinquishment of areas
- Article 3 – minimum work and financial commitments and work programme & budget
- Article 4 – management of operations
- Article 5 – profit split detailing the profit-sharing breakdown
- Article 8 – sales of natural gas and duration and relinquishment of gas fields
- Article 12 – procurement (of equipment, goods, materials, supplies, and services)
- Article 13 – dispute resolution
- Article 16 – assignment of contractor’s rights
- Article 17 – unitisation
- Article 21 – force majeure
- Article 22 – indemnity
- Article 24 – governing law (Malaysian law)
- Article 26 – employment and training requirements
- Article 28 – joint operating agreement
- Article 29 – abandonment/decommissioning

4.2.1.1 Profit-sharing

The profit-sharing breakdown can best be described by Figure 11:

Figure 11: Typical profit-sharing structure in a PSC



Source: REFSA's industry sources. Graphic courtesy of Foong Li Mei, REFSA

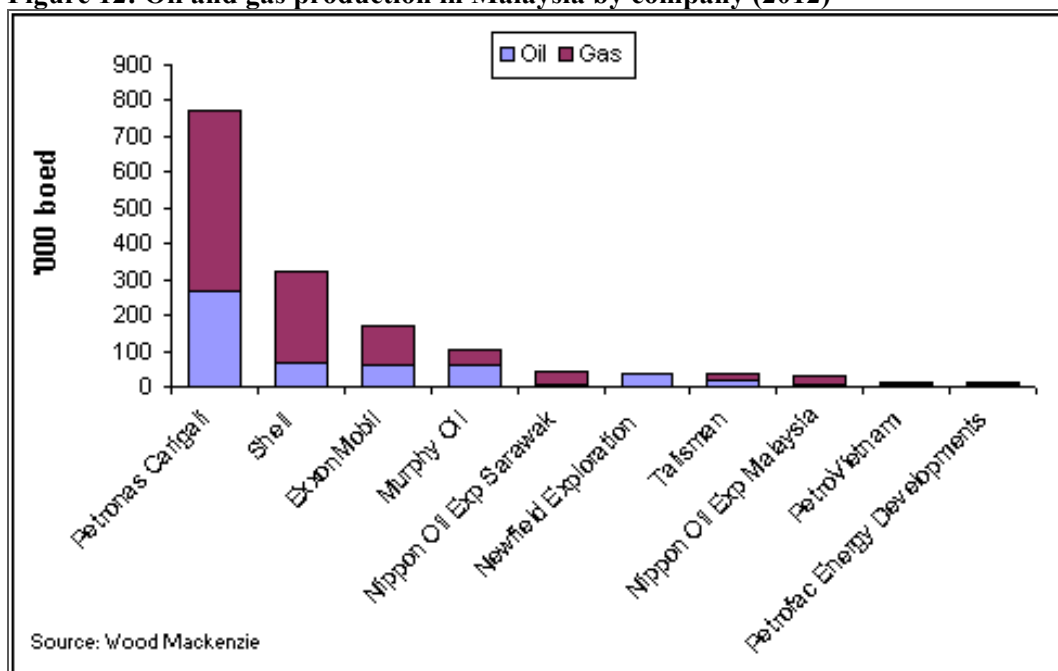
Based upon an example production of 100 barrels of oil, ten barrels will be taken as payment of royalties with five each going to state and federal government royalty payments. Up to 60 barrels will be applied toward cost oil and the remaining 30 would be profit oil. Profit oil would be split according to an agreed ratio under the PSC. A typical ratio is 60:40 in favour of PETRONAS, so the contractor's profit oil share would be 12 barrels.

Over the last 30 years, the PSC has become the dominant form of access to O&G exploration and development for international petroleum companies in developing countries. PSCs define and grant wide-ranging powers to PETRONAS, while curtailing those of the oil companies who are now contractors. Investment plans, annual work programmes, information on oil resources, and production sub-contractors have to be submitted to PETRONAS for approval.

Pre-1998, five companies held all the PSCs in Malaysia with PCSB, Shell, and ExxonMobil leading the way in terms of acreage and production. Following the implementation of new and improved fiscal terms for PSC holders, including specific deepwater terms and the Revenue over Cost (R/C) terms to encourage marginal field development, new players have been attracted to Malaysia, increasing the diversity of operatorship⁶⁵. As of Apr 2012, there were 83 PSCs in operation in Malaysia involving international oil companies such as Exxon Mobil, Shell, ConocoPhillips, Murphy Oil, Hess Corporation, BHP Billiton, and others⁶⁶. PCSB is a hands-on operator that works alongside a number of petroleum multinationals through PSCs to explore, develop, and produce O&G in Malaysia.

Wood Mackenzie's country overview of Malaysia reveals that there are just 29 active acreage holders in the country's upstream industry, which is dominated by PETRONAS. More recently, new players such as Total and Murphy Oil have come to Malaysia, attracted by its deepwater potential⁶⁷. Based on O&G production quantities in thousands of barrels of oil equivalent per day in 2012, the three largest companies in Malaysia are PCSB, Shell, and ExxonMobil (Figure 12).

Figure 12: Oil and gas production in Malaysia by company (2012)



Source: Wood Mackenzie's South East Asia Upstream Service: Malaysia Country Overview, July 2012

4.3 Risk service contracts

Taking advantage of new tax incentives from the Malaysian government, PETRONAS launched risk service contracts (RSCs) in early-2011 to stimulate the development of marginal O&G fields and increase the recovery of hydrocarbon resources through innovative solutions. Instead of trying to improve PSC terms, RSCs balance the sharing of risks with fair returns.

Under the RSC concept, PETRONAS retains resource ownership while contractors are service providers with equity share in the RSC. Contractors contribute the upfront capital investments according to their equity share and receive payment only upon first production⁶⁸. They are responsible for field development and operation, and are remunerated based upon performance against negotiable performance indicators. The reserve size of each marginal field is no more than 30 million barrels of oil equivalent⁶⁹. According to Wood Mackenzie⁷⁰, the basic fiscal terms for a typical RSC are:

- Contractor can recover capital and operating costs from annual revenues, up to a 70% ceiling (capital cost recovery is limited to 120% of the capital cost estimate bid by the contractor)
- Contractor will then receive a remuneration fee, based on a negotiable fixed fee per barrel linked to production performance and capital cost performance multipliers
- Any unrecovered costs at end of field life or contract expiry will be reimbursed

- Royalty of 10% to be paid by PETRONAS
- Contractor is not liable for abandonment or research cess payments

To date, three RSCs have been signed:

1. In Jan 2011, with a consortium led by UK-based Petrofac and local players Kencana Petroleum and Sapura Group for the Berantai gas field offshore Terengganu;
2. In Aug 2011, with a consortium led by Australia-based Roc Oil and local players Dialog D&P Sdn. Bhd. and PCSB for the development of the Balai Cluster fields offshore Sarawak; and
3. In Jul 2012, with Thailand-based Coastal Energy and local player Petra Energy for the development of the Kapal, Banang, and Meranti (KBM) cluster of small fields located offshore Peninsular Malaysia

4.4 Enhanced Oil Recovery

As Malaysian basins mature, the country will find it increasingly challenging to sustain its hydrocarbon production levels. Domestic O&G production is expected to drop by 1-2% per year on average in the next decade as O&G discoveries in mature basins are, on average, smaller than before and the size of discovered resources is declining⁷¹. However, there is significant potential in mature, small, and technically more complex fields.

In an effort to arrest declining production levels, three key strategies are being employed: 1) Rejuvenation of existing fields through Enhanced Oil Recovery (EOR), 2) development of marginal fields through innovative solutions, and 3) intensification of exploration activities, all of which complement the government's Economic Transformation Programme (ETP) to turn Malaysia into a high-income economy by 2020. The ETP, unveiled on 1 Sep 2010, includes Malaysia's oil, gas, and energy (OGE) sector as one of its 12 National Key Economic Areas^x (NKEAs). Sustaining O&G production is one of four thrusts that the government and the OGE industry are focusing on. It involves extending the lifecycle of existing resources by optimising exploration, development, and production activities, for which three Entry Point Projects^{xi} (EPPs) have been identified. The first of these is to rejuvenate existing fields through EOR⁷².

^x NKEAs are viewed as engines of growth and lie at the core of the ETP. An NKEA is defined as a driver of economic activity with the potential to directly and materially contribute a quantifiable amount of economic growth to the Malaysian economy (see http://etp.pemandu.gov.my/Overview_of_NKEAs_-_@-Overview_of_NKEAs.aspx)

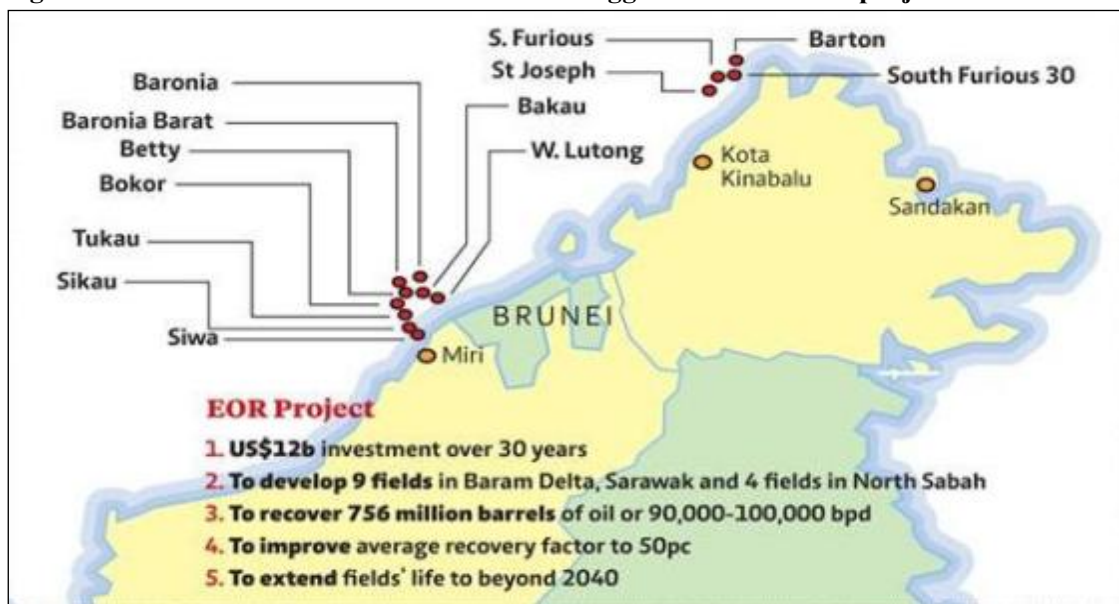
^{xi} EPPs are projects matched with specific ideas and actions to spur the growth of the NKEAs

The focus on EOR was triggered by declining output at mature oil fields where the average recovery factor was only about half the 46% average⁷³. EOR techniques include using external energy to increase production rates and improve recovery factors at mature oil fields. It is also known as tertiary recovery. Employing methods such as gas or chemical injection or thermal flooding to reduce the viscosity of oil and improve its flow, the amount of oil recovered can be increased from industry norms of 20-35% to 30-50%. Some of the substances used in EOR include CO₂, steam, air or oxygen, foam, polymer solutions, gels, surfactant polymer formulations, and micro-organism formulations. EOR requires advanced technologies and significant capital investments.

PETRONAS is encouraging EOR in order to increase domestic oil production, by reviewing PSC terms and introducing economic incentives to implement EOR techniques, attracting companies with specialised EOR expertise to operate in Malaysia, and ensuring that the most innovative methods and technologies are disseminated and deployed to reduce capital and operating costs⁷⁴. In line with the strategy to maximise recovery at existing fields through EOR and IOR (Improved Oil Recovery), PETRONAS approved more than 380 million barrels of oil equivalent of additional O&G resources to be developed in PE2011⁷⁵.

In Nov 2011, Malaysia embarked on the world's biggest offshore EOR project when PETRONAS signed a US\$12 billion (RM38 billion) Heads of Agreement with PCSB and Shell plc for two 30-year PSCs using EOR technologies at two oil fields offshore Sabah and Sarawak. The parties to the PSCs are PETRONAS, Sarawak Shell Bhd., Sabah Shell Petroleum Company Limited, Shell Sabah Selatan Sdn. Bhd., and PCSB. The two locations are the Baram Delta offshore Sarawak which covers nine oil fields, and the North Sabah Development Area consisting of four fields (Figure 13).

Figure 13: Location of oil fields in the world's biggest offshore EOR project



Source: Process Design Engineering blog at <http://processoilgas.blogspot.com/2012/01/huge-potential-of-eor-in-malaysia-oil.html>

Oil & Gas 104: Interaction between O&G companies and states

International oil companies (IOCs) in Malaysia generally do not deal directly with state governments, but work through PETRONAS. However, IOCs do maintain some minor relationships with the states they operate in through, for example, CSR programmes, and tend to bias their staff recruitment in favor of people from those states. In terms of management of emergencies and disasters involving oil rigs and oil spills, for example, IOCs maintain emergency management linkages with the states, particularly through the non-profit organisation PIMMAG (Petroleum Industry of Malaysia Mutual Aid Group). PIMMAG was established in Dec 1993 to protect the environment through the provision of pooled resources in order to respond to oil spill contingencies in Malaysia. Its major shareholders are the oil companies operating in Malaysia (see www.pimmag.com.my). PIMMAG supports members and/or non-members to respond to Tier-2 oil spills in Malaysia, including the EEZ (Exclusive Economic Zone), and cooperates with governmental efforts in oil spill clean-ups. A Tier-2 oil spill involves a loss of containment that is relatively significant that occurs in the area of the producing company's facilities, and normally requires the aid of other companies and resources, including the government (see www.investopedia.com/terms/t/tier-2-spill.asp)

The project builds upon existing PSCs for fields in the Baram Delta and North Sabah Development Area where oil has been produced for decades using primary and secondary recovery techniques⁷⁶. The Baram Delta EOR project covers Bokor, Bakau, Baronia, Baronia Barat, Betty, Sikau, Siwa, Tukai, and West Lutong oil fields, while the North Sabah Development Area EOR project comprises the St. Joseph, South Furious, South Furious 30, and Barton fields. The project will increase the average recovery factor in the Baram Delta and North Sabah fields from around 36% to 50% and extend the life of the fields to beyond 2040⁷⁷.

Using EOR techniques, the project is expected to recover 750 million barrels of oil reserves, equal to tens of

thousands of extra barrels produced per day. PETRONAS would be the operator of the Baram Delta EOR PSC with a 60% interest while Shell would hold a 40% stake via its subsidiary Sarawak Shell Bhd. Shell and PETRONAS would jointly operate the North Sabah EOR PSC on a 50:50 basis⁷⁸. This is in addition to the existing 2008 PSC extension with ExxonMobil Malaysia for EOR implementation in the Guntong and Tapis fields, offshore Peninsular Malaysia⁷⁹. In Nov 2012, Dialog and US-based Halliburton formed a 50:50 joint venture (Halliburton Bayan Petroleum) to provide services to PETRONAS to enhance recoverable reserves from the Bayan field in Sarawak. The estimated value of the EOR project is RM3.6 billion for a term of 24 years⁸⁰.

5. OIL AND GAS AND THE NATIONAL ECONOMY

5.1 Oil and gas' long shadow

PETRONAS, a FORTUNE Global 500® company, is the country's largest single taxpayer and biggest revenue source. Presently, O&G contributes about 40% of Malaysia's total revenues, compared to only 7.8% in 1975. In monetary terms, O&G revenues amounted to RM400 million in 1975 and almost RM68 billion in 2012.

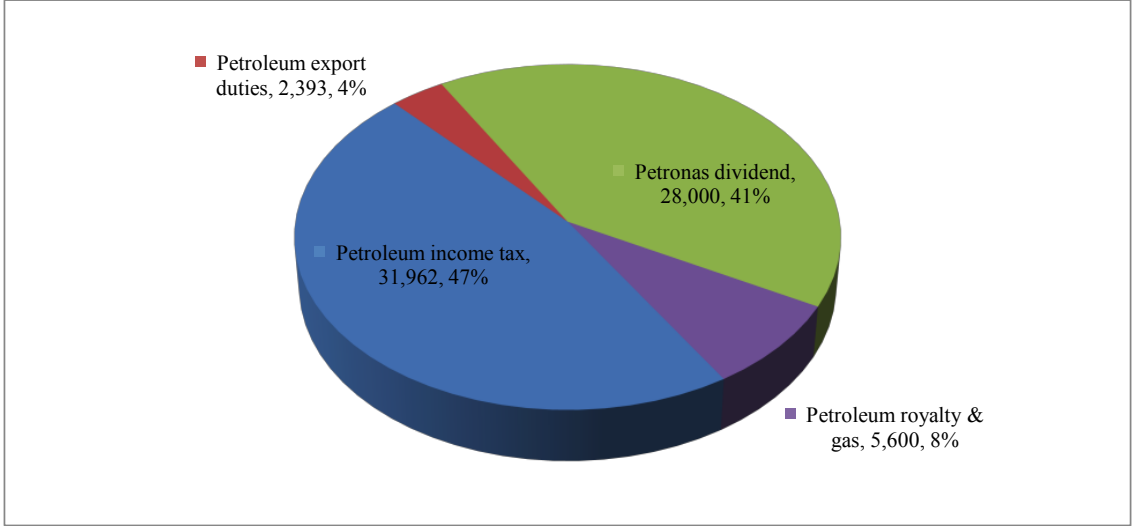
Since PETRONAS' incorporation in 1974 until the end of 2011, it had contributed RM653 billion to the federal and various state governments⁸¹. Of this, RM317.3 billion or almost 49% was paid in the last five years alone (FY 2008: RM61.6 billion; FY2009: RM74 billion; FY2010: RM57.6 billion; FY2011: RM65.7 billion; PE2011: RM58.4 billion) with about 45% of that consisting purely of dividend payments⁸². O&G revenues accrued to the federal government are derived through direct tax (petroleum income tax), indirect tax (export duties on petroleum and petroleum-related products), and non-tax revenue (dividends from PETRONAS and petroleum royalties).

In 2012, according to the Ministry of Finance in its Economic Report 2012/2013, the amount of federal government revenue derived from petroleum income tax was RM32 billion. This accounted for approximately 27% of the total direct tax collected by the federal government in 2012 of RM116.8 billion. In terms of indirect taxes, the federal government collected an estimated RM35.7 billion from excise duties, sales tax, service tax, import duties, and export duties from all sources. The O&G sector's contribution to indirect tax revenue was in the form of export duties which amounted to about RM2.4 billion or about 20% of the total RM12.3 billion of excise duties collected. This was more than 6% of the total indirect taxes collected in 2012.

Dividends (41.2%) and income tax from petroleum (47%) accounted for the bulk of revenue from O&G in 2012 (Figure 14). Non-tax revenue collected in the form of dividends from PETRONAS in 2012 totalled RM28 billion (although a one-off amount of RM1.7 billion of this was allocated to the fuel cost sharing mechanism between the government, PETRONAS, and Tenaga Nasional Berhad), while petroleum royalties amounted to RM5.6 billion. Non-tax revenue from O&G, therefore, amounted to RM33.6 billion to account for 61.3% of the total non-tax revenue of RM54.8 billion collected by the federal government in 2012. Contributions by type of O&G revenues to the federal government from 1975 onwards are presented in Table 4.

In addition to taxes, duties, royalties, and dividends paid to the federal and state governments, PETRONAS also provides subsidies representing potential revenue foregone associated with the supply of gas to the domestic power and non-power sectors at below-market prices. These subsidies amount to over RM20 billion per year⁸³. We are of the view that these subsidies should rightly be also carried in the federal government budget: firstly reflected as revenue from PETRONAS to the federal government which are then expensed as subsidies. Taking that view, O&G contributed 40% of total federal government revenue in 2012⁸⁴.

Figure 14: Sources of federal government’s O&G revenues (2012, RM million)



Source: Ministry of Finance, Economic Report 2012/2013

Table 4: Federal government revenue from oil and gas (1975-2012, RM million)

Type of Oil and Gas Revenue By Year	1975	1980	1985	1990	1995	2000	2001	2002	2003
Petroleum Income Tax	322	1,736	3,130	2,644	2,185	6,010	9,859	7,636	8,466
Petroleum Export Duties	0	677	1,639	1,910	751	996	831	768	1,106
PETRONAS									
Dividend	0	0	930	2,300	3,100	4,100	5,910	5,390	5,100
Petroleum Royalty and Gas	78	345	619	627	710	1,763	2,000	1,600	2,142
Total Revenue from Oil and Gas	400	2,758	6,318	7,481	6,746	12,869	18,600	15,394	16,814
<i>% share of Total Government Revenue</i>	<i>7.8</i>	<i>19.8</i>	<i>29.9</i>	<i>25.3</i>	<i>13.3</i>	<i>20.8</i>	<i>23.4</i>	<i>18.4</i>	<i>18.2</i>
WTI US\$ per barrel (Dec)	11.16	37.00	27.23	27.34	19.04	28.46	19.33	29.42	32.15
Total Government Revenue	5,117	13,926	21,115	29,521	50,594	61,864	79,567	83,516	92,608

Type of Oil and Gas Revenue By Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Petroleum Income Tax	11,479	14,566	20,674	22,600	24,191	27,231	18,713	27,748	31,962
Petroleum Export Duties	1,539	2,029	2,325	2,450	2,703	1,104	1,745	1,997	2,393
PETRONAS									
Dividend	9,100	11,000	18,000	24,000	30,000	30,000	30,000	30,000	28,000*
Petroleum Royalty and Gas	2,497	3,293	4,240	4,230	5,908	4,800	4,900	5,100	5,600
Total Revenue from Oil and Gas	24,615	30,888	45,239	53,280	62,802	63,135	55,358	64,845	67,955
<i>% share of Total Government Revenue</i>	<i>24.8</i>	<i>29.1</i>	<i>36.6</i>	<i>37.8</i>	<i>39.3</i>	<i>39.8</i>	<i>34.7</i>	<i>35.0</i>	<i>32.8</i>
WTI US\$ per barrel (Dec)	43.33	59.43	62.03	91.73	41.02	74.30	89.04	98.57	88.25
Total Government Revenue	99,397	106,304	123,546	141,073	159,793	158,639	159,653	185,419	207,246

Sources: Ministry of Finance, Economic Report (various years); WTI prices in December each year: www.econmagic.com/em-cgi/data.exe/var/west-texas-crude-long

* Due to the fuel cost sharing mechanism between the government, PETRONAS, and Tenaga Nasional Berhad, dividend for 2012 declined to RM26.3 billion

The composition and magnitude of contributions from the different components of O&G revenue have undergone significant changes. In 1975, petroleum income tax and petroleum royalty accounted for 80.5% and 19.5% respectively of total revenue. By 2010, PETRONAS' dividends accounted for the largest portion of revenue at 54.2%, followed by petroleum income tax at 33.8%, petroleum royalty at 8.9%, and petroleum export duties at 3.2% (Table 5). This change can be partly explained by the increasing reliance of the federal government on exorbitant dividends from PETRONAS to fill its coffers, resulting in a fixed dividend amount of RM30 billion for four consecutive years from 2008 regardless of the corporation's net profits. In 2010, it amounted to 74.4% of PETRONAS' net profit! Arguing that it needs to retain more of its profits for reinvestments, PETRONAS has been proposing since 2010 to cap its dividend payout at a fixed 30% of net profit instead, which is more in line with the practices of other national oil companies. Simultaneously, the reduction of the petroleum income tax rate over time to 38% currently has led to smaller contributions from this source, although this is also affected by world oil prices and production volumes.

Table 5: Percentage share by type of oil and gas revenue (1975-2012)

	(% Share to Total Oil and Gas Revenue)								
	1975	1980	1985	1990	1995	2000	2005	2010	2012
Petroleum Income Tax	80.5	62.9	49.5	35.3	32.4	46.7	47.2	33.8	47.0
Petroleum Export Duties	-	24.5	25.9	25.5	11.1	7.7	6.6	3.2	3.5
PETRONAS Dividend	-	-	14.7	30.7	46.0	31.9	35.6	54.2	41.2
Petroleum Royalty and Gas	19.5	12.5	9.8	8.4	10.5	13.7	10.7	8.9	8.2
Total Revenue from Oil and Gas	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Finance, Economic Reports (various years)

5.2 PETRONAS dividends – killing the goose that lays the golden egg?

Rising development expenditure, as well as the need to contain the federal government's fiscal deficit at a prudent level, necessitated increasing the dividend payments from PETRONAS to the government. These dividends grew from RM930 million (almost 15% of the total O&G revenues paid to the government by PETRONAS) in 1985 to RM30 billion (54.2% of the total O&G revenues paid to the government by PETRONAS) in 2010 (Table 4). In 2010, dividends paid to the government were almost three-quarters of PETRONAS' net profit of RM40.3 billion (Table 6).

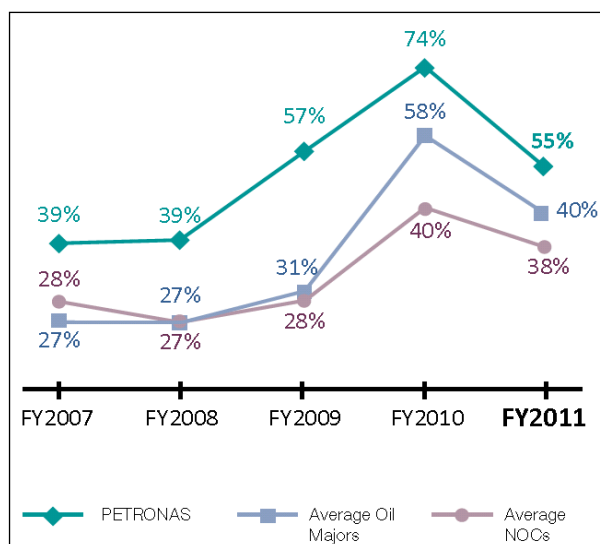
Table 6: Percentage of net profits paid as annual dividends by PETRONAS to the federal government

Year	Net profit (RM billion)	Dividend (RM billion)	Dividend as a percentage of net profit (%)
2012	49.4	33	66.8
PE2011	48.9	30	61.3
2011	54.8	30	54.7
2010	40.3	30	74.4
2009	52.5	30	57.1
2008	61.0	24	39.3
2007	46.4	18	38.8

Source: For 2007-PE2011: PETRONAS annual reports. For 2012: Maybank Investment Bank Bhd. Oil & Gas Sector Update March 8, 2012. PETRONAS' 2012 report card. Wong Chew Hann

As with any state-owned oil company, PETRONAS is obligated to contribute a share of its profits to the government, just as a private sector oil company would pay dividends to its shareholders. Those dividends consumed almost 55% of its net profits in the fiscal year ended 31 Mar 2011, well above the average of 38% paid by national oil companies around the world (Figure 15). A lower payout would permit reinvestment in global O&G exploration to address declining domestic supplies. A Reuters analysis of PETRONAS and government financial data showed PETRONAS would have paid about RM17 billion in the fiscal year ended Mar 2011 if the 30% dividend formula had been in place⁸⁵. Ratings agency Fitch warned in Feb 2012 that Malaysia's budget was overly reliant on petroleum receipts and the imminent general elections could drive up spending and deepen its budget deficit⁸⁶. And as PETRONAS increasingly pushes to peg its dividend at 30% of net profits, arguing that it needs funds for operation and reinvestment for future growth, it remains to be seen how these contributions might yet change in the future.

Figure 15: PETRONAS' dividend payout ratio (fraction of net profits paid out as dividends) vs those of average oil majors and average National Oil Companies (NOCs)



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. The NOCs consist of PetroChina, Petrobras, Statoil, and Rosneft

Source: PETRONAS' 2011 Annual Report

5.3 Subsidies

Subsidies, funded in part by O&G revenues, have been steadily increasing in the federal government budget. Under Prime Minister Najib Razak's administration, subsidies had quadrupled from RM10 billion in 2007 to over RM42 billion in 2012.

Budgetary control has been extremely weak. The federal government had initially proposed RM33 billion worth of subsidies for 2012 and this was approved by parliament as part of the entire Budget 2012 proposals. However, by Oct 2012, the federal government revealed that it had grossly overspent and the subsidy bill for 2012 was expected to hit RM42 billion, a massive RM9 billion or 27% above the RM33 billion originally forecast for the year.

The four-fold increase in subsidies under premier Najib's administration has clearly been wasteful. Properly channelled, the RM42 billion of subsidies in 2012 would have been sufficient to give RM1,560 *per month* to the poorest one-third of Malaysian households⁸⁷. This would more than double their current incomes which average just RM1,500 per month⁸⁸ and is in stark contrast to the RM500 *one-off* BR1M^{xii} payments which are still necessary despite the huge subsidies elsewhere.

Most of the subsidies are channelled toward cheaper fuel. Blanket subsidies such as for cheap petrol and sugar 1) encourage excessive and wasteful consumption, 2) discourage investments to improve productivity and efficiency, and 3) benefit upper-class Malaysians who consume much more than their poorer compatriots. At the time of writing this report, the Barisan Nasional incumbent government appears set to continue petrol subsidies. Its election manifesto did not mention addressing this issue.

Note that the subsidies mentioned above do not include the direct subsidies incurred by PETRONAS in supplying gas to the domestic power and non-power sectors at below-market prices. These subsidies amount to over RM20 billion per year, as discussed earlier in this chapter.

^{xii} BR1M = 1Malaysia People's Aid programme – a one-off cash payment of RM500 by the federal government to households earning up to RM3,000 per month to help low-income earners cope with the rising costs of living

6. TRANSPARENCY AND ACCOUNTABILITY

6.1 Where Malaysia and PETRONAS stand in the eyes of the world

In the 2013 Resource Governance Index (RGI) by the Revenue Watch Institute (RWI), Malaysia received a “weak” score of 46 (below the global average of 51) out of 100, placing it 34th out of 58 countries assessed on the quality of their governance in the oil, gas, and mining industry. In the RGI’s assessment of all 58 countries under four key governance components, Malaysia ranked 49th in *Institutional and Legal Setting* for having an inadequate legislative framework; 32nd for *Reporting Practices* because it publishes little or no information on contracts or resource-funded subsidies; 44th under *Safeguards and Quality Controls* due to a lack of disclosure policies, checks on licensing authorities, and because the legislature does not have significant oversight of the petroleum sector; and 12th in *Enabling Environment* reflecting a satisfactory ranking for government effectiveness but lower scores on budget openness and democratic accountability⁸⁹.

In 2010, RWI and Transparency International (TI) produced a pilot index on natural resource transparency. Due to a different methodology and other adjustments, its findings cannot be compared with the 2013 RGI, but merit mention, nonetheless. In the aforementioned 2010 Revenue Watch Index, Malaysia was placed in the “Partial Revenue Transparency” category, amassing a score of 48.4 (out of 100) against the average score of 50.1 for the Asia Pacific region. This category groups countries that provide their citizens with information on the extractive sector, yet possess important transparency gaps in one or more specific index categories. Malaysia’s placement in this category was attributed to not having legislation to compel disclosure in the O&G sector. Malaysia also had below-average scores for information on revenue generation⁹⁰. In the 2012 Open Budget Survey by the International Budget Partnership, Malaysia obtained a score of 39 (out of 100) and placed in the “minimal” category along with other countries with minimal budget transparency. Malaysia’s score of 39 was below the average score of 43 and placed it beneath countries such as Indonesia (which scored 62), Bangladesh (58), Bosnia and Herzegovina (50), the Philippines (48), and Mali (43)⁹¹. Malaysia had the same score and was also placed in the “minimal” category in the 2010 version of the Open Budget Survey⁹².

There are other clear weaknesses. These include parliament not having the authority to ratify contracts, as well as little to no operational information on quasi-fiscal activities, transfers to state governments, or joint-ventures being publicly disclosed⁹³. Revenue transparency is essential for responsible resource management and ensures public accountability by government and the corporations involved in the extractive industry. In the case of PETRONAS, while information about its overseas operations is available, it is limited in scope. For example, reporting of country-specific payments made to host governments is not publicly accessible and PETRONAS does not disclose country-by-country figures in its annual reports.

In the publication *Promoting revenue transparency: 2011 report on oil and gas companies* by Transparency International and The Revenue Watch Institute, which analyses reporting practices by 44 major O&G companies in areas relevant to revenue transparency, PETRONAS scored below the average in the three main categories examined. It scored 30% in the “reporting on anti-corruption programmes” category (versus the average score of 43%), 38% in the “organisational disclosure” category (average: 65%), and 0% in the “country-level disclosure for international operations” category (average: 16%). The data was based exclusively on publicly-available information or documents⁹⁴. Elsewhere, a 2011 World Bank working paper on governance and performance of national oil companies ranked PETRONAS slightly above the global average⁹⁵.

6.2 How PETRONAS is trying to improve its governance

PETRONAS’ annual reports contain a Statement of Corporate Governance and a Statement of Anti-Corruption. In the former, the company says that good corporate governance is fundamental to ensuring its competitiveness, growth, and sustainability, and asserts its requirement for the Management to uphold the high standards of governance, transparency, and ethical conduct. It further states that since its inception in Jun 2011, its Corporate Governance & International Compliance unit, Legal Division, has launched a series of governance programmes to further enhance the application of governance standards in line with global best practices. In its Anti-Corruption Statement, it explains that the PETRONAS Code of Conduct and Business Ethics (launched in 2012) expressly prohibits the giving and accepting of bribes by PETRONAS employees and the signing of the Corporate Integrity Pledge further underpins its commitment towards addressing and prohibiting bribery and corruption⁹⁶.

On its website www.petronas.com.my, the PETRONAS Code of Conduct and Business Ethics (CoBE) is easily downloaded from its Governance webpage. The CoBE contains detailed policy statements on standards of behaviour and ethical conduct expected of all employees and directors within the PETRONAS Group worldwide, as well as contractors, subcontractors, consultants, agents, representatives, and others performing work or services for, or on behalf of, PETRONAS. Some provisions of the CoBE will be adapted to the requirements of the host countries in which PETRONAS operates and individual Country Supplements are in the pipeline for this reason. At the moment, only the Malaysia Country Supplement is available on the website. Also on the same Governance webpage is PETRONAS’ whistleblowing policy and an e-form for online reporting of any improper conduct committed, or about to be committed, within the PETRONAS group.

PETRONAS has instituted further positive changes in the way it operates in terms of transparency, governance, and accountability. In addition to its CoBE and the establishment of a Corporate Governance & International Compliance unit, it established a new senior position of Chief Integrity Officer (CIO) within the corporation in Jun 2012. The CIO is responsible for

implementing systems to promote good governance and detect corruption risks. Its first and current CIO is seconded from the Malaysian Anti-Corruption Commission (MACC). Further down the road, PETRONAS intends to develop guidelines on competition law and produce an anti-bribery and corruption manual. Also, all new employees go through an on-boarding orientation and induction programme called PIPE (PETRONAS Induction Programme for new Executives) for two weeks at the company's training centre, Permata, where one of the modules is the CoBE so that they are aware of it as soon as they report for duty. PETRONAS has also had a no-gifts policy in place for its staff since 2012.

The Malaysian chapter of Transparency International (TI) regularly engages with PETRONAS on ways to improve its governance and operate more transparently, and informs the corporation of standards in use internationally by other NOCs such as accounting standards. TI also provides guidance on how PETRONAS can improve its scores in the Revenue Watch Index, for example, by explaining the methodologies employed and the reasoning behind the scoring system.

6.3 Issues

In interviews conducted by REFSA with industry professionals and CSOs, the general consensus was that there was likely little to no leakage in what O&G companies in Malaysia pay to the federal government and what the federal government receives from O&G companies. However, what happens to those revenues once they are in the government's coffers and how they are utilised is less clear. Some countries regulate how O&G revenues are spent by their governments, but this is not the case with Malaysia and has occasionally led to the less-than-ideal use of O&G revenues.

Any leakages are more likely to come in the form of favouring particular parties in procurement processes in the O&G industry, which leads to uncompetitive practices. There is a general lack of transparency in the competitive bidding process in the domestic O&G industry.

There were also concerns over PETRONAS' ventures into non-core business sectors such as healthcare, the Formula One (F1) World Championship racing circuit, property investments, and facility management services, as these are potential additional avenues for leakage. There are views that PETRONAS should keep its focus on developing and specialising in the O&G sector instead of venturing into unrelated industries, particularly as the local petroleum sector has not been sufficiently developed⁹⁷. Additionally, it is pertinent to examine if PETRONAS' unrelated business investments are actually adding value to its core business or instead burdening it with more costs⁹⁸.

The fact that PETRONAS reports directly to the Prime Minister and parliament has absolutely no oversight of PETRONAS, particularly access to review its operations and financial accounts, was identified by several as a critical weakness in the system that is a huge challenge to transparency and accountability in the Malaysian O&G industry. PETRONAS should report to parliament and be independent of the Prime Minister as this would provide an effective check on executive powers over PETRONAS that are virtually unrestricted under the current arrangement. This is critical given the enormous contributions to national revenue from PETRONAS and the potential for abuse or misuse of these funds.

Inadequate legislation mandating transparency, such as the absence of a freedom of information act in the industry, is another challenge. For example, in the course of researching this study, I contacted the Malaysian Petroleum Resources Corporation, an agency tasked with creating a dynamic and progressive O&G services industry in Malaysia under the Prime Minister's Department, for a copy of the "Oil and Gas Map – Malaysia". Its "Head of Administration" denied my request and said that the map was a confidential document. In reality, it can be purchased for RM1,000 a piece and is even given out for free at certain O&G forums, plastered with advertisers' logos. Whether her response was the result of a lack of transparency or simply a case of ignorance is a matter for conjecture.

In general, awareness of the O&G industry in Malaysia is rather nascent, particularly on issues of transparency and accountability. In our efforts to engage other CSOs on transparency and accountability in the O&G industry in Malaysia, we did not find any working specifically on this. While Malaysia has active CSOs working on clean elections, migrant workers, and civil rights, there seem to be none working primarily on the O&G industry. It is not a hot-button topic and does not get enough exposure. This is probably due to the impression that the O&G industry appears to be well-managed and PETRONAS generally has a good reputation and does not court controversy. But the truth is that there are issues and scope for improvement when it comes to transparency, accountability, and governance.

6.4 What about the environment?

In general, no one spoken to in the course of researching this study identified the environment as an issue of note in the Malaysian O&G industry, even when prompted. However, environmental issues are beyond the scope of this report.

APPENDIX A: THIS PROJECT, THE INSTITUTES, AND THE PEOPLE BEHIND THIS STUDY



REFSA's project represents the Malaysian component under the Southeast Asian-wide initiative, "A Southeast Asian partnership for better governance in extractive industries", which has the objective of promoting the effective, transparent, and accountable management of oil, gas, and mineral resources by sub-national and national governments in Southeast Asia.

The lead organisation for this wider initiative is the Revenue Watch Institute (RWI), with funding from the United States Agency for International Development (USAID). The initiative falls under the umbrella IKAT-US (Southeast Asia-US Partnership) initiative: "Civil societies innovating together", designed to promote partnerships, networking, and the sharing of experiences between Indonesian, Southeast Asian, and US civil society organisations.

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of REFSA and do not necessarily reflect the views of USAID, the United States Government, or the Revenue Watch Institute (RWI).

A.1 Funding

Primary funding for REFSA's project and this study is from USAID. REFSA's Project Manager's time is fully funded by USAID while additional staff time contributed by REFSA's Executive Director, Financial Officer and Administrator, Pen Wielder and Media Musketeer, and other associates were provided *pro bono* along with in-kind contributions from REFSA.

A.2 About the author

Eugene Thean Hock Lee is a Malaysian who went through the country's primary and secondary school education system before completing his tertiary-level studies to the Master's level in the United States. He has spent the lion's share of his working life in the environmental and wildlife conservation fields for both profit, as well as non-profit, non-governmental organisations in the United States and Malaysia. He then went into business for himself in 2007

by working as an independent freelance consultant, focusing primarily on conservation and environmental matters, with the occasional foray into other fields such as for this scoping study. In addition to the United States and Malaysia, Eugene has also lived and worked in Chile. He is still open to living and working almost anywhere in the world and likes to keep his options open. For now, at least.

Eugene wishes to record his gratitude to REFSA and his fellow REFSA colleagues, the Revenue Watch Institute staff in Jakarta and New York, IKAT-US partners throughout Southeast Asia, USAID, Tricia Yeoh, his parents and friends, and the many people he interviewed for this study for their support, assistance, and advice throughout this project, without which, he would still be trying to figure out how to proceed. If he has inadvertently left anyone out, he apologises profusely. Eugene is appreciative of REFSA's Executive Director Teh Chi-Chang, for believing in him and entrusting him with the responsibility to manage this project, as well as for his guidance and feedback over the course of writing this scoping study, but particularly for his open door and listening ear. Chi-Chang also wrote the section on subsidies in this report.

A.3 About Research for Social Advancement Bhd. (REFSA)

REFSA is an independent, not-for-profit research institute providing relevant and reliable information and analyses on social, economic, and political issues affecting Malaysians with the aim of promoting open and constructive discussions that result in effective policies to address those issues. REFSA stands out in its ability to analyse and explain complex issues in plain language for the benefit of ordinary Malaysians. For example, to facilitate analysis and explanation of the government's Economic Transformation Programme (ETP), REFSA constructed a five-point framework named "DEEDS". The analysis was first distilled into a series of eight focus papers of up to ten pages each. These were then simplified into a PowerPoint presentation and further simplified into a set of three infographics for less technically-minded audiences. Find out more about REFSA at www.refsa.org

A.4 About the Revenue Watch Institute (RWI)

The Revenue Watch Institute (RWI) is a non-profit policy institute and grantmaking organisation that promotes the effective, transparent, and accountable management of oil, gas, and mineral resources for public good. Through capacity building, technical assistance, research, and advocacy, RWI helps countries realise the development benefits of their natural resource wealth. RWI is the only organisation dedicated exclusively to addressing the problems of countries that are resource-rich. These are countries where poverty, corruption, and armed conflict too often converge. Find out more about RWI at www.revenuewatch.org

A.5 About the Revenue Watch IKAT-US project

The Revenue Watch IKAT-US project is a partnership with three Indonesian non-governmental organisations and civil society counterparts from Southeast Asia (including REFSA) to promote effective transparency and accountability campaigns focused on the oil, gas, and mining industries, and targeting regional, national, and sub-national authorities. Advocacy by Indonesian civil society that promoted better governance of the extractive industries in their country is one of the inspirations behind the project. These efforts contributed to the 2010 decision by the Indonesian government to join the Extractive Industries Transparency Initiative (EITI). The overarching goals of the IKAT-US initiative are to promote greater democracy, improved governance, and greater respect for human rights in Indonesia and Southeast Asia, as well as the strengthening of South-South civil society linkages. Thus, IKAT-US is designed to promote partnerships among Indonesian, U.S., and Southeast Asian CSOs to expand and deepen the sharing of Indonesia's experience and expertise in the region. The IKAT-US framework allows all members of the partnership, under RWI's guidance, to share experiences, conduct cross-national capacity building, and improve advocacy strategies.

APPENDIX B: GLOSSARY

Barrel of oil equivalent (boe): A method of quantifying energy consumption or production across different energy sources. The term "boe" refers to the amount of energy that is equivalent to that found in a barrel of crude oil. For example, natural gas volumes are measured for the amount of energy they produce compared to a barrel of oil

Block: The sub-division of exploration and production acreage which could consist of several oil or gas fields upon which companies work on. A block is generally defined in latitude and longitude at intervals of one degree

Condensates: Liquid hydrocarbons such as ethane, butane, and pentane produced with natural gas and separated by cooling and other means. Also known as Natural Gas Liquids (NGLs)

Contingent resources: Resources estimated to be potentially recoverable from known accumulations, but, at a given date, not commercially viable due to one or more contingencies. Contingent resources are further classified into 1C, 2C, and 3C in accordance with the level of uncertainty associated with the estimates

Field: A geographical area containing a single, or multiple, hydrocarbon reservoirs

Gross Domestic Product (GDP): The market value of a country's total output of finished goods and services within a specific period of time (usually a fiscal year) plus the value of exports minus the value of imports. Commonly used to assess the standard of living and economic health of a country

Improved Oil Recovery (IOR): Any process or combination of processes to economically increase the volume of oil that is ultimately recovered from a reservoir at an accelerated rate. IOR may include chemical, mechanical, physical, or procedural processes (courtesy of the PETRONAS PE2011 Annual Report)

kboe: Thousand barrels of oil equivalent

oRRR (Overall Resource Replenishment Ratio, aka Reserve Replacement Ratio): The ratio of the amount of oil added to a company's proven reserves to the amount extracted. It is an indication of a company's track record in maintaining a stable reserve of O&G. A ratio of 1 means current production is sustainable, a ratio exceeding 1 means it can grow, and anything below 1 means a company is tapping into its reserves and will eventually run dry

Probable reserves: Have a 50% certainty of being produced under current market conditions. Probable and proven reserves are often combined in a definition known as 2P which is the most common way to assess the amount of oil a field is likely to produce

Proven reserves: Have a 90% certainty of being produced at current prices, with current commercial terms and government consent, and are also known in the industry as 1P

Recovery factor/rate: The ratio of oil (or gas) that will be extracted compared to the amount of oil (or gas) in place

Reserves: A subset of O&G resources which are commercially viable to extract

Resources: All quantities of petroleum which are known to exist, including those which are not, at that time, considered to be commercially viable to extract. This can change as technology develops and with higher oil prices

Unconventional energy sources: Any resources accessed by means other than the conventional oil well method. This is an umbrella term that shifts over time, but is currently used to refer to sources such as shale gas, coal bed methane, and oil sands. While these reserves may hold the key to the future oil supply, companies must deal with the additional time, cost, and resources it takes to extract the unconventional oil

APPENDIX C: END NOTES

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¹¹ Using consumption figures from the BP Statistical Review of World Energy Jun 2012, available at bp.com/statisticalreview and converting them into Tcf using the conversion calculator at <http://www.bp.com/conversionCalculator.do?categoryId=9037131>

¹² www.clearonmoney.com/dw/doku.php?id=public:natural_gas_reserves

¹³ <http://www.chemlink.com.au/conversions.htm>

¹⁴ <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2241rank.html>

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¹⁷ Page 45 of the PETRONAS PE2011 Annual Report

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²⁷ According to Chapter 3 of the Malaysian Economic Report for 2012/2013, produced annually by the Ministry of Finance

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⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

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⁸³ RM18.4 billion for the nine month period ended Dec 2011 and RM20.1 billion for the financial year ended Mar 2011, based on the PETRONAS PE2011 Annual Report. Annualising the nine month number would give us a total RM24.5 billion.

⁸⁴ From Table 4, O&G contributed RM67,955 million to the total RM207,246 million federal government revenue in 2012. Assuming a full year gas subsidy of RM24.5 billion borne directly by PETRONAS, as calculated in the previous endnote, and adding that to the O&G and government revenue would give RM92,455 million of O&G revenue and RM231,746 million federal government revenue - 40%.

⁸⁵ As reported in *The polite rebellion of Malaysia's piggy bank*. Niluksi Koswanage and Emily Kaiser. A special report. Thomson Reuters. 2012

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