

May 2015

Challenges for a new era

An investor survey of the Indonesian oil and gas industry



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Introduction

Challenges for a new era.

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 seventh 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 95 respondents from 75 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. The recent (May 2015) announcement that Sudirman Said, Minister of Energy and Mineral Resources, has formed a new independent team named the National Exploration Committee with a focus on implementing existing recommendations may assist in this regard.

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. We note that further inroads into providing greater ease in licensing and permitting for the industry by way of the proposed one-stop service at BKPM could also assist in improving competitiveness.

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.

Executive Summary



Photo source: PT Medco Energi Internasional Tbk.

Supply and demand for oil and gas

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. Continuing the trend seen in earlier surveys respondents expect Indonesian gas demand to increase more than demand for Indonesian oil. For the first time since PwC began these industry surveys, some respondents forecast a decline in Indonesian oil demand. 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. A higher percentage of respondents (56%) said that their company will increase exploration in Indonesia, but this is also down from last year's survey. Respondents were quite optimistic about future government regulation with 40% expecting regulations to improve in terms

of quality and usefulness and only 6% expecting deterioration. This question attracted extensive comments from respondents which generally confirmed an early endorsement of the new government.

Employment

In a dramatic shift from the 2014 and 2012 surveys, the majority of respondents believe that employment in the oil and gas industry will decrease this year, highlighting the affect of the slide in the oil price.

In line with comments in our previous surveys, respondents commented that there is a lack of skilled local and expatriate staff, in part because of better conditions and opportunities outside of Indonesia as well as the tighter controls on skilled expatriates. Just over half of the respondents expect their company to reduce their expatriate workforce with 32% 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 as it is.

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 investment in the Indonesian oil and gas industry.

Challenges facing the industry

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

1. **Lack of consistent policies and vision between the Ministry of Finance, Ministry of Energy and Mineral Resources and Ministry of Industry**
2. **Contract sanctity and PSC extensions**
3. **Lack of a singular body to objectively resolve government disputes across various departments and agencies**
4. **Confusion over Law No. 22 and its implementing regulations and GR79/2010**
5. **SKK Migas' performance**

Out of the top five challenges, survey participants expect the issue of contract sanctity and PSC extensions to deteriorate most markedly over the next 12 months. They were more confident that the remaining top five issues would improve slightly in the short term or, in the case of the lack of a single body to resolve government disputes across departments and agencies, not get any worse.

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. Political stability
5. Environmental regulation

These top competitive features are largely unchanged from prior surveys.

It is interesting to note, however, that respondents are much more optimistic about at least one of Indonesia's least competitive features, infrastructure. Respondents expect the building of new infrastructure, no doubt as a result of the new administration's actions and comments to date.

Upstream issues

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.

Significantly there was an overwhelming recognition of the need for further harmonization of Government policy for the oil & gas sector across all relevant ministries and improved clarity on the rules and conditions for PSC extensions.

An overview of the oil and gas industry in Indonesia



Photo source: Chevron Indonesia [PT Chevron Pacific Indonesia]

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 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 to approximately US\$75 per barrel. Prices increased to average (on an annual basis) approximately US\$94-98 a barrel (WTI) in the period from 2011 to 2013.

In mid-2014 prices fell dramatically, reaching a low of US\$47 in January 2015. By May 2015 WTI was trading at around US\$60 a barrel.

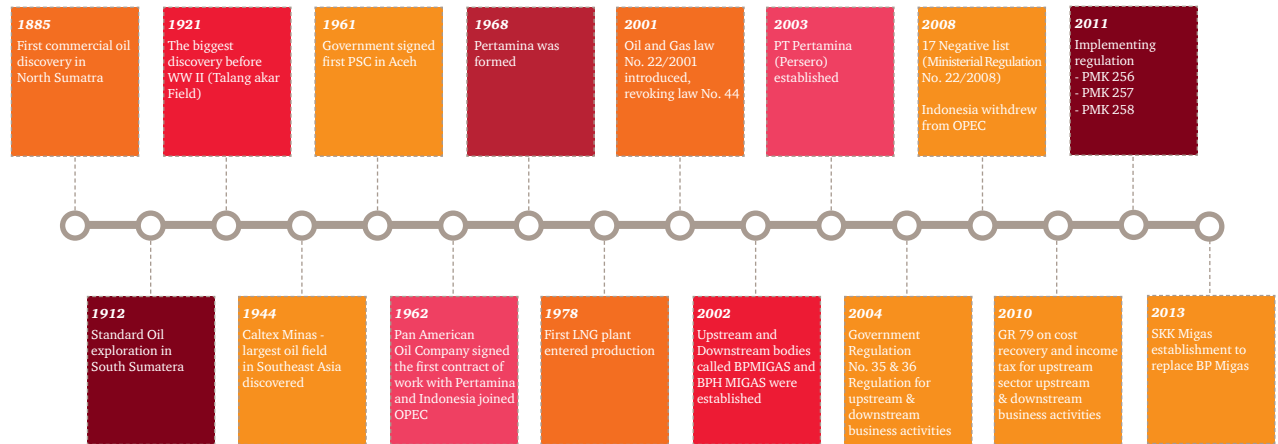
Despite ongoing regulatory changes, investment in the oil and gas industry in Indonesia reached IDR180.6 trillion in 2013 and IDR211.6 trillion in 2014 and contributed around 13% of total state revenue. The Ministry of Finance is expecting oil and gas revenue to halve to IDR95.6 trillion in 2015.

In 2012 there were 25 new oil and gas contracts entered into along with a further 14 in 2013 and 7 in 2014. In March 2015, 11 contracts were signed.

Global Context

Indonesia has been active in the oil and gas sector for nearly 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.

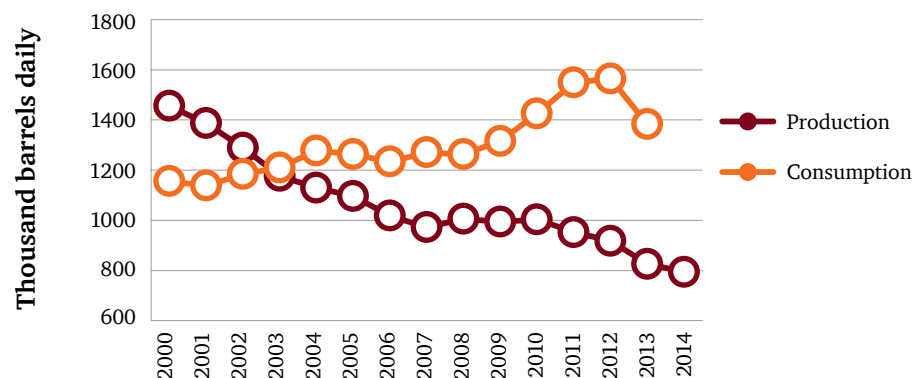
Significant events in the history of Indonesia's Oil and Gas Sector



Indonesia holds proven oil reserves of 3.6 billion barrels and ranks 20th among world oil producers, accounting for approximately 1.1% of world oil production. Declining oil production and increased consumption resulted in Indonesia becoming a net oil importer in late 2004. This factor, led the Government to decide to

temporarily withdraw from the Organisation of Petroleum Exporting Countries (OPEC) – an organisation of which it had been the only Asian member since 1962. The Government has recently indicated it is considering rejoining OPEC to better be able to monitor market conditions.

Indonesia Oil Production and Consumption



Source: BP Statistical Review of World Energy (2000-2013); SKK Migas

Indonesia is ranked 10th in world gas production and the second largest in the Asia Pacific region after China¹, with proven reserves of 105 trillion cubic feet in 2014. Indonesia's gas industry is also being transformed by more competitive liquefied natural gas (LNG) markets, new pipelines/regasification facilities, and increasing domestic gas demand. Indonesia's natural gas production has decreased in recent years (Indonesia supplied 2.6% of the world's marketed production of natural gas in 2010 and

2.1% in 2013²) and the country is facing a declining global LNG market share to 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 world's largest exporter of LNG in 2005 to the world's fourth largest exporter of LNG in 2013, behind Qatar, Malaysia and Australia. It exports to South Korea, Japan, China, Taiwan, Mexico and India.

Resources and Production

Key Indicators - Indonesia's oil and gas industry

Indicator	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
Reserves												
Oil (Million barrels)	8,610	8,630	8,930	8,400	8,220	8,000	7,760	7,730	7,400	7880	7598	N/A
Proven	4,300	4,190	4,370	3,990	3,750	4,300	4,230	4,040	3,740	4030	3741	3692
Potential	4,310	4,440	4,560	4,410	4,470	3,700	3,530	3,690	3,660	3850	3857	N/A
Gas (TSCF)	188.34	185.80	187.10	165.00	170.10	159.63	157.14	152.89	150.70	155.75*	153.75	N/A
Proven	97.81	97.26	94.00	106.00	112.50	107.34	108.40	104.71	103.35	108.4	104.71	103.35
Potential	90.53	88.54	93.10	59.00	57.60	52.29	48.74	48.18	47.35	47.35*	49.04	N/A
Production												
Crude oil (MBOPD)	1,130	1,096	1,018	972	1,006	994	1,003	952	918	824	794	825
Natural gas (MMSCFD)	7,986	7,823	7,660	7,283	7,460	7,962	8,857	8,415	8,167	6,830	6,532	6,532
New contract signed	17	23	5	28	34	34	21	31	25	14	7	11

Source:

2004-2102 Reserves: MoEMR

2013-2015 Reserves: Energy Information Administration, SKK Migas, MoEMR

2004-2012 Production: BP Statistical Review

2013 Production: SKK Migas

2014 Production: MoEMR

2015 Production estimate: State Budget

MBOPD: Thousand Barrels per Day

MMSCFD: Million Standard Cubic Feet per Day

* estimate or budget

1 BP Statistical Review of World Energy 2014

2 BP Statistical Review of World Energy 2014

Indonesia struggles to maintain LNG production levels and continues to feel the pressure of balancing revenues from gas exports with meeting stronger demand from its domestic market. Indonesia's operating LNG liquefaction facilities are based in Bontang in East Kalimantan, and Tangguh in West Papua. A third facility, the Donggi Senoro floating LNG plant

in Sulawesi, is scheduled to be commissioned in mid-2015. The Lampung LNG FSRU facility was commissioned in 2014. Pertamina decommissioned Arun LNG in October 2014 after 36 years of production and converted it into an import and regasification terminal. Arun started receiving LNG from Tangguh in February 2015.

Oil and Gas Contribution to Domestic 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	1,635	211.6	12.94%
2015*	1,793	95.6	5.33%

Source: Ministry of Finance (MoF)

* Budget

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 been well 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 oil-producing regions are Sumatra, the Java Sea, East Kalimantan and Natuna and the four main gas-producing regions are East Kalimantan, Arun (North Sumatra), South Sumatra 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 2014, Indonesia's total crude oil production at 794,000 barrels per day, was a little more than half of its 2001 daily production (1.456 million barrels). The national oil production target for 2015 is 825,000 barrels per day.

The number of wells declined to 64 (23 onshore wells and 41 offshore wells) from 74 in 2013 and 96 in 2012.

Unconventional Oil and Gas

Indonesia's coal bed methane (CBM) reserves are estimated to be 453 Tcf which is larger than Indonesia's estimated natural gas resource and ranks sixth in the world. Its CBM reserves are spread across the archipelago but are predominantly located in South Sumatra, South Kalimantan, and East Kalimantan. The first CBM contract was signed in 2008 and by the end of 2012 there were 54 CBM cooperation contracts in place although only half are being explored. In 2013, four CBM production pilots began selling gas to independent power producers. CBM commercialisation remains in an early phase and the Government revised its targets in March 2014 to daily production of 10 mmcf by 2015 rising to 25 mmcf by 2020.

Indonesia's shale gas reserves are estimated to be 574 Tcf, which is even greater than its CBM reserves. As at the end of 2013, the Government had received 75 proposals spread across Sumatra, Sulawesi, Kalimantan and Papua and five, including Pertamina, had completed a Joint Study. Pertamina signed the first unconventional oil & gas (MNK) PSC for a work area in North Sumatra (Sumbagut) and the MoEMR awarded a second block in Kisaran, North Sumatra in June 2014 and three more blocks, in Sumatra and Riau, in March 2015.

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.



Survey approach



Photo source: PT Techwin Benakat Timur

Survey background

This is the seventh 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 2015 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 95 responses (representing 75 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 2014 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

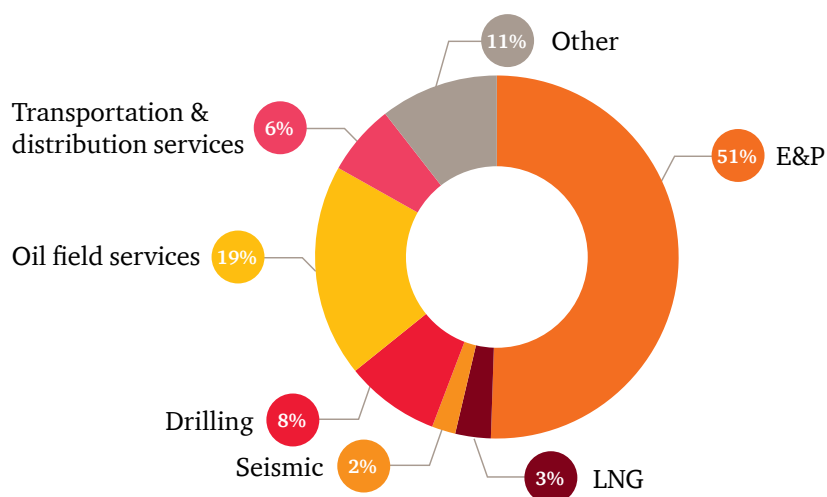
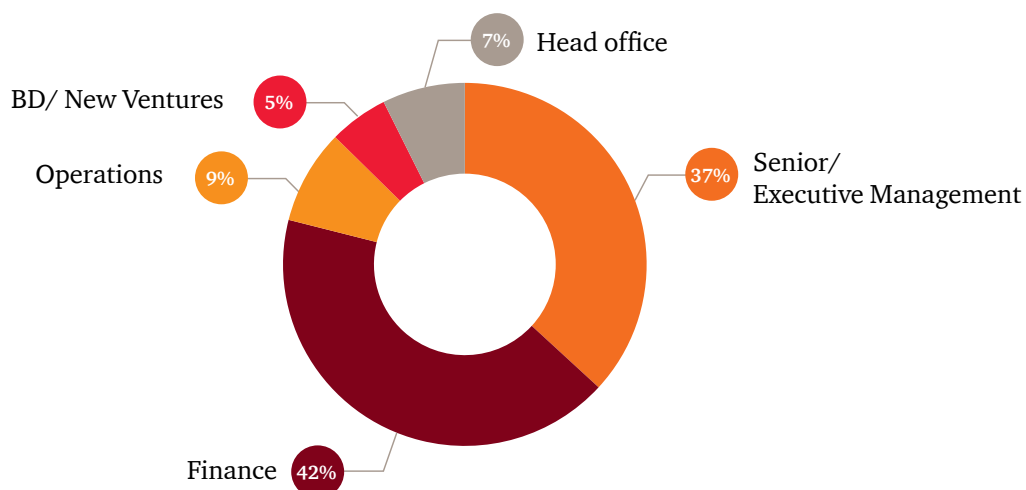


Chart 4.2
Survey participants' functional role



Supply and demand for oil and gas



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

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 more respondents expect Indonesian gas demand to significantly increase more than demand for Indonesian oil. 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, 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 first time since PwC began these industry surveys, some respondents forecast a decline in Indonesian oil demand.

“With current oil prices, it will be more economical to develop and exploit natural gas.”

Survey participant comment

“Supply and demand for gas will depend on the ability to align the availability of supply and demand with the readiness of infrastructure. Unlike oil which can, at least partially, use existing or public infrastructure, for natural gas to be utilised there needs to be a match between supply, infrastructure and demand.”

Survey participant comment

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

Chart 5.1 Indonesian oil demand

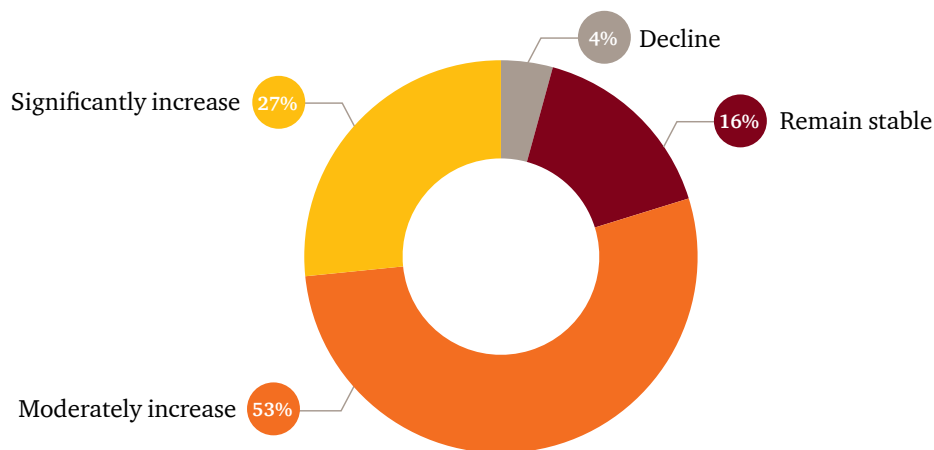
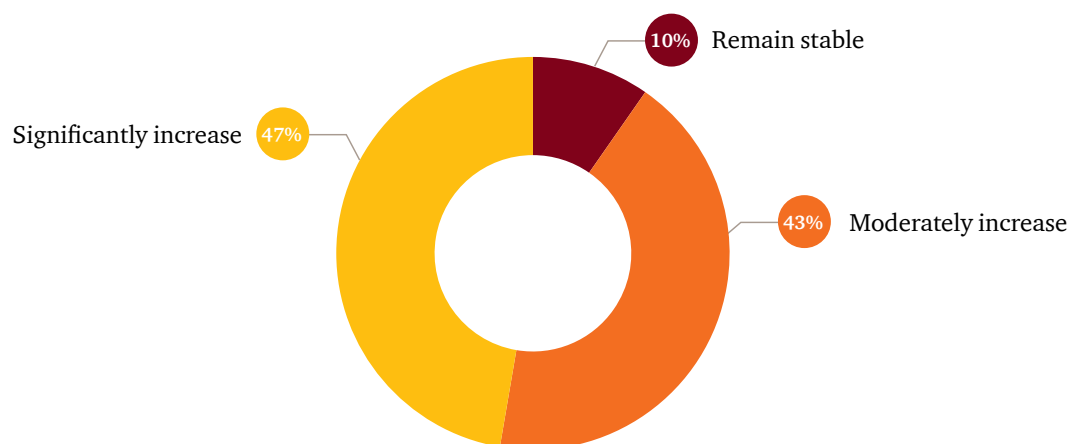


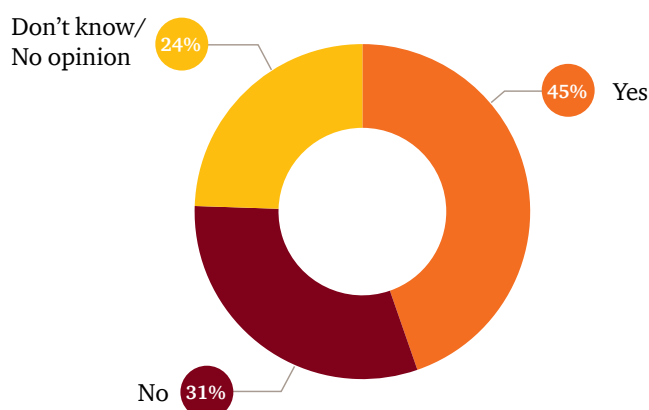
Chart 5.2 Indonesian gas demand



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

Chart 5.3

Significant oil reserves will be discovered?



“Indonesian oil reserves are huge, however, it needs high technology to find [the oil] and a good business climate. Besides this, companies have difficulty producing oil with the prices lower than \$50/barrel.”

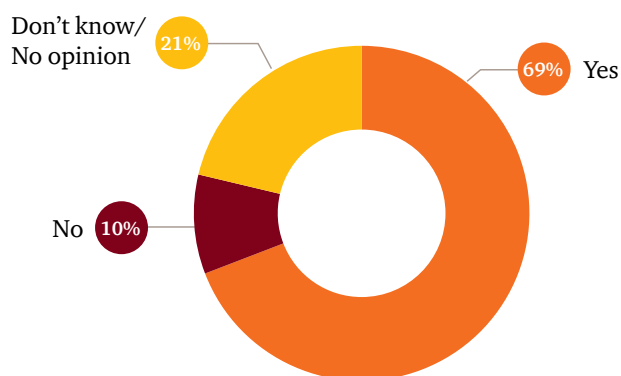
Survey participant comment

A larger number of respondents believe there are still significant oil reserves to be discovered (45%). This compares to an even split of views in 2014 (yes: 39%; no: 39%).

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

Chart 5.4

Significant gas reserves will be discovered?



“The future of Indonesian energy is gas.”

Survey participant comment

Whilst 45% of the survey respondents indicated that they believed that there are still significant oil reserves to be discovered in Indonesia, 68% of respondents thought there were significant gas reserves untapped (compared to 66% in 2014). For both oil and gas, respondents pointed to deepwater, remote areas and hard to reach basins, that is in Eastern Indonesia (Papua, East Timor, Maluku, etc.),

North Central Indonesia (Kalimantan, Sulawesi) and the deeper Sumatra basins. We note that although sentiment has strengthened a little since our 2014 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).

“Current regulatory environment does not support and incentivise exploration activities.”

Survey participant comment

“[Given the] decline in the oil price, significant and synchronised actions need to be taken by those who participate in the oil & gas industry.”

Survey participant comment

“Unconventional [gas] should serve long-term plan.”

“We are just at the beginning of exploring CBM and shale gas.”

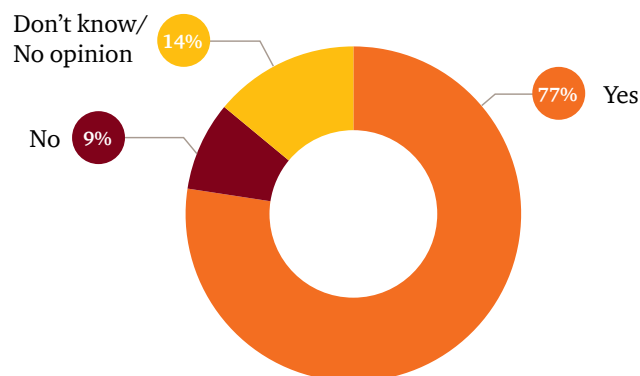
“[Unconventional gas] requires longer development time: more than 5 years.”

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 government support on reserves discovered

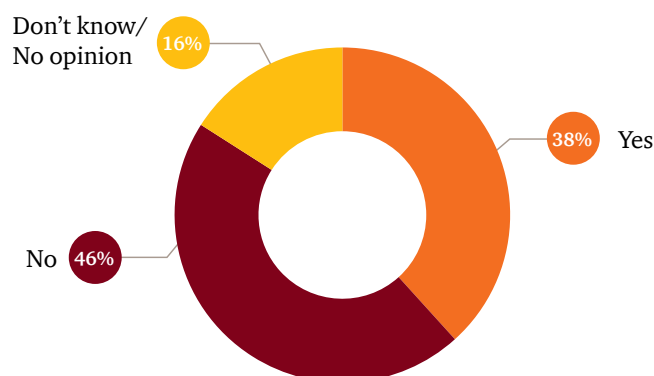


Respondents were asked a follow-up question in this survey about whether the current regulatory and commercial environment is hampering the development of new reserves as this could be a reason why respondents are less likely to believe future new oil and gas reserves will be discovered. More than three-quarters of respondents agreed that there are already significant reserves discovered, but the current regulatory and commercial environment does not support development of those fields.

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

Chart 5.6

Indonesia's ability in providing unconventional gas

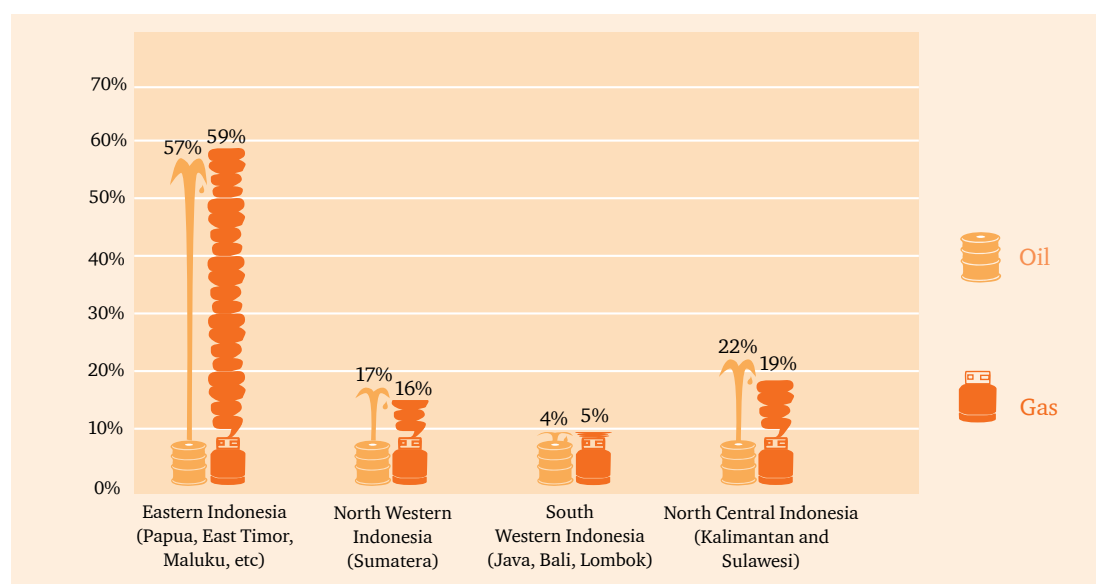


More than a third of the respondents think that Indonesia can supply commercial quantities of unconventional gas in the medium term, although the survey comments suggest that this is some way off. We note also in these survey results a decline in the interest in unconventional gas exploration (see question H below).

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

Chart 5.6

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, although that figure has fallen to 60% in 2015. In our 2012 survey, 50% of the survey participants indicated that new oil discoveries would be in Eastern Indonesia, this percentage increased to 51% in 2014 and 57% in this survey.

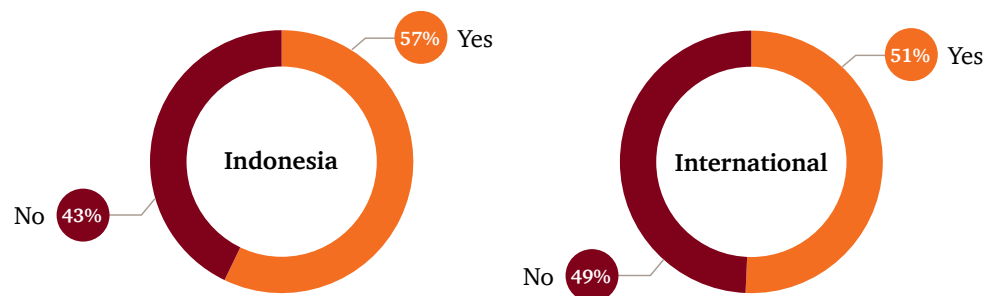
Participants are becoming less optimistic about finding new oil reserves in Sumatra (18% in 2015 compared with 20% in 2014 and 24% in 2012)

notwithstanding that this basin provides a large percentage of the country's current oil production. By contrast more respondents see potential for new gas reserves in Sumatra with 16% of respondents in 2015 having this view, up from 9% in 2014 and 13% in 2012.

The expectations for Western and North Central Indonesia have remained more or less the same as our 2012 and 2014 survey results.

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

Chart 5.7 Increase explorations activities



The fall in the oil price has had a marked effect on exploration activities with only 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 higher percentage of respondents (56%) said that their company will increase exploration in Indonesia, although this is also down from 63% of respondents in last year's survey.

“Since the oil price has decreased significantly, all exploration activities have been postponed.”

Survey participant comment

“Infrastructure is required to balance oversupply in some regions whilst demand in some other regions cannot be fulfilled locally.”

Survey participant comment

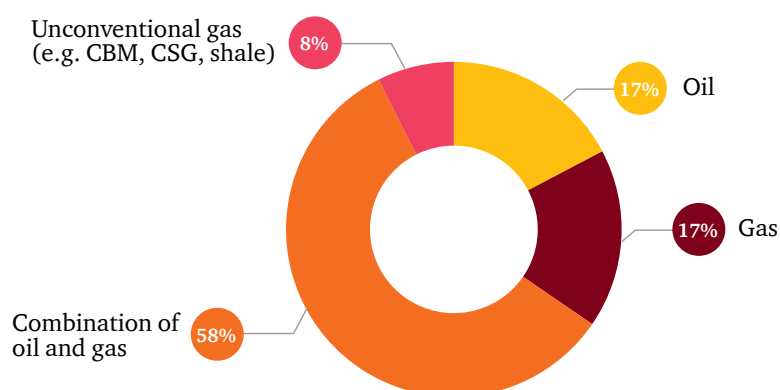
H. What will be the focus of your company’s Indonesian exploration activities for the next three years?

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 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.

In the 2014 survey, 17% of respondents said that the focus of their exploration activities in the future will be unconventional gas, but this has dropped to 8% in this year’s survey, exactly offsetting in percentage terms the increased focus on oil exploration. The percentage of respondents who will be focusing on gas exploration remained broadly unchanged between the two surveys.

Chart 5.8

Focus of exploration activities



“Exemption of Land and Building Tax on exploration starting 2015, somehow seen as a good start but Industry needs more.”

Survey participant comment

I. Over the next 12 months do you expect the quality and usefulness of government regulation in Indonesia which affects 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. Forty percent of respondents expected regulations to improve in terms of quality and usefulness, 44% thought they would remain the same and only 16% expected deterioration. This question attracted extensive comments from respondents which generally confirmed an early endorsement of the new government.

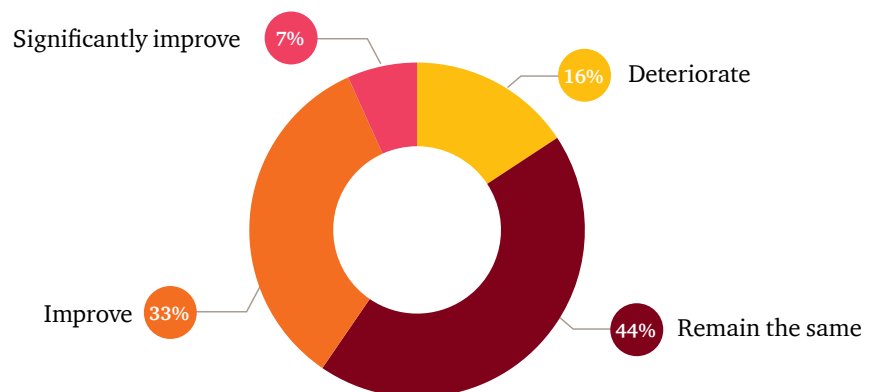
Based on the comments received, the Land and Building tax exemption at the exploration stage has been applauded and there is an expectation of further regulatory improvements. Still, some respondents cautioned that there is a long way to go in improving the regulatory framework. One respondent commented 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.

“Contract sanctity and clear tax regulations will be key factors for continuity of exploration and production activities.”

Survey participant comment

Chart 5.9

Quality and usefulness of government regulation to the industry



“Significant/radical regulatory change is required to spur investment in exploration, for example, VAT & import deferment/facilities, complete non-compliance with PTK 007 for exploration activities, better fiscal terms (investment credits, DMO or tax holidays etc), relaxation of expat work permits requirements, use of contractors/temporary workers during exploration.”

Survey participant comment

Employment



Photo source: PwC

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

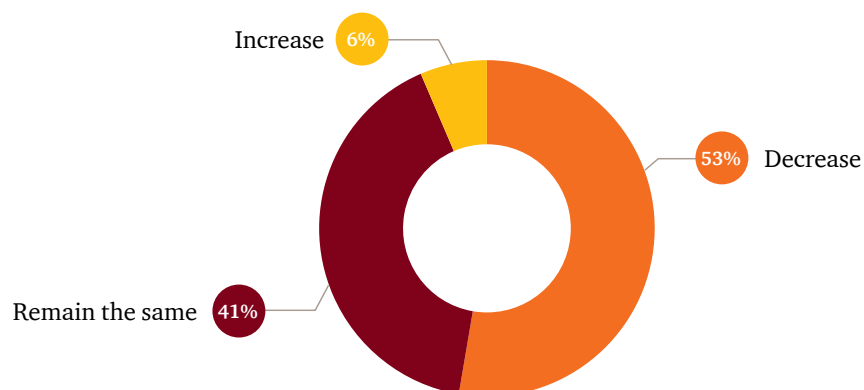
“The drop in the global oil price will affect the investment activities in the industry, hence demand for certain types of workers will decrease.”

Survey participant comment

In a dramatic shift from the 2014 and 2012 surveys, the majority (53%) of respondents believe that employment in the oil and gas industry will decrease this year, highlighting the affect of the oil price fall on workforce numbers. Last year only 17% expected a decrease in employment numbers, while 42% expected an increase and 41% expected employment numbers to remain the same.

Chart 6.1

Employment in oil and gas industry

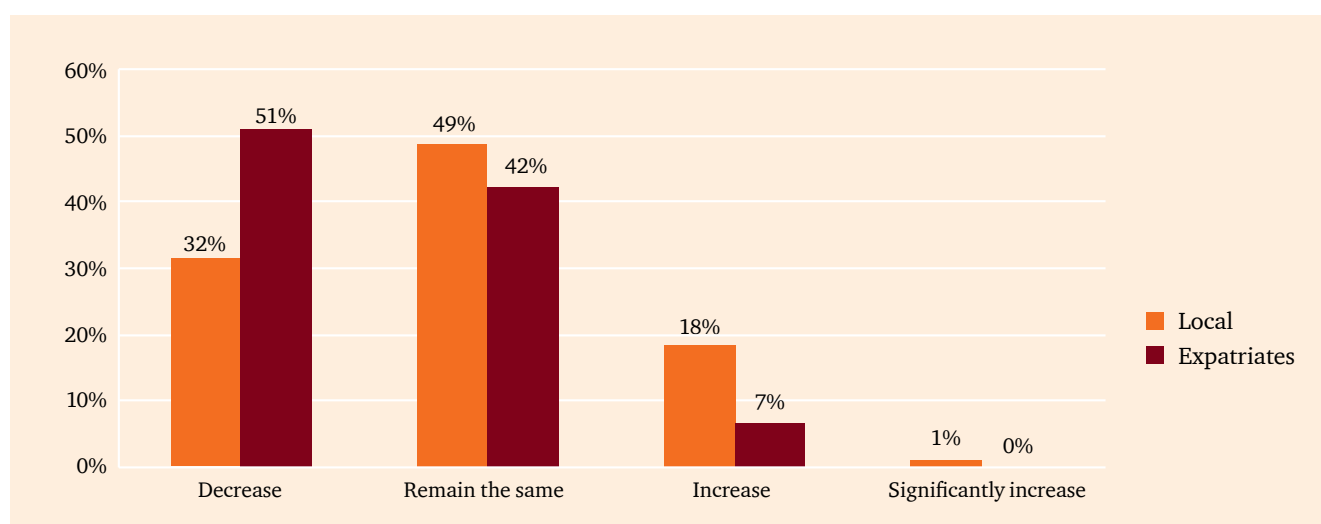


“The age restrictive regulations that the Manpower department is subjecting western companies operating in Indonesia [to] serves to degrade the effectiveness of the industry, eliminates essential mentoring of in-country professionals and ultimately will reduce the appetite for investing in Indonesia.”

Survey participant comment

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

Chart 6.2 Employee numbers



“One of the continuing issues remains skilled staff going abroad to gain higher wages and experience.”

Survey participant comment

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.

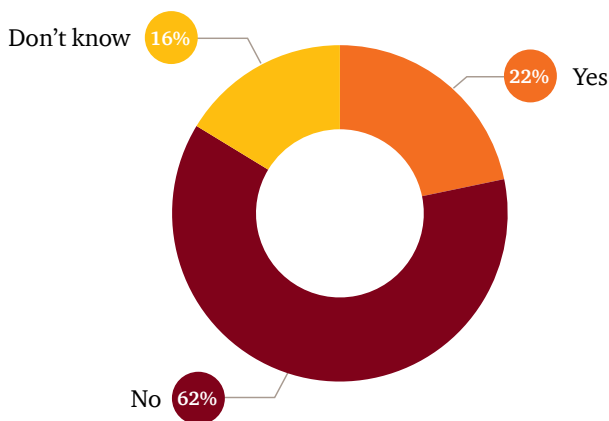
Most respondents (51%) expect expatriate headcount in their company to decrease compared with around 35% expecting a decrease in the 2014 and 2012 surveys. There has been an even more dramatic change in the expectations for local staff, with 32% of respondents expecting

a decline compared to 8% in the previous two surveys. The lower oil price is credited as having a significant effect on 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



“The age restriction concerning expats needs to be revisited in a round table with industry. In fact, more round table and expeditious resolution of all material matters is required in Indonesia.”

Survey participant comment

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 last year’s survey where 60% of respondents said that the industry would have difficulty in this area. 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.

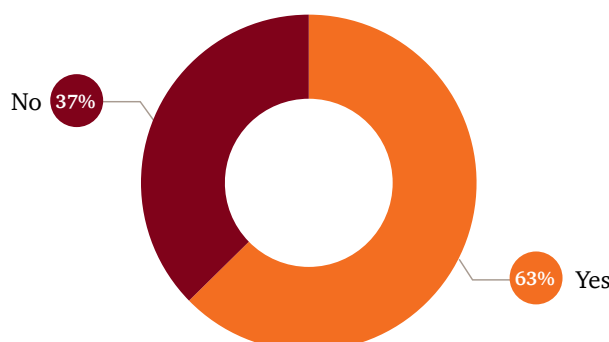
“Regulations and restrictions on foreign talent are limiting the industry to grow and consequently slowing down the grooming of local talents.”

Survey participant comment

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

Almost two-thirds (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 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



“Manpower Ministry’s regulation on expatriate age limitation will definitely impact composition of workplace due to a lack of experienced manpower availability locally.”

Survey participant comment

“The Oil and Gas industry has become unattractive to fresh graduates ... due to the lack of activities and oil price slump.”

Survey participant comment

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



F. Has the Manpower Ministry's regulation on expatriate age limitation affected the composition of your workplace?

Chart 6.6

Age limitation affecting workplace composition



Almost 60% said the salary cap has not caused issues for attracting skilled staff, although 54% said that restrictions on employing expatriates over the age of 55 had affected workforce competition. 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 that 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

Capital expenditure



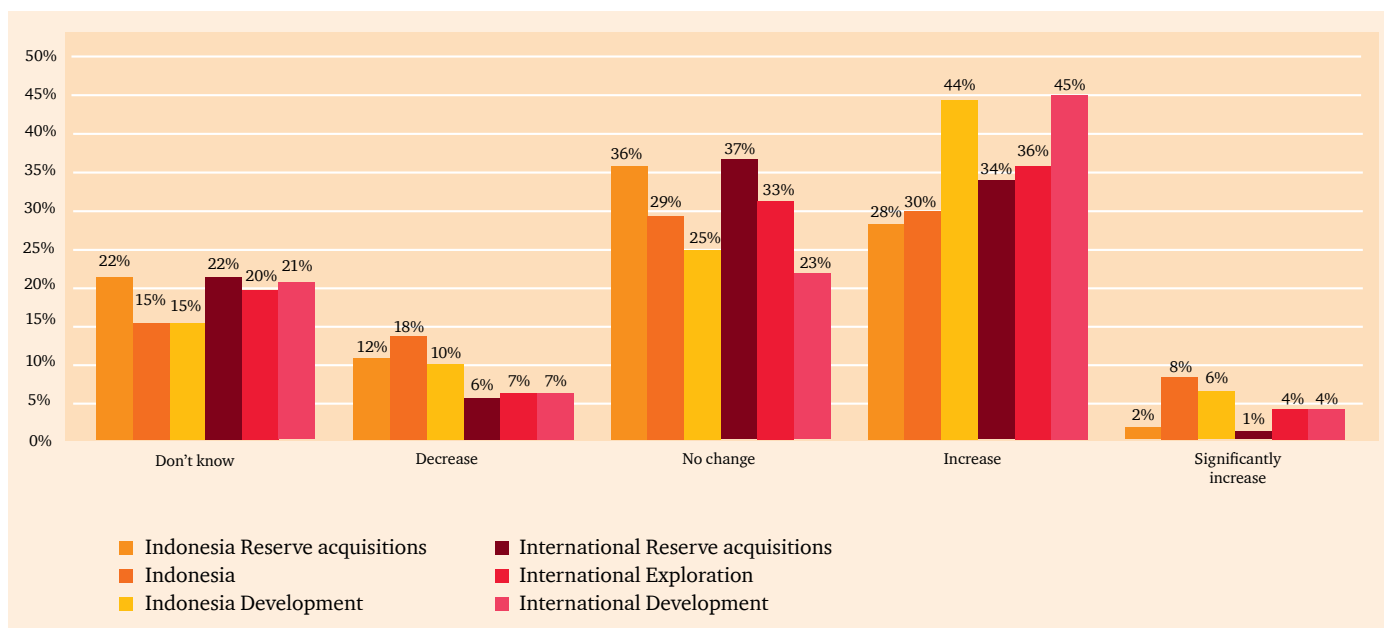
Photo source: Chevron Indonesia [PT Chevron Pacific Indonesia]

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

Future capital spending is expected to slow, 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 participants' view is at best mixed this year. In fact, 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.

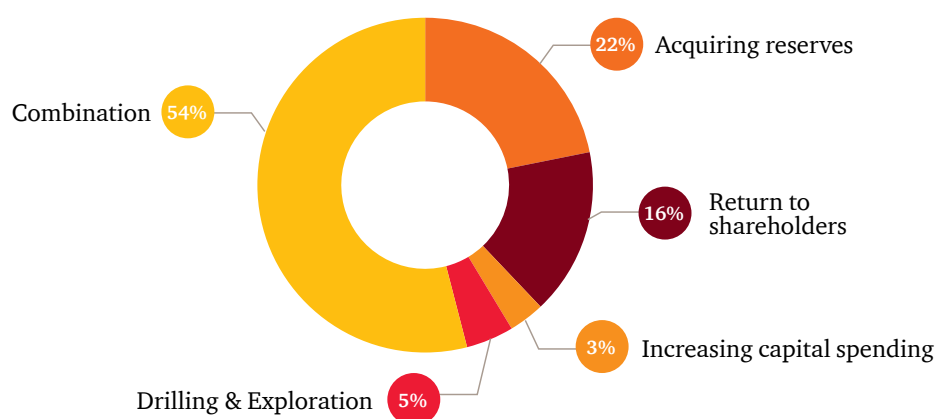
This result is at odds with the government's desire for an increase in investment in the Indonesian oil and gas industry and can be directly linked to the sharp decline in oil and gas prices since the middle of 2014. Some survey participants indicated that the price decrease has meant that all exploration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

Chart 7.1 Capital spending in Indonesia and internationally



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

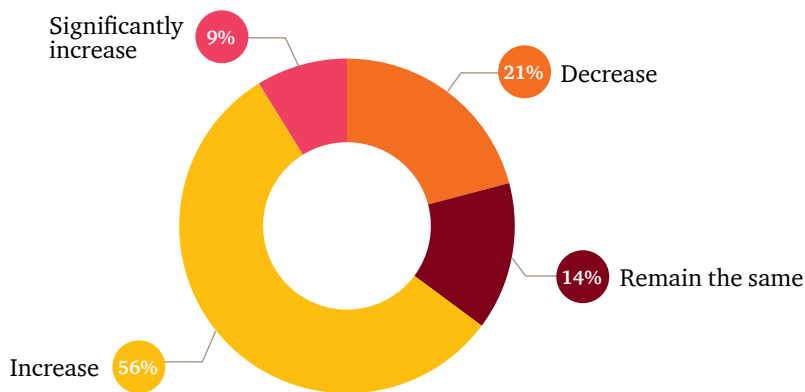


“Due to the decline in oil prices lots of PSC are terminating their current work scope.”

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

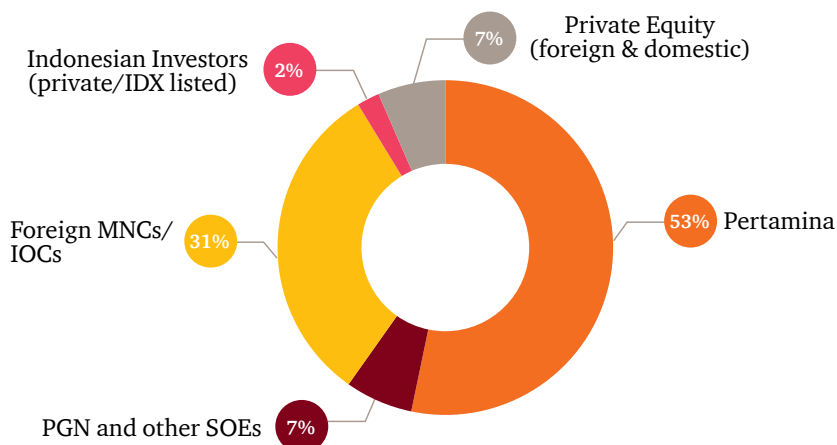


Consistent with the expectation that capital spending is slowing down, 21% of respondents said that the industry’s need for capital will decrease in the next five years. This compares with only 5% of respondents to the 2014 survey expecting

a decrease in the need for capital. On the upside, 65% expect the industry will have an increased need for capital. This will no doubt depend on a sustained increase in 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

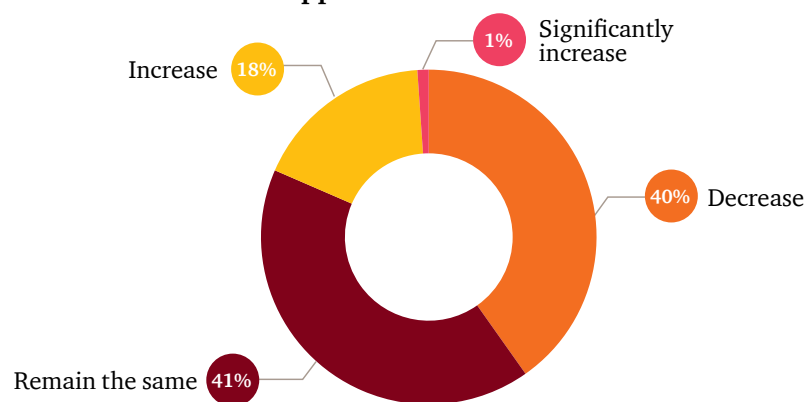


“To make Pertamina better is a lofty goal and we all want that but for the moment what is needed is a level playing field without too much favouritism towards Pertamina.”

Survey participant comment

E. What 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 81% of respondents indicated that interest would decrease (40%) or remain the same (41%). Such indicators are clearly at odds with increasing exploration spending, and better accessing Indonesia's domestic gas resources to support economic growth.

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.

Table 8.1

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

“The new government has taken some initiatives to improve the oil and gas environment: establishing the Oil & Gas Management Reform Team, initiating the One Stop Integrated Services for permitting/licences, ... exempting the Land Building Tax for Exploration PSCs. Over the next five years, we hope that there will be improvements in the areas of concern for the industry such as bureaucracy, slow decision making, incentivizing exploration, certainty on PSC extensions, local government / community issues and criminalization of the PSC. The enactment of the new Oil & Gas Law should also improve legal certainty.”

Survey participant comment

Of these challenges, 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 SKK Migas created. 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.

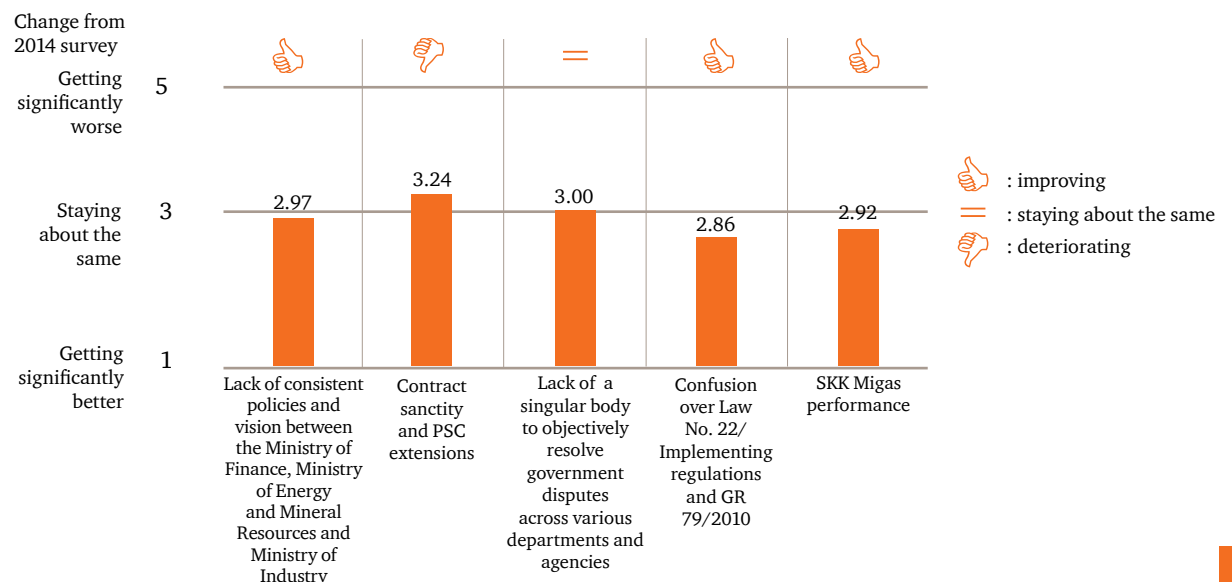
Examples of the perceived lack of policy coordination between Ministries were the Land and Building tax assessments on exploration phase PSCs, in some cases exceeding the

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. This is borne out by participants views on this matter for the next 12 months (see below).

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

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 contract sanctity and PSC extension to deteriorate most markedly over the next 12 months. They were more confident that the remaining top five issues would improve slightly in the short term or, in the case of the lack of a single body to resolve government disputes across departments and agencies, at least not get any worse. This general optimism points to the early faith the industry has placed in the new administration and expectations that the Government will continue to take positive steps to overhaul the administration of the oil and gas sector. We assume that investors foresee continued confusion over the Oil & Gas Law No.22, the implementing regulations and GR79/2010, given that the new Oil & Gas law is still being prepared for Parliament and now may now also include a royalty tax scheme in addition to the PSC format. The later would likely require amendment to the jointly MoF and MoEMR sponsored GR79/2010 which deals with cost recovery and taxation issues, but may also present an opportunity for clarifying the regulatory status of the cost recovery “suspense account” procedures.

“Each ministry tries to do their "best" without consistency.”

Survey participant comment



Photo source: PwC

Competitiveness



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

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

What are the most attractive features of investing in Indonesia?

Table 9.2

Feature	2015 rank
Geological opportunities	1
Trained workforce	2
Ease of foreign ownership	3
Political stability	4
Environmental regulation	5

Please note that all of the above features were also highlighted as the top 5 competitive features in the 2014, 2012 and 2010 surveys.

Survey participants indicated 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.

“There are signs that the GOI ... understands that additional infrastructure will accelerate additional development and investment.”

Survey participant comment

What are the least competitive features of investing in Indonesia?

Table 9.3

Feature	2015 rank
Contract and project approval process	10
Regulatory framework	9
Existing fiscal framework	8
Infrastructure	7
Risk Premium	6

Note that the above features were also highlighted as the 5 least competitive features in our three earlier surveys.

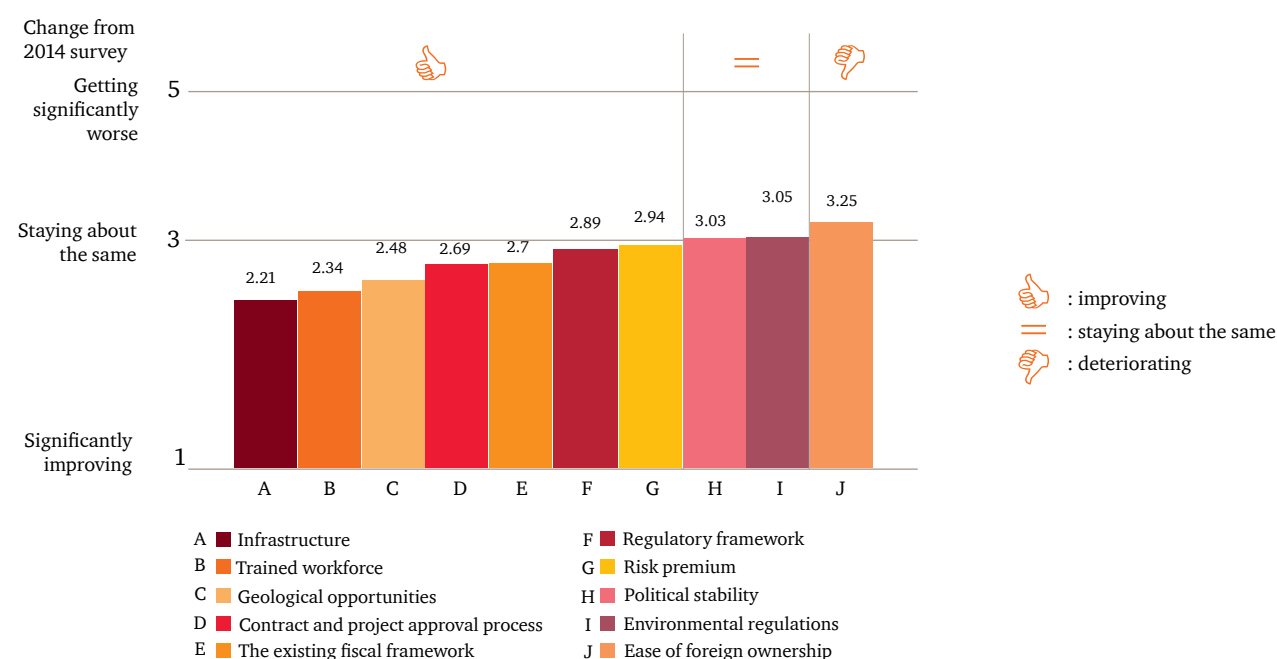
Comparing the results of our past surveys in 2010, 2012 and 2014 with this 2015 survey suggest that there has been little positive change in features described as problematic.

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.

“The government realizes that it needs to improve the PSC terms to attract oil and gas investment.”

Survey participant comment

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 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 commitments 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.

Respondents indicated that the geological opportunities are also expected to improve. Whilst we take this as 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.

The one negative signal was regarding the ease of foreign ownership, which some respondents fear will become more problematic over the next five years. In the service sector, this may be in response to the new restrictions on foreign ownership announced in the 2014 so-called Negative Investment List. Foreign participation in some oil and gas services including: onshore drilling, onshore production installation, well operation and maintenance, and design and engineering services are now closed to foreign investment. Foreign participation is also limited, variously to between 49% and 95%, in offshore pipeline installation, survey services, platform construction and offshore drilling. Whilst in regard to upstream investment, investors are known to have concerns over the degree of autonomy they will have under the proposed new Oil & Gas law, in the case of new PSCs, and an imminent Ministerial Regulation on PSC extensions.

“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

Upstream Challenges

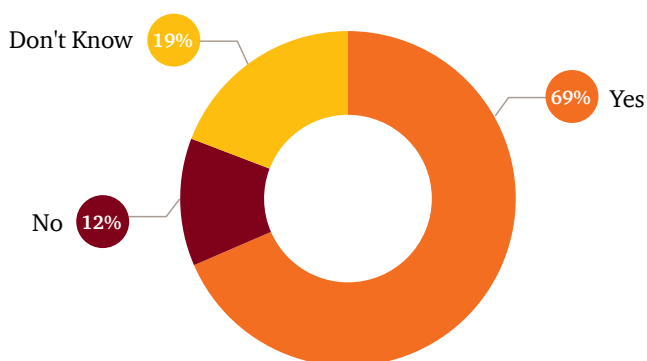
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In assessing survey participants views on contemporary upstream issues, we sought to focus this year on whether there was a need to increase exploration activity, how the use of natural gas as a prioritised energy source could be supported and what other steps could be taken to develop of 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 69% of respondents indicated that immediate actions were warranted to stimulate oil and gas exploration activity.

“Long term plans must be initiated by stakeholders and they rely on the Indonesian Government not to change the rules mid way through projects.”

Survey participant comment

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 works in progress.

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, two changes:

- a) further harmonization of Government policy for the oil and gas sector across all relevant ministries; and
- b) improved clarity on the rules and conditions for PSC extensions.

These two most highly rated actions were considered moderately important or very important by 95% and 91% of respondents respectively.

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

Responses from survey participants suggest that, to the extent that:

- a) some exemption from PTK-007 during the exploration phase of operations; or
- b) incentives to reduce the upfront cost of engaging drilling or seismic contractors could be put in place,

contractors may be able to make an investment case for reconsidering their exploration spend in Indonesia.

In this vein, a temporary or partial removal of ring fencing for cost recovery for existing PSC investors in Indonesia could send a powerful message to contractors and might also help spur a reconsideration of exploration spending, particularly on known but undeveloped fields.

“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

Table 10.1

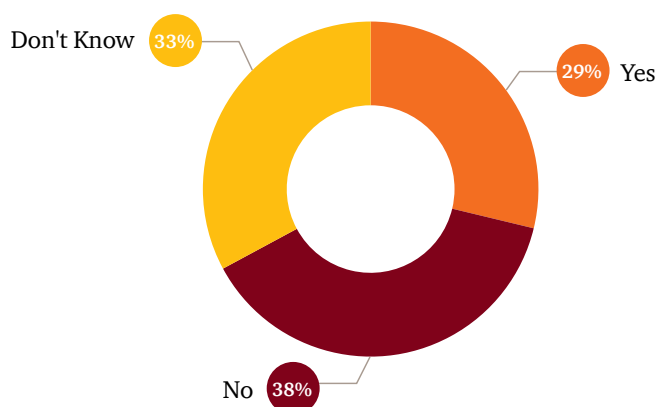
Would any of the following assist to stimulate an increase in exploration spending in the short term?	Yes, very important	Yes, moderately important	Yes, but not so important	No, would not assist
Further harmonization of Government policy for the oil & gas sector across all relevant ministries, including the Ministry of Finance, Ministry of Energy and Mineral Resources and Ministry of Environment, etc	79%	16%	3%	2%
Improved clarity on the rules and conditions for PSC extensions	73%	18%	7%	2%
An exemption from the need to apply PTK-007 during the exploration period of a PSC	44%	39%	10%	7%
Other non-fiscal or fiscal incentives (e.g. zero rating VAT (0%) of drilling and seismic fees)	39%	47%	9%	5%
A blanket exemption from the Cabotage rules for specialized seismic vessels, drill ships and drilling rigs	37%	43%	18%	2%
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)	37%	34%	20%	9%
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	34%	18%	21%	27%
Improved access to data and a framework that promotes the use of multi-client seismic data, including cost recovery thereof	29%	39%	27%	5%
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)	25%	36%	33%	6%

“[What’s needed is] an ongoing dialogue at the highest level between the major producing PSCs and the GPI agencies like SKKMIGAS, ESDM, DPR/Commission 7.”

Survey participant comment

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?

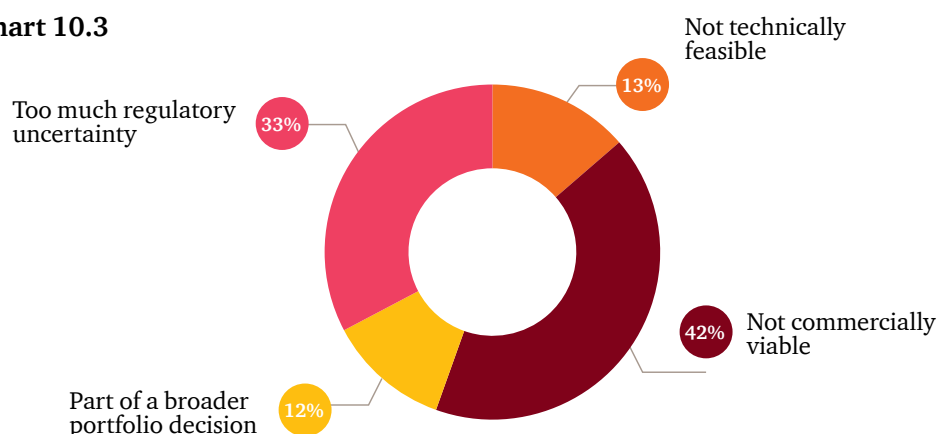
Chart 10.2



Responses were divided on the likely effect better quality data and information during the bid round process, however close to a third (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



Commercial viability appears to be the major reason for relinquishments, 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. Surprisingly 33% of respondents indicated that they thought contractors were walking away from blocks due to regulatory issues, rather than geological reasons.

“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

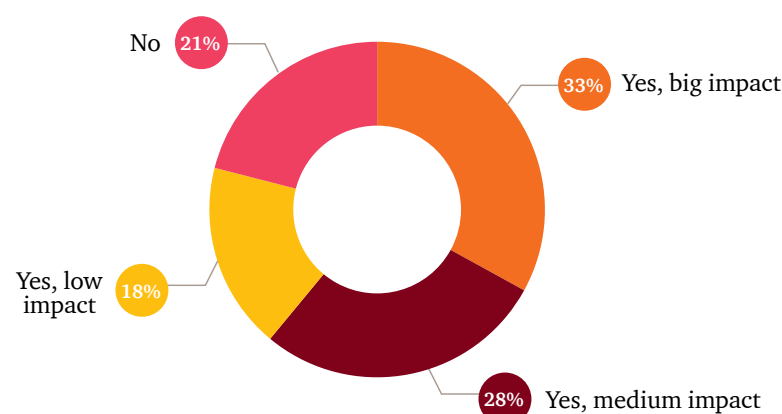
In regard to the prioritisation of gas as a domestic energy source, which issues require immediate attention?	Yes, high priority	Yes, medium priority	Yes, low priority
Providing fiscal or non-fiscal incentives for the commercialization of stranded gas / untapped gas deposits	63%	29%	8%
Establishing a clear regulatory framework and long term tariff structure for pipeline investors	54%	33%	13%
Providing fiscal or non-fiscal incentives for the construction of further pipelines	52%	38%	10%

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 production plans?

Chart 10.4



“Wealth (so-called) in the ground is worth little without the capital and expertise to bring it to market.”

Survey participant comment

“[What’s needed is] full government support for solution driven change.”

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 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.

“The oil and gas sector continues to be a priority sector for the Indonesian Government. Yet, the oil and gas investors continue to experience overwhelming problems to conduct their operations. The bureaucracy, overlapping laws and regulations, numbers of permits required, security issues, conflicts with local communities, central versus local government policies are all impediments that hamper oil and gas investment. All these challenges highlight the importance of strong coordination and relationships between all levels of the government, central as well as regional, the operating firms, the local communities, academia, supporting industries and a broad array of other stakeholders to advance the national oil and gas sector. The oil and gas sector cannot move on its own, especially in today’s ever-connected landscape.”

Survey participant comment

About PwC



Photo source : PwC

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 196,000 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.

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 four Lines of Service, 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.

- Consulting Services help you to improve your financial and operational procedures and internal controls in a wide variety of areas within your organisation. Our Consulting practice has the following sub-divisions:
 - Financial Effectiveness
 - Forensics
 - Operations
 - People & Change
 - Sustainability
 - Technology

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 1,600 professional staff, including 51 Indonesian national partners and expatriate technical advisors, trained in providing assurance, advisory, consulting and tax services to Indonesian and international companies.

- 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 mining 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 some 3,400 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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- Chevron Indonesia [PT Chevron Pacific Indonesia].
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Glossary

BOPD	Barrels of Oil per Day
BPH Migas	<i>Badan Pengatur Hilir Minyak dan Gas Bumi</i> (Oil and Gas Downstream Regulatory Agency)
BPKP	<i>Badan Pengawasan Keuangan dan Pembangunan</i> (Government Audit Body)
CBM	Coal Bed Methane
CFO	Chief Financial Officer
COO	Chief Operating Officer
CSG	Coal Seam Gas
DMO	Domestic Market 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	<i>Perusahaan Pertambangan Minyak dan Gas Bumi Negara</i> (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	<i>Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak</i> (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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