May 2012

Staring Down the Barrel

An investor survey of the Indonesian oil and gas industry

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Introduction

Staring Down the Barrel.

Indonesia has a long history in the oil and gas industry with a diversity of geological basins which continue to offer sizeable oil and gas potential. However, Indonesia's crude oil production has declined over the last decade due to the natural maturing of producing oil fields, a slower reserve replacement rate and decreased exploration/investment. The Government of Indonesia ("GoI") continues to put some effort into increasing Indonesia's oil production and attracting investment from new and existing players, but in practice this has proven to be challenging.

This is the fifth edition of our survey of the Indonesian oil and gas industry, and where applicable we have analyzed trends in survey participants' responses from prior reports. The survey responses come from 32 different companies currently operating in the Indonesia oil and gas sector and therefore can be used to draw credible conclusions about the issues preventing the industry from reaching its full potential. The survey shows that there have been improvements in some areas, but also indicates that contract sanctity, uncertainty over cost recovery and interference from other government agencies continue to stifle investment.

We trust that this report will prove informative and would like to thank all the individuals who took the time and efforts to participate in this important undertaking.

Photo source : Premier Oil Natuna Sea B.V.

Executive Summary

Supply and demand for oil and gas

Not surprisingly, survey participants believe that the demand for oil and gas will continue to grow, both globally and in Indonesia. Similar to our 2008 and 2010 survey results, the demand for gas is expected to increase at a greater rate than the demand for oil. Most respondents (64% for oil and 91 % for gas) seem to be of the opinion that there are still significant oil and gas reserves to be discovered in Indonesia, especially in Eastern Indonesia (Papua, Maluku, etc). The majority of the survey respondents indicated that the price of crude oil would remain in the US$101 - 120 per barrel range for 2012 but either increase to US$ 120-135, or decrease to US$ 81 – US$ 100 per barrel in 2013.

Employment

In line with the continued increase in global demand for oil, the demand for employees working in the oil and gas industry in Indonesia is likely to increase over the coming years, although compared to previous survey results, there has been a shift towards “remaining the same”, especially for the expatriates. A large percentage of survey participants indicated that they expect to increase their hiring of local staff, together with a decrease in expatriate employees. Similar to the 2010 survey results, a large portion of the survey participants expect difficulties in attracting sufficient (skilled) human resources.

One of the reasons behind this is the fact that a significant proportion of skilled local employees seek employment abroad (mostly in the Middle East) in search of higher compensation.

Capital Expenditure

The participants' general view seems to be that capital spending will decline or at best stay the same over the coming 5 years. This is a significant change in sentiment compared to the 2008 survey results where over 90% of the survey participants thought capital expenditures would increase or even significantly increase. This pessimistic view is a worrying development, as the GoI is keen to see an increase in investment in the Indonesian oil and gas industry. For the first time, some survey participants indicated that they will not spend money in Indonesia going forward as no budget has been allocated to Indonesia, but they will spend their funds elsewhere.

Challenges facing the industry

There are a number of fiscal, legal and bureaucratic challenges which have hindered the achievement of Indonesia's full investment potential in the upstream oil and gas industry. With geological resources having been extensively exploited for more than four decades it is understandable that the current prospects are not as compelling as they were in the past (due to declining find sizes or the need to move into more difficult environments such as offshore deepwater or more remote areas). It is therefore of the utmost importance for the GoI to seriously address these challenges (which are not geological in nature) to attract higher investment in the upstream oil and gas industry.

From this survey, the five most critical challenges facing the industry are as follows:

1. **Interference from other government agencies, such as the tax authorities**
2. **Uncertainty over cost recovery and BP Migas / BPKP audit findings**
3. **Contract sanctity**
4. Corruption, Collusion and Nepotism ("KKN")
5. Confusion over Law No. 22/ implementing regulations

The challenges highlighted in bold above were also included in the top five challenges in our 2008 and 2010 surveys.

We noted that survey participants were slightly optimistic on the anticipated developments on a number of challenges over the longer term as they expect some improvements within the coming five years. However, despite this, the survey participants also indicated that they don't expect any significant improvement for the remaining challenges (such as interference from other government agencies, such as the tax authorities, uncertainty over cost recovery and BP Migas / BPKP audit findings and contract sanctity). The main reason behind this somewhat pessimistic view may be that many of the challenges confronting Indonesia, such as KKN and judicial reform, require structural changes and it will take a long time to implement such changes.

Competitiveness

From this survey, the five most competitive features of the Indonesian oil and gas industry are as follows:

1. Geological opportunities (including access to acreage)
2. Political stability
3. Trained workforce
4. Ease of foreign ownership
5. Risk premium

As in the 2010 survey, industry participants indicated that geological prospectivity remains Indonesia's most attractive feature, followed by political stability. This is a positive sign and should enhance levels of foreign investment, however, this needs to be tempered with the survey participants' negative views on GoI coordination. Access to a trained workforce has re-surfaced in the top five most competitive features. The oil and gas industry has a long history in Indonesia which has resulted in a large, well educated workforce, especially for the technical professions such as engineers and geologists.

Other challenges

Indonesia usually ranks high in corruption listings. The majority (60%) of the survey participants indicated that recent high profile arrests in relation to corruption are having a positive impact on the perception of Indonesia's commitment to fighting corruption. Survey participants indicated that Indonesia is on the right path, but that it will take considerable efforts from the GoI to maintain this.

Photo source : Santos Indonesia [Santos (Sanga-Sanga) Pty. Ltd.]

An overview of the oil and gas industry in Indonesia

Introduction

The oil and gas industry, both in Indonesia and globally, has experienced dramatic swings in recent years. The industry had been experiencing a significant resurgence in investment coinciding with the run up in crude oil prices which peaked at approximately US$145 per barrel in mid 2008.

This was then tempered with the onset of the global financial crisis and ensuing global recession which gained momentum in the latter half of 2008. From its peak in mid-2008, the oil price collapsed by more than 70% and ended 2008 at approximately US$40 per barrel.

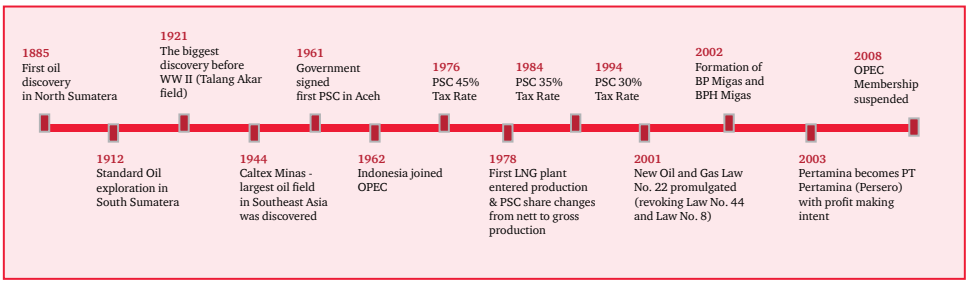
With market confidence returning crude prices recovered somewhat in 2009 at approximately US$75 per barrel, steadily increased in 2010 at approximately US$90 per barrel and approximately USD$100 per barrel at the end of 2011.

Despite the recent industry volatility, investment in the oil and gas industry and oil and gas revenue has gradually being rising. For instance, investment in the oil and gas industry in Indonesia reached US$ 12.8 billion in 2011 and contributed US$ 34.4 billion to State Revenue. Further, in 2011 more than 30 new oil and gas contracts were entered into.

Global Context

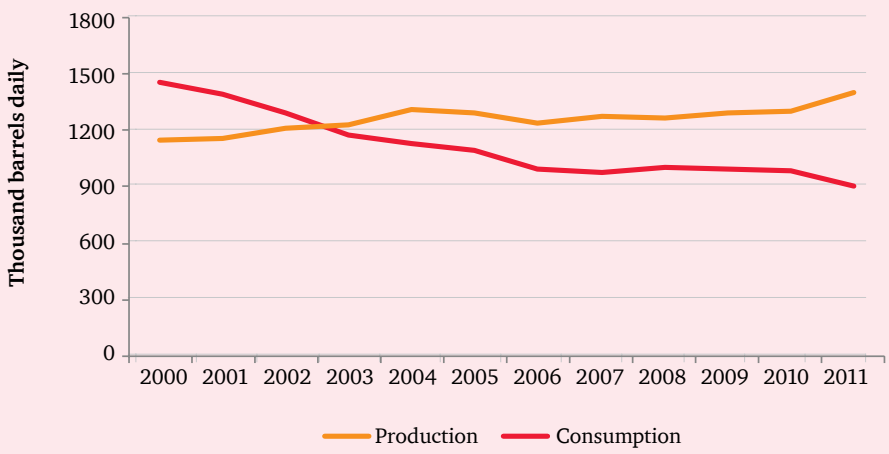
Indonesia has been active in the oil and gas sector for more than 125 years after its first oil discovery in North Sumatra in 1885, and continues to be a significant player in the international oil and gas industry.

Significant events in the history of Indonesia's Oil and Gas Sector



Indonesia holds proven oil reserves of 4.0 billion barrels and ranks twentieth among world oil producers accounting for approximately 1.2% of world oil production. Declining oil production and increased consumption resulted in Indonesia becoming a net oil importer in late 2004. This factor, along with high oil prices in 2004-2008, led the Government to substantially scale back the domestic fuel subsidy in 2008 and to decide to temporarily withdraw from the Organisation of Petroleum Exporting Countries ("OPEC") – an organization representing approximately 45% of world oil production. As the only Asian member of OPEC since 1962, the Government has indicated it will consider rejoining OPEC if the country's oil production can be increased and it can become a net exporter again.

Indonesia Oil Production and Consumption



Source:
BP Statistical Review of World Energy June 2011 for data 2000 - 2010
BP Migas for 2011 production
Business Monitor International Forecast for 2011 consumption

Indonesia is ranked eighth in world gas production, with proven reserves of 108 trillion cubic feet in year 2010. This provides Indonesia with the eleventh largest reserves in the world and the largest in the Asia Pacific region. Gas reserves are equivalent to three times Indonesia's oil reserves and can supply the country for 50 years at current production rates. Indonesia's gas industry is also being transformed by more competitive liquefied natural gas ("LNG") markets, new pipeline exports, and increasing domestic gas demand. Whilst Indonesia's natural gas production has increased in recent years (Indonesia supplied 2.6% of the world's marketed production of natural gas in 2010), the country is facing a declining global LNG market share to emerging LNG producers in Qatar, Australia, Algeria and Malaysia. After announcing its 2006 policy to re-orient natural gas production to serve domestic needs, Indonesia dropped from its status as world's largest exporter of LNG in 2005 to the world's second largest exporter of LNG in 2010. It currently exports LNG to Japan, South Korea and Taiwan representing approximately 11% of the world's LNG exports. Indonesia's three existing LNG facilities are based in Arun in Aceh, Bontang in East Kalimantan and Tangguh in Papua. The Tangguh Project, which commenced first production mid 2009, broadens Indonesia's LNG customer base to China and the west coast of the United States.

Resources and Production

Key Indicators - Indonesia's oil and gas industry

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Reserves											
Oil (Million Barrels)	9,754	9,747	9,094	8,613	8,100	8,680	8,400	8,220	7,993	7,764	7,730
Proven	5,095	4,722	4,437	4,301	4,440	4,370	3,990	3,750	4,303	4,230	4,040
Potential	4,659	5,025	4,657	4,312	3,660	4,310	4,410	4,470	3,690	3,534	3,690
Gas (TCF)	168	176	168	189	180	170	165	170	159	157	No data
Proven	92	90	92	98	97	94	106	112	107	108	104
Potential	76	86	76	91	83	76	59	58	52	49	No data
Production											
Crude oil (1000 barrels)	1,387	1,289	1,176	1,130	1,090	996	972	1,003	990	986	903**
Natural Gas (million standard cu m)	66,300	69,700	73,200	70,300	71,200	70,300	67,600	69,700	71,900	82,000	86,600*
LPG (1000 MT)	2,188	2,099	1,922	2,945	2,743	1,774	2,117	2,224	2,181	No data	No data
LNG (100 MT)	23,883	26,215	27,392	25,238	23,677	22,400	20,851	19,034	19,933	24,184	No data
New Contract signed	10	1	15	17	23	5	28	34	34	21	31

Source:
- 2011 Gas Proven : BP Migas
- 2011 Oil Proven : ESDM
- 2001 - 2010 Oil and Gas Proven : BP Statistical Review of World Energy June 2011
- 2001 - 2011 New Contract Signed : ESDM

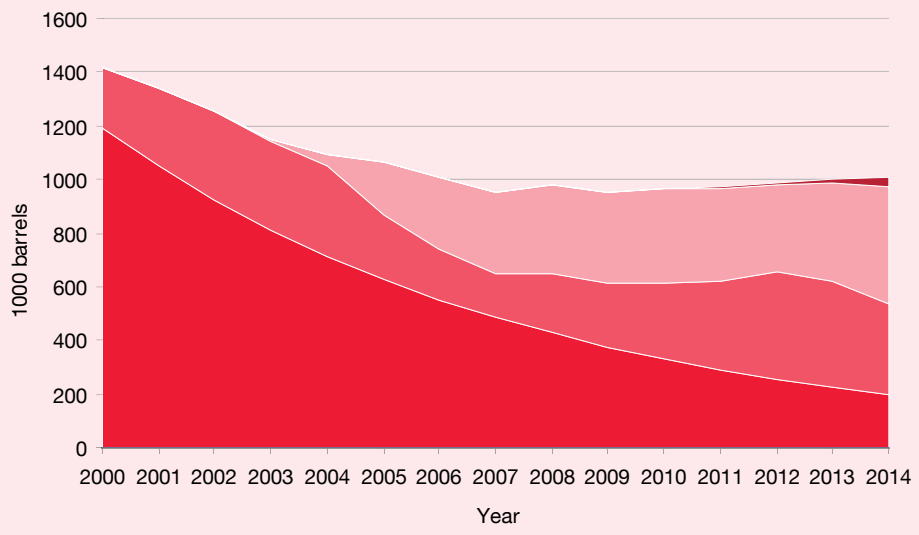
* Natural gas : Business Monitor International Forecast

** Crude oil : BP Migas

Indonesia has a diversity of geological basins which continue to offer sizeable oil and gas potential. Of the estimated 128 oil basins, only 38 have been extensively explored. Most oil production and exploration is currently carried out in the basins of Western Indonesia (the bulk of Indonesia's oil reserves being located onshore and offshore of central Sumatra and East Kalimantan).

Indonesia's crude oil production has declined over the last decade due to the natural maturing of producing oil fields, a slower reserve replacement rate and decreased exploration/ investment. During 2011, Indonesian total crude oil production was 0.903 million barrels per day, a drop of 34 percent since 2001.

Indonesia Oil and Condensate Production Forecast



- New discoveries from exploration
- New fields
- Production optimisation
- Do nothing

Source: Directorate General of Oil & Gas (MoEMR) 2008-2009 (actual) 2010-2014 (forecast)

As Indonesia's oil production has decreased the country has attempted to shift towards natural gas (and to a lesser extent, geothermal) especially for power generation. This can be seen by the relative increase in the number of gas wells drilled for the years 2003 to 2009 as displayed in the table below.

Wells Completed

	2003	2004	2005	2006	2007	2008	2009
Oil	558	807	605	566	570	574	568*
Gas	42	88	430	402	420	439	434*
Dry hole	25	80	52	49	55	62	40
Other	288	125	63	58	55	52	not available
Total	**913**	**1,100**	**1,150**	**1,075**	**1,100**	**1,127**	**1,042**
Average depth (ft)	3,079	3,330	3,350	3,120	3,350	3,597	not available

Source: OPEC 2008 Annual Statistical Bulletin for data 2003-2008

Directorate General for Oil & Gas (MoEMR) for 2009 data.

* Pro rata estimate

Other related sectors

Indonesia's total geothermal energy potential is equivalent to 29,177 MW of electricity – the largest geothermal energy capacity in the world. Of these reserves total 12,756 MW is confirmed as probable, 823 MW as possible and 2,288 MW as proven. The remaining 13,296 MW is still speculative and hypothetical resources. However, progress in this sector has been slow and present installed capacity is only 4.2 percent of its potential or around 1,226 MW which compares to a target of 9,500 MW set for 2025. Geothermal energy is a special focus of Indonesia's US$400 million Clean Technology Fund co-financed by the World Bank and Asian Development Bank for which a significant scale-up of large-scale geothermal power development has been identified as a priority.

Indonesia's coal bed methane ("CBM") reserves are estimated to be 453 Tcf which is larger than Indonesia's estimated conventional natural gas resource and ranks the sixth in the world. But utilization is still low. The first CBM contract was signed in 2008 and by the end of April 2012 there were fifty CBM cooperation contracts. Recently, CBM was used to produce electricity, although this only accounted for only a small amount of capacity. The government has set daily production targets of 500 mmcf by 2015 rising to 1,000 mmcf by the year 2020 and 1,500 by the year 2025.

In addition, Indonesia is working at developing unconventional gas such as shale gas. Indonesian shale gas potential is estimated around 574 Tcf, bigger than CBM. In order to support the potential of this energy the government plans to start completing the regulations concerning shale gas by 2012.

Photo source : Chevron IndoAsia Business Unit

Survey approach

Survey background

This is the fifth edition of the Indonesian oil and gas survey. The purpose of the survey is to help inform the public and private sectors in Indonesia and abroad about Indonesia's upstream petroleum industry and to highlight some of the challenges attracting optimal investment and achieving its full potential. Where possible, we have compared current results with the results from prior surveys to highlight trends and to assess whether conditions are deteriorating or improving.

Survey coverage

The 2012 report is based on the results of a confidential comprehensive survey circulated by PwC Indonesia to senior management (Country Managers, CFO's, COO's, Finance Managers, etc) of a wide range of companies operating in the Indonesian oil and gas industry (E&P, drilling, oil field services and seismic analysis companies). Refer to charts 4.1 and 4.2 for background on the survey participants. The survey questionnaire included both quantifiable and qualitative data sections. Because of the incomplete nature of certain quantifiable data responses we have been unable to utilise this data in its entirety in our report.

The survey questionnaire was sent to individuals working for 76 different companies active in the Indonesian oil and gas industry. We received 39 responses (representing 36 different companies currently active in the Indonesia oil and gas sector); Responses from several companies were aggregated and therefore represent the combined views of several executives. Completed surveys came from companies representing almost 75% of Indonesia's petroleum production in 2011 and several recent entrants to the Indonesia oil and gas sector that

are currently in the exploration stage. As such, the views expressed by the survey participants can be viewed as representative conclusions on issues that may be preventing the industry from reaching its full potential, and to make credible observations about investment and spending trends.

Chart 4.1

Survey Participants' background

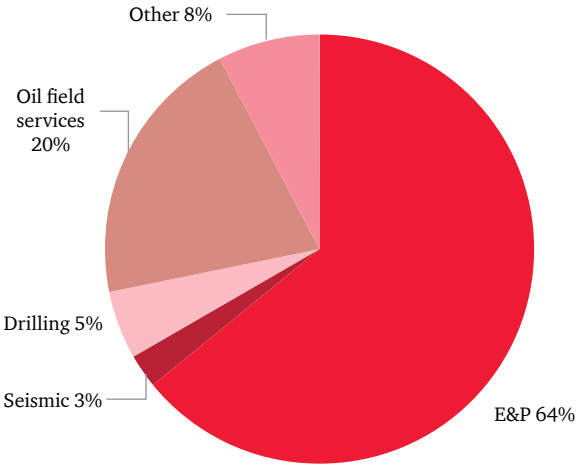


Chart 4.2

Survey participants' functional role

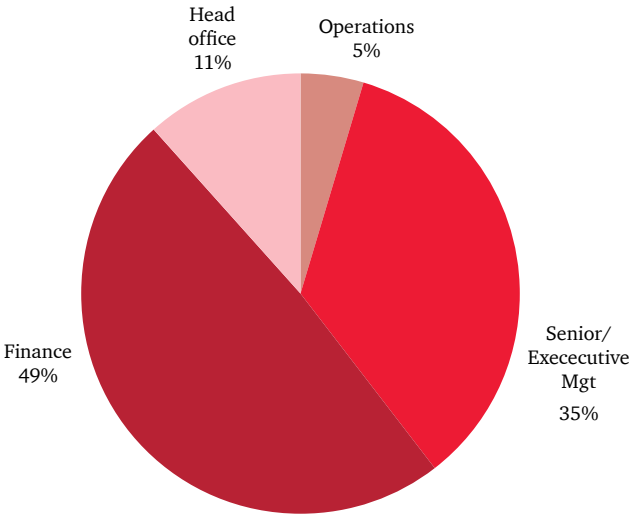


Photo source : Santos Indonesia [Santos (Sampang) Pty.Ltd.]

Supply and demand for oil and gas

As expected, almost all survey respondents are of the opinion that the demand for oil and gas will continue to (significantly) increase in the next five years (see charts 5.1 and 5.2). Although oil prices have come down from the historical highs reached in 2008, the current commodity prices still allow difficult-to-reach areas and reservoirs to be economically viable. As was also the case in our 2010 survey, none of the participants expect the global demand for oil or gas to decrease. As can be seen on chart 5.2, the survey participants indicated that the demand for gas, both globally and in Indonesia, would significantly increase in the next five years. This may be an indication of a shift towards cleaner energy. It is interesting to note that survey participants expected the global demand for oil to increase more than the demand for oil in Indonesia. This may be due to the continuing increase in demand for oil in countries like India and China.

A. Will Indonesian and world oil and gas demand rise or fall over the next five years?

Chart 5.1
Indonesian and world oil demand

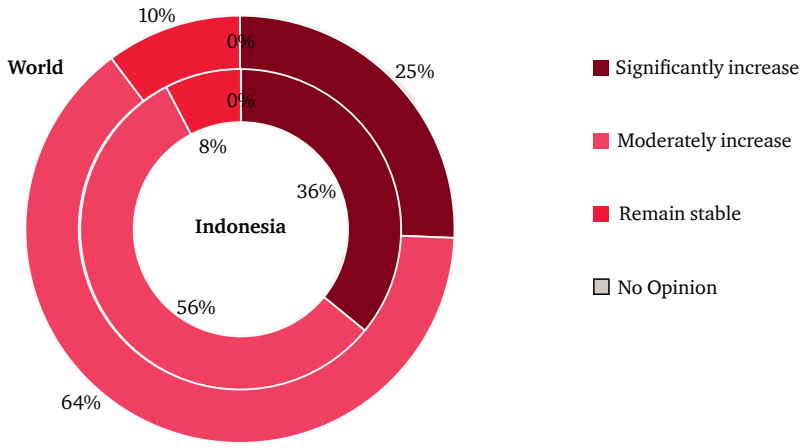
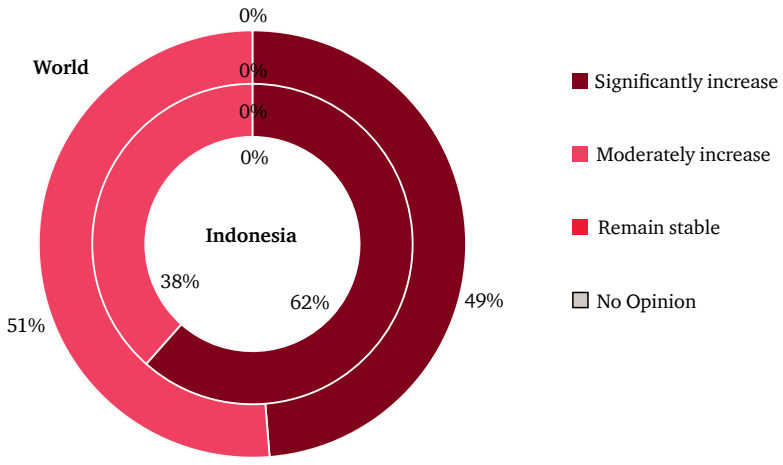


Chart 5.2

Indonesian and world gas demand



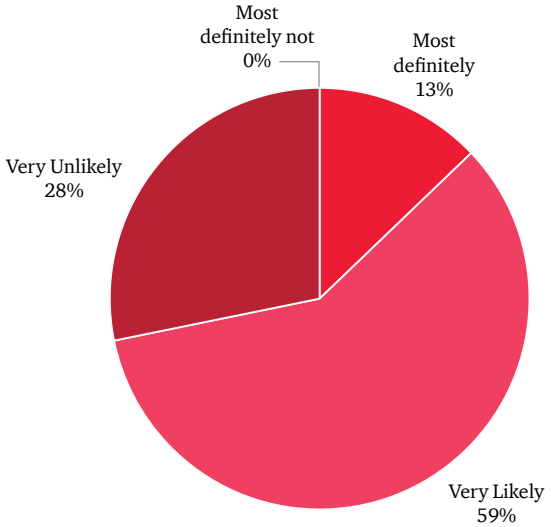
"Western Indonesia is still attractive for new resources, albeit much smaller field sizes. Eastern Indonesia is largely deepwater and exploration will fail unless GoI provides better incentives."

Survey participant comment

B. Are there significant Indonesian oil reserves yet to be discovered?

Chart 5.3

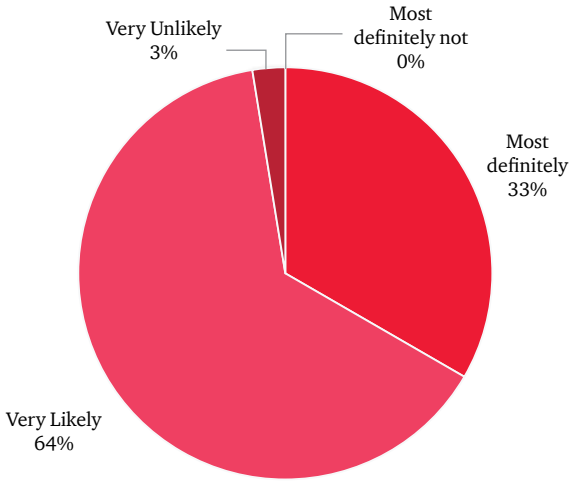
Significant oil reserves will be discovered?



C. Are there significant Indonesian gas reserves yet to be discovered?

Chart 5.4

Significant gas reserves will be discovered?



Most respondents (72% for oil and 97 % for gas) are of the opinion that there are still significant oil and gas reserves to be discovered in Indonesia. Consistent with our 2010 survey, respondents indicated that they believed there were slightly more gas reserves to be discovered than oil reserves. Almost 28% thought it was very unlikely that there are still significant oil reserves to be discovered. Whereas, only 3% thought it was very unlikely that there are still significant gas reserves to be discovered. In line with previous surveys, overall survey participants still believe that geological prospectivity is still one of Indonesia's most competitive features.

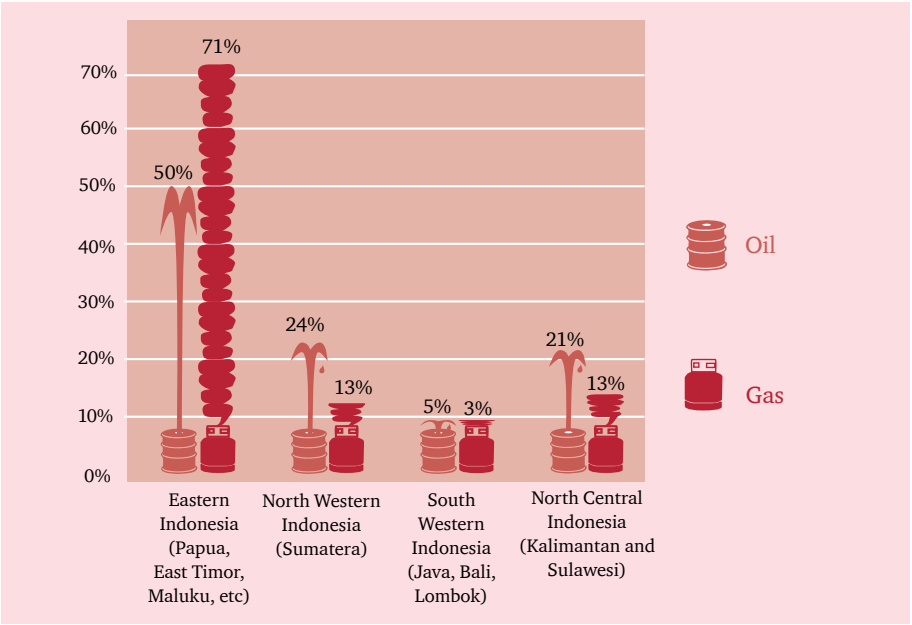
"The entire country is rich in natural resources."

Survey participant comment

D. Which of the following areas offer the greatest potential for new discoveries of crude oil and gas reserves?

Chart 5.5

Potential for new reserves



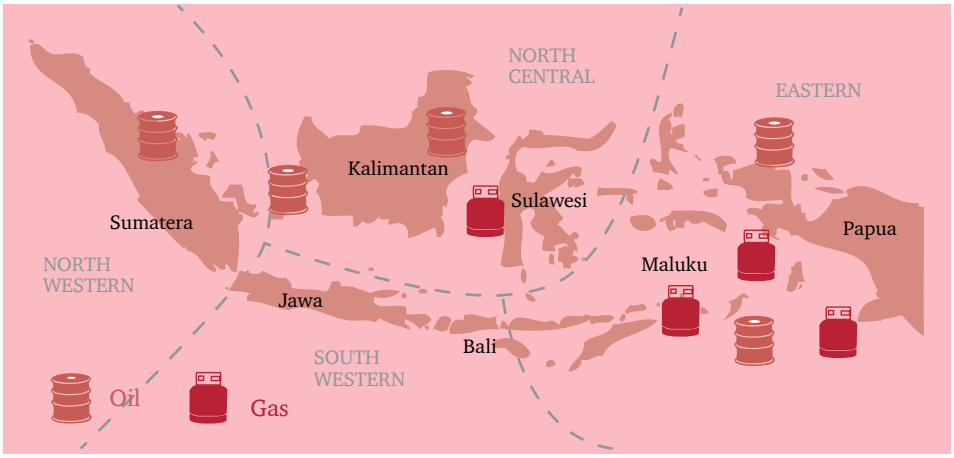
As can be seen in chart 5.5 above, the majority of oil and gas reserves are believed to be in Eastern Indonesia (Papua, East Timor, Maluku, etc), followed by North Central Indonesia (Kalimantan, Sulawesi). Consistent with prior surveys, participants are less optimistic about finding new oil reserves in North Western Indonesia (Sumatera), notwithstanding that this basin provides a large percentage of the country's current oil production. In our 2010 survey, 60% of the survey participants indicated that new oil discoveries would be in Eastern Indonesia, this percentage has now decreased to 28%, whereas in 2012 only 8% of survey participants believed new oil discoveries are expected in North Western Indonesia (2010: 10%). The expectations for South Western and North Central Indonesia have remained more or less the same with our 2010 survey results.

The high expectations for gas in Eastern Indonesia are a promising feature of the industry feedback.

"Further exploration activities will depend on the investment climate in the Oil & Gas industry. If the Government continues to introduce new regulations/ decrees that discourage new investment, further exploration will likely decline."

Survey participant comment

Map of Indonesia



"Western Indonesia is still attractive for new resources, albeit much smaller field sizes. Eastern Indonesia is largely deepwater and exploration will fail unless GoI provides better incentives."

Survey participant comment

E. What will be the focus of your company's Indonesian exploration activities for the next three years?

Given the expectations of survey participants that there are still significant undiscovered oil and gas reserves in Indonesia, it is not surprising that the majority of the participants indicated that they will focus on a combination of oil and gas exploration for the next three years. This is generally consistent with prior surveys. Participants also indicated that there will be more focus on gas exploration in the coming years (26% in 2012 versus 18% in 2010). This is a trend that started in 2010.

Chart 5.6

Focus of exploration activities

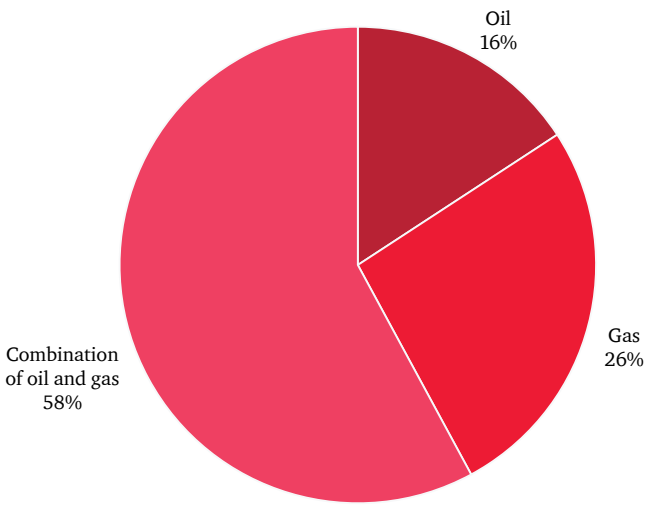


Photo source : Santos Indonesia [Santos (Sampang) Pty Ltd.]

Employment

"Finding well-trained, experienced nationals continues to be a serious issue. The good ones have moved overseas. The GOI must stand firm against the nationalists who would continue their drive to remove expats and provide jobs to under-qualified, less-experienced nationals. This will create further inefficiencies and unsafe practices which will result in a major incident. The age limit of 60 for expats is draconian - these are the very experienced people the country needs."

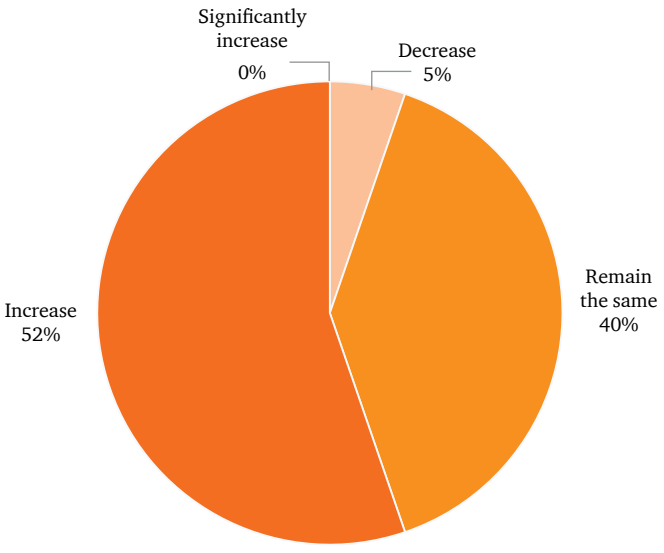
Survey participant comment

A. Compared to 2010, will the level of employment in the oil and gas industry in Indonesia increase or decrease?

The belief that significant undiscovered oil and gas reserves exist in Indonesia, undoubtedly gives rise to the high percentage of survey participants who think that employment in the Indonesian oil and gas industry will increase over the coming years. More than 50% of the participants believe that the employment will increase however, the percentage (2012: 55%) is roughly the same as the 2010 survey (52 %). The remaining half of the participants indicated that they think employment will remain stable (40%) or decrease (5%).

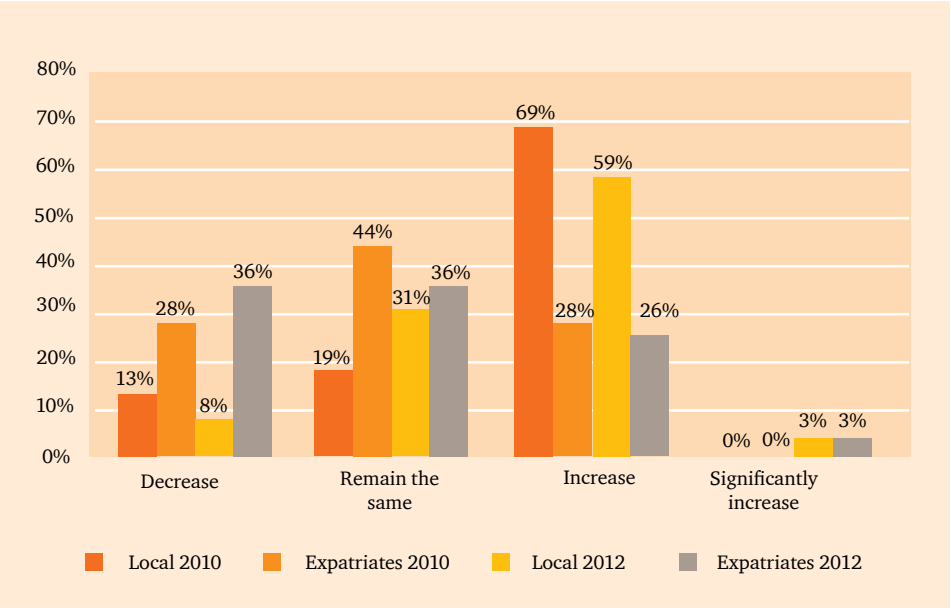
Chart 6.1

Employment in oil and gas industry



B. Compared to 2010, will the number of employees in your company increase or decrease?

Chart 6.2
Employee numbers



"Pressures on expatriate costs and difficulty to obtain work permits preclude companies from doing work in Indonesia."

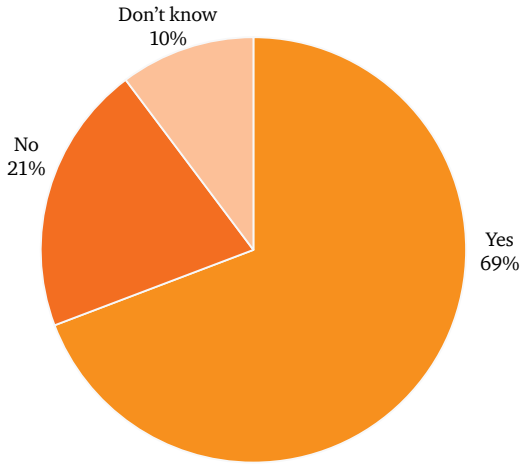
Survey participant comment

Not surprisingly, survey participants see the number of employees working in the oil and gas industry in Indonesia increasing over the coming years, although compared to previous survey results, there has been a shift towards "remaining the same", or even "decrease", especially for the expatriates. A number of survey participants commented that the decrease in expatriate numbers is a worry as they have a wealth of experience. One of the reasons for this decrease could be the age limit imposed by BPMigas. A large percentage of survey participants indicated that they expect to increase their hiring of local staff. However, a recurring theme in the comments made by survey participants was that they consider attracting qualified and talented staff to be one of the most significant challenges facing the industry in Indonesia and across the globe, both now and in the future. Consistent with our 2010 survey, several respondents commented on the trend for skilled (national) employees to leave Indonesia to work in other locations (mostly the Middle East). One possible reason behind this "brain drain" is the somewhat restrictive salary guidelines from the regulator which result in skilled local employees seeking more attractive employment packages outside Indonesia.

C. Do you expect the industry to encounter difficulties in hiring and retaining employees in 2012?

Chart 6.3

Difficulties in hiring and retaining employees



"Indonesians are now very active in seeking jobs overseas and moving from the service industry to oil and gas companies. We feel we will see pressure to attract and retain staff."

Survey participant comment

D. Does the Indonesian oil and gas industry have a sufficient number of skilled staff to perform these activities?

Given that a majority of survey participants indicated that they expect to encounter difficulties retaining employees in 2012, it is worrying that they also consistently indicated that the Indonesian oil and gas industry currently does not have a sufficient number of skilled staff. On a more positive note, the percentage of survey participants who believe that Indonesia does not have sufficient skilled Indonesian staff has come down from 67% in 2010 to 59% in 2012 (see Chart 6.4)! However, the fact that two-thirds of survey participants still believe that the Indonesian oil and gas sector lacks a sufficient number of skilled staff, combined with the fact that over half also expect difficulties in hiring and retaining employees is not a good sign for the industry.

"Oil and gas should provide open opportunities, internal and overseas training, and short term employment for fresh graduates."

Survey participant comment

Chart 6.4

Sufficient skilled staff

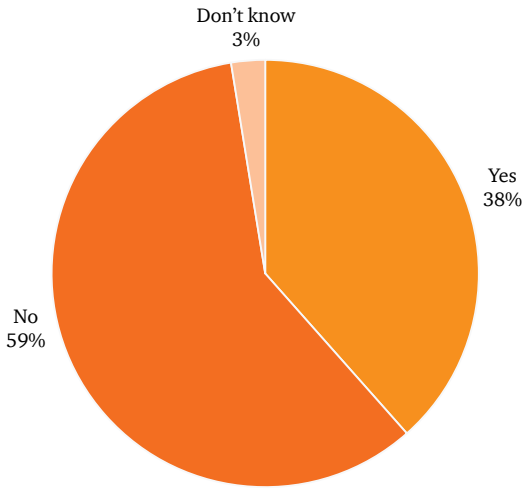


Photo source: Talisman Energy Inc. [Talisman (Sageri) ltd.]

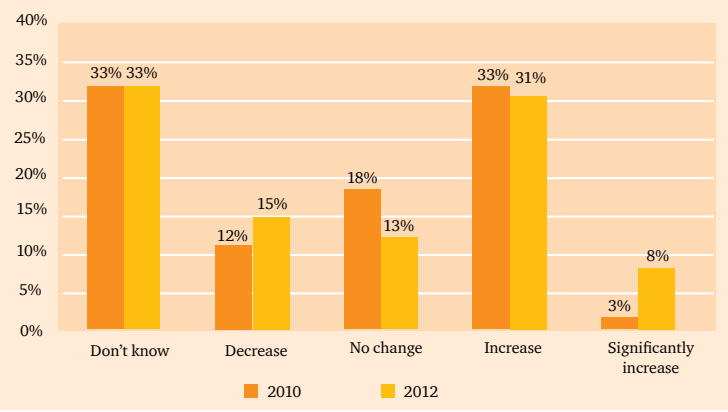
Capital expenditure

A. Compared to 2010, how will the capital spending for the Indonesian oil and gas industry change over the next five years?

As can be seen in the chart below, 48% of the participants' general view still seems to be that the capital spending will decline or stay the same over the coming 5 years. This is a worrying trend especially since, in our 2008 survey, over 90% of survey participants thought capital expenditure would increase or significantly increase. Approximately 33% of survey participants indicated that they "don't know" what capital expenditure will do over the next five years which we are interpreting as a negative trend given the long-term nature of the industry and need to plan far in advance before investments reap measurable returns. This pessimistic view is a worrying development as the GoI is keen to see an increase in investment in the Indonesian oil and gas industry. For the first time, some survey participants indicated that they will not spend any money in Indonesia going forward, as no budget has been allocated to Indonesia and their companies had decided to spend their investment funds elsewhere.

Chart 7.1

Capital spending in Indonesia



"We have no capital budget for Indonesia for 2012 and beyond. Corporate funding is going elsewhere."

Survey participant comment

Chart 7.2

Source of capital

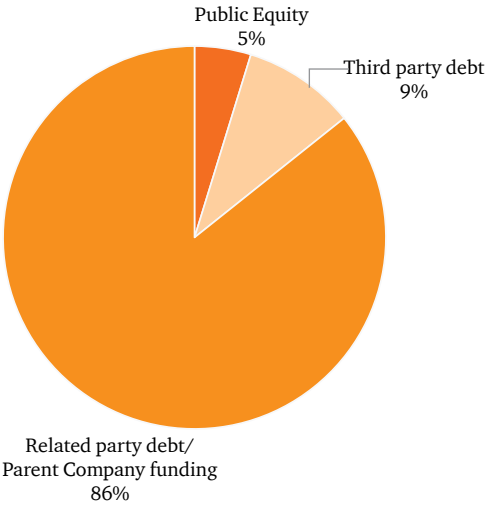
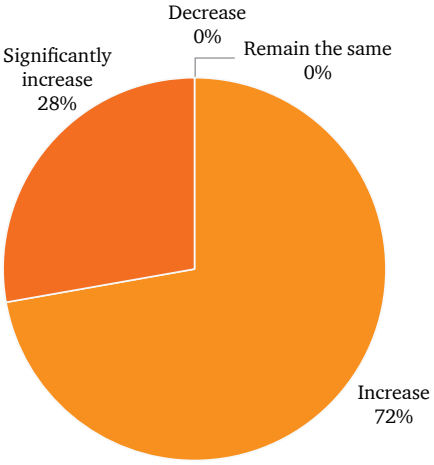


Chart 7.3

Need for capital



B. What will be the primary source of capital for the Indonesian oil and gas industry over the next five years?

As can be seen in Chart 7.2, the primary anticipated source of capital seems to be related party debt/ parent company funding, which is consistent with prior year surveys and not surprising as the industry is dominated by a few large international players. The use of third party debt seems to have remained the same as in our 2010 survey. Given the low interest rates, we would have expected the use of third party debt to play a more substantial role. However, since the global financial crisis, companies may be more careful in taking on additional debt. It is interesting to see that the use of public equity has decreased from 15% in 2010 to only 5% in 2012.

C. Compared to 2010, how will the Indonesian oil and gas industry's need for capital change over the next five years?

Not surprisingly a majority of the industry participants believe that the need for capital will continue to increase over the next five years. The anticipated increase in capital spending is likely to be a result of the increased focus on mature fields and more remote (ie difficult) exploration/deepwater activities which are more costly to run/operate. The fact that industry participants expect the need for capital to (significantly) increase, but at the same time expects less desire to allocate additional funds may be an early warning sign of problems going forward.

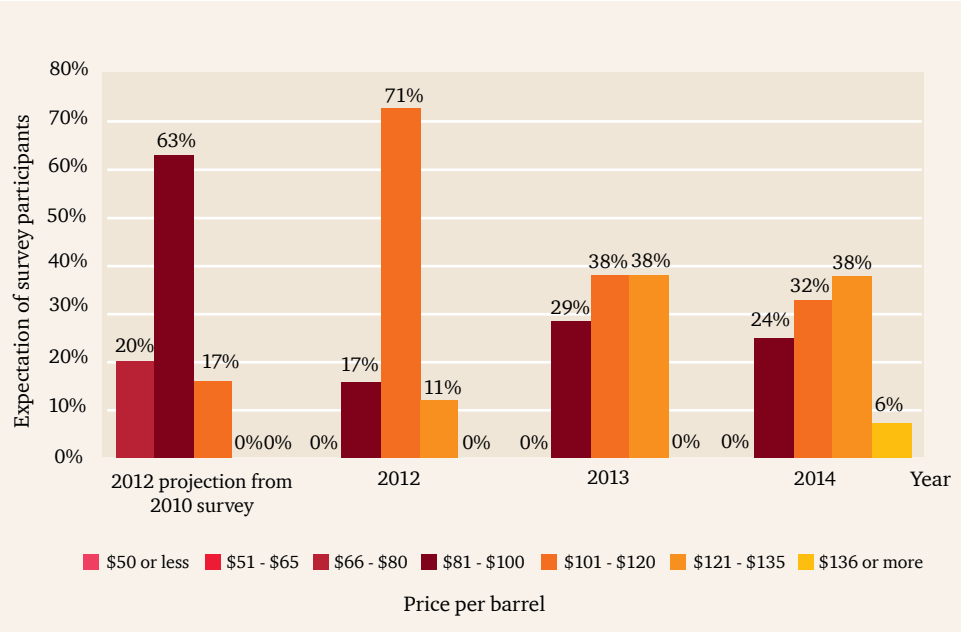
"If GoI wants to boost the source of capital, should consider the limited bank interest as part of the cost recovery for specific areas of development or exploration such as deep water."

Survey participant comment

D. What do you anticipate to be the average US$ price in per barrel of crude oil in 2012, 2013 and 2014?

Chart 7.4

Average price in US$ per barrel of crude oil



The majority of the survey respondents indicated that they expected price of crude oil would remain in the US$101 – 120 per barrel range for 2012 but either increase to US$ 120 – 135, or decrease to US$ 81 – 100 per barrel in 2013 (the survey was undertaken in early 2012 when oil prices ranged between US$101 and US$120 per barrel). Not surprisingly, the further into the future the projection is carried, the wider the range of responses from participants. Although it should be noted however that none of the participants thought that the price of oil would go below US$ 81 – 100 per barrel. 6% of the participants indicated that they though the price of oil would exceed US$ 135 per barrel in 2014.

"Because of the PSC structure project financing can be difficult in the Indonesian environment."

Survey participant comment

Photo source : PwC

Challenges facing the industry

"Contract sanctity is a must for investment."

Survey participant comment

To gain an understanding of the most critical challenges facing the industry we asked survey participants to rate 15 different challenges confronting the Indonesian oil and gas industry, as well as indicating any other challenges they deemed relevant. On a scale of 1 to 5 (1 being "Significantly Important", 3 being "Moderately Important" and 5 being "Not Important at All") survey participants were asked to rate the following:

Table 8.1

Critical Industry Challenges	
Confusion as to the roles of the central, provincial and regional governments	Relations with local government
Interference from other government agencies, such as the tax authorities	Confusion as to the role of Pertamina/BP-Migas and the Ministry of Energy and Mineral Resources ("MEMR")
Corruption, collusion and nepotism ("KKN")	Contract sanctity
Relations with the local community	Confusion over Law No. 22/ Implementing regulations
Security of assets, people and ownership rights	Confusion over BP Migas regulations/"grand fathering" of prior Pertamina rulings
Labor regulations	Confusion over energy policy and supporting blueprints (gas utilization etc.)
Political risks	Uncertainty over cost recovery and BP Migas / BPKP audit findings
Taxation	

"GR79 has substantially eroded benefits associated with PSC agreements. Protection of long term investment has been compromised, as such long term investment in Indonesia may see a reduction."

Survey participant comment

Top five challenges facing the industry

Table 8.2

Challenge	2010 survey % of responses rated issue as "1 - Significantly Important"	2010 survey % of responses rated issue as "1 - Significantly Important"	2008 survey % of responses rated issue as "1 - Significantly Important"
Contract sanctity	54%	48%	32%
Taxation	53%	32%	24%
Interference from other government agencies, such as the tax authorities	49%	55%	30%
Uncertainty over cost recovery and BP Migas / BPKP audit findings	48%	48%	37%
Confusion as the roles of the central, provincial & regional government	42%	38%	-

The challenges highlighted above in table 8.2 were also included in the top five challenges in our 2010 survey.

"The PSC system has become unworkable due to the paranoia surrounding cost recovery."

Survey participant comment

The 2012 survey results are probably not surprising given the recently issued regulations related to cost recovery and taxation. The 2012 survey participants are clearly more aligned in terms of the areas which are significantly important to the industry, namely 1). Contract sanctity, 2). Taxation, 3). Interference from other government agencies, such as the tax authorities 4). Uncertainty over cost recovery and BP Migas / BPKP audit findings, and 5). Confusion as the roles of the central, provincial & regional government.

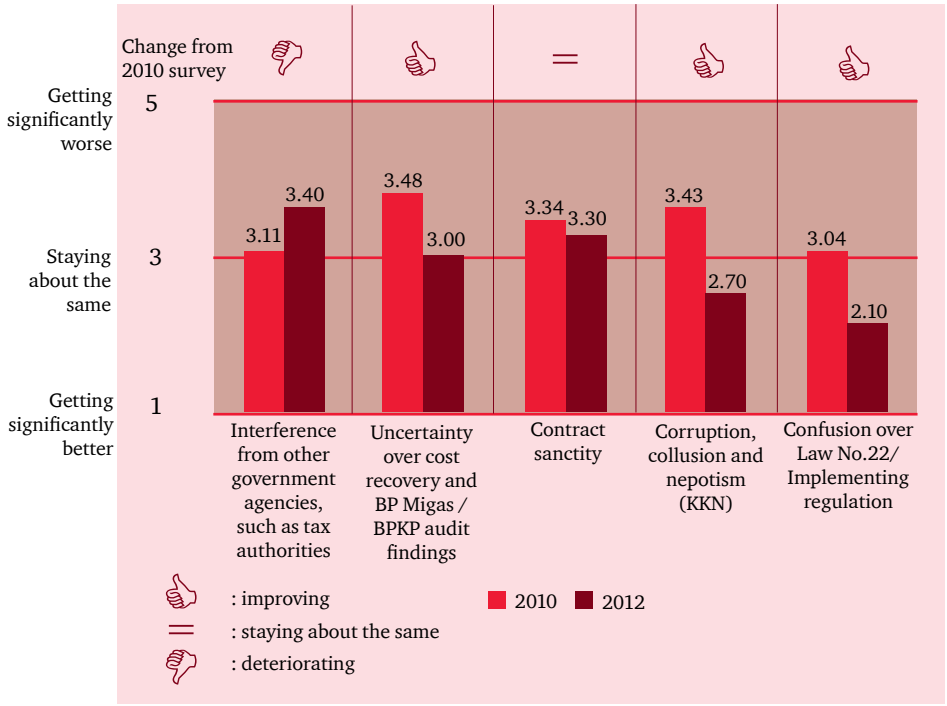
"The issuance of GR-79 has created more uncertainties around contract sanctity especially in respect of taxation application and other fiscal terms. There will be more government stakeholders to manage including Directorate General of Taxes, the Supreme Auditors and local governments"

Survey participant comment

Survey participants' view on the development of challenges over the next 12 months:

Chart 8.1

Development of challenges (over the next 12 months)



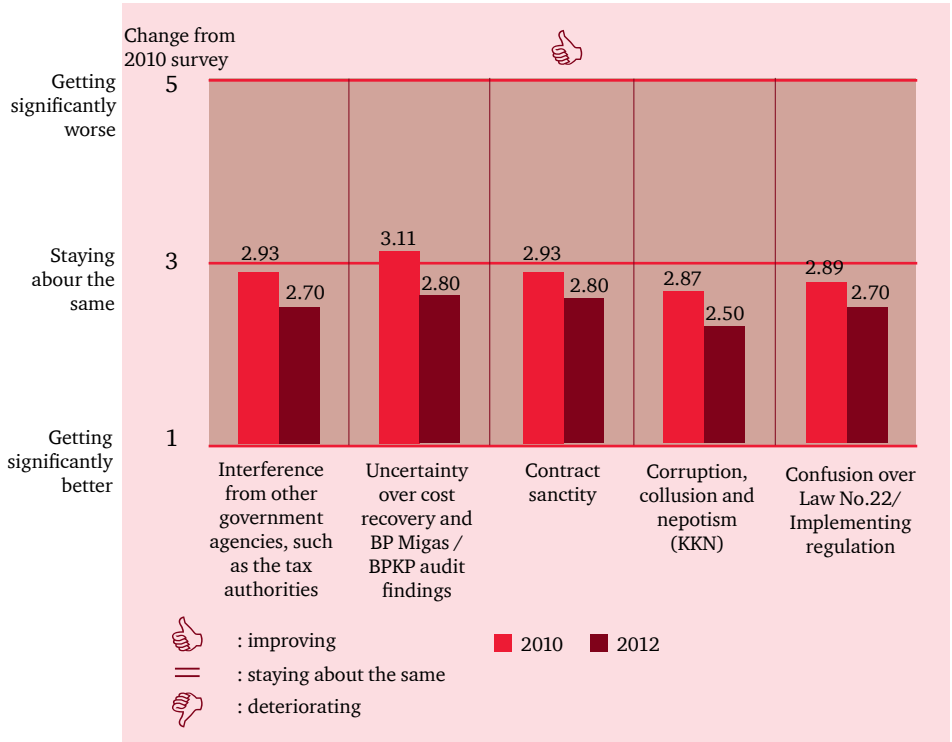
"The government needs to stop trying to "micromanage" the industry and let capitalism work. There are too many examples of policies and regulations being issued without adequate consideration of the consequences to the industry and its competitiveness."

Survey participant comment

Survey participants' view on the likely status of challenges (over the next one to five years):

Chart 8.2

Likely status of challenges (over the next one to five years)



"History will record that the past decade has seen a big increase in political interference in the oil and gas industry and it is no surprise that oil and gas production has been adversely affected. Ours is an industry that requires long-term investment, longer than the government political cycles and only with contract sanctity and stability in the regulatory regime can that investment be sustained. Our industry provides the bulk of the GDP for Indonesia yet has been hijacked by the Ministry of Finance as a result of their incessant greed for a greater share of revenues. This has clearly stifled investment, particularly in the Exploration sector - comparative data shows that Indonesia can no longer compete with its regional neighbors."

Survey participant comment

As can be seen in chart 8.1, survey participants were generally neutral or pessimistic on the development of these challenges over the next 12 months. We noted that survey participants were slightly optimistic on the anticipated developments on a number of challenges over the longer term as they expect some improvements within the coming five years. However, despite this, the survey participants also indicated that they don't expect any significant improvement for the remaining challenges such as interference from other government agencies (including the tax authorities), uncertainty over cost recovery and BP Migas / BPKP audit findings and contract sanctity. The main reason behind this somewhat pessimistic view may be that many of the challenges confronting Indonesia, such as KKN and judicial reform, require structural changes, which will take time to implement.

Photo source : ExxonMobil Oil Indonesia Inc.

Competitiveness

Indonesia's petroleum industry has for decades been viewed by international petroleum investors as an attractive destination for investment however in recent years there has been some concern that the country's competitiveness is slipping. To gauge the accuracy of this concern we asked the survey participants to rate Indonesia's competitiveness compared to other countries on the following features (1: highly competitive, 3: neutral, 5: not competitive at all):

Table 9.1

Feature	
Geological opportunities	Infrastructure
Trained workforce	Risk premium
Political stability	Regulatory framework
Environmental regulations	Contract and project approval process
Ease of foreign ownership	The existing fiscal framework

What are the most attractive features of investing in Indonesia?

Table 9.2

Feature	2012 Score	2010 Score	Change from 2010 survey
Geological opportunities (including access to acreage)	1.9	1.8	=
Trained workforce	2.4	2.5	=
Political stability	2.8	2.4	
Environmental regulation	2.8	3.0	
Ease of foreign ownership	2.9	2.6	

The features highlighted were in the top 5 competitive features in the 2010 survey.

As can be seen in Table 9.2, survey participants indicated that Indonesia's most competitive features have remained the same compared to the last survey or have decreased slightly. Geological opportunities have always been regarded as Indonesia's most competitive feature. It is interesting to note that environmental regulations and ease of foreign ownership are regarded as significant competitive features, especially since environmental regulations had been classified as one of Indonesia's least competitive features in our 2010 survey. The fact that the political stability has remained a competitive feature may be the result of increased government focus on stability throughout the archipelago.

"Indonesia is facing general elections within 2 years from now. It's difficult to expect more business friendly policies to foreign investors as it might be counter productive to the politician populist agenda around nationalization."

Survey participant comment

What are the least competitive features of investing in Indonesia?

Table 9.3

Feature	2012 Score	2010 Score	Change from 2010 survey
Contract and project approval process	3.5	3.3	👎
Existing fiscal framework	3.5	3.2	👎
Regulatory frame work	3.4	3.4	=
Infrastructure	3.2	3.1	=
Risk Premium	3.2	3.0	👎

Ratings:

1: Highly attractive

3: Neutral

5: Highly unattractive

The features highlighted were in the top 5 least competitive features in the 2010 survey.

The fact that the views on the regulatory framework have remained the same is somewhat surprising as there has been a lot of push back from the industry on the newly issued regulations on cost recovery (e.g GR 79) and taxation.This highlights once more that survey participants value contract sanctity and do not appreciate any changes to existing contracts. This is probably also the reason why risk premium scored lower compared to our 2010 survey. It is interesting to note that environmental regulations have now become one of Indonesia's most competitive features, as they were listed as one of Indonesia's least competitive features in 2010.

In addition, we asked survey participants their views on the developments they expected in the competitiveness of these features. As shown in charts 9.1 and 9.2, survey participants indicate that they believe that Indonesia's most competitive features will improve over the coming 12 months and Indonesia's less competitive features will remain he same, except for the fiscal framework which they believe will get worse over the next 12 months. Should this view persist it will not help to attract investors.

However it should be noted that, similar to our 2010 survey, participants remain optimistic regarding the development of all features over the coming 5 years.

In 2010, 2008 and 2005 PwC undertook similar surveys and included many of the competitive features listed on the previous page. Although not true in all respects, we noted that Indonesia seems to have continuously lost competitiveness in several areas compared with the results from previous surveys, or at best is staying the same.

Chart 9.1
Development of competitiveness (within 12 months)

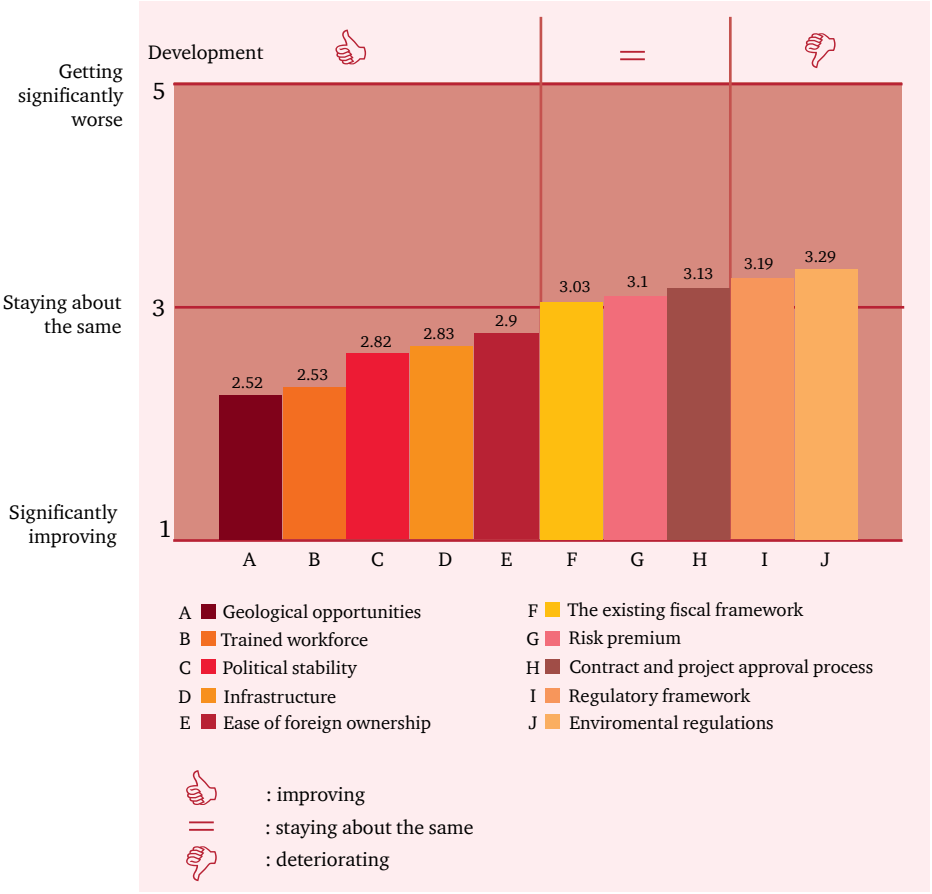
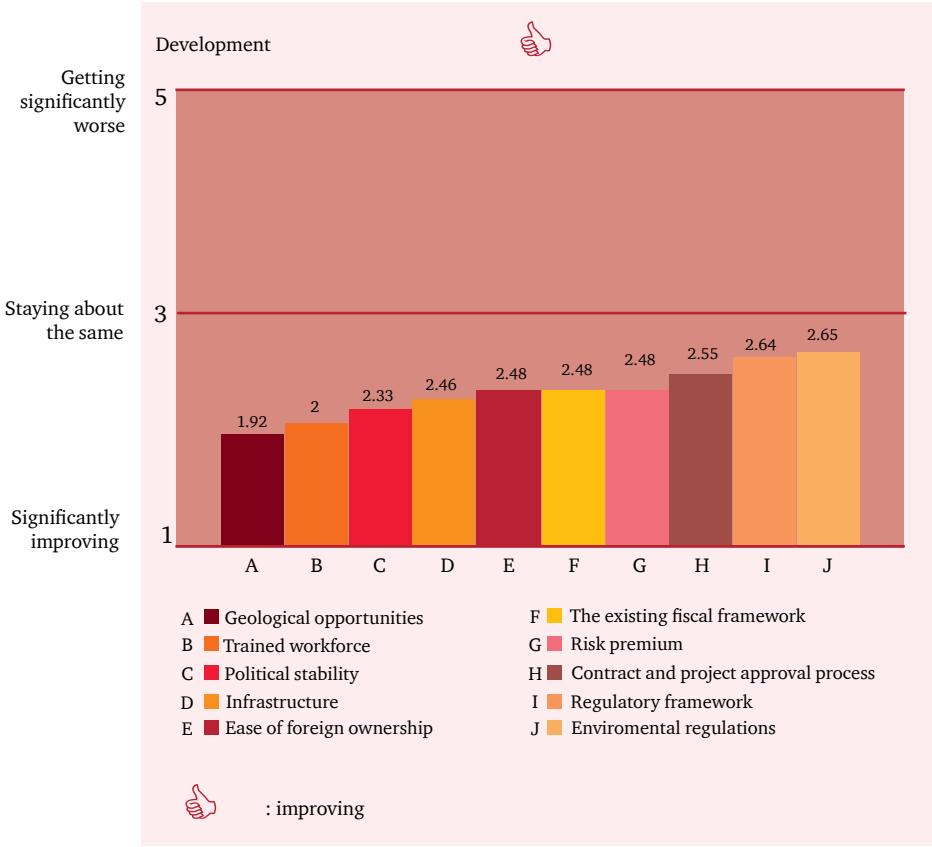


Chart 9.2
Development of competitiveness (within 1- 5 years)



Indonesia's competitiveness compared to other oil & gas producing countries

Although no significant changes compared to the 2010 survey results, it seems that survey participants are slightly more optimistic and expect some improvement on certain challenges in the one to five year window, albeit this is a less overwhelming perspective than in our 2010 survey. This may be because the majority of these challenges are regarded as structural and require a long time to achieve real improvement.

Survey participants were asked to rate the relative competitiveness of different countries in comparison with Indonesia on four different features, namely geological prospects (including access to acreage), infrastructure, political stability and regulatory framework.

(Please see the map on the inside of this fold out page, for the results)

Chart 9.3

Norway	
Geological prospects (including access to acreage)	=
Infrastructure	=
Political stability	👍
Regulatory framework	👍

China	
Geological prospects (including access to acreage)	=
Infrastructure	=
Political stability	👍
Regulatory framework	=

Vietnam	
Geological prospects (including access to acreage)	=
Infrastructure	=
Political stability	👍
Regulatory framework	=

USA	
Geological prospects (including access to acreage)	👍
Infrastructure	👍
Political stability	👍
Regulatory framework	👍

Thailand	
Geological prospects (including access to acreage)	=
Infrastructure	=
Political stability	=
Regulatory framework	=

Malaysia	
Geological prospects (including access to acreage)	👍
Infrastructure	👍
Political stability	=
Regulatory framework	👍

Venezuela	
Geological prospects (including access to acreage)	=
Infrastructure	👎
Political stability	👎
Regulatory framework	👎

Australia	
Geological prospects (including access to acreage)	=
Infrastructure	=
Political stability	👍
Regulatory framework	=

Nigeria	
Geological prospects (including access to acreage)	👍
Infrastructure	=
Political stability	👎
Regulatory framework	👎

Angola	
Geological prospects (including access to acreage)	👍
Infrastructure	=
Political stability	=
Regulatory framework	=

UAE	
Geological prospects (including access to acreage)	=
Infrastructure	👎
Political stability	=
Regulatory framework	👎

👍 : More competitive than Indonesia

= : Same as Indonesia

👎 : Less competitive than Indonesia

As can be seen in chart 9.3 on the previous page, geological prospectivity remains one of Indonesia's most competitive features. Of the countries included in the survey, only Norway, Angola, the USA and the UAE are seen to have better geological prospects. Despite Indonesia's young democracy, the country was also rated favorably on political stability with only Norway, China and the USA being viewed more favorably. Surprisingly, Indonesia was rated positively on infrastructure, with only the UAE, the USA, and China rated more favorably. This can may be able to be partly explained by the results of an aggressive program that the GoI has put in place to increase investment in infrastructure projects. Survey participants rated the regulatory framework in Indonesia as above the middle relative to its peers, with some countries scoring higher and some scoring lower than Indonesia.

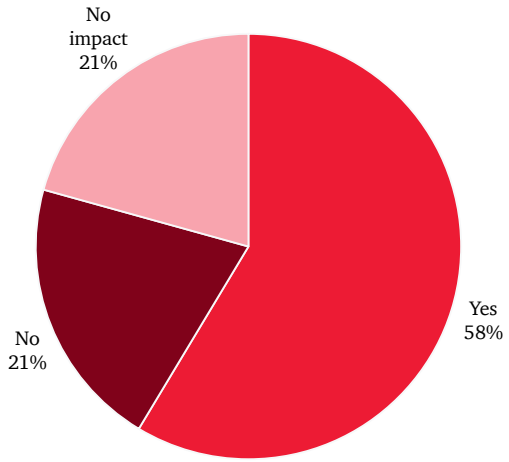
Photo source : Chevron IndoAsia Business Unit

Other challenges

A. There have been several high profile arrests in relation to corruption. Do you think that these will improve the perception of Indonesia's commitment to fighting corruption?

Chart 10.1

Do the recent arrests have a positive impact on the perception around the commitment to fighting corruption?



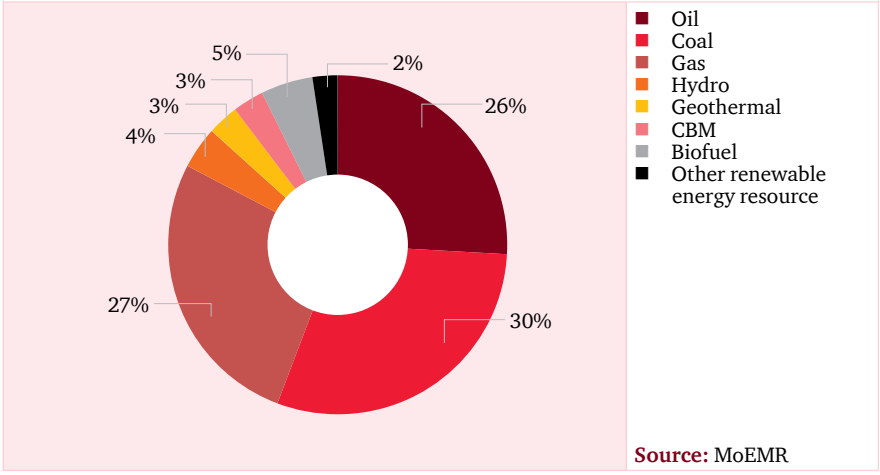
"Improve infrastructure, eliminate corruption, efficient government bureaucracy."

Survey participant comment

As can be seen in chart 10.1, the majority (58%, 2010: 60%) of the survey participants indicated that the recent high profile arrests in relation to corruption are having a positive impact on the perception of Indonesia's commitment to fighting corruption. In addition, it should be noted that still 42% is of the opinion that the GoI's approach has a positive impact on perception of commitment to fighting corruption. This may be an indication that survey participants are remaining skeptical about the effectiveness of the GoI's approach to fighting KKN.

The GoI issued its revised Energy Mix in 2012 calling for greater diversification of the country's energy mix. As part of this debate the country's policymakers have been discussing the development of nuclear energy to fuel a portion of Indonesia's future energy needs. We asked survey participants if they believed the country was ready for nuclear energy and if it possessed the requisite knowledge and expertise to operate a nuclear power plant.

2030 Targeted Energy Mix

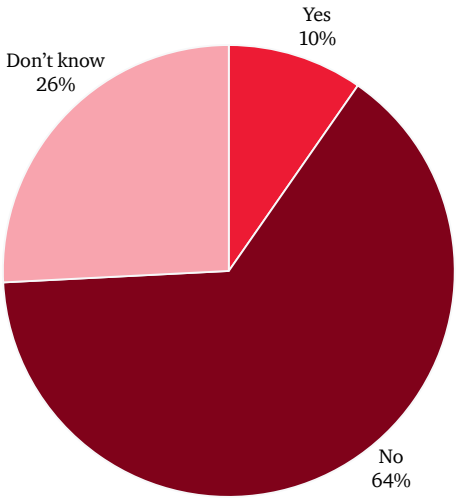


Source: MoEMR

B. Do you think Indonesia is ready for nuclear energy?

Chart 10.2

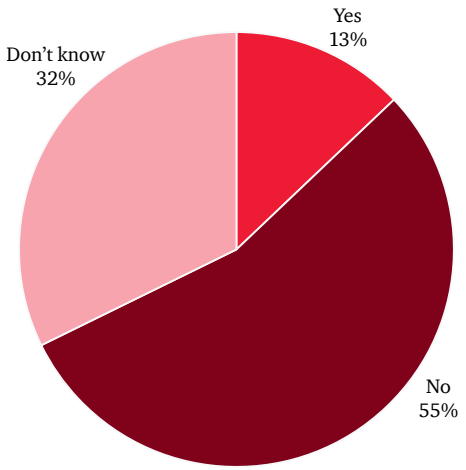
Readiness for nuclear energy



C. Do you think Indonesia has the knowledge and expertise to operate a nuclear power plant?

Chart 10.3

Does Indonesia have the knowledge and expertise to operate a nuclear power plant?



As shown in charts 10.2 and 10.3, survey participants believe that Indonesia is not yet ready for nuclear energy. The main reasons behind this reluctance may be the lack of knowledge and the risks associated with volcanic eruptions, earthquakes and terrorism. However, as Indonesia will eventually run out of oil, it is definitely something that could be considered in due course.

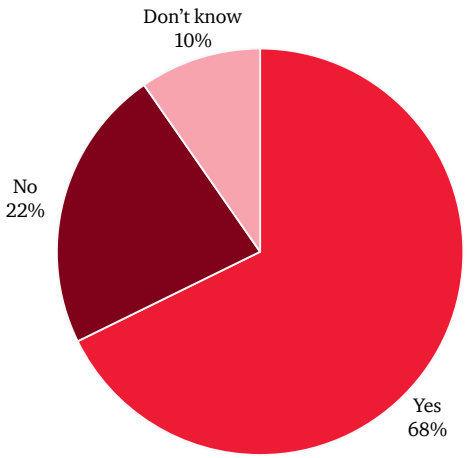
"CBM is land use intensive. Too crowded to make it work here. Too much negative impact from local communities. CBM needs to be a highly efficient execution machine to make it work."

Survey participant comment

D. Will Coal Bed Methane ("CBM") be a viable alternative for domestic gas?

Chart 10.4

Is CBM a viable alternative for domestic gas?



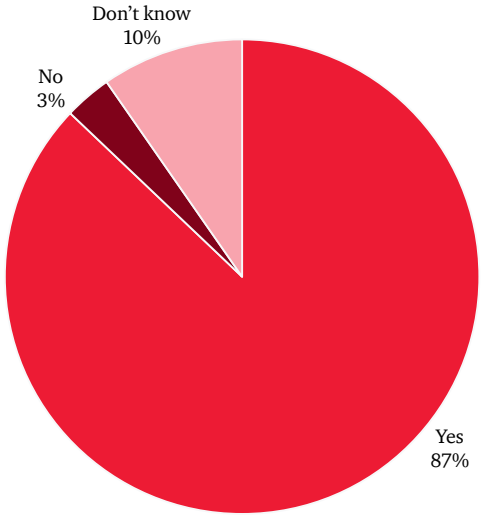
"Geothermal is the best renewable energy."

Survey participant comment

E. Should the government provide more incentives for the development of geothermal energy?

Chart 10.5

More incentives for the development of geothermal energy needed?



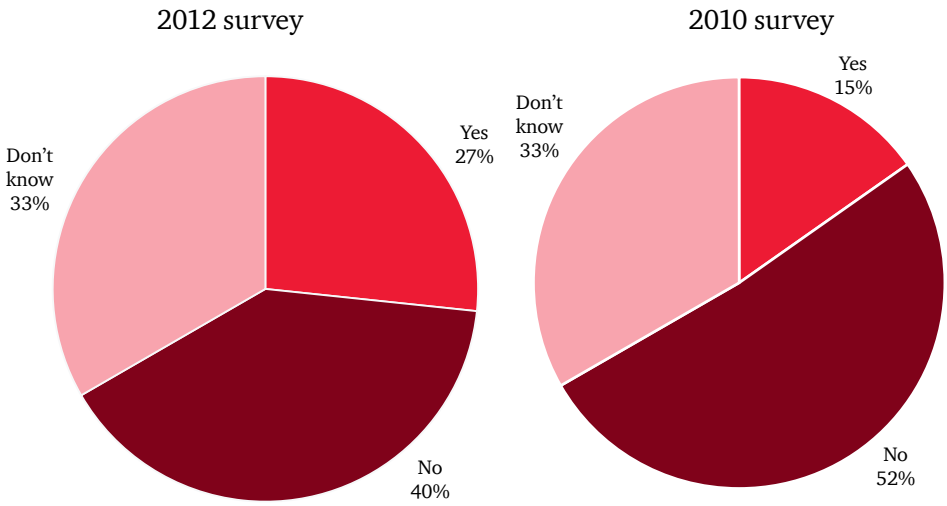
Indonesia holds 40 percent of the world's potential geothermal energy reserves, but ranks third for energy output after the United States and the Philippines. At a geothermal conference in Bali, President Susilo Bambang Yudhoyono indicated that he intends for Indonesia to become the biggest user of geothermal energy in the world.

Survey participants clearly see that CBM and geothermal are viable alternatives for oil and gas. In order to stimulate the use of these alternative energy sources, they indicated that the GoI should provide more incentives. The fact that 87% of the survey participants indicated that they believe that more incentives should be given, supports this view, especially since it has increased from 64% in 2010.

F. Has your company ever considered leaving Indonesia because of the issues described earlier?

Chart 10.6

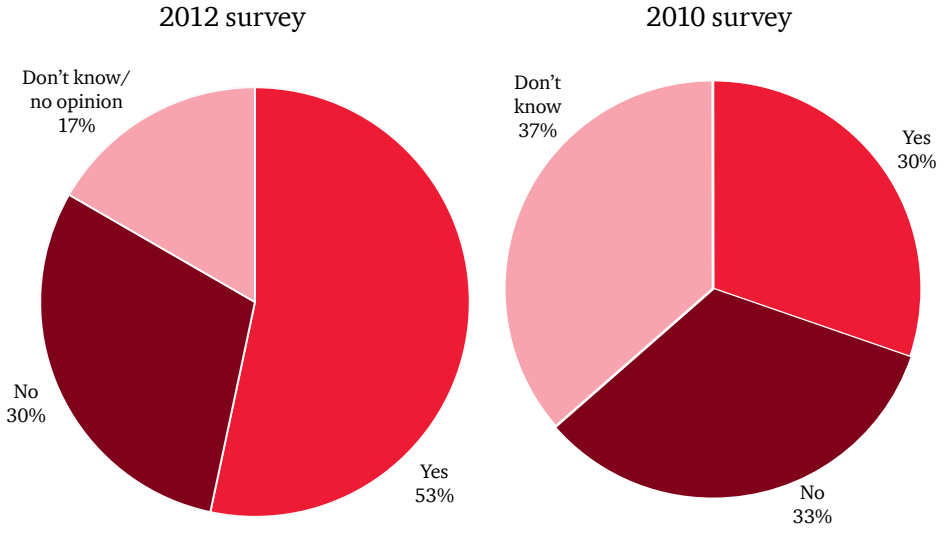
Ever considered leaving Indonesia?



G. Are you satisfied with the current return on investment you are getting from your operations in Indonesia?

Chart 10.7

Satisfaction with return on investment



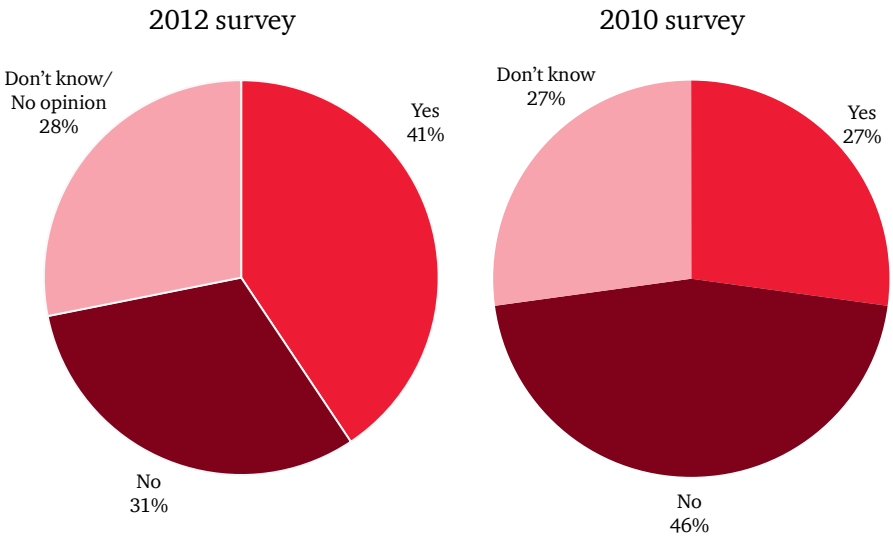
"Government must work harder to resolve all outstanding issues through better coordination among relevant stakeholders and properly manage any political pressures from politicians."

Survey participant comment

H. Do you anticipate a significant improvement in returns from the oil and gas industry in Indonesia over the next five to ten years?

Chart 10.8

Improvement in returns expected?



Despite the problems and issues noted in the earlier sections of the survey, investors are not currently considering leaving Indonesia, mainly due to the good geological prospects. Although it should be noted that 27% of the participants indicated that they were considering leaving Indonesia, and that this was only 15% in 2010, so there is clearly a change in sentiment. However, 53% (2010: 30%) of the survey participants indicated that they are satisfied with the returns they are getting on their investment in Indonesia and 59% are pessimistic about improvements over the next five to ten years. The fact that investors are not considering leaving Indonesia yet is undoubtedly linked to Indonesia's good geological prospects in combination with high commodity prices. In addition, in 2010 27 % of the participants indicated they anticipated significant improvements in return from oil and gas industry in Indonesia, in 2012 this percentage has increased to 41%. In addition, the participants who indicated "don't know" have remained the same as in 2010. These developments may be an indication that although Indonesia is still regarded as attractive for investors, the "shine" is wearing off.

"There needs to be a more equal sharing of risk and reward on projects. At present, the Contractor bears all the risk and the Indonesian government receives over 80% of the reward. There is also too much regulation and bureaucracy in the form of BPMigas supervision and a lack of clarity regarding Ministerial Regulations. It is very difficult to conduct projects in Indonesia due to these factors."

Survey participant comment

I. The government is trying to change the terms of the PSCs (including cost recovery). What do you think would be the best fiscal terms with the government?

The majority of the survey participants indicated that there should definitely be no cap on cost recovery and/or any changes to existing PSCs. In addition, they indicated that a tax/royalty scheme would be a better alternative to the current PSC system.

J. What effect and impact do you feel that PTK 007 Rev 2 will have on oil & gas production levels over the next 12 months to 36 months?

The majority (80%) of the survey participants indicated that they though that PTK 007 Rev 2 would have a negative effect on the oil & gas production levels over the next 12 months to 36 months. They also indicated that the impact of PTK 007 Rev 2 would be at a medium level (60%), whereas 28% of the participants thought it would have a high impact to their businesses.

K.What is the effect of PTK 007 Rev 2 on PSC's being able to easily access cutting edge technology for exploration and production in Indonesia?

Approximately 71% of the survey participants indicated that they thought that PTK 007 Rev 2 would have a negative effect on PSC's being able to obtain easy access to cutting edge technology for exploration and production in Indonesia. They also indicated that the impact of PTK 007 Rev 2 on access to cutting edge technology be at a moderate or medium level (60%), whereas 32% of the participants thought it would have a high impact and only 8% thought it would have a low or slight impact.

Based on the response to the previous 2 questions and the strong view of the survey participants on contract sanctity, it seems that the revised procurement regulations are not perceived to have a positive impact on the oil & gas industry in Indonesia. Again such regulatory developments will not help attract new, much needed, investment.

Photo source : UMW Standard Drilling Sdn. Bhd.

Conclusion

As this is the fifth edition of the oil and gas survey, we have been able to identify trends in survey participant's perception of various challenges facing the industry and the competitive features of the Indonesian oil and gas industry. Overall, survey participants indicated that Indonesia is still regarded as attractive; however the "shine" seems to be wearing off. The general downwards shift in survey participants' sentiment which we already reported in our 2010 survey seems to have continued, which is not good for investment.

Geological prospectivity has always been Indonesia's most competitive feature, followed by the presence of a trained workforce and political stability. The survey participants indicated that they expect global and Indonesian demand for oil and gas to increase over the coming years. Survey participants indicated that they expect that there is still significant oil and gas reserves to be discovered in Indonesia. Similar to previous survey results, they expect that there are likely to be more gas reserves to be discovered than oil reserves. According to the survey participants, these new oil and gas reserves are likely to be found in Eastern Indonesia (Papua, Maluku, etc).

Although this is a positive for the industry, the majority of the survey participants indicated that they expect their capital spending to decrease or stay the same over the next 5 years. Only 38% indicated that they expect their capital spending to (significantly) increase. This outlook is not a positive signal given the long-term nature of the industry and need to plan far in advance before investments reap measurable returns. This pessimistic view is a worrying development as the GoI is keen to see an increase in investment in the Indonesian oil and gas industry.

Similar to our 2010 survey, the majority of the survey participants expect to encounter difficulties in attracting sufficient skilled human resources. Although 59% of the survey participants indicated that Indonesia does not have sufficient skilled staff to perform the required activities, the trained work force remains a competitive aspect of the industry in Indonesia. The oil and gas industry has a long history in this country, which has resulted in a large, well educated workforce, especially of geologists and engineers. The experience and exposure gained by the workforce through employment by international oil and gas companies has enhanced their competence and expertise in these companies' operations.

We noted that the top 5 issues have remained more or less the same for a number of years. The major challenges facing the industry that remained in the top five of the least competitive aspects of the Indonesian oil and gas industry are:

- Contract sanctity
- Taxation
- Interference from other government agencies, such as the tax authorities

The troubling fact is that, similar to the 2010 survey, the survey participants do not expect significant change (i.e. improvement) within the next 5 years for the above mentioned issues. They indicated that they expect the situation for these issues to improve slightly.

On a positive note, survey participants expect slightly more improvement in relation to corruption, collusion and nepotism. This is a positive, as it confirms that the GoI is on the right path and its significant efforts in fighting KKN are being recognised.

Overall one can conclude that, in order to remain competitive, it is critical that the investment climate in Indonesia continues to improve. In order to attract more investment Indonesia needs regulatory clarity, consistency, certainty and competitiveness.

However, it would not be fair to only look at the areas which need improvement. Indonesia has become more attractive for investors in some respects. This is partly due to the new initiatives of the Indonesian Government, for example the opening up of CBM acreage. The Government of Indonesia needs to stay focused on the issues highlighted in this survey and ensure that proper action is taken.

We believe that the President and the relevant ministries and government officials are aware of the need to develop an environment conducive to doing business, in addition to providing fiscal incentives. However, the recent Presidential Instruction No.2/2012 in regard to oil production testifies to this. Based on the responses of the survey participants, it is clear that the industry is keen and supports the current government to take the necessary action to achieve a better business environment.

Photo source : PwC

About PwC

About the PwC network

Why PwC?

As the world's largest professional services network and one of the big four accountancy firms, PwC firms provide Industry-focused assurance, tax and advisory services for public and private companies. Close to 169,000 people in 158 countries connect their thinking, experience and solutions to build trust and enhance value for clients and their stakeholders.

A globally integrated firm

Being part of a global network means we can invest in priority clients, sectors and markets and deliver leading edge ideas, products and services more quickly and effectively than our competitors. We work across borders without the constraints of geographic considerations and we work to a global standard and quality. Our global network structure enables quick decision-making and worldwide delivery of the best resources.

We are organised into industry groups, of which the oil and gas industry group is one of the largest. Our industry focus ensures our people have both a broad overview of the marketplace and a deep understanding of the industries and markets in which they specialise.

Our oil and gas industry group has priority status in terms of investment and resources in all key markets including Indonesia, reflecting our worldwide dominance in this market.

Our strength in the oil and gas industry is one of which we are proud. This means we are the most committed firm to achieving oil and gas client's needs and actively participate in the industry in all countries in which the industry is active. We work closely with our oil and gas clients, offering the benefits of our experience, to help achieve their goals.

PwC Indonesia

PwC Indonesia's (PwC or we) oil and gas team brings together local knowledge and experience with international oil and gas expertise. Our strength in serving the oil and gas industry comes from our skills, our experience and our network of partners and managers who focus 100% of their time on understanding the oil and gas industry and working on solutions to oil and gas industry issues. Detailed oil and gas knowledge and experience ensures that we have the background and understanding of industry issues and can provide sharper, more sophisticated solutions.

PwC is organised into three Lines of Services, each staffed by highly qualified experienced professionals who are leaders in their fields. The lines of service are:

- Assurance Services which provide innovative, high quality, and cost-effective services related to an organisations' financial controls, regulatory reporting, shareholder value and technology needs.
- Tax Services which provide a range of specialist tax services in three main areas: tax consulting, tax dispute resolution, and compliance. Some of our value-driven tax services include:
  - International tax restructuring
  - Mergers and acquisitions
  - Compliance services
  - Dispute resolution
  - Indirect taxes
  - Transfer pricing; and
  - Tax process reviews
- Advisory services which provide comprehensive advice and assistance relating to transactions, performance improvement and crisis management, based on long-term relationships with clients and our financial analysis and business process skills.

For companies operating in the Indonesian oil and gas sector, there are some compelling reasons to choose PwC as your professional services firm:

- We are the leading advisor in the industry, both globally and in Indonesia, working with more explorers, producers and related service providers than any other professional services firm. In particular, PwC audits over 60% (in terms of production) of the oil and gas producers in Indonesia under Production Sharing Contract agreements, and provides other professional services such as taxation and advisory services to oil and gas producers in all stages of their development.
- We have operated in Indonesia since 1971 and have over 1,300 professional staff, including 38 Indonesian national partners and expatriate technical advisors, trained in providing assurance, advisory and tax services to Indonesian and international companies, and the Government of Indonesia.
- Our Energy, Utilities and Mining ("EUM") practice in Indonesia comprises over 300 dedicated professionals across our three Lines of Service. This body of professionals brings deep local industry knowledge and experience with international oil and gas expertise and provides us with the largest group of industry specialists in the Indonesian professional market. We can also draw on the PwC global EUM network which includes more than 10,000 qualified industry experts.
- Our commitment to the oil and gas industry is unmatched and demonstrated by our active participation in industry associations in Indonesia and around the world, and our thought leadership on the issues affecting the industry. Through our involvement with the Indonesian Petroleum Association ("IPA") we help shape the future of the industry.
- Our client service approach involves learning about the company's issues and seeking ways to add value to every task we perform. Detailed oil and gas knowledge and experience ensures that we have the background and understanding of industry issues and can provide sharper, more sophisticated solutions that help clients accomplish their strategic objectives.

PwC Indonesia (www.pwc.com/id)

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Glossary

BOPD	Barrels of Oil per Day
BP Migas	Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi (Government Executive Agency for Upstream Oil and Gas Business Activities)
BPH Migas	Badan Pengatur Hilir Minyak dan Gas Bumi (Oil and Gas Downstream Regulatory Agency)
BPKP	Badan Pengawasan Keuangan dan Pembangunan (Government Audit Body)
CFO	Chief Financial Officer
COO	Chief Operating Officer
EU&M	Energy, Utilites, and Mining
GoI	Government of Indonesia
IPA	Indonesian Petroleum Association
KKN	Corruption, Collusion and Nepotism
LPG	Liquified Petroleum Gas
MEMR	Ministry of Energy and Mineral Resources
Pertamina	Perusahaan Pertambangan Minyak dan Gas Bumi Negara (The Indonesian State Oil Company)
PSC	Production Sharing Contract
US$	United States Dollar
VAT	Value Added Tax