May 2016

Is the drum half full or half empty?

An investor survey of the Indonesian oil and gas industry

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1 Introduction

Is the drum half full or half empty?

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 continued to decline over the last decade due to the natural maturing of producing oil fields, a slower reserve replacement rate and arguably, insufficient exploration and investment.

This is the eighth edition of our survey of the Indonesian oil and gas industry, and where applicable we have analyzed the collective trends in survey participants' responses using the current and prior reports. The survey responses come from 75 respondents from 53 different companies currently operating in the Indonesian 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 Government of Indonesia (GoI) has in recent years put effort into increasing Indonesia's oil and gas production and attracting investment from new and existing players, but in practice this has proven to be challenging. The survey shows that the investment appetite in Indonesia's oil and gas sector is stagnant and that there is an overwhelming desire from investors for:

a) greater consistency in the policies and vision for the industry from the Ministry of Energy and Mineral Resources, Ministry of Finance and Ministry of Industry; and

b) certainty in regard to contract sanctity and the terms and conditions surrounding PSC extensions.

Survey participants also made clear that there was an urgent need for immediate action to stimulate oil and gas exploration activity in Indonesia.

On a more positive note, survey participants were optimistic about the likely improvements in Indonesia's competitiveness which is expected to flow from greater investment in infrastructure.

Our concluding question for the survey was to enquire as to what ways stakeholders can work together to promote the development of Indonesia's energy resources. Respondents focused on the perennial need for greater dialogue between investors and the Government of Indonesia/industry regulators. We hope that this publication can serve as a tool to encourage such greater dialogue between stakeholders and support Indonesia's economic growth and prosperity.

2 Executive Summary

Supply and demand for oil and gas

The beginning of 2016 has been a challenge for the oil and gas sector with the continued global demand and supply imbalance preventing a recovery in prices.

Although fewer than in previous years, a majority of survey respondents remain of the view that the demand for oil and gas will continue to increase in the next five years. Continuing the trend seen in earlier surveys respondents expect Indonesian gas demand to increase more than that for oil. For the second time since PwC began these industry surveys, some respondents forecast a decline in Indonesian oil demand. This may be a surprise given the expectations for continued growth in the Indonesian economy, but may be a recognition of the move away from diesel for power generation to other fuel sources such as coal and gas.

The fall in the oil price has had a marked effect on exploration activities with only half of those surveyed expecting that their company will increase its exploration activities globally in the next three years. Many oil majors have signalled further cuts in capital expenditure for 2016 and beyond after already paring back spending in 2015. This trend is also evident in Indonesia, with reduced exploration and development spending, and cost efficiency programmes across the board.

In Indonesia, the impact of the downturn in oil and gas prices is exacerbated by continuing concerns around the regulatory regime. With regard to quality and usefulness of government regulations, only 25% (2015: 40%) of respondents expected regulations to improve, while almost 50% indicated that they thought they would remain the same. It is a worrying development that the proportion of respondents who expect regulations to improve has almost halved compared to last year. This is also reflected in the fact that inter-government cooperation and contract sanctity always score high on the list of "Challenges facing the industry".

Employment

An overwhelming majority (91%) of respondents believe that employment in the oil and gas industry will decrease this year, highlighting the continuing effect of the decline in the oil price.

In fact in Indonesia there are a number of employee redundancy programmes that have commenced in 2016 as companies attempt to right-size for the new oil price environment. This is likely to have a significant impact on employment in the sector in 2016 and beyond.

However, in line with comments in our previous surveys, respondents still believe that there is a lack of skilled local and expatriate staff, in part because of better conditions and opportunities outside Indonesia, as well as the tighter controls on hiring skilled expatriates. Almost 75% of the respondents expect their company to reduce their expatriate workforce with 53% expecting a decline in the number of local hires.

Capital Expenditure

Future capital spending is expected to slow, particularly for exploration, compared to previous years. Respondents broadly fall into three similarly sized groups – one-third will decrease capital expenditure, one-third will increase spending and one-third will maintain it.

Survey participants suggested that the appetite for investment in the Indonesian oil and gas sector is stagnant, sadly at odds with the government's desire for an increase in Indonesian oil and gas production.

Challenges facing the industry

Our survey indicated that the five most critical challenges facing the industry are as follows:

1. Contract sanctity and PSC extensions
2. Lack of consistent policies and vision between the Ministry of Finance, the Ministry of Energy and Mineral Resources and the Ministry of Industry
3. New regulations (such as MoF Regulation No.218/PMK.02/2014 on reimbursement of VAT in the upstream sector)
4. Uncertainty over cost recovery and SKK Migas / BPKP audit findings
5. Lack of a single body to objectively resolve government disputes across various departments and agencies

Out of the top five challenges, survey participants expect the issue of new regulations, contract sanctity and lack of a single body to resolve government disputes across departments and agencies to deteriorate most markedly over the next 12 months. The respondents indicated that they expect SKK Migas performance to improve, or at least stay the same. As was the case in previous surveys, the respondents do not expect significant developments within a 12 month window as many of these issues are structural in nature and will require time to achieve real improvement.

Of note is the fact that contract sanctity and PSC extensions has risen to number one on the list, compared to last year's survey where it was at number two.

Highly publicised disputes within government over some contract extensions and development of new fields have also had an impact on perception around these issues.

Competitiveness

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

1. Geological opportunities
2. Trained workforce
3. Ease of foreign ownership
4. The existing fiscal framework
5. Contract and project approval process

The top three competitive features have remained the same when compared with our surveys over recent years.

Upstream issues

In assessing survey participants views on contemporary upstream issues, we sought to focus for a second year on: whether there was a need to increase exploration activity; how the use of natural gas as a prioritised energy source could be supported; and what other steps could be taken to develop Indonesia's energy resources for domestic energy needs. Significantly there was an overwhelming recognition of the need for, or importance of:

- Improved clarity on the rules and conditions for PSC extensions;
- Further harmonization of Government policy for the oil & gas sector across all relevant ministries, including the Ministry of Finance, the Ministry of Energy and Mineral Resources and the Ministry of Environment, etc; and
- Other non-fiscal or fiscal incentives (e.g. zero rating VAT of drilling and seismic fees).

Outlook

Indonesia therefore faces a key challenge in the development of the oil and gas sector as we confront what may be a prolonged downturn in oil prices. At the same time this provides an opportunity to improve the regulatory environment for oil and gas investment in order to attract the scarce investment funds available for exploration and development, ready for the next uptick in the commodities cycle. So we may ask – is the drum half full or half empty?

3

An overview of the oil and gas industry in Indonesia

Photo source: PT Pertamina (Persero)

Introduction

The landscape of the oil and gas industry, both in Indonesia and globally, has experienced dramatic changes in recent years. The industry experienced a significant resurgence in investment, conciding with a decline in crude oil prices.

From its peak in mid-2008 (US$145 per barrel), the oil price collapsed by more than 70%, and ended 2008 at approximately US$40 per barrel following the global financial crisis. Market confidence, particularly in the growth story of China and other emerging markets, returned crude prices to an average (annual basis) of approximately US$94-98 a barrel (WTI) in the period from 2011 to 2014. The oil price has since fallen by 70% to approximately US$40 per barrel at the beginning of 2016.

Despite the price decline and ongoing regulatory uncertainty, investment in the oil and gas industry in Indonesia reached US$22.2 billion in 2015 and is expected to hit US$23.9 billion in 2016. However, its contribution to total state revenue has dropped from 14% in 2014 to 4.5% in 2015, and is expected to decline further to below 4% in 2016 following sustained lower oil prices and decreasing production. In 2014 there were seven new oil and gas contracts entered into, along with a further 12 contracts in 2015.

Indonesian Context

Indonesia has been active in the oil and gas sector for more than 130 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.

A long-time member of OPEC, Indonesia suspended its membership in 2008 after several years of declining production, but rejoined the bloc in 2015, signalling its commitment to the industry.

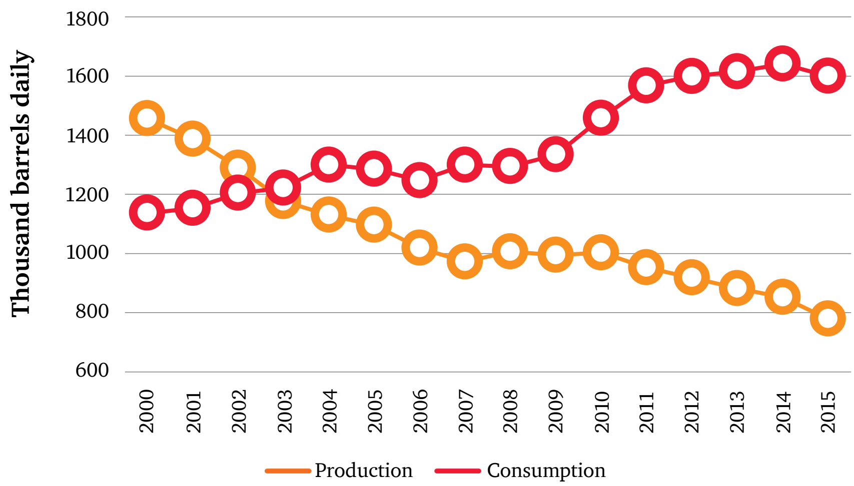
Significant events in the history of Indonesia's Oil and Gas Sector

- **1885** First commercial oil discovery in North Sumatra
- **1912** Standard Oil commenced exploration in South Sumatera
- **1921** The biggest discovery before WW II (Talang akar Field)
- **1944** Caltex Minas - largest oil field in Southeast Asia discovered
- **1961** Government signed first PSC in Aceh
- **1962** Pan American Oil Company signed the first contract of work with Pertamina and Indonesia joined OPEC
- **1968** PERTAMINA was formed
- **1978** First LNG plant entered production
- **2001** Oil and Gas law No. 22/2001 introduced, revoking law No. 44
- **2002** Upstream and Downstream bodies BPMIGAS and BPH MIGAS were established
- **2003** PT Pertamina (Persero) established
- **2004** Government Regulation Nos. 35 & 36 on upstream & downstream business activities
- **2008** List of 17 Negative cost recovery items (Ministerial Regulation No. 22/2008)
  Indonesia withdrew from OPEC
- **2010** GR 79 on cost recovery and income tax for upstream sector
- **2011** GR 79 implementing regulations
  - PMK 256
  - PMK 257
  - PMK 258
- **2013** SKK Migas establishment to replace BP Migas
- **2015** Indonesia rejoins OPEC

According to the Ministry of Energy and Mineral Resources, Indonesia holds proven oil reserves of 3.7 billion barrels, ranked 24th among the world's oil producers, accounting for approximately 0.2% of world oil production.

Declining oil production and increased consumption resulted in Indonesia becoming a net oil importer since late 2004. This factor, along with high oil prices before 2015, led the Government to gradually but substantially scale back the domestic fuel subsidy during 2009-2014.

Indonesia Oil Production and Consumption



Source:
2000 - 2014: BP Statistical Review of Energy 2015
2015: SKK Migas & MoEMR

Indonesia is ranked 10th in terms of world gas production, with proven reserves of 2,900 billion cubic feet in 2014 according to the OECD. This ranks Indonesia 14th in the world and the third in the Asia Pacific region after Australia and China.

Indonesia's gas industry is also being transformed by more competitive liquefied natural gas (LNG) markets, new pipeline exports, and increasing domestic gas demand. Indonesia's LNG production has decreased in recent years (Indonesia supplied 2.6% of the world's marketed production of LNG in 2010, and 2.1% in 2014[2]) and the country is facing a declining global LNG market share with significant new production coming out of LNG producers in Qatar and Australia. After announcing its 2006 policy to re-orient natural gas production to serve domestic needs, Indonesia dropped from its status as the world's largest exporter of LNG in 2005 to the world's fifth largest exporter of LNG in 2014, behind Qatar, Malaysia, Australia and Nigeria.

Indonesia struggles to maintain LNG production levels and continues to feel the pressure of balancing revenue from gas exports with meeting stronger demand from its domestic market. Indonesia's existing LNG facilities are based in Bontang in East Kalimantan, Tangguh in West Papua and Donggi Senoro in Sulawesi.

Arun LNG, which was one of the world's first LNG facilities and one of the biggest LNG exporters in the 1990s, has been converted into a storage and regasification terminal due to declining gas reserves.

Oil and Gas Contribution to State Revenues

Year	Domestic Revenue	Oil/Gas Revenue	% of contribution
	Rp Trillion		
2004	403	85	21.09%
2005	494	104	21.05%
2006	636	158	24.84%
2007	706	125	17.71%
2008	979	212	21.65%
2009	847	126	14.88%
2010	992	153	15.42%
2011	1,205	193	16.02%
2012	1,338	205.8	15.38%
2013	1,438	180.6	12.56%
2014	1,538	216.9	14.11%
2015	1,758	78.4	4.46%
2016*	1,830	62.9	3.44%

Source: Ministry of Finance (MoF)
* Budget

1 BP Statistical Review of World Energy 2015
2 BP Statistical Review of World Energy 2015

Resources, Reserves and Production

Indonesia has a diversity of geological basins which continue to offer sizeable oil and gas reserve potential. Indonesia has 60 sedimentary basins including 36 in Western Indonesia that have already been thoroughly explored. Fourteen of these are producing oil and gas. In under-explored Eastern Indonesia, 39 tertiary and pre-tertiary basins show rich promise in hydrocarbons.

About 75% of exploration and production is located in Western Indonesia. The four main oil-producing regions are Sumatra, the Java Sea, East Kalimantan and Natuna and the main gas-producing regions are East Kalimantan, West Papua, South Sumatra, Sulawesi and Natuna.

Indonesia's crude oil production declined over the last decade due to the natural maturation of producing oil fields combined with a slower reserve replacement rate and decreased exploration/investment. During 2015, Indonesia's total crude oil production, at 0.779 million barrels per day, was around 70% of its 2005 daily production. With few significant oil discoveries in Western Indonesia in the last ten years, the Government has continued to encourage contractors to consider developing oil reserves in Eastern Indonesia's frontier and deep-sea areas.

Most oil and gas production is carried out by foreign contractors under production sharing contract (PSC) arrangements. The major crude oil and natural gas producers (as PSC operators) as of January 2016 were as follows:

Key Indicators - Indonesia's oil and gas industry

Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015
Reserves									
*Oil (Million Barrels)	8,400	8,220	8,000	7,760	7,730	7,410	7,550	7,370	7,370#
Proven	3,990	3,750	4,300	4,230	4,040	3,740	3,690	3,620	3,692
Potential	4,410	4,470	3,700	3,530	3,690	3,670	3,860	3,750	3,750#
**Gas (TCF)	165.00	170.10	159.63	157.14	152.89	150.70	150.39	149.30	149.30#
Proven	106.00	112.50	107.34	108.40	104.71	103.35	101.54	100.26	103.35
Potential	59.00	57.60	52.29	48.74	48.18	47.35	48.85	49.04	49.04#
Production									
***Crude oil (MBOPD)	972	1,006	994	1,003	952	918	825	789	779
***Natural gas (MMSCFD)	7,283	7,460	7,962	8,857	8,415	7,110	6,826	8,218	8,102
New contracts signed	28	34	34	21	31	39	14	7	12

Source:
* 2007-2014 Oil Proven and Potential Reserves: ESDM
* 2015 Oil proven: EIA
** 2007-2014 Gas Proven and Potential Reserves: ESDM
** 2015 Gas proven: EIA
New contracts signed: ESDM
Using 2014 as an estimate as 2015 data not yet available
*** 2007-2012 Crude Oil and Natural Gas Production: BP Statistical Review of World Energy
*** 2013-2014 Crude Oil and Natural Gas production: SKK Migas Annual Report 2013 and 2014
*** 2015 Crude oil production: Ministry of Finance (State Budget Realization)
*** 2015 Natural gas production: SKK Migas

For further information on the Indonesian oil and gas industry and the associated tax and investment regime please see our Oil and Gas in Indonesia Investment and Taxation Guide, available online.

4

Survey approach


Photo source: PT Badak NGL

Survey background

This is the eighth 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 2016 report is based on the results of a confidential comprehensive survey circulated by PwC Indonesia to senior management (including Directors, Country Managers, CFOs, COOs, Finance Managers and Operations Executives 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 more than 150 different companies active in the Indonesian oil and gas industry. We received 75 responses (representing 53 different companies currently active in the Indonesian oil and gas sector). Completed surveys came from companies representing almost 80% of Indonesia's petroleum production in 2015 and several recent entrants to the Indonesian 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. Furthermore, the responses from survey participants arguably permit credible observations about investment and spending trends.

Chart 4.1

Survey Participants' background

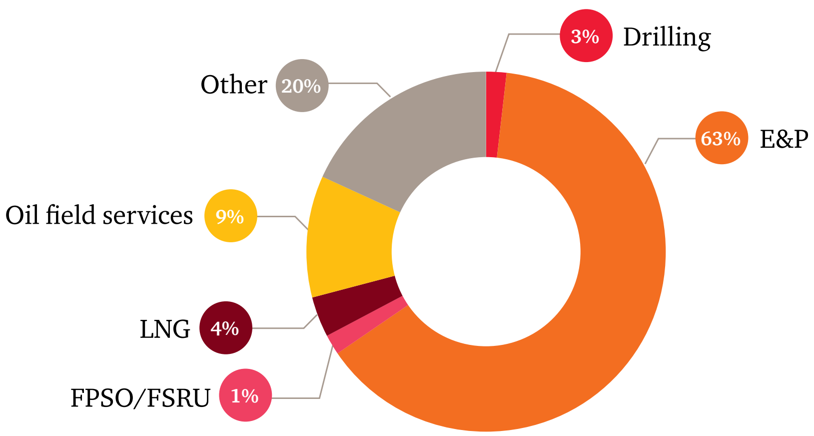
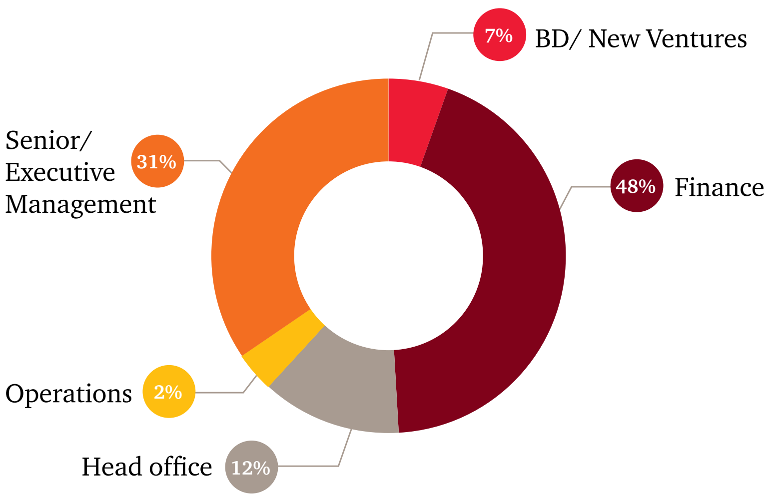


Chart 4.2

Survey participants' functional role



5

Supply and demand for oil and gas


Photo source: PT Pertamina (Persero)

Oil prices have fallen to historically low levels and now make stranded reserves or technically difficult reservoirs less viable. Although fewer than in previous years, an overwhelming majority of survey respondents remain of the opinion that the demand for oil and gas will continue to increase in the next five years (see charts 5.1 and 5.2). Continuing the trend seen in earlier surveys respondents expect Indonesian gas demand to (significantly) increase more than demand for Indonesian oil. The positive development compared to the previous survey is that 85% and 92% of the survey participants expect a growth in the Indonesian oil and gas demand respectively, compared with 80% and 90% in the previous survey. This may be an indication of a shift towards cleaner energy, but in reality probably reflects the cumulative effect of growing demand from industry for gas, particularly for power generation, the commissioning of new gas pipelines resulting in market access and easier distribution of gas. However, it is clear that respondents believe there is a need for even more investment in gas transportation infrastructure. For the second time since PwC began these industry surveys, some respondents forecast a decline in Indonesian oil demand, but the expected decline is smaller than as reported in the last survey.

"There are some areas in East Indonesia that are still promising."

Survey participant comment

"There are still plenty of untapped oil reservoirs in Indonesia."

Survey participant comment

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

Chart 5.1 Indonesian oil demand

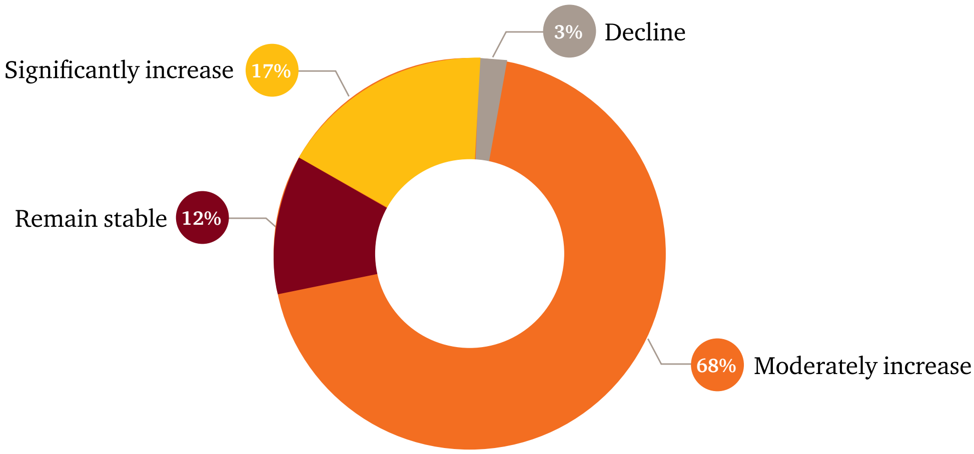
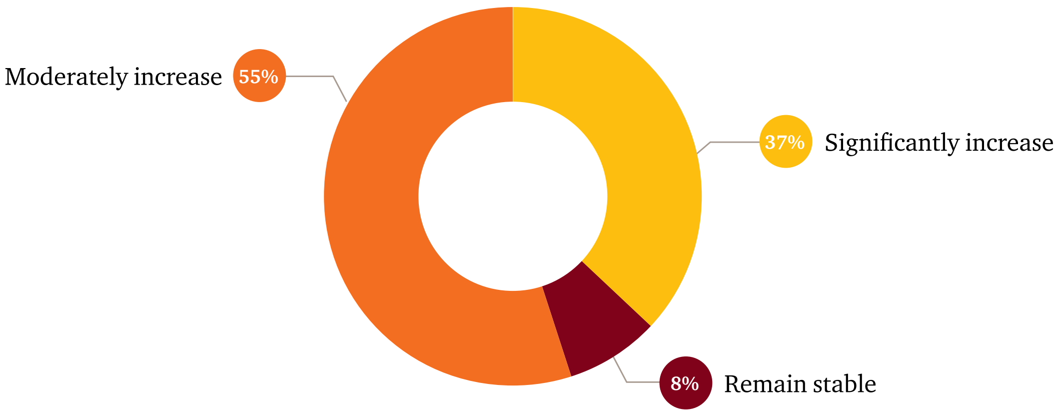


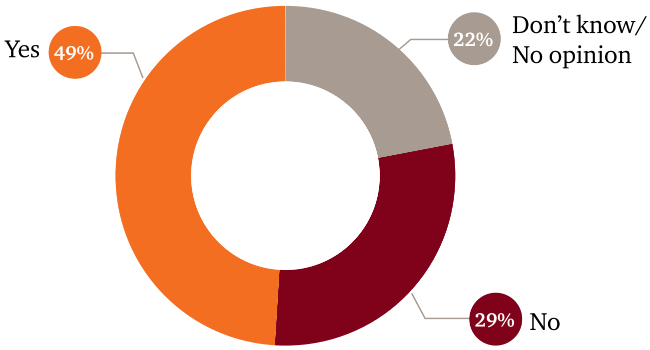
Chart 5.2 Indonesian gas demand



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

Chart 5.3

Significant oil reserves will be discovered?

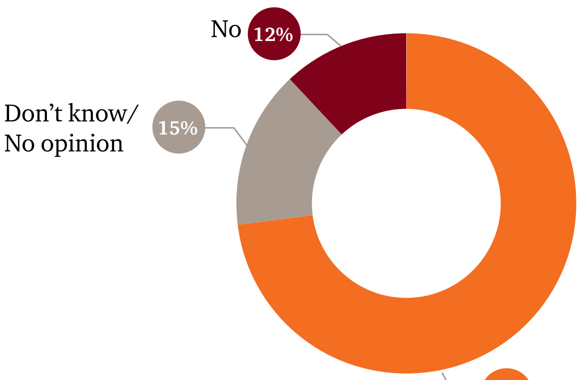


The percentage of respondents who indicated that there are still significant oil reserves to be discovered is slightly higher than in the previous survey (i.e. 49% versus 45%), which is a positive development.

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

Chart 5.4

Significant gas reserves will be discovered?



Whilst 49% (2015: 45%) of the survey respondents expect that there are still significant oil reserves to be discovered in Indonesia, an overwhelming 73% (2015: 68%) of respondents believe there are significant gas reserves untapped. Similar to previous surveys, for both oil and gas, respondents pointed to deepwater, remote areas and hard to reach basins, such as in Eastern Indonesia (Papua, Timor, Maluku, etc.), North Central Indonesia (Kalimantan, Sulawesi) and the deeper Sumatra basins. We note that although sentiment has strengthened a little since our 2015 survey, respondents are still pessimistic compared to the 2012 survey, when 72% and 97% of the participants believed there would be significant oil and gas reserves discovered (respectively).

"All stakeholders need to identify potential areas of mutual cooperation to improve the current investment climate."

Survey participant comment

"Pre tertiary basements in eastern Indonesia have potential and are under explored."

Survey participant comment

"With the current regulatory changes it will be difficult to commercialize the gas."

Survey participant comment

"In the last 8 years of exploring unconventional resources, the industry hasn't found any commercial quantity of unconventional gas. With current commodity price environment and regulatory/operational challenges in Indonesia I don't think we can expect more success in exploring this type of resources."

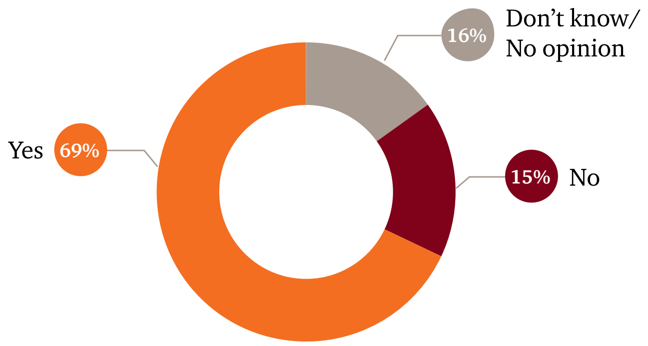
"We have 10 years or so of CBM opportunity, and have got no production. If the government is smart, it may take another 10 years to reach that point. Shale gas is where CBM was 10 years ago."

Survey participants' comments

D. Are there already significant reserves discovered, but the current regulatory / commercial environment does not support development?

Chart 5.5

Lack of regulatory support for reserves discovered

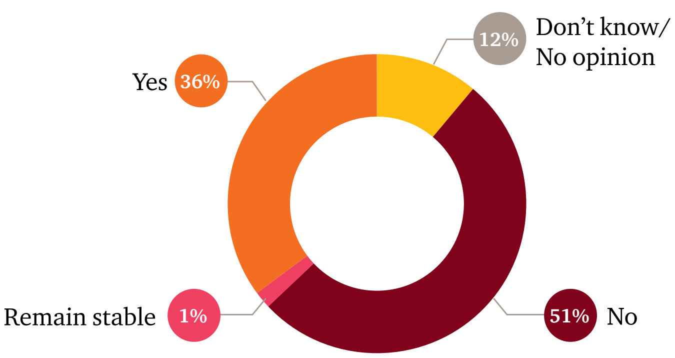


Respondents were asked a follow-up question in this survey about whether the current regulatory and commercial environment is hampering the development of new reserves as this could be a reason why respondents are less confident in the discovery of new oil and gas reserves. Almost 70% of respondents (2015: 77%) agreed that there are already significant reserves discovered, but the current regulatory and commercial environment does not support development of those fields. Given the Government's desire to increase production, these are worrying statistics.

E. Do you think Indonesia can supply commercial quantities of unconventional gas in the medium term (e.g. CBM, CSG, shale gas, etc)?

Chart 5.6

Indonesia's ability in providing unconventional gas



More than a third (2015: 38%) of the respondents think that Indonesia can supply commercial quantities of unconventional gas in the medium term, although the survey comments suggest that this is some way off. More than 50% believe this will not happen. We note also in these survey results a decline in the interest in unconventional gas exploration (see question H below).

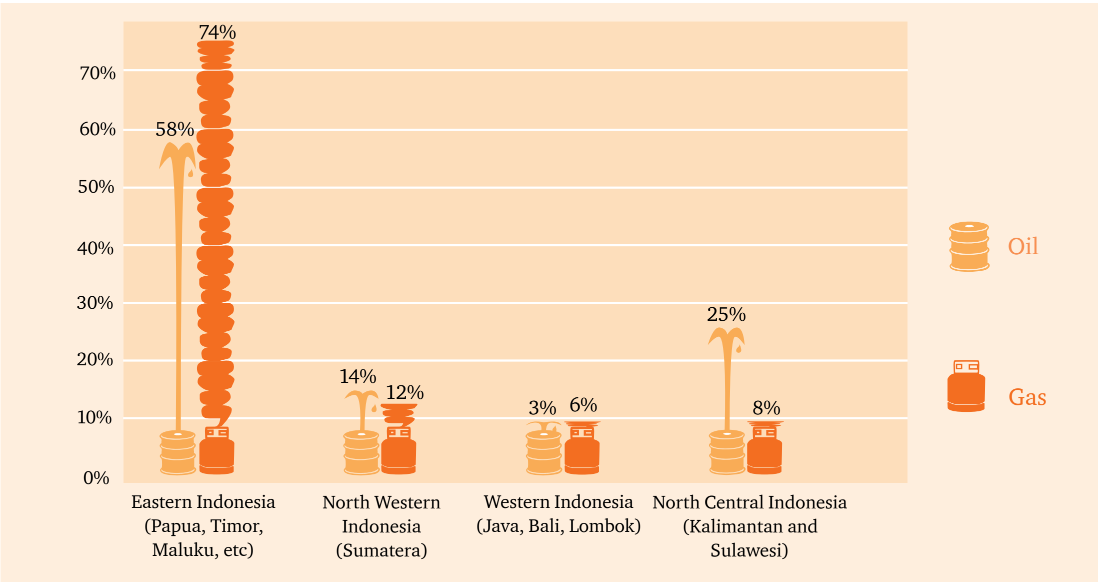
"Demand will increase due to increasing of the transportation, industry and household consumption. However, supply tends to decline due to production decrease and less exploration."

Survey participant comment

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

Chart 5.7

Potential for new reserves



As can be seen in the chart above, the majority of oil and gas reserves are believed to be in Eastern Indonesia (Papua, East Timor, Maluku, etc.). In the 2012 and 2014 surveys 71% of respondents believed that this area offered the greatest potential for new gas reserves, and this has now increased to 74% (2015: 60%). In our 2012 survey, 50% of the survey participants indicated that new oil discoveries would be in Eastern Indonesia, this percentage increased to 57% in 2015 and 58% in this survey.

Participants are becoming less optimistic about finding new oil reserves in Sumatra (14% in 2016 compared with 18% in 2015, 20% in 2014 and 24% in 2012) notwithstanding that this basin continues to provide a large percentage of the country's current oil production.

The expectations for Western and North Central Indonesia have remained more or less consistent with the results of our 2012, 2014 and 2015 surveys.

"Oil demand will continue to rise in the short term as there is little to no gas infrastructure to enable the development of gas as a substitute."

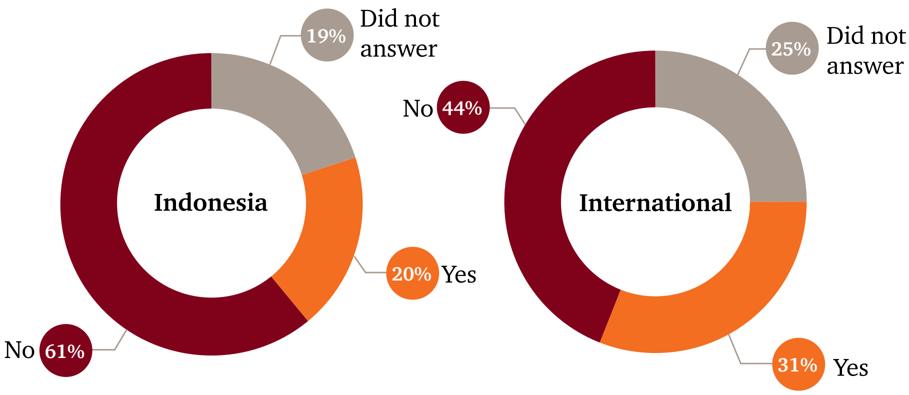
Survey participant comment

"Most of the prolific basins located in Western Indonesia are in mature stage, while Eastern Indonesia is geologically complex (even we don't clearly know the basin itself), lack of infrastructure, probably gas prone, high cost of development and current fiscal terms and conditions it would be less likely to find any new significant reserve."

Survey participant comment

G. Will your company increase its exploration activities in the next three years?

Chart 5.8 Increase exploration activities



The fall in the oil price has had a marked effect on exploration activities with only 31% (2015: 51%) of respondents saying that their company will increase its exploration activities globally in the next three years compared with 73% of respondents in the 2014 survey. A worrying lower percentage of respondents (20%) said that their company will increase exploration in Indonesia, although this is also significantly down from 56% of respondents in last year's survey.

"We might conduct exploration activities in Indonesia in 2017 or the following year, depending on oil price, but would be primarily on less risk areas (no green fields)."

Survey participant comment

"Currently the situation is not really appropriate for further development."

Survey participant comment

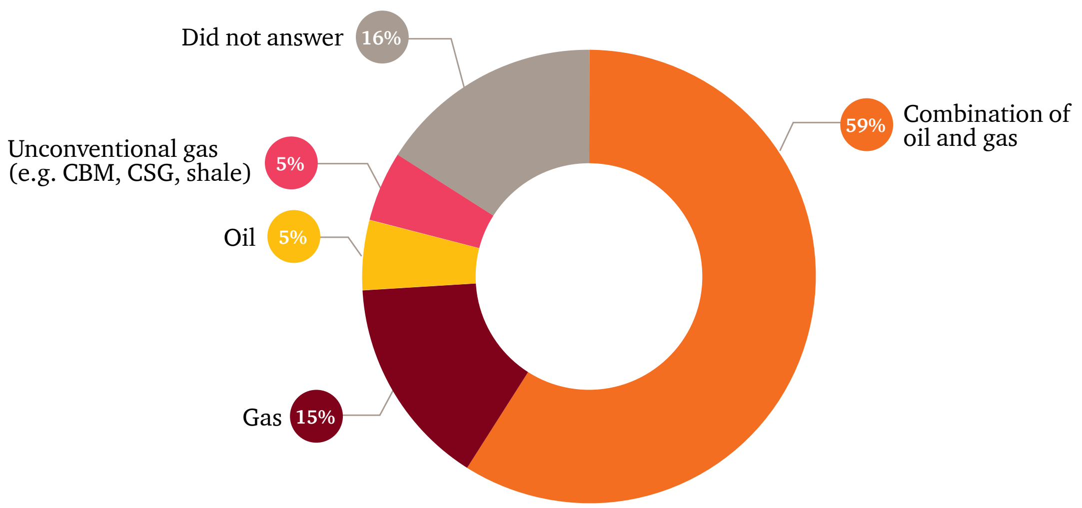
H. What will be the focus of your company's Indonesian exploration activities for the next three years?

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 (59%) 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 (2015: 58%).

In the 2015 survey, 17% of respondents said that the focus of their exploration activities in the future will be oil, but this has dropped to 5% in this year's survey. The percentage of respondents who will be focusing on gas exploration remained broadly unchanged between the two surveys.

Chart 5.9

Focus of exploration activities



"We will look at all opportunities in the oil and gas market, including geothermal."

Survey participant comment

"The Government need further incentives to improve E&P exploration in Indonesia."

Survey participant comment

I. Over the next 12 months do you expect the quality and usefulness of government regulations in Indonesia which affect the industry to improve or deteriorate?

Respondents were asked an additional question this year regarding the quality and usefulness of government regulation in the sector and the responses were quite optimistic. 25% (2015: 40%) of respondents expected regulations to improve in terms of quality and usefulness, 47% (2015: 44%) thought they would remain the same and only 16% (2015: 16%) expected deterioration. It is a worrying development that the respondents who think that the expected regulations would improve has halved compared to our previous survey. This is also reflected in the fact that inter government cooperation and contract sanctity always score high on the list of "Challenges facing the industry".

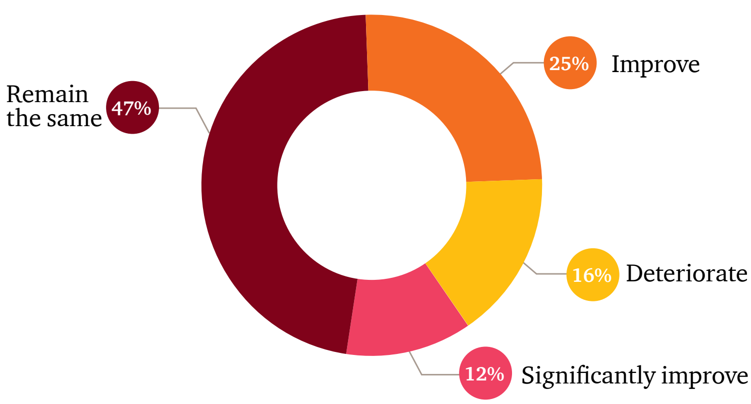
Based on the comments received, the Land and Building tax exemption at the exploration stage has been applauded and there is an expectation of further regulatory improvements. Still, some respondents cautioned that there is a long way to go in improving the regulatory framework. One respondent commented that significant regulatory change is required to "spur investment in exploration" and listed tax regulations and tightened work permit requirements as issues to be solved.

"The current situation increases the uncertainty. If the government does not create any improvement, this will create unfavourable situation for the foreign investment climate."

Survey participant comment

Chart 5.10

Expectation of improvement in quality and usefulness of government regulation to the industry



"The Government stated publicly that they want to improve the investment in the sector but separate ministries are not coordinated and are even working at cross purposes in the interests of the ministry revenue raising rather than a top down " best for the country" position."

Survey participant comment

6

Employment


Photo source: PwC

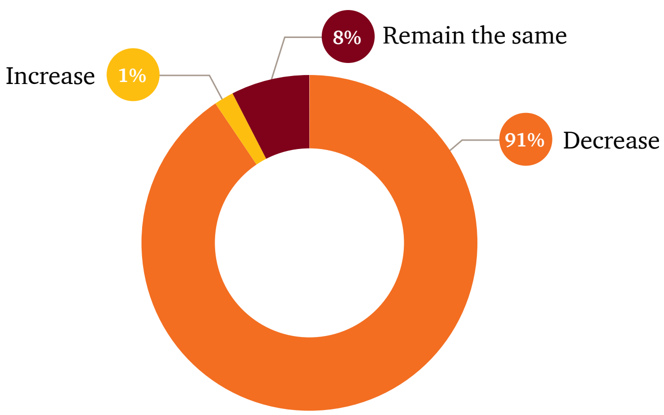
> *"The drop in the global oil price will affect the investment activities in the industry, hence demand for certain types of workers will decrease."*
>
> Survey participant comment

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

The pessimistic view with regard to employment in the oil and gas industry is reflected in the fact that 91% of the respondents indicated that they expect a decrease in employment compared to last year, which is undoubtedly a result of the historically low oil price. Only 1% of the respondents indicated that they expect the workforce numbers to increase, whereas 8% indicated that they expect the numbers to remain the same. Last year only 53% expected a decrease in employment numbers, while 6% expected an increase and 41% expected employment numbers to remain the same.

Chart 6.1

Employment in oil and gas industry

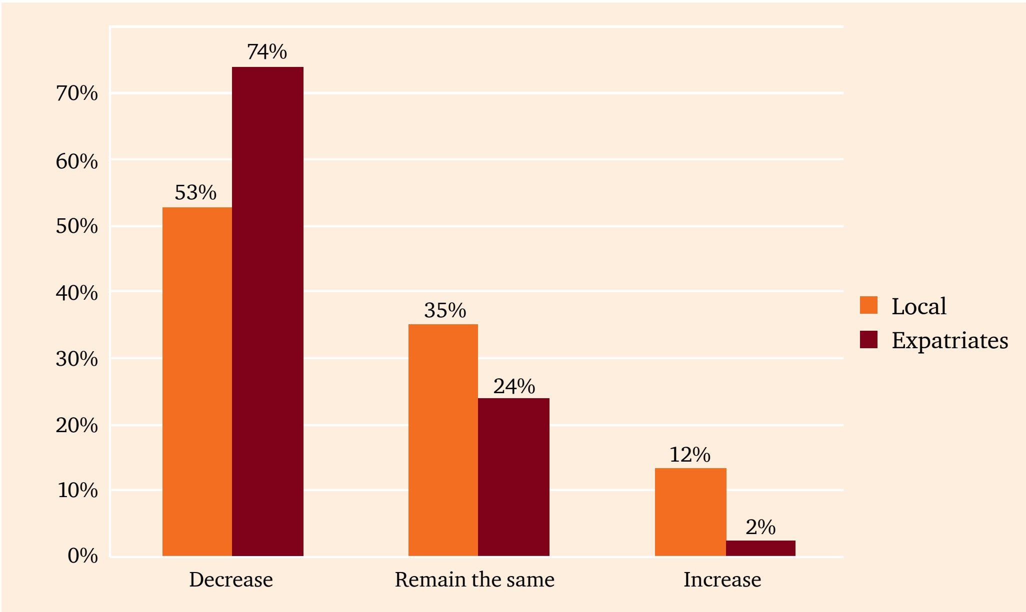


"The age restrictive regulations that the Manpower department is subjecting western companies operating in Indonesia [to] serves to degrade the effectiveness of the industry, eliminates essential mentoring of in-country professionals and ultimately will reduce the appetite for investing in Indonesia."

Survey participant comment

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

Chart 6.2 Employee numbers



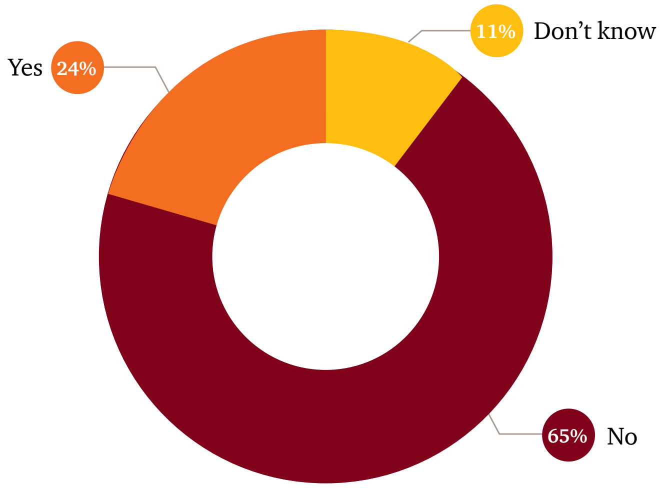
Respondents commented that there is a lack of skilled staff, in part because of better conditions and opportunities outside of Indonesia as well as the tighter controls on skilled expatriates, particularly those aged over 55.

A significant portion of the respondents (74%) expect expatriate headcount in their company to decrease compared with around 51% expecting a decrease in the 2015 and 2014 surveys. The expectations for local staff are less dramatic, with 53% of respondents expecting a decline compared to 32% in the 2015 survey. The lower oil price is cited as a key factor in reducing workforce numbers. There also appear to be concerns that the quality of the available workforce may also be in decline due to higher salaries elsewhere and restrictions on expatriate hires, reasons that are generally unchanged since last year's survey.

C. Do you expect the industry to encounter difficulties in hiring and retaining employees in the next 12 months?

Chart 6.3

Difficulties in hiring and retaining employees



Given that the number of workers in the industry is expected to decline, respondents did not expect that the industry will have difficulties hiring and retaining staff. This suggests again a general downsizing in the Indonesia’s oil and gas sector workforce and is in contrast to the 2012 and 2014 surveys were 60% of respondents said that the industry would have difficulty in this area. This is borne out by employee reduction programmes that have already commenced in 2016 as companies attempt to right-size to the current oil price environment.

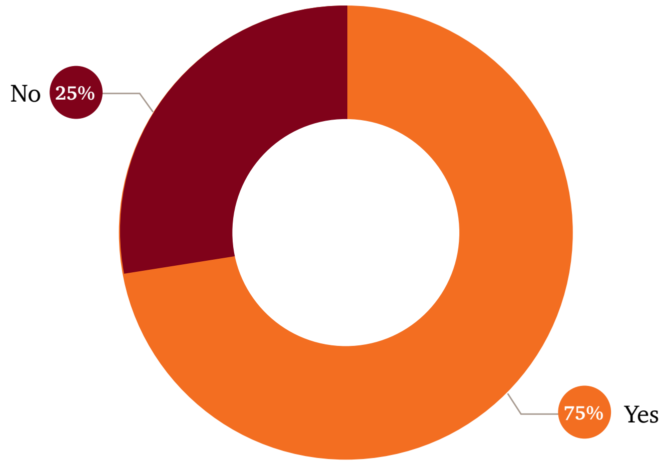
Nevertheless employment issues are a concern to many respondents, particularly the restrictions on expatriate workers. The aim of the restriction is to encourage the employment and promotion of local staff, but survey comments suggest that experienced mentors, who are necessary to help develop local talent, are being lost.

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

Seventy five percent (2015: 63%) of survey participants believe that the Indonesian oil and gas sector has a sufficient number of skilled staff, despite the restrictions on expatriate workers. But the 25% (2015: 37%) who said that there is not sufficient skilled staff pointed to the manpower regulations affecting expatriate hires and experienced local staff being attracted offshore as real issues.

Chart 6.4

Sufficient skilled staff



E. Have regulations imposing salary caps for expatriate employees affected your ability to attract skilled staff?

Respondents were asked two additional questions regarding regulations affecting expatriate staff, that is have salary caps affected your ability to attract skilled staff and have expatriate age limitations affected the composition of your workforce.

Chart 6.5

Salary caps affecting skilled staff hiring

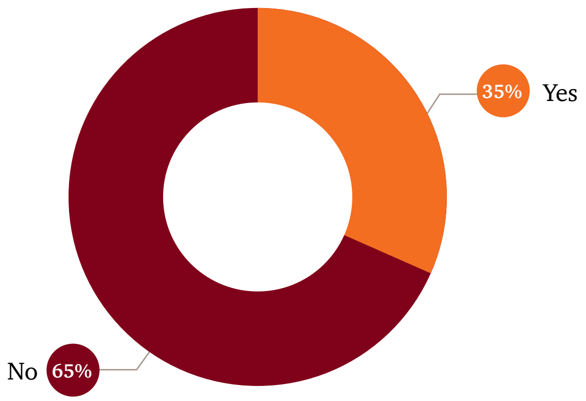
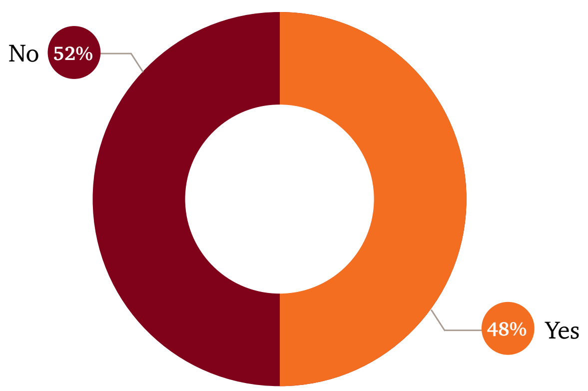


Chart 6.6

Age limitation affecting workplace composition



More than 60% said the salary cap has not caused issues for attracting skilled staff, although 48% said that restrictions on employing expatriates over the age of 55 had affected workforce composition. Although in simple yes/no terms not a definitive result, respondents' comments displayed some serious concerns about the policies. Many respondents complained that the age restriction was seriously undermining the industry's ability to up-skill local workers and a number of respondents indicated that although the salary cap was not causing issues in attracting skilled staff, it didn't make sense as the cap is based on nationality, rather than expertise and deliverables.

"Salary level has to be based on expertise and deliverables, not based on … expat vs local."

Survey participant comment

7 Capital expenditure

Photo source: PwC

A. What are your company's future plans for capital spending in Indonesia compared to last year?

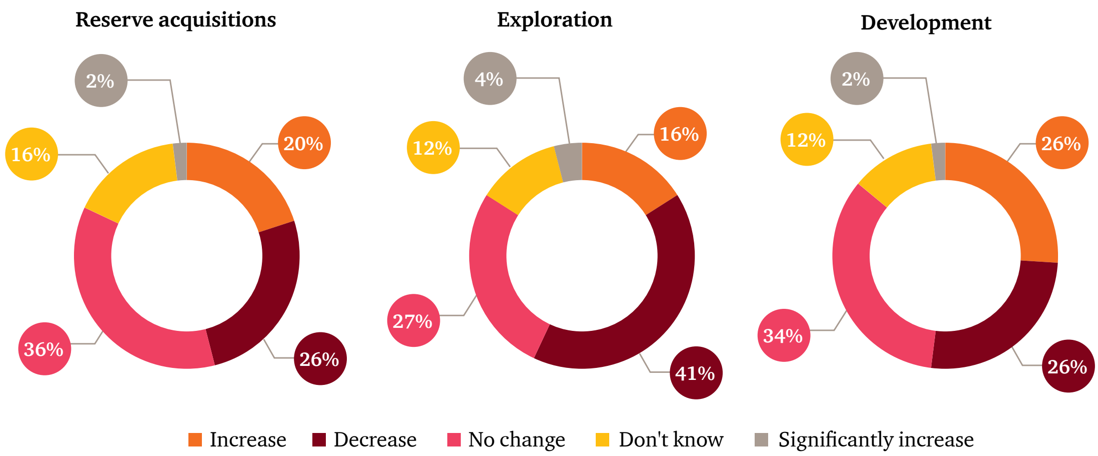
Future capital spending is expected to slow down or stay the same, particularly for exploration. Compared to the 2014 and 2012 surveys where the expectation was to maintain or increase capital spending on reserve acquisition, exploration and development, the general view of participants is, at best, mixed this year. In fact, similar to the 2015 survey results, respondents broadly fall into three similarly sized groups – one third will decrease capital expenditure, one-third will increase spending and one third will maintain it as it is.

This is generally consistent with the signals from the majors that capital expenditure will be pared back significantly in 2016, and perhaps beyond.

"Considering the situation and risks (technical and commercial) there will be significantly reduced exploration activities in the country."

Survey participant comment

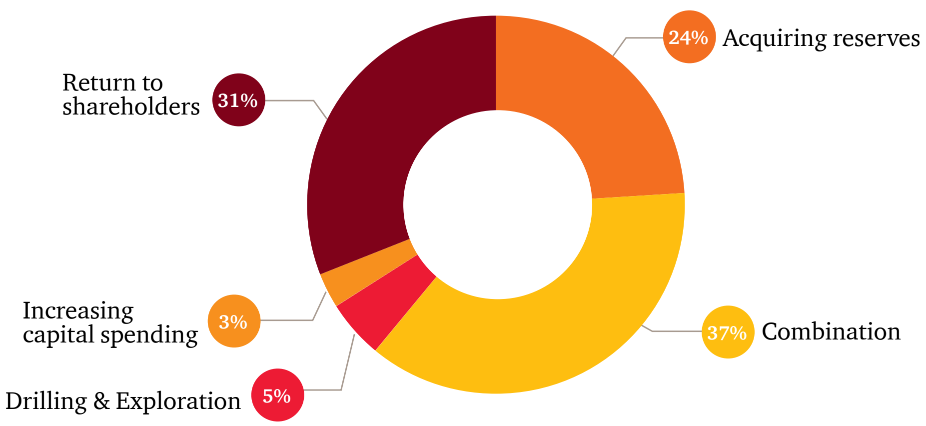
Chart 7.1 Capital spending in Indonesia and internationally



This result is at odds with the government's desire for an increase in investment in the Indonesian oil and gas industry and can be directly linked to the sharp decline in oil and gas prices since the middle of 2014. Some survey participants indicated that the price decline has meant that all exploration activities have been or will be postponed.

B. Given the current price environment, where will the Indonesian oil & gas industry principally spend its available cash flows?

Chart 7.2 Available cash flow spending

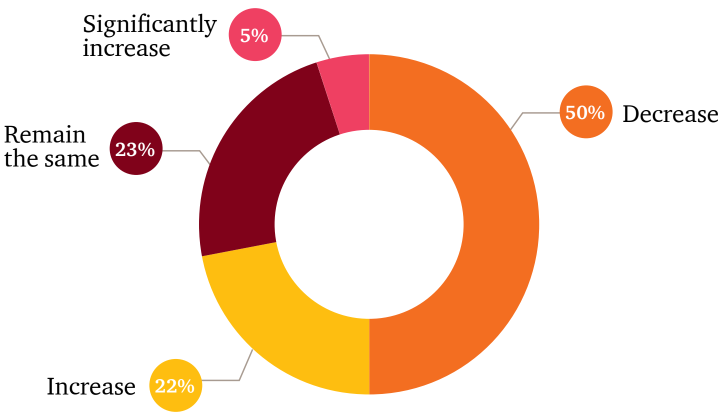


"Indonesia needs to improve its fiscal policy for oil and gas."

Survey participant comment

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

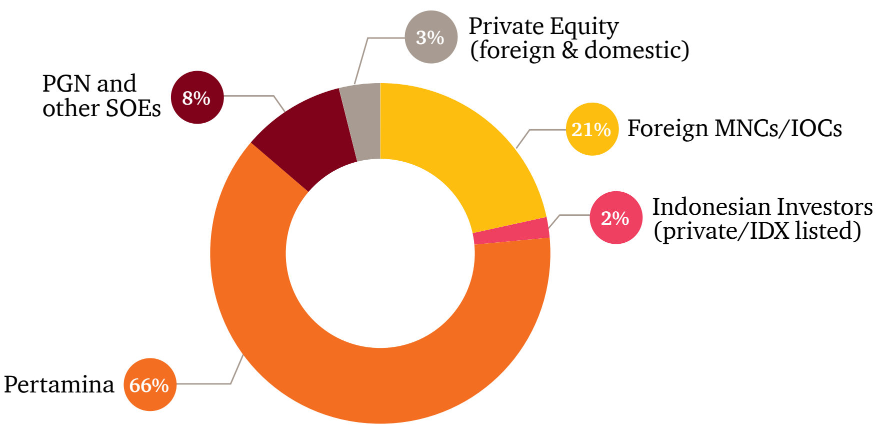
Chart 7.3 Need for capital



Consistent with the expectation that capital spending is slowing down, an overwhelming 50% of respondents said that the industry's need for capital will decrease in the next five years. This compares with only 21% of respondents to the 2015 survey expecting a decrease in the need for capital. On the upside, 22% (2015: 65%) expect the industry will have an increased need for capital. This will no doubt depend on an increase in oil prices.

D. Who do you see being the leader in exploiting Indonesian oil and gas over the next five years?

Chart 7.4 Indonesian oil and gas future leader

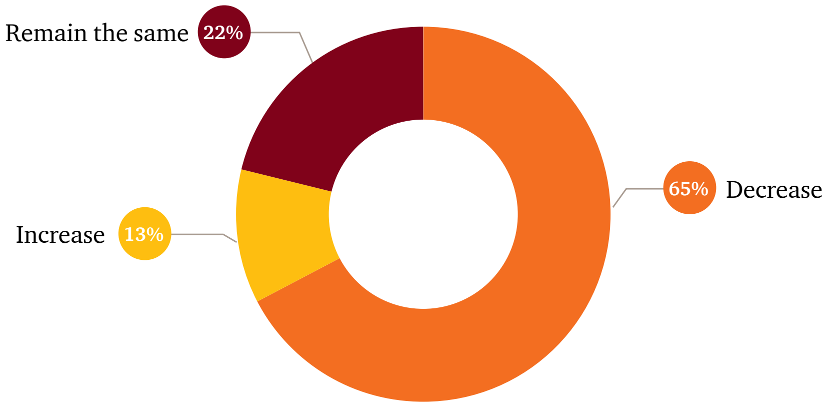


"Despite the commendable efforts by the new leaderships in SKK MIGAS and ESDM, unfortunately there still remain many unfavorable things relating to investment environment, primarily re-tax and customs, local government (PI, permits etc), security, SKKMIGAS/MIGAS procedures and regulations for development and production and sales of gas."

Survey participant comment

E. What are your views on the investment appetite for Indonesia's oil and gas industry?

Chart 7.5 Investment appetite



Survey participants suggested that at present the appetite for investment in the Indonesian oil and gas sector is stagnant. An overwhelming 65% (2015: 81%) of respondents indicated that interest would decrease, while 22% (2015: 41%) expected it to remain the same. Such indicators are clearly at odds with increasing exploration spending, and better accessing Indonesia's domestic oil and gas resources to support economic growth.

"There are still many undeveloped Oil and Gas reserves in Indonesia, which of course will still be able to attract new investors. Not only oil and gas, but also the requirement of increasing infrastructure in Indonesia will definitely create a positive environment for the investors to come."

Survey participant comment

8

Challenges facing the industry

Photo source: PwC

To gain an understanding of the most critical challenges facing the industry we asked survey participants to rank (in terms of priority) 11 different challenges confronting the Indonesian oil and gas industry, as well as indicating any other challenges they deemed relevant. The results are as follows:

Table 8.1

Ranking of Critical Industry Challenges	
1	Contract sanctity and PSC extentions
2	Lack of consistent policies and vision between the Ministry of Finance, Ministry of Energy and Mineral Resources and Ministry of Industry
3	New regulations (such as MoF Regulation No.218/PMK.02/2014 on reimbursement of VAT in the upstream sector)
4	Uncertainty over cost recovery and SKK Migas / BPKP audit findings and the risk of suspense account treatment
5	Lack of a singular body to objectively resolve government disputes across various departments and agencies
6	Provincial and regency government relations
7	Confusion over Law No. 22/Implementing regulations and GR 79/2010
8	Confusion over SKK Migas regulations/“grand fathering” of prior Pertamina practices (such as DMO and open access for pipelines)
9	Community relations
10	Labor regulations
11	SKK Migas performance

"Each ministry has their own KPIs, which results in behaviors that do not necessarily support one another."

Survey participant comment

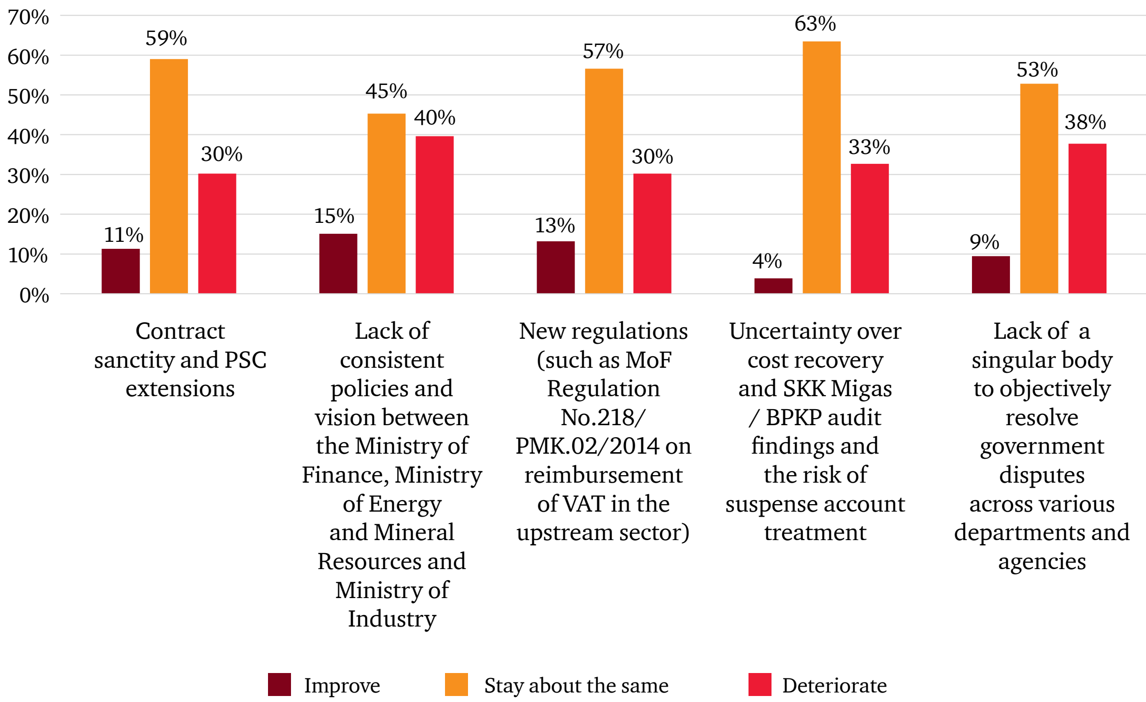
Of these challenges, similar to last year's survey results, those ranked 1-5 above, reflect in part the overall lack of coordinated policy between the technical ministries and uncertainty over the overarching regulatory framework since 2012 when BP Migas was dissolved and subsequently replaced SKK Migas. Noting also that during this time a substantial revision to the Oil & Gas Law No.22 was under consideration but not passed by Parliament prior to the 2014 elections, and remains under discussion as we write.

Examples of the perceived lack of policy coordination between Ministries were the Land and Building tax assessments on exploration phase PSCs, in some cases exceeding the committed work programs and budgets, and the change in VAT reimbursement procedures.

The prolonged discussions with PSC holders over the terms of contemporary PSC extensions and internal deliberations on the proposed Ministry of Energy and Mineral Resources Regulation on PSC extensions (the Management of Oil & Gas Working Areas of Expiring Cooperation Contracts) look to have played a part in industry concerns over contract sanctity and PSC extensions, together with the highly publicised debates over the extension of some large PSCs and development of new blocks in recent times. This is borne out by the expectations of survey respondents on this matter for the next 12 months (see below).

Particularly worrying is that generally a third or more of respondents expect deterioration in the top 5 challenges over the next 12 months – with a significant 40% forcasting deterioration in inter-governmental coordination.

Chart 8.1 Survey participants' views on the development of challenges over the next 12 months



Out of the top five challenges, survey participants expect the issue of new regulations, contract sanctity and lack of a single body to resolve government disputes across departments and agencies to deteriorate most markedly over the next 12 months. The respondents indicated that they expect SKK Migas performance to improve, or at least stay the same. As was the case in previous surveys, the respondents do not expect significant developments within a 12 month window as many of these issues are structural in nature and will require time to achieve real improvement.

"Continued delay due to continuous change in composition of and lack of understanding in DPR commision VII."

Survey participant comment

9 Competitiveness

Photo source: PT Badak NGL

Indonesia's petroleum industry has for decades been viewed by international petroleum investors as an attractive destination for investment, however for some years now there has been concern that the country's competitiveness is slipping. To gauge the issues around competitiveness we asked the survey participants to rank Indonesia's competitive features on a scale 1 to 10, with 1 being most competitive.

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

"Geologically attractive, relatively safe cumbersome regulatory process especially in disputes."

Survey participant comment

What are the most attractive features of investing in Indonesia?

Table 9.2

Feature	2016 rank
Geological opportunities	1
Trained workforce	2
Ease of foreign ownership	3

Survey participants indicated, once more, that Indonesia's most attractive feature for investment is its geological opportunity. It is interesting to note that Indonesia's trained workforce remains the second most attractive feature in this year's survey, despite concerns voiced by respondents about local talent being attracted overseas and new restrictions on expatriate hires. This is an acknowledgement of the strong local talent that is the legacy of Indonesia's long history in oil and gas.

What are the least competitive features of investing in Indonesia?

Table 9.3

Feature	2016 rank
Political stability	10
Risk premium	9
Regulatory framework	8
Infrastructure	7

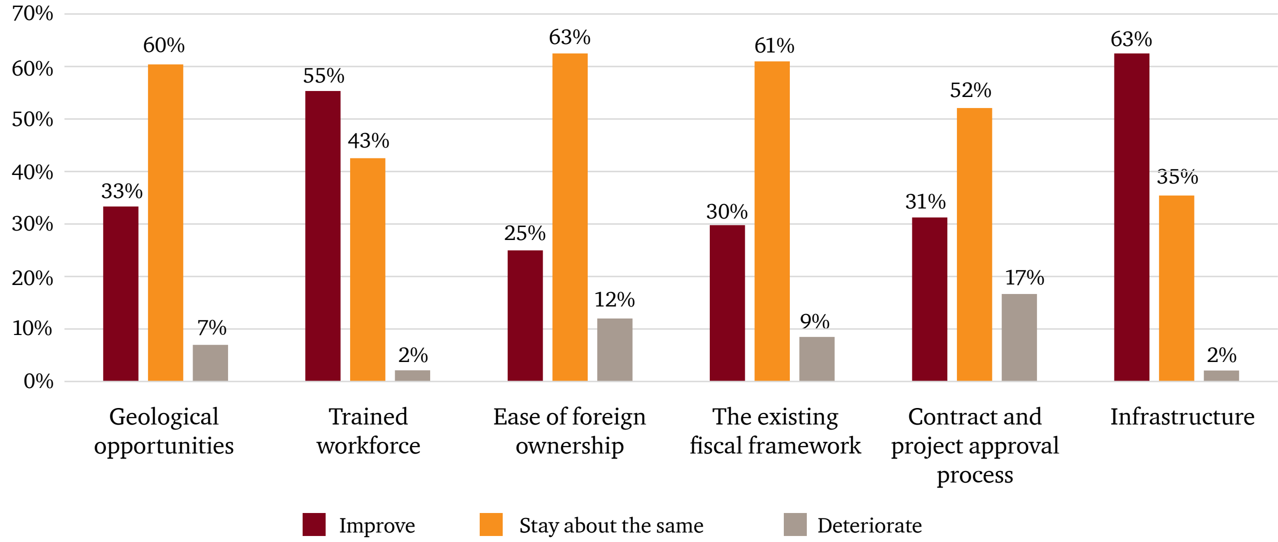
"A lot of initiative, in fact, counter-productive or controversial with the situation."

Survey participant comment

Comparing the results of our past surveys in 2010, 2012, 2014 and 2015 with this 2016 survey suggests that there has been little positive change in features described as problematic, which is probably due to the fact that these issues are structural and therefore difficult to change in the short term.

To the extent that these features of investment are "controllable" by the Government of Indonesia, they do represent an opportunity for action that could potentially change the mindset of investors, whose investment appetite for Indonesia, as noted above, has stagnated, despite continued strong interest in the geological opportunities of the country.

Chart 9.1
Development of competitiveness (within 12 months)



It is interesting to note that respondents are more optimistic about improvements in competitiveness in this survey compared to the past three surveys. The stand-out improvement, similar to the 2015 survey, that is expected by respondents is the building of new infrastructure, no doubt as a result of the new administration's actions and comments to date. Having substantially reduced expenditures on fuel subsidies, the revision of the national budget (APBN) for fiscal 2015 has seen a substantial increase in funds allocated for infrastructure spending. This is consistent with President Joko Widodo's commitment that his government will build new ports, roads and power stations to help achieve Indonesia's long-term growth targets. The development of further power generation facilities, improvement in transportation and energy infrastructure (pipelines and regasification terminals) bodes well for attracting further investment into Indonesia's gas sector, as this supports feedstock demand and assists with commercialisation of gas reserves.

Despite real concerns that the contract and approval process has deteriorated in the past, respondents expect improvements over the next five years.

The respondents also indicated that they believe that the trained workforce will remain a strong competitive feature in the long run. This is probably due to the fact that Indonesia has a long track record in the oil and gas industry.

Respondents indicated that, similar to the 2015 survey, the geological opportunities are also expected to improve. Whilst we take this to mean better access to new or relinquished work areas, commercial success will depend on the interplay of market prices, the cost of developing deeper and more remote fields and the fiscal terms made available to contractors.

A lot of uncertainty to predict the long term situation. But overall the oil and gas industry is in a very difficult situation and I don't see any significant and meaningful initiative to cure them."

Survey participant comment

"The new government has promised much, and even if it doesn't deliver on all of that, it's made a decent start."

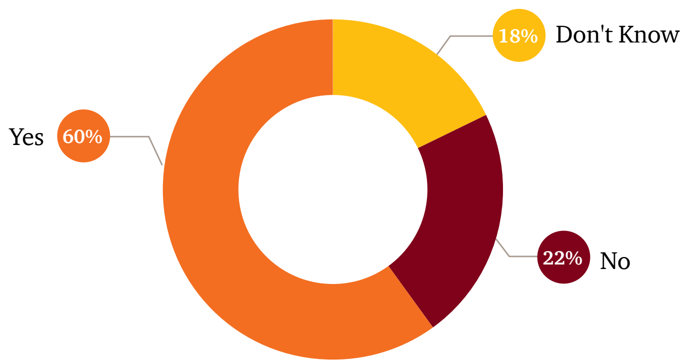
Survey participant comment

10 Upstream Challenges

In assessing survey participants views on contemporary upstream issues, we sought to focus this year on whether there was a need to increase exploration activity, how the use of natural gas as a prioritised energy source could be supported and what other steps could be taken to develop Indonesia's energy resources for domestic energy needs.

A. Do you think new immediate actions are warranted to stimulate oil & gas exploration activity in Indonesia?

Chart 10.1



An overwhelming 60% (2015: 69%) of respondents indicated that immediate actions were warranted to stimulate oil and gas exploration activity.

B. Would any of the following assist to stimulate an increase in exploration spending in the short term?

Survey participants were asked to indicate the relative importance or implied merit of a variety of actions that might be considered by the Government, relevant Ministries or SKK Migas. Note that many of these ideas have been raised in the past by the industry or Government, but remain untested or are still work in progress.

Table 10.1

Would any of the following assist to stimulate an increase in exploration spending in the short term?	Yes	No	Don't Know
Improved clarity on the rules and conditions for PSC extensions	81%	8%	11%
Further harmonization of Government policy for the oil & gas sector across all relevant ministries, including the Ministry of Finance, Ministry of Energy and Mineral Resources and Ministry of Environment, etc.	81%	0%	19%
Other non-fiscal or fiscal incentives (e.g. zero rating VAT (0%) of drilling and seismic fees)	83%	9%	8%
An exemption from the need to apply PTK-007 during the exploration period of a PSC	72%	11%	17%
Improved access to data and a framework that promotes the use of multi-client seismic data, including cost recovery thereof	57%	20%	23%
A temporary or partial removal of ring fencing of PSCs for cost recovery purposes (e.g. allowing investors with multiple PSC investments recovery of the unsuccessful exploration costs from PSC #1 against production revenues on producing PSC#2)	76%	14%	10%
A blanket exemption from the Cabotage rules for specialized seismic vessels, drill ships and drilling rigs	71%	12%	17%
A move from a PSC model to a royalty and tax regime, with Contractors having greater discretion over their expenditures and engagement of service providers	46%	35%	19%
Provision of a formal framework for “subdivision” of PSCs to enable the pursuit of untapped prospects (e.g. by non-equity holders in the PSC, albeit with the right technical experience or sufficient capital)	40%	29%	31%

"Need a significant and meaningful stimulus, not only optical which don't touch the bottomline."

Survey participant comment

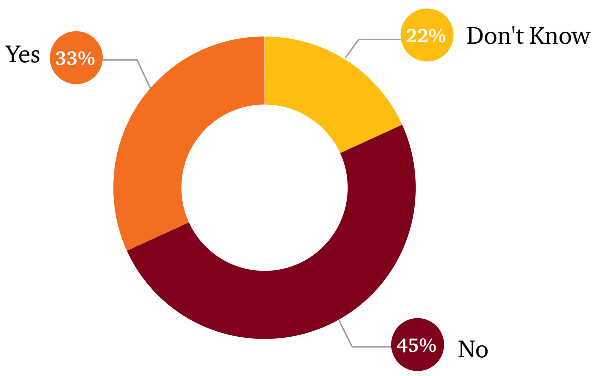
More than 50% of respondents rated all nine of these potential actions as very important or moderately important. Significantly there was an overwhelming recognition of the need for, or importance of:

1. Improved clarity on the rules and conditions for PSC extensions;
2. Further harmonization of Government policy for the oil & gas sector across all relevant ministries, including the Ministry of Finance, Ministry of Energy and Mineral Resources and Ministry of Environment, etc; and
3. Other non-fiscal or fiscal incentives (e.g. zero rating VAT (0%) for drilling and seismic fees).

Significantly, there was also great interest in the next four most highly rated potential actions. Whilst all require policy changes, these potential initiatives could act as a catalyst and trigger greater exploration spending.

C. Would contractors be prepared to pay larger Signature Bonuses in bid rounds if the MoEMR was able to provide improved data and information that supported the probability of commercial success?

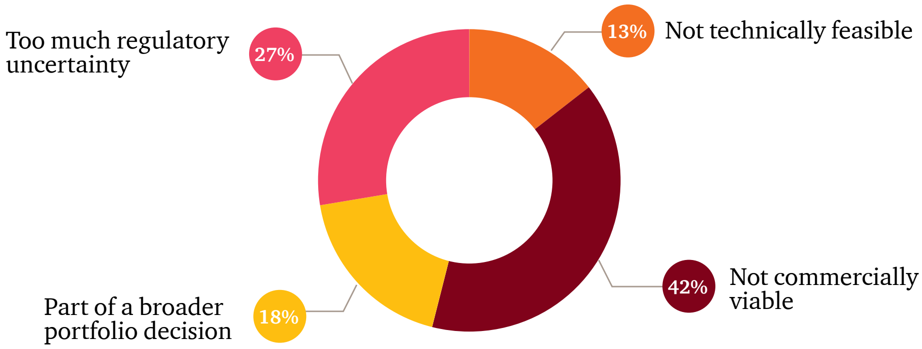
Chart 10.2



Responses were divided on the likely effect of better quality data and information during the bid round process. Half of the respondents indicated that they do not believe that contractors would be willing to pay larger signature bonuses, however close to a third (2015: 29%) of respondents did think that greater signature bonuses would be justified by a greater likelihood of commercial success.

D. Why do you think a number of blocks have been relinquished by contractors in the past 12-18 months?

Chart 10.3



Similar to prior surveys, commercial viability appears to be the major reason for relinquishments (42%), although it was not clear whether this was due to the recent fall in oil and gas prices or issues of scale, where discoveries or reserves were deemed too small to be viable. In addition, similar to the 2015 survey results, almost a third (2015: 28%) of the respondents indicated that they thought contractors were walking away from blocks due to regulatory issues, rather than geological reasons.

"Long term plans must be initiated by stakeholders and they rely on the Indonesian Government not to change the rules midway through projects."

Survey participant comment

"The era of easy oil and easy gas is over. Incentives are needed to encourage exploration activities in the offshore deepwater remote areas of east Indonesia."

Survey participant comment

E. In regard to the prioritisation of gas as a domestic energy source, which issues require immediate attention?

Table 10.2

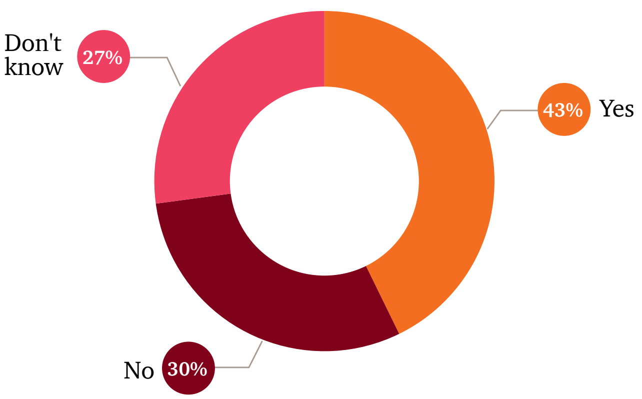
Gas as a domestic energy source - In regard to the prioritisation of gas as a domestic energy source, which issues require immediate attention?	Yes	No	Don't Know
Providing fiscal or non-fiscal incentives for the commercialization of stranded gas / untapped gas deposits	86%	6%	8%
Providing fiscal or non-fiscal incentives for the construction of further pipelines	83%	11%	6%
Establishing a clear regulatory framework and long term tariff structure for pipeline investors	83%	6%	11%

Given the intended utilisation of natural gas feedstocks for power generation and industrial use to help underpin economic growth these issues warrant attention.

We note that these issues are similar to the concerns over the regulatory framework and tariffs for Indonesian infrastructure in a broader sense.

F. Do you think that "Open Access Policy" on oil and gas pipelines will have any impact on your current plan of production?

Chart 10.4



There are mixed views with regards to the impact of the "Open Access Policy" on the production plans, as 30% of the respondents indicated that it will not impact their production plans, 27% indicated that they don't know whether it would impact their production plans, and the remaining 43% said it would impact their production plans.

"Clear and foreseeable governmental procedure would be a help to encourage the stakeholders to promote."

Survey participant comment

G. In what ways can stakeholders work together to promote the development of Indonesia's energy resources in order to satisfy Indonesia's energy needs?

To conclude the survey this year we asked for respondents' ideas on how stakeholders may be able to work together to promote the oil and gas industry. A common theme amongst responses was that enhanced transparent communication and more dialogue on the issues holding back investment seemed to be a good place to start. However, responses did indicate that dialogue must result in an improved investment environment and solution driven changes being forthcoming.

"Government as regulator to [provide] investors with the good law enforcement and consistent policy for all aspects of the oil & gas industry."

"Work together, do your best, no corruption or looking for personal benefit."

Survey participant comment

About PwC

11


Photo source: 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. More than 208,000 people in 157 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.

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 clients' 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 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 four Lines of Service, each staffed by highly qualified experienced professionals who are leaders in their field. The lines of service are:

- Assurance Services provide assurance over any system, process or controls and over any set of information to the highest PwC quality.
  - Risk Assurance
  - Financial Audit
  - Capital Market Services
  - Accounting Advisory Services
- Tax Services optimise tax efficiency and contribute to overall corporate strategy through the formulation of effective tax strategies and innovative tax planning. Some of our value-driven tax services include:
  - Corporate tax
  - International tax
  - Transfer pricing (TP)
  - Mergers and acquisitions (M&A)
  - VAT
  - Tax disputes
  - International assignments
  - Customs
  - Investment and corporate services
- Advisory services implement an integrated suite of solutions covering deals and transaction support and performance improvement.
  - Business Recovery Services
  - Capital Projects & Infrastructure
  - Corporate Finance
  - Corporate Value Advisory
  - Deal Strategy
  - Delivering Deal Value
  - Transaction Services
- Consulting Services help organisations to work smarter and grow faster. We consult with our clients to build effective organisations, innovate & grow, reduce costs, manage risk & regulations and leverage talent. Our aim is to support you in designing, managing and executing lasting beneficial change.
  - Management Consulting
  - Risk Consulting
  - Technology Consulting
  - Strategy Consulting

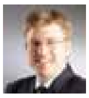
For companies operating in the Indonesian oil and gas sector, there are some compelling reasons to choose PwC as your professional services firm:

- 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 1,700 professional staff, including over 50 Indonesian national partners and expatriate technical advisors, trained in providing assurance, advisory, tax and consulting services to Indonesian and international companies, and the Government of Indonesia.
- Our Energy, Utilities and Mining (EU&M) practice in Indonesia comprises over 300 dedicated professionals across our four 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 also draw on the PwC global EU&M network which includes more than 12,000 people focused on serving energy, power and mining clients.
- 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) and our clients 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)

For further information, please do not hesitate to contact any of the following specialists from our Indonesian Energy, Utilities and Mining (EU&M) practice:

Assurance



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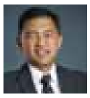

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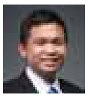

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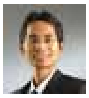

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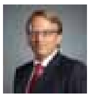

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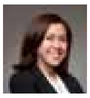

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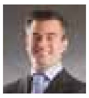

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13 Glossary

BOPD	Barrels of Oil per Day
BPH Migas	*Badan Pengatur Hilir Minyak dan Gas Bumi* (Oil and Gas Downstream Regulatory Agency)
BPKP	*Badan Pengawasan Keuangan dan Pembangunan* (Government Audit Body)
CBM	Coal Bed Methane
CFO	Chief Financial Officer
COO	Chief Operating Officer
CSG	Coal Seam Gas
DMO	Domestic Marget Obligation
EU&M	Energy, Utilities, and Mining
FSRU	Floating Storage & Regasification Unit
GoI	Government of Indonesia
GR-79	Government Regulation No.79/2010 on cost recovery and tax in the upstream sector (and its implementing regulations).
IPA	Indonesian Petroleum Association
KKN	Corruption, Collusion and Nepotism
Law No. 22	Oil and Gas Law No. 22/2001
LPG	Liquified Petroleum Gas
MoF	Ministry of Finance
MoEMR	Ministry of Energy and Mineral Resources
Pertamina	*Perusahaan Pertambangan Minyak dan Gas Bumi Negara* (The Indonesian State Oil Company)
PSC	Production Sharing Contract
PTK-007	BP Migas Guidance (No.007/PTK) on the Management Framework for the Supply Chain for Cooperation Contracts
SKK Migas	*Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak* (Government Executive Agency for Upstream Oil and Gas Business Activities)
US$	United States Dollar
VAT	Value Added Tax
WTI	West Texas Intermediate (Crude Oil Price)

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