









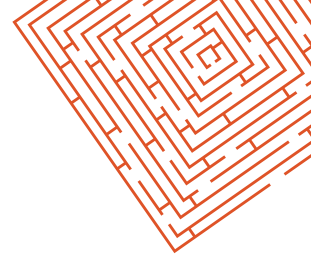
OIL AND GAS INDUSTRY

OVERVIEW OF OIL AND GAS INDUSTRY

- The oil and gas industry is generally divided into upstream, midstream and downstream activities. Upstream activities consist of exploration, development and production of oil and gas resources. Midstream and downstream activities range from the transportation of oil and gas, to refining and processing through to marketing and trading of end products.
- The availability of domestic hydrocarbon resources gave Malaysia a natural impetus to develop the oil and gas sector. PETRONAS, the national oil corporation, continues to play a major role in driving the industry's growth through its development of oil and gas resources as well as the creation of opportunities for local companies to build up their capacity and capability across the value chain. PETRONAS' Petroleum Management Unit regulates upstream activities, while PETRONAS subsidiary Petronas Carigali participates in production sharing contracts (PSC) with other PSC contractors such as Shell, ExxonMobil, Murphy Oil, Talisman, Petrofac and Newfield.
- The midstream segment consists of pipeline, transportation and other logistic assets that are mainly controlled by PETRONAS and other oil companies operating in Malaysia. The contribution of this segment amounts to approximately RM3.2 billion annually.
- In the downstream segment, two major integrated petrochemical zones have been established in Kerteh, Terengganu and Gebeng, Pahang. These industrial zones have attracted foreign investments mainly from the USA, Germany and Japan (e.g. Dow Chemical, BASF and Idemitsu), complementing investments from PETRONAS. These investments involve the production of petrochemical materials such as polypropylene, acetyls, and other such materials. There are also refineries operated by PETRONAS (in Kerteh, Terengganu and Sungai Udang, Melaka), Shell and ExxonMobil (both in Port Dickson, Negeri Sembilan).
- The oil field services and equipment (OFSE) industry supports primarily upstream activities and currently contributes RM1 to RM2 billion in GDP. Included in this sector are land drilling services, offshore drilling services, geophysical services, engineering and contracting (E&C), equipment assembly and manufacturing, offshore structure fabrication and installation and operations and maintenance (O&M). While most of the major international players in OFSE such as Schlumberger, Baker Hughes and Technip are already present in Malaysia, PETRONAS has supported the development of local companies such as Scomi, SapuraCrest, Kencana, Petra Perdana and Wasco.

OIL AND GAS INDUSTRY PLAYERS

UPSTREAM						MIDSTREAM	DOWNSTREAM
Fabrication	Pipes/ Equipment	EPCIC	Drilling Related	FPSO/ MOPU	Offshore support services	Transport/ Storage	Retail/ Petrochem
 <ul style="list-style-type: none"> Sapura Kencana MMHE Coastal Contracts Boustead TH Heavy 	 <ul style="list-style-type: none"> Wasco 	 <ul style="list-style-type: none"> Sapura Kencana 	 <ul style="list-style-type: none"> Sapura Kencana Dialog Bumi Armada Tanjong Offshore 	 <ul style="list-style-type: none"> Bumi Armada MISC Perisai Petroleum TH Heavy 	 <ul style="list-style-type: none"> Sapura Kencana Bumi Armada Tanjong Offshore Dayang Enterprise Alam Maritim Coastal Contracts Perdana Petroleum 	 <ul style="list-style-type: none"> MISC Dialog Petronas Gas 	 <ul style="list-style-type: none"> Petronas Chemicals Petronas Dagangan

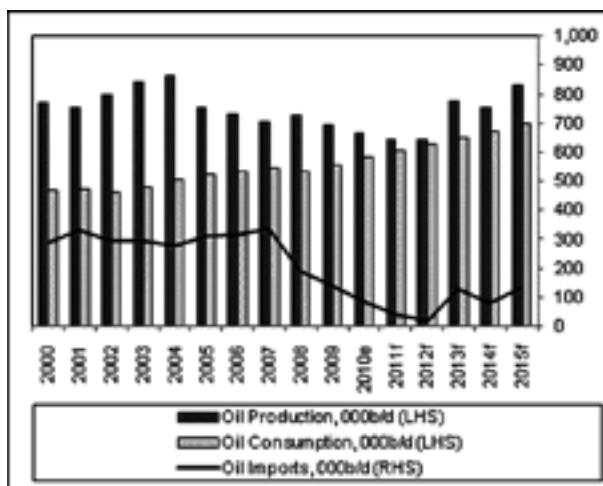


MARKET SCENARIO

Oil and Gas Production

- Global oil and gas production has grown by approximately 1.5 percent per year in the last decade, driven by robust demand in OECD countries and rapidly rising demand from developing economies, notably China and India. According to the International Energy Agency the global growth outlook for 2010 to 2020 for both oil and gas demand will shift further to developing economies in this decade. While “green” policies and de-carbonisation are taking place, especially in developed economies, any impact on oil and gas demand is not expected to be marked until the end of the decade. Demand for gas, especially, may actually benefit in the near term, as natural gas is both plentiful and green vis-à-vis other fossil fuels.
- Global oil and gas supply capacity jumped ahead of demand during the financial crisis of 2008 and 2009. This created a temporary but significant price dip in oil prices and enduring turmoil in global gas markets. The ongoing volatility in gas markets has been exacerbated by significant supply additions in the USA from domestic production of shale gas. A tighter balance of supply and demand is expected in both oil and gas by the middle of the decade, as demand growth catches up with supply infrastructure.
- In the last decade, growth in the upstream sector in Malaysia has been driven more by rising prices in oil and gas than by increases in production. PETRONAS’ international expansion has also contributed to Malaysia’s GNI.

Malaysia Oil Production, Consumption And Imports (000b/d)



Source: Business Monitor International

- Despite the declining conventional oil and gas resource base, there remains significant potential in mature, small and technically more complex fields. Future growth could come from initiatives such as enhanced oil recovery, innovative approaches to the development of small fields, or through intensifying exploration activities to achieve a faster pace of oil and gas discoveries.

Oil Field Services

- The Asian market for oil field services has grown by 20 percent per year over the last decade, primarily driven by the shift towards more technically challenging fields, e.g. deepwater, and increases in the price of oil, which has boosted industry margins. The sector outlook continues to be bright, driven by the upbeat outlook for offshore exploration activity in Southeast Asia, tight gas developments across Asia and the liquefied natural gas (LNG) boom in Australia.
- The market for OFSE in the region is quite fragmented, with most of the players setting up operations in Malaysia, Indonesia, Singapore and Thailand. This presents an opportunity for Malaysia, as most of Malaysia’s offshore producing fields are more mature than those of our Southeast Asian neighbours. This means that there will be significant opportunities for maintenance and replacement of assets, in addition to development of new fields, which will continue to drive growth in this subsector.

Mid-and Downstream Oil

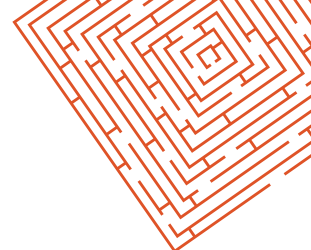
- The regional midstream logistics market (oil and oil product storage) also offers a positive growth outlook, as crude oil consumption in the Asian region is expected to grow by 420 thousand barrels per day in each year from 2010 to 2015. The increased flow of hydrocarbons in the region will require additional storage capacity (for transshipment, sales and marketing and trading purposes). At the same time, the region’s existing trading hub, Singapore, is nearing full utilisation.
- Downstream processing (petrochemicals and refining) and marketing industries are likely to also show at least modest growth levels. The opportunity to expand the large installed petrochemical complexes in Malaysia will depend on regional supply and demand balances as well as on the opportunity to introduce process and product innovations. Likewise, the pace of potential refinery expansion will be driven by regional supply-demand balances.

UPSTREAM ACTIVITIES

- Since its creation in 1974, national oil company PETRONAS has shaped and guided Malaysia's hydrocarbons industry. Punching considerably above its weight, the company has succeeded on the world stage, building overseas assets in Asia Pacific, the Middle East, Africa and now North America.
- However, the national oil company has somewhat neglected domestic production and exploration efforts. In 2011, the country's crude output fell below 600,000 barrels of oil per day (bopd) to 573,000 for the first time in a decade, according to data from the BP Statistical Review of World Energy.
- As such, the country badly needs to enhance exploration efforts and capitalize on its undiscovered resources, which are estimated at up to 10 billion barrels in deep- and ultra-deep water, of which 65 percent are in deep water.
- With this in mind, PETRONAS and its exploration arm Petronas Carigali have devised a three-pronged approach to reverse the nation's production fortunes. Targetting the development of the country's marginal fields, deepwater exploratory drilling and the revitalization of mature assets, capital expenditure on exploration is set to soar over the next decade, with much of this being ploughed into the country's offshore opportunities.

Marginal Fields

- The first prong of Malaysia's bid to boost flagging production is to encourage the development of the country's marginal fields. These assets, typically holding less than 30 million barrels of reserves, are of little interest to international oil companies focused on landing the far larger offshore deposits, but offer smaller, nimbler players the chance to leverage their experience in enhanced oil recovery (EOR) techniques and rapid mobilization.
 - Although the individual fields may not add up to much individually, with many of the sites having 10 million barrels worth of reserves or less, Malaysia's 106 combined marginal sites hold a healthy 580 million barrels of oil equivalent, according to research from investment bank JP Morgan.
 - For the time being, PETRONAS has plans to develop only 27 of these, leading to speculation over whether the increase from marginal fields can make a serious impact on the country's overall production profile. Keen to incentivize smaller players to take up the marginal field challenge, PETRONAS has decided to forgo the standard production-sharing contract (PSC) in favour of a more tailored risk-sharing contract (RSC) model.
- An RSC is effective in two ways. For PETRONAS it ensures the oil remains a sovereign asset, while for contractors, usually a consortium of services companies, it strikes a fair balance between the risk and potential return for developing the marginal field.
 - Contractors are expected to put up the development capital and the initial costs of the project. At an agreed point, usually subsequent to the pre-development phase or upon the production of first oil, the contractors are reimbursed, and thereafter paid a fee based on the amount of oil produced.
 - There is no standard RSC - the terms vary field by field, with contractor compensation contingent on reaching production by a set target date and achieving certain rates of production throughout the life cycle of the contract.
 - As the oil remains the property of PETRONAS, the contractors cannot count the reserves on their books, which is something that ordinarily dissuade investment from an international oil company. However, for a services company independent from the need to build a healthy crude balance sheet, this is of no consequence.
 - For Malaysia, the RSC has another attractive feature. Each participating international services company must join with a local partner, listed on Bursa Malaysia. Not only is part of the money generated through the RSC ploughed directly back into the Malaysian economy, but the local partner also gains valuable experience.
 - The local content element of this agreement is effective in helping to lock in experience for local firms and furthering Malaysia's aim of becoming an offshore centre.
 - The reception to the new RSCs implemented since 2011 has so far been generally positive. The RSC model would prove effective at enticing medium-sized, dynamic players to work on the marginal fields. BC Petroleum, which has an RSC for the Balai Cluster, was one of the first to sign the new joint venture agreement in August 2011 - a joint venture between Australian upstream player ROC Oil, Malaysian engineering and oilfield services company Dialog Group and Petronas Carigali.
 - BC Petroleum's entry followed that of Malaysian players Kencana and SapuraCrest, before merging in 2012, which joined forces with international service company Petrofac to develop the offshore Kapal, Banang and Meranti cluster of small fields, known as the KBM Cluster.



Deepwater Exploratory

- The most critical and long lasting potential increase in production is set to come from deepwater projects. At current rates, crude oil output in Malaysia from maturing fields is expected to last only for the next two decades, according to industry website Offshore Technology. This is a low figure compared to Malaysia's overall current reserve-to-production ratio of 28 years.
- Offshore plays, ranging somewhere between 200 metres and 1,200 metres for deepwater and from 1,200 metres onwards for ultra-deepwater, are a vital counterbalance, set to contribute an estimated 30 percent towards the country's total oil production by 2020, according to a report by consultancy Frost & Sullivan. Indeed, so intense is PETRONAS' interest in deepwater discoveries that in capital expenditure alone Malaysia is set to see the largest increase in the region, beating India and China with investment of US\$60 billion over the next five years.
- The first producing of these new deepwater projects, is the Kikeh field, offshore Sabah. Discovered in 2002, US operator Murphy Oil and Petronas Carigali managed to overcome the complex geology and water depths of 1,341 metres, beginning production of 40,000 bopd in August 2007.
- As more wells came on stream the output has since increased to 120,000 bopd. Since the Kikeh discovery, other international oil companies have sunk their teeth into Malaysia's deepwater prospects. By July 2011, 24 rigs were drilling in Malaysian waters.
- The total number of offshore rigs is expected to grow to approximately 30 by 2013, with 20 percent of the forecasted wells drilled by 2015 to be in deepwater, according to Frost & Sullivan. Deepwater is the next key frontier for Malaysia. It is established and proven that it is very prolific petroleum system.

Revitalization of Mature Assets

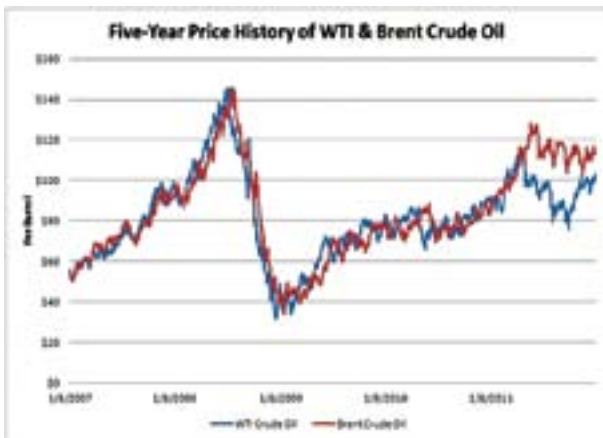
- The final piece of Malaysia production target jigsaw is expected to come from the aggressive revitalization of mature fields and the use of enhanced recovery techniques. In January 2012, Shell and PETRONAS signed two, 30-year PSCs that, when combined, are expected to become the world's largest offshore Enhanced Oil Recovery (EOR) project.
- The existing PSCs for the Baram Delta oilfield offshore Sarawak and the North Sabah development areas were due to expire by 2019.
- However, under the fresh terms, the licences have been extended until 2040, with the added EOR component potentially yielding an increase in average recovery from 36 percent to 50 percent, according to Shell.

- The two projects, worth US\$12 billion, are also set to become the first to employ sizeable offshore chemical EOR, with the North Sabah field becoming the first to use alkaline surfactant polymer technology in a horizontal well environment.
- The large investment PETRONAS has made to seize the opportunity to maximize domestic output through its new RSC model, enhanced oil recovery techniques and deepwater exploration has created a buzz with regards to offshore activity.
- PETRONAS is expected to benefit from advances in technology, both for subsea exploration and production, including EOR and Malaysia will be able to sustain - and possibly increase - current national oil production levels.

OFFSHORE SUPPORT VESSELS (OSV)

- Malaysia features a plethora of offshore support vessel (OSV) players, with vessels of all speed and size, reflective of the variety of offshore upstream activities in the country. At the lower end of the value scale, the sector offers a relatively easy entry for startup companies wishing to gain a foothold in the promising offshore oil and gas industry.
- With increasing requirements for deepwater capabilities and fiercer competition for contracts with vessels of lower brake horsepower (bph), it is the higher value vessel owners, together with those that enjoy more generous financing terms, that stand to gain the most from Malaysia's deepwater frontier.
- The sector took a battering following the 2008 oil price drop and the global economic downturn. Daily charter rates for OSVs are strongly correlated to the price of oil, the key determinant in upstream operators investment decisions, impacting upon the demand for offshore services.
- The stalling of upstream projects after 2008 was compounded by an oversupply of OSVs in the run up to the oil price retreat, as owner-operators expanded fleets and a swathe of new entrants appeared during a bullish market for oil that saw a record peak in price in 2008 of US\$145 per barrel.

- A subsequent climb in oil prices in 2012, with the price for Brent crude breaching US\$120 in first quarter of 2012, has encouraged oil companies to return to the table and pick up the pace in offshore projects. However, supply side dynamics have placed an upper limit on OSV daily charter rates, with the sector reporting a 20-percent discount on 2007-2008 rates in 2012, as the glut in supply keeps Malaysia's OSV sector competitive.

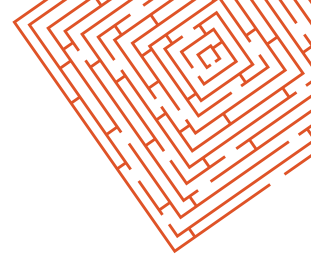


Source: Bloomberg

- These fundamentals will continue to subdue rates for the foreseeable future. However, persistent global oil supply demand looks set to maintain the high and relatively stable oil prices that were witnessed in 2012, encouraging increased upstream investment in the medium term.
- The impact on Malaysia's OSV sector will vary, as financing is a key concern of many operators - particularly for smaller players without access to public markets. Moreover, unpredictable changes in operators' tender requirements in terms of vessel bhp and deepwater capabilities will be detrimental to ship owners with fleets that no longer meet the standards, and for whom the depressed charter rates also do not meet the cost of operation.
- However, prospects in the country are much rosier for larger, listed operators - those that have already invested in more sophisticated fleets, and without onerous financing costs. In anticipation of national oil firm PETRONAS' surge in up-stream activity from 2013 onwards, its exploration and production arm Petronas Carigali has invited bids for a total of 34 vessels, including six straight supply vessels (SSVs), eight platform support vessels (PSVs) and 20 anchor handling tug supply (AHTS) vessels.
- Malaysian investment bank, Maybank, has suggested that this represents US\$950 million - US\$1.02 billion worth of contracts for the OSV sector, based on estimations that the 34 contracts will last between three and five years.
- Despite this headline contract figure, daily charter rates are expected to remain 10-18 percent below the heady peak of 2007-2008 in the medium term. This rate will cover operational costs for most vessel operators, while turning a profit on fleet investments.
- Many owner-operators - with Maybank highlighting listed players Alam Maritim in the smaller vessel segment, Perdana Petroleum in the 8,000-10,000 bhp segment and Bumi Armada for the high bhp AHTS, SSVs and PSVs - will benefit from deploying currently idle vessels.
- Perhaps the golden era for OSVs is over, but operators with scale and financing are still set to reap the rewards from Malaysia's upstream boom, even as smaller OSV owners struggle to stay afloat.
- There are many different types of boats that provide services to the oil and gas industry. Some are designed to transport crews to, from, and between oil rigs and platforms, while others are used to deliver supplies to rigs or tow a rig from one location to another. The line between different asset classes can become blurred as many boats are built with functionality that crosses over into another vessel's domain. Below are the main types of vessels used in the oil industry.

Anchor Handling Tug Supply (AHTS)

- Anchor Handling Tug Supply vessels, or AHTS vessels, tow rigs from one location to another and are equipped with powerful winches which are used to lift and position the rig's anchors. In addition, many can carry moderate amounts of supplies such as drilling fluid or drill pipe and also support offshore construction projects. AHTS vessels are usually specified in terms of base horsepower (bhp) and towing capacity.
- New generation, deepwater capable vessels typically have much greater horsepower (at least 8000 BHP) and winch strength (at least 250 tons). Winch strength determines the size of an anchor and the maximum depth to which it can be placed. In addition, their winches also have longer spooling lengths, which are needed to place anchors in deeper waters.



Anchor Handling Tug (AHT)

Purpose - A special purpose vessel equipped with towing machinery used to tow offshore rigs and equipment from one location to another and to set anchors for drilling rigs. Usually in small size to maximize its towing power.

- Most have dynamic positioning capability although it is not an absolute requirement. Dynamic positioned vessels use global positioning systems and computer controlled propulsion systems that allow the vessel to maintain an exact position, regardless of wave and wind forces. In addition, a vessel that is typically built today can carry more supplies than its 25 year old peers.



Anchor Handling Tug Supply (AHTS)

Purpose - A special purpose vessel similar to AHT, equipped with towing winches to tow and deploy offshore rigs and moorings. In addition, AHTS, which are characterized by longer after decks, could be used in limited supply roles.

Supply Vessels

- Offshore Supply Vessels deliver drilling supplies such as liquid mud, dry bulk cement, fuel, drinking water, drill pipe, casing and a variety of other supplies to drilling rigs and platform. The vessels are also referred to as Platform Supply Vessels (PSVs). They are the same thing, although some industry participants like to think of a PSV as the larger version of an Offshore Supply Vessel. Offshore Supply Vessels are usually specified in terms of cargo carrying capacity, measured in dwt.



Offshore Supply Vessel

Purpose - A specialized vessel used to transport supply and carried out limited support roles such as pipe laying, rig moorings.



Platform Supply Vessel (PSV)

Purpose - Vessel with large carrying capacity used to transport supply from port to oil platform.

Crew Boats

- Crew boats transport personnel to, from and between offshore rigs and platforms. These boats are much smaller than their AHTS or OSV cousins, and can range in size from 75 ft to 190 ft (23m – 58m). Crew boats are generally specified by cruising speed.
- The smallest boats (75 ft) are typically used to transport crews between offshore installations and not to and from shore. Newer generation crew boats, called Fast Supply Vessels (FSV) can also carry very limited amounts of supplies and as such are often used for emergency or time sensitive deliveries of supplies in addition to transporting crews.



Crew Boat

Purpose – Transport personnel to, from and between offshore rigs and platforms.

Other Types of Vessels

- There are a variety of other types of vessels used by the oil & gas industry, which include:
 - Standby/Rescue Vessels, which are required to remain in the vicinity of offshore rigs and platforms in order to provide emergency response services, such as personnel rescue, fire fighting, and first aid.
 - Multi-Purpose Supply Vessels (MPSV) which can provide a combination of remote subsea intervention services, remote operated vehicle (ROV) operations, deep-water lifting & installation, delivery of supplies, fire fighting, and oil spill recovery.
 - Tug boat, which is powerful small size boat with high level of maneuverability providing towing services for vessels and barge.
 - Survey vessels, which collect geophysical data.
 - Well stimulation vessels, which perform fracturing and acidizing of producing wells.
 - Utility/Workboats, which perform a lot of work in support of offshore construction projects.

- Laybarge/Crane, which is a specialised barge with crane facilities used for pipe installation and pipe laying. Also equipped with welding stations and mooring system.



Tug Boat

Purpose – Powerful small size boat with high level of maneuverability providing towing services for vessels and barge.

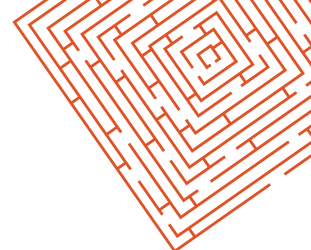
CHALLENGES OF OIL AND GAS INDUSTRY

Safety and Environmental Risk

- Despite a highly paid profession, working at offshore drilling rigs is both risky and dangerous as accident can cause the rig to explode and capsize. Incidents of oil spill occurring during and after drilling on the seabed for oil is detrimental to the environment and endangering aquatic life because of oil contamination. Also, radioactive wastes, carbon emission and pollution due to drilling are harmful to health and causing ecological imbalances.
- Apart from damaging the environment, health and marine life due to oil spills, the company has to pay the cost of cleaning up the oil. It also has to pay compensation to affected parties which may include fishing community, ports, tourism, workers due to loss of income or life.

Demand for Better and Sophisticated Drilling Technology

- Exploring in the ultra deepwater requires the industry to continue to employ more sophisticated drilling technology so that the various inherent risks are taken care of such as minimum spilling; safety of the health and environment; and preventing the risk of dry drilling after having employed all the efforts, time and technology on exploration.



High Cost and Expensive Technology

- As deepwater exploration is more complicated and dangerous than onshore fields, operation cost and production cost lifting of oil to the surface tends to be higher. Financing for the equipment and technology may not be easily come forth by financiers due to uncertainty and riskiness of the project viability while economic return will only be realized in the long-term. The removal of rig after drilling proves just as costly as construction. The overall drilling expenditure is expected to increase with more offshore drilling undertaken by international oil companies, national and government worldwide.

Leasing/Charter Rates

- Since the global financial crisis, the leasing rates of rigs except for jack ups have not been recovered due to sluggish demand. The leasing rates, move in tandem with the development in the industry while search for offshore E&P depends on future demand for oil of which it is highly susceptible to economic growth.
- The charter rates for jack ups have improved from more than US\$130,000 per day to more than US\$150,000 a day since the last two years. Meanwhile, new rigs equipped with special features will continue to be in demand to service more complex wells as well as remote reservoirs. Of the total numbers of rigs worldwide, US dominates the most, followed by Canada and others.

Factors Influencing Industry and Operating Environment of Oil and Gas Players

- Government regulations, including environmental regulations, which affect production cost and may limit the quantity of oil and natural gas that may be economically produced.
- Industry regulations that entail licensing and parameters within which the industry operates, which may dictate entry barriers.
- Market growth prospects and/or emergence of new competition (including accessibility of prospects or untapped reserves).
- Outlook for global economic growth.
- The balance between supply and demand as indicated by global inventory levels.

- Potential supply disruptions, including geopolitical developments.
- The degree to which individual OPEC nations and other large oil and natural gas producing countries are willing and able to control production and export of oil.
- Technological advancements that improve total recovery and productivity.
- Prospects for alternative energy and/or substitutes.
- Ability of oil and natural gas companies to gain access to funds to carry out their E&P plans.

CONCLUSION

- The landscape of the oil and gas industry is characterised by high barriers to entry which mainly revolve around high capital requirements and technical expertise. Contracts from major oil companies are only given to companies that have proven their capability in delivering quality works while complying with very strict safety requirements. Companies owned and controlled by Malaysians are preferred over foreign companies, to meet national aspirations in developing the capability and capacity of local oil and gas companies.
- The Malaysian oil and gas sector is on course for a structural reform caused by a flagging production which threatens to bestow a net importer status on the country.
- To combat this, PETRONAS has launched a RM300bil 5 year capex programme with the primary goal of increasing Exploration and Production (E&P) through the award of more Production Sharing Contracts (PSCs) and to revitalize its production predominantly through an Enhanced Oil Recovery (EOR) and marginal oilfield Risk Service Contract programme.
- The advent of deepwater exploration and production is expected to increase the demand for offshore support services as these petroleum fields lie at a greater distance from the shore. This new development will create greater demand for new series of OSVs, which have the capability in operating at deepwater oil fields for operational support and maintenance services.

Contract Bids Up for Grabs in 2013

PROJECT TYPE	DETAILS	ESTIMATED VALUE (RMBN)	NOTABLE POTENTIAL BENEFICIARIES
Marginal oilfields	<ul style="list-style-type: none"> 2-3 fields 	5-8 bil	Bumi Armada, Dialog, Sapura Kencana, Scomi Marine
EOR projects	<ul style="list-style-type: none"> 3 fields with respective CPP and satellite platform Fabrication of offshore structures CEOR floating solution 	0.6-1.6/field	<ul style="list-style-type: none"> Sapura Kencana (HUC and fabrication), MMHE Sapura Kencana (HUC and fabrication), MMHE Bumi Armada, MISC
HPHT projects	<ul style="list-style-type: none"> Baram Delta fields 	na	<ul style="list-style-type: none"> MMHE, Sapura Kencana, TH Heavy
Deepwater	<ul style="list-style-type: none"> 1 Tension Leg Platform 	1.5-2 bil	<ul style="list-style-type: none"> MMHE
Gas fields	<ul style="list-style-type: none"> Floating solutions, platform equipment (EPCC) and 200 km pipeline 	15 bil	<ul style="list-style-type: none"> Bumi Armada, MISC, Sapura Kencana, Petronas Gas (gas transmission), Wasco
Floating solutions	<ul style="list-style-type: none"> Belud field Dahlia, Teratai 	na	<ul style="list-style-type: none"> Bumi Armada, MISC, M3nergy
New shallow-water blocks	<ul style="list-style-type: none"> Cakerawala and Muda gas fields 	na	<ul style="list-style-type: none"> MMHE, Sapura Kencana (Fabrication, HUC, tender rigs), Wasco
Downstream	<ul style="list-style-type: none"> 2 terminals 	2.0 (Lumut), 4.0 (Pengerang)	<ul style="list-style-type: none"> Petronas Gas
Hookup and Commissioning (HUC)	<ul style="list-style-type: none"> 10 job packages 	8-10 bil	<ul style="list-style-type: none"> Sapura Kencana, Dayang, Alam Maritim, Petra Energy
Offshore Support Vessels (OSV)	<ul style="list-style-type: none"> 34 OSV charters 	2-3 bil	<ul style="list-style-type: none"> Bumi Armada, Dayang, Alam Maritim, Perdana Petroleum

Source: CLSA Asia-Pacific Markets

Reference:

- The Oil & Gas Year
- CLSA Asia-Pacific Markets
- Economic Transformation Programme (ETP)