Shell warns of energy shake-up

ANGLO-Dutch supermajor Shell has warned that the world is undergoing a major transition of its energy system, and that the oil industry must shape up and collaborate to secure the planet’s energy future.

Russia in plea
Energy Minister calls for removal of ‘politically motivated restrictions’.

ExxonMobil focus
Supermajor sees technology as key to cutting costs and improving standards.

Social contract
Former president calls for industry to be more socially aware in emerging economies.

Bridge building
Turkey looks to lessen dependence on imported energy.

Saudis highlight need for investment

Total repositions to weather downturn

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EXXONMOBIL sees diversification among projects as a key hedge against the uncertainty created by today’s low oil price environment, a top exploration executive said, writes Katherine Schmidt.

That is why the company has invested in increasing its position in the short-cycle Permian basin in the state of Texas, the PNG liquefied natural gas project in Papua New Guinea, and deep-water Area 4 off Mozambique, according to Steven Greenlee, president of the ExxonMobil Exploration & Production company.

Speaking in a panel at the World Petroleum Congress in Istanbul, Greenlee said ExxonMobil does not pretend to be smart enough to predict which types of projects — short-cycle, long-cycle or liquefies natural gas — eventually emerge as top performers. Instead it aims to focus on a variety of projects that will perform well with low oil prices, but also offer an upside if prices go up.

“We’re trying to insulate ourselves,” Greenlee explained. That said, each different company will reach different conclusions about how best to handle the challenge.

While some deep-water projects are not as profitable as they once were, break-even costs have become “much lower”, meaning those who aim to focus only on unconventional “might want to reconsider”. ExxonMobil’s vision also includes a role for top exploration projects and acreage. The company spudded its Payara-2 exploration well off the south American nation of Guyana two weeks ago, Greenlee confirmed.

This is the latest exploration test of the major discovery called Liza, and surrounding accumulations that the super-major believes could contain around 8 trillion-worth of investment in the sector is vital to ensuring global energy security, according to Saudi Aramco chief executive Amin Nasser.

“Rising demand for all sources of energy — with oil and gas at the heart of the mix — will be the reality for decades to come,” he said.

In his plenary session address at the 22nd World Petroleum Congress, Nasser questioned whether the world is paying sufficient attention to ensuring adequate energy supplies during the long transition towards alternative energy sources.

“There seems to be a growing belief that the world can prematurely disengage from proven and reliable energy sources like oil and gas, on the mistaken assumption that alternatives will be rapidly deployed.

“If we look at the long-term situation of oil supplies, for example, the picture is becoming increasingly worrying,” he said.

Nasser told delegates that around $1 trillion-worth of investments has already been lost during the latest crude price slump against the backdrop of burgeoning oil demand and natural decline at producing assets.

“Even conservative estimates suggest about 20 million barrels per day needs to be offset over the next five years to counter these two effects... that is a lot of production capacity to be made up.”

He said that industry leaders and policymakers must develop an aligned and compelling narrative that will attract the level of investments needed.

Meanwhile, there has been a dearth of new oil and gas discoveries in recent times with the volume of conventional oil found in the last four years down more than 50% on the prior 48 months.

“Any none of this is being helped by misleading narratives about ‘peak oil demand’ and ‘stranded resources’,” Nasser said.

He added that this translates to financial investors shying away from making much-needed large investments in oil exploration, long-term development and related infrastructure.

Aramco is transforming its own business model to build the resilience and discipline to see the company through the transition.

“We plan to invest more than $300 billion over the coming decade to reinforce our preeminent position in oil, maintain our spare oil production capacity, and pursue large exploration and production programme centreing on conventional and unconventional gas resources,” Nasser said.

Aramco plans to double its natural gas production to 23 billion cubic feet per day over the next decade, which will boost the share of gas in the kingdom’s utilities to around 70% — said to be the highest of any G20 nation.

But the company is not just focusing on conventional energy sources.

With economic diversification and future energy transformation in mind, the kingdom’s Vision 2030 sees Saudi Arabia becoming nothing less than a solar powerhouse.

The kingdom has already launched a phased programme to build an initial renewables capability of 9.5 gigawatts by 2023 and Aramco is set to play an increasing role in achieving that goal.
Shell says world is heading towards major energy transition

Chief executive Van Beurden calls for industry to shape up and to look at collaboration in effort to meet the challenges of future supply and demand

OUTLOOK

Shell says world is heading towards major energy transition

Chief executive Van Beurden calls for industry to shape up and to look at collaboration in effort to meet the challenges of future supply and demand

Industrial needs to manage uncertainty as well as risk, the latter of which is always perceived as a negative outcome, Rice-Oxley said at WPC on Monday, writes Amanda Batterby.

"In exploration, if we only look at risk, we would never, ever enter a new country... we would never drill a prospect," she said.

"So we always start with understanding uncertainties, whether it's sub-surface or surface uncertainties. We consider the opportunities that are connected to uncertainty," she said of the Malaysian national oil and gas company's strategy.

It is such opportunities that drive Petronas to keep exploring deep-water plays in countries including Gabon and Mexico, as well as Malaysia.

"For deep water we recognise that the investment straddles multiple economic cycles. We also realise that in deep water there are new technologies that do not exist today that will certainly help us unlock opportunities in the future."

Since January 2015, the low oil price has wreaked havoc on companies' cash flow and profitability, with many operators delaying financial investment decisions on upstream projects.

Rice-Oxley acknowledged that, even as a national oil company and Malaysia's oil and gas regulator, Petronas itself has not been immune to these challenges and "needed to change its culture".

ANGLO-Dutch supermajor Shell has warned that the world is undergoing a major transition of its energy system, and that the oil industry must shape up and collaborate to secure the planet's energy future.

In a keynote speech at the World Petroleum Congress in Istanbul, Shell chief executive Ben van Beurden said the world needs to cross three important bridges to address the existing energy challenges, making a parallel to the three bridges that now cross the Bosphorous Strait in Istanbul.

"First there is the bridge of perception. The energy transition is regularly portrayed in terms that compare it to a revolution, a moment in time when everything changes," he said.

"In truth, different countries and different sectors will advance at different speeds. We are not talking about a moment in time, but of change that will take place over generations."

Quoting a United Nations study, he said the world’s population is expected to increase from 7.5 billion to 11.2 billion by the end of the century, with the vast majority of the growth to take place in Asia and sub-Saharan Africa.

"Consider where these people will be, where the energy demand is going to emerge. It is in areas where we can expect to see living standards rising. There is a huge opportunity here," he said.

He said whereas countries in Europe will have to “renew and evolve” infrastructure, those in other parts of the world with minimal infrastructure, limited finances and growing populations will have an entirely different task: they have the potential to “shift more directly onto a less energy-intensive pathway to development”.

Nevertheless, he added that these countries will still require hydrocarbons to develop their industries, and that the energy revolution and shift to cleaner sources of power, like natural gas and renewables, will happen over time.

"There is not one single energy transition under way, but many, all running alongside each other," Van Beurden said. "These are happening right now, but they will take many decades to play out."

The second bridge to be crossed, he explained, relates to solutions.

In transport, battery electric cars are gaining consumer acceptance in some parts of the world, while wind and solar are contributing more and more to the global energy supply, he said.

Van Beurden highlighted that, as the world “decarbonises”, hydrogen fuel cell vehicles will be needed, as well as liquefied natural gas as a transport fuel and the next generation of sustainable biofuels.

“Different challenges throughout this energy transition will require different solutions. There is no one, single answer to all these challenges, and that means there will be many winners,” he predicted.

The third and final bridge, in which the world must make a commitment to change and move in the same direction towards a successful energy transition, is perhaps the most difficult to achieve, Van Beurden said.

Shell will be investing up to $1 billion per year on its new energy division to end the decade, and is supporting other initiatives such as the Carbon Pricing Leadership Coalition, launched in Paris in November 2015.

“Creating the investment landscape in which all these different solutions, and many more too, can be developed and deployed at scale, is one of the great challenges in the world,” he said.

“We have one planet and, for good or ill, a shared destination. Even as the world moves forward with different solutions and at different speeds, it must commit to moving in one direction.”
## Tuesday 11 July

### 08:30 – 09:30 Plenary 3: Leading through change  
**Session Chair:** Dan Vergin, Vice Chairman, IHS Markit, USA  
**Keynote Speakers:** Patrick Pouyanné, CEO, Total, France  
Decio Oddone, Director General, ANP, Brazil  

### 09:30 – 10:30 Plenary 4: Supply and demand challenges for oil, gas and products  
**Session Chair:** Shri Dharmendra Pradhan, Minister of Petroleum, India  
**Keynote Speakers:**  
Katsuo Nagasaka, Chairman of the Board, Chiyoda Corporation, Japan  
Dinesh K Sarraf, CMD, ONGC, India  
Nelson Ferrer, Vice President, Exploration and Production, PDVSA, Venezuela

### 10:30 – 10:45 Coffee Break

### 10:45 – 11:45 Ministerial Sessions  
**India:**  
H.E. Shri Dharmendra Pradhan, Minister of Petroleum  
**Saudi Arabia:**  
Prince Faisal Bin Turki Bin Abdel Aziz Al-Saud  
**Iran:**  
Dr. Amir Hossein Zamaninia, for Trade and International Affairs

### 11:45 – 12:00 Break

### 12:00 – 13:00 Technical Programme  
**Block 1: F1**  
Exploration challenges – how to reduce risk?  
**Block 2: F7**  
Competitive refining technologies  
**Block 3: F12**  
Opening up new uses and applications for gas  
**Block 4: F16**  
Knowledge management

### 12:30 – 14:00 Interactive Poster Plaza  
**Block 1:**  
Exploration challenges – how to reduce risk?  
**Block 2:**  
Competitive refining technologies  
**Block 3:**  
Opening up new uses and applications for gas  
**Block 4:**  
Knowledge management

### 14:00 – 14:15 Break

### 14:15 – 15:45 Technical Programme  
**Block 1:**  
Managing upstream mega projects  
**Block 2:**  
Oils and products storage and transportation  
**Block 3:**  
Sustainable value chains for unconventional gas  
**Block 4:**  
Human resources – how to attract and retain talent in our industry

### 14:15 – 15:45 CEO Panels  
**CEO 4 Strategies for Refining & Petrochemicals**  
Chair: John Abbott, Downstream Director, Shell, Netherlands  
**Keynote Panel:**  
Jean-Marc Fontaine, Vice President Social Business and Societal, Total, France  
**Panelists:**  
Miriam Winsten, Director General, ANP, Brazil  
Richard Masson, Vice Chairman, WPC Canada, Canada

### 15:45 – 16:00 Coffee Break

### 16:00 – 17:30 CEO Panels  
**CEO 5 Importance of Research for Innovation**  
Chair: Alexandra Bech Gjerv, CEO, Sintef, Norway  
**Keynote Panel:**  
Yuri Sebregts, Executive Vice President, Innovation Research and Development and Shell Chief Technology Officer, Royal Dutch Shell, Netherlands  
**Panelists:**  
Bakheet Al-Rashidi, President, Kuwait Petroleum International (KPI) & CEO of KPC Holdings Aruba, Kuwait  
Pedro Miró, Vice Chairman and CEO, Cepsa, Spain  
Tufan Erginbilgic, CEO, Downstream, BP, UK

### 18:00 – 22:00 Turkish Night  
Terrace of Istanbul Congress Center (ICC)
Russia points to politicking

Energy Minister calls for removal of ‘politically motivated restrictions’ on oil and gas cross-border projects and speaks of seeing economic ‘sabotage’

VLADIMIR AFANASIEV

RUSSIA’S Energy Minister Alexander Novak has called for the removal of “politically motivated restrictions” on oil and gas infrastructure projects to bring the industry in line with a global trend of openness and transparency.

Speaking at the 22nd World Petroleum Congress in Istanbul on Monday, Novak said the global energy industry is transforming very fast and may become unrecognizable in 20 years.

However, he said Russia has noticed “destructive tendencies”, such as “artificial and one-sided barriers” that are erected by some countries to create “uncompetitive marketing of (domestic) production”.

Additionally, restrictions are being put in place to prevent the free development of infrastructure.

He said Russia has seen “plain sabotage” of economically attractive infrastructure projects such as the Gazprom-led Nord Stream 2 subsea gas export pipeline from Russia to Germany.

“Some countries even go as far as refusing clean energy sources such as nuclear power and natural gas, under the influence of political considerations,” he said, adding that such decisions go against the “industry market mechanisms” and impede progress.

Novak called for oil and gas producing countries to concentrate on uniting their efforts and ensuring that the global economy is adequately supplied by energy to underpin its growth and transformation.

He added that the “source of that energy is not important”. Instead, the energy should be easily available on demand, competitive on price and compliant with end-customer requirements.

Novak expects that the growth in demand will also shift in the next two decades to countries in Asia, the Middle East and Africa, where energy consumption may rise by one and a half times.

While the share of hydrocarbons in global energy consumption is likely to drop, the demand for them may still grow by more than 20% as a result of increased use of hydrocarbons as feedstock for the petrochemicals industry, he said.

The world will not easily be able to abandon the well-developed infrastructure that supports the consumption of hydrocarbons, with too rapid “de-carbonisation” hurting developing economies as the cost of energy and its delivery will rise, he said.

In Novak’s view, renewable energy — including hydro and nuclear for electricity generation — will grow fast in any case, as it is backed by the United Nations’ efforts to reduce emissions.

Meanwhile, new technological advances will decrease the cost of hydrocarbon production and open opportunities in new areas, such as biotechnologies.

Novak has also welcomed proposals to combine liquefied natural gas regasification terminals with electricity generation facilities to provide cleaner energy for consumers, as Russia is laying ambitious plans to become a major exporter of its Arctic gas reserves.

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EXERTS

Wednesday 11 July 2017

WPC Daily News 5

 Observation: Russian Energy Minister Alexander Novak
 Photo: VLADIMIR AFANASIEV

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Please visit us at World Petroleum Congress 2017, R135 Rumeli Hall
LEARNING from the past can help companies become more profitable in the current economic climate, according to Statoil’s senior vice president project of development Torger Rod, writes Amanda Battersby.

“When we think about how to be competitive in a cyclical environment, we have to think about the past, current and the future,” Rod told delegates at the 22nd World Petroleum Congress.

He said that even back in 2013, the industry was not sustainable. “Even though oil prices were significant, well above $100, we still had a negative cash flow,” said Rod. “I think it’s extremely important to remember that picture going forward.”

Statoil realised then that the company had to focus on what it could do and began setting itself tough targets. “We set tough targets (in 2013)... hoped to improve our entire portfolio.”

He added that a good place for an operator to start is sub-surface, with the reservoir – “that’s what creates the money, that’s what creates the cash flow. We have to do what we can to really enhance the sub-surface output.”

As well as focusing on capital expenditure, Statoil is also looking at its production efficiency. The Norwegian player has managed to reduce its break-even point of its portfolio to just below $30 per barrel today while increasing its recoverable reserves in the past few years.

But Statoil is not resting on its laurels and the company is looking to ensure that it stays competitive going forward as well.

Rod said that from the very early phase of its projects, Statoil has focused on energy efficiency and energy supply in its solutions. “Furthermore, safety has to be in place when it comes to our design, it has be in place when it comes to our execution, it has be in place when it comes to our operations,” he added. “That is our priority number one.”

Rod said that, also remembering the past, Statoil is today really treating all its assets as “marginal”.

“We are making them as good as we can. Then when the oil price goes up again we are just making more money.”

TOTAL has reshaped its portfolio and embarked on a new exploration strategy as the French major positions itself to weather the latest industry downturn. “This is the worst downturn since the ‘70s... we have drastically improved our business model with cost reductions and efficiency improvements,” Total E&P president Arnaud Breuillac told delegates at the 22nd World Petroleum Congress in Istanbul.

The operator has made a conscious decision to target oil assets with a low break-even price while reducing its exposure to high-cost assets via some key divestments, Breuillac said. “We have also implemented a new exploration strategy.”

He added that as the company has no control over oil prices, it has had to focus on what it can control – not least capital and operating costs.

The company last year reduced opex at the group level by $2.3 billion, with a reduction of $3.5 billion targeted this year and a target of $5 per barrel of oil equivalent this year and a target of $5 per boe in 2018. Breuillac claimed Total has the lowest operating costs among the majors — $5.5 per barrel of oil equivalent this year and a target of $5 per boe in 2018.

Meanwhile, the French player has reduced capex (including resource renewal) from $21 billion in 2015 to $18 billion last year. This year’s capex is forecast to be between $16 billion and $17 billion, and then in the $15 billion to $17 billion range from 2018 through 2020.

As part of this cost-cutting drive, Total has been streamlining all its interfaces with contractors. “In many of our operations we had too many contractors... In fact we have reduced the number of our contractors, that is to say the number of companies, by two thirds,” Breuillac said.

“Since 2014 this represents more than $100 million of savings. We now believe we have stabilised our capex to a sustainable level.”

In tandem with these cost reduction initiatives, Total is focused on improving its environmental performance. Key targets include improving energy efficiency by an average of 1% per annum in the decade ending 2020 and “encouraging advances” in carbon capture utilisation and storage technology.
ExxonMobil chief executive Darren Woods speaks during the WPC plenary session

ExxonMobil chief executive Darren Woods sees technology as key

INNOVATION BY INDUSTRY

Can help reduce environmental impacts and raise living standards

KATHRINE SCHMIDT

Istanbul

KEY challenges for the oil and gas industry include not just reducing capital spending and reducing emissions, but also bringing energy to new markets to help increase living standards, ExxonMobil chief executive Darren Woods said yesterday. Woods told a plenary session at the World Petroleum Congress in Istanbul that technology, including that which drove the global shale boom, has been and continues to be a key driver for those goals.

“Technology holds the promise of reducing global energy poverty and emissions,” he said.

“It’s about taking advantage of global abundance to increase global affluence.”

That is an important goal when some 1 billion people worldwide still lack electricity, and 3 billion are still working only with primitive fuels, he said.

ExxonMobil is cultivating new technology to drive innovative projects, such as efforts to develop carbon-capture fuel cells and advanced biofuels from algae.

However, technology has also played a key role in the company’s staple capital projects, such as its $19 billion PNG liquefied natural gas project in Papua New Guinea.

There, the company leveraged innovation to fly in large drilling rigs to drill productive gas wells and used special techniques to install about 700 kilometres of pipelines crossing rough volcanic terrain. Production from the project began in 2014.

“Technology was critical to scale up and make the investment profitable,” Woods said.

Another technology-driven project involved the company’s giant refining and petrochemical plant in Singapore, which according to Woods, included the 2013 start-up of the world’s only steam cracker that uses crude as a feedstock.

Other key efforts include liquefied natural gas in Qatar and the West Qurna field in Iraq, as well as the Abu Dhabi and Saudi Arabia markets.

ExxonMobil also works to build on strong relationships across the world, including with national oil companies and governments. Industry’s challenge, he said, is “reducing energy poverty by increasing energy access.”

However, certain conditions need to be present to facilitate such investment, Woods said.

“We can do our jobs when markets are open, rules are clear and investments are protected,” he said.

Without those conditions, “the investment case is much more difficult.”

“If governments restrict markets, these restrictions should be applied equally,” woods said, to generate a level playing field.
Call for oil companies to be more socially aware

Former president urges industry to step up to the plate when it comes to being a socially responsible partner to emerging economies

Former South African president FW de Klerk

Experience: former South African president FW de Klerk

Photo: TOLGA SEZGIN

OL companies should avoid trying to be “the power behind the throne” when striking deals with governments but must also not shirk their responsibilities when it comes to being a socially responsible partner in emerging economies, according to former South African president FW de Klerk.

“I think it would be wise of companies to limit their political intervention to just making sure they have a good regulatory regime in the countries where they operate, to help those governments to offer them a fair legal system with good security with regards to their investment,” the Nobel Peace Prize Laureate said at the World Petroleum Congress on Monday.

“But they should stay out of politics because they should not try to be the power behind the throne and get involved in internal politics — (but) with one qualification,” De Klerk said, referring to what he sees as companies’ responsibility to be socially responsible partners in the process of nation building.

De Klerk, speaking alongside another legendary peacemaker in former Algerian foreign minister Lakhdar Brahimi, said the three biggest challenges facing the world this century are: the fight against poverty; climate change; and how to manage diversity in societies.

“Capital rich companies operating in countries need to take an interest in the social situation in those countries, they need to get involved in channelling part of their profits towards the development of opportunities for the people of that country, to help create jobs, to help if there is a medical crisis in that country,” De Klerk said.

“Social responsibility is a big issue when it comes to multinational companies, and I am glad to say that, in all my interaction with these companies, I get the impression they are taking this seriously.”

Oil players also have a heavy burden to bear when it comes to helping combat climate change, meaning there will be an increased need for diplomacy and conflict resolution.

De Klerk said the Paris Accord on climate change “certainly involved a great deal of intense diplomacy on behalf of 195 signatory countries”.

However, referring to the recent decision by the US to unilaterally pull out of the accord, he added: “President Trump’s decision has enormous implications for diplomacy.

“So, there will be plenty of work for diplomats and negotiators in the energy field in the foreseeable future.

“Some have to secure new exploration rights, some will be working for or against energy cartels, others attempting to resolve territorial disputes over energy-rich regions, and others exploring ways and means of preserving our fragile environment through the reduction of carbon emissions.”

De Klerk said he hoped crises — such as climate change — can be resolved peacefully through diplomacy and negotiation.

“The alternative of trying to resolve such disputes by war, or by doing nothing to address climate change, would be too ghastly to contemplate.”

DIPLOMACY AND CONFLICT

Spotlight on South Sudan

LESSONS TO BE LEARNED

Solving problem in conflict area ‘will be costly’

“Unfortunately what we have seen is that this partition is not working in South Sudan at all. So, what are the lessons that we can learn from that and how can we fix South Sudan? I think it is going to be complicated, difficult, costly — especially for the people of South Sudan.”
How to capture and retain talent in the energy industry

Perspectives on young talent attraction and retention

Survey Report on the Perception of our Industry: The oil and gas image as viewed by Young Insiders. "Building on opportunities for young professionals as the most valuable action to retain talent".

A STRATEGIC tool for talent attraction and retention: Talent attraction and retention is a main concern for oil & gas companies to secure the energy future. WPC's Young Professionals Committee aims to serve as a vehicle for transferring students' expectations and young professionals' aspirations to serve as a key tool for industry strategic decision makers. Knowing how to manage expectations and understanding how to modify companies' policies accordingly will be key to capture and retain talent.

Working on media messages to increase talent attraction: The perception and public image of the industry becomes one of the most relevant issues to address when trying to capture and retain talent. In this sense young professionals point out a mismatch between industry reality and its public perception. Despite the fact that over 65% of respondents have a very positive image of the oil & gas industry, the majority doubt that this positive perception reached industry outsiders, identifying a key point of improvement where the industry should act.

Creating opportunities for young talents as a key issue to retain talent: The sentiment of uncertainty about the future of the industry seems to be impacting on the industry's human capital perspectives, as only 43% of respondents intend to remain in the oil & gas industry for their whole career, almost 30% less than respondents on the 1st Young Professionals perception of the industry survey. Providing development opportunities and trusting young people to lead positions of responsibility regardless of age is key to retain valuable and dynamic talent reaching for constant challenges.

It's not all about the money — recognition and development comes at the top of priorities above competitive remuneration: What Young Professionals of today require from a career in the oil & gas industry differs from the requirements that current senior professionals had in the past. The majority of young professionals are more linked to recognition, career development opportunities and simply liking what they do every day rather than a long term career or a more competitive salary.

In fact, young professionals consider that providing mentor programmes and support from senior leaders and an increasing responsibility for driving projects and initiatives are the best practices that the industry can put in place in order to retain talent. Those actions are again more linked to recognition and continuous improvement, rather than to competitive remuneration that despite retaining importance.

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The Young Professionals of today are the senior leaders of tomorrow. Those industries that will succeed in capturing and retaining the best young talent will be in a better position to become the front runners of the future. Strategic decisions should be adapted to students and young professionals requirements in a fast changing environment.
### Cleaner energy talk takes the centre stage

**Renewables moving up the agenda for oil and gas companies**

**FABIO PALMIGIANI and ANAMARIA DEDULEASA**

**Istanbul**

A switch to cleaner forms of energy, like natural gas and renewables, was the talk among oil industry executives at a panel in the World Petroleum Congress in Istanbul about the market’s response to the Paris Climate Accord.

Turkey is already implanting changes to its energy policy, hoping to attract further investments to its growing renewable energy sector, as the country is working to reduce its import dependency.

"In the last 15 years, Turkey has attracted $60 billion of investments by transforming our energy market to include a competitive market model and privatization of distribution and generation assets," said Deputy Undersecretary of the Ministry of Energy, Alparslan Bayraktar.

"Most investments come from private sector investors, who are increasingly finding the Turkish energy market attractive." However, as the country is still heavily reliant on imports, it is working to diversify its energy mix.

"Renewables are growing significantly in Turkey. Wind energy alone has reached 6 gigawatts installed capacity, and we introduced new solar and wind tenders, looking to install more," Bayraktar said.

"If we plan to reduce import reliance issues by 2023, renewable energy development will be one of the major resources we need to increasingly utilize." By 2023, renewables are expected to account for 30% of Turkey’s energy mix. Meanwhile, looking to diversify, the country also wants to add nuclear to the energy mix, and it is already in talks with Russia, Japan and France to build multiple nuclear plants by 2023.

Brazil is on the same path, with ambitious goals to reduce carbon emissions by 15% by 2025 and by as much as 43% by 2030.

"Brazil is going through the biggest transformation in its history. We have one of the cleanest energy matrices in the world, and we want to make it much cleaner," said Decio Oddone, director general of Brazilian regulator the National Petroleum Agency.

Biofuels, which was a hot topic in Brazil a decade ago before the huge pre-salt oil discoveries in the Santos basin sucked out most of the investments that were originally targeted towards the sector, is gaining traction again.

According to Oddone, the government is trying to increase biofuels participation in the energy matrix by 2030, and is developing a new initiative called RenovaBio to expand biofuels production.

"Brazil is already one of the world’s top ethanol producers. Ethanol consumption has been rising steadily since flex fuel cars were introduced in the country in 2004. Meanwhile, Norway’s Statoil has been working relentlessly to reduce carbon dioxide emissions and remain ahead of the curve when it comes to supporting the Paris agreement. According to Statoil senior vice president of sustainability Bjorn Otto Sverdrup, a low carbon footprint will make the company more competitive in the future. Statoil currently has a portfolio carbon intensity of 18 kilometers per barrel of oil equivalent, below the industry’s average of 17 kilos per barrel. According to Sverdrup, the goal is to reduce that number to 8 kilos per barrel and eliminate routine flaring by 2030.

"New energy solutions have the potential to represent between 15% and 20% of our investments by 2030," said Sverdrup.

Marc Hauchecorne, senior vice president of strategy at France’s Engie, said the industry is already adapting corporate strategies in several ways to produce energy from cleaner sources, with many oil majors developing a strong renewable business.

"We need oil, natural gas and renewables, but it is important to say we need less coal," he said.

TURKEY continues to support the Paris Climate Accord but the country has “certain difficulties with some of its annexes”, Deputy Undersecretary of the Ministry of Energy Alparslan Bayraktar said at the World Petroleum Congress in Istanbul on Monday, writes AnaMaria Deduleasa.

Clarifying recent reports that Turkey’s President Recep Tayyip Erdogan is considering withdrawing from the historic agreement, Bayraktar said the country is working to diversify its energy mix, which will include renewables.

"Two main challenges of the Turkish energy market are the growing demand and the dependency on imports. And we are working to meet demand and reduce dependency," Bayraktar said. "The Paris agreement has set important targets to fight carbon emissions. But every country has different circumstances. How are you going to apply one set of rules to all? This leads to so many challenges. And if you can’t implement this successfully, it will create problems."

"For Turkey, the Paris agreement is a great achievement, but when you look at the annexes attached to the deal, it does not fit today’s realties. When it comes to the Paris agreement, we need to continue our work," he added.

Under the Paris Climate Accord, Turkey’s target is to cut back its emissions by 28% by 2030. However, at last week’s G20 meeting in Germany, Erdogan threatened that his country would not ratify the accord, following in the footsteps of the US President Donald Trump, who recently announced a unilateral withdrawal from the pact.
Turkey looks to bridge the gap

Country aiming to cut dependency on imports by diversifying its energy mix and building up its own resources

ANAMARIA DEDULEASA
Istanbul

TURKEY is working to become a “key energy bridge” as it plans to reduce its energy dependency by diversifying the energy mix, President Recep Tayyip Erdogan said during the World Petroleum Congress in Istanbul on Monday.

“A strong country has its own energy resources or has a say in it,” Erdogan said, warning that the exploitation of such resources can lead to conflicts.

“Oil and gas resources are now associated with war, bloodshed and conflicts. But Turkey wants these resources to contribute to peace and prosperity in the world, and we have the ability to be at the epicentre,” he said.

He called Turkey a “considerable actor on the energy arena”, as it is involved in the construction of new plants and the development of pipelines that will transport resources from Russia and Azerbaijan and the Caspian Sea into Europe.

The country is at the centre of the huge Tanap and TurkStream pipeline projects that will open up additional gas corridors to Europe.

“Today Turkey is dependent on imports of oil and gas due to limited carbon resources. But we need to reduce our import dependency by maximising our local resource,” Erdogan said.

“We also aim to incorporate local resources, diversify our energy mix by adding renewables and nuclear. Promoting energy efficiency is also a priority for us.”

Erdogan wants to see Turkey become “a bridge nation” that can further promote co-operation and, as a result, energy security.

Turkish Prime Minister Binali Yildirim added: “We want to ensure we become a key global economy around the world. What we need to do is ensure energy security for Turkey, energy diversity to guarantee peace and co-operation.”

Turkey is investing in the upstream sector in an attempt to reduce its energy import dependency, while at the same time pushing for renewable and nuclear energy development.

“Turkey has significant potential for the development of renewable energy, which is expected to account for 30% of Turkey’s energy mix by 2023,” Yildirim said.

“We also want to add nuclear to the energy mix, and are working with Russia, Japan and France to build nuclear plants by 2023.”

Meeting: Turkish President Recep Tayyip Erdogan (right) and BP chief executive Bob Dudley meet at the 22nd WPC in Istanbul on Monday
Consolidation still on the menu for oil and gas industry

Chief executive of newly-formed BHGE says there is still some way to go for the energy sector to find a balance to go forward in a new oil price environment

EOIN O’CINNEIDE
Istanbul

Deep-water projects are set to make a comeback as the resource opportunities are just too compelling to turn down, but break-even costs need to fall dramatically, according to BHGE chief executive Lorenzo Simonelli.

"There will come a time when deep water and offshore comes back into the frame," the boss of the newly-merged GE Oil & Gas and Baker Hughes said on the sidelines of the World Petroleum Congress (WPC) in Istanbul on Monday.

"There are great resources out there and the macro-environment necessitates that some of these projects at some stage go forward. So there is every inclination to continue to drive the cost-per-barrel down in deep-water projects and offshore so that they can go forward."

Although there has been a number of final investment decisions in the upstream sector this year, it is still down on levels seen before the oil price crash, meaning there will be a likely oil and gas supply gap within the next seven years or so.

"The big conundrum is, how early do you have to go with your final investment decisions to make sure you are in that best window to have the opportunity of benefiting when there is a supply shortage," Simonelli said.

For the deep-water market to rebound, the break-even has to move well below the $60 or $70 per barrel currently seen.

"Why can’t it be $35? How do we change the model? How do we change the way we think about and execute a deep-water project?" Simonelli said.

"That is what is going to allow deep water to go forward. The resource is fantastic."

Deep-water resources just too attractive to by-pass

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Adnoc planning to table services side in IPO plan

Abu Dhabi operator looking to set up global partnerships and to boost private sector

NISHANT UGAL
New Delhi

ABU Dhabi National Oil Company (Adnoc) is planning to list some of its services-related businesses on local equity markets and set up new global partnerships across its entire value chain.

The state-owned giant has said that it is “considering the initial public offering of minority stakes of some of its services businesses which have attractive investment and growth profiles”.

Adnoc said in a statement that “such IPOs would support the growth and expansion of the United Arab Emirate’s private sector and equity capital markets and will allow the public, and other investors, to invest alongside Adnoc to benefit from the future growth of these assets”.

Adnoc’s group chief executive Sultan Ahmed Al Jaber said that while the company intends to list some of its service companies, there are no plans whatsoever to have an IPO for the Adnoc group.

“Let me be very clear, we will not IPO Adnoc, the group holding company. Adnoc will remain fully owned by the government of Abu Dhabi,” Al Jaber said while speaking to UAE’s The National newspaper. Adnoc is believed to have already initiated discussions about the new partnerships, which are expected to be announced later this year.

Al Jaber said that the company’s new approach will allow Adnoc to “unlock value and reinvest capital into new high growth opportunities”.

Adnoc believes that the expansion of its partnership model will span across the entire value chain as well and will lead to more active management of its portfolio of assets.

“At the heart of this new approach is a range of new and compelling partnership and co-investment opportunities in the oil, gas, refining and petrochemical space,” the company added.

In the upstream sector, Adnoc plans to develop and further expand a regional, fully integrated drilling company. In addition, the state-owned giant said it would be looking at “the development of upstream concessions with value-added partners that may also seek to strategically partner with Adnoc in other parts of the value chain”.

The company believes that its new initiative builds on Adnoc’s flexible operating model and its 2030 growth strategy.
On the eve of WPC 2017, Upstream surveyed many of the leading figures in the international oil & gas industry on topical issues shaping the sector. Aker Solutions chief executive Luis Araujo responds.

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14 WPC Daily News

Tuesday 11 July 2017

INTERVIEW

Aker Solutions chief executive Luis Araujo on topical issues shaping the sector

A

As the industry adjusted to the extent that companies can operate profitably in the current lower price environment for oil and gas? If not, what more needs to be done and by whom?

Araujo: The industry has already made major adjustments. It has become more collaborative, through alliances and partnerships, as well as more efficient, through simplification and standardisation of products and processes.

As a company, our drive toward greater efficiency has already yielded cost savings for ourselves and our customers. Simplification has helped to halve developments costs at the Johan Castberg project and reduce the break-even price for Johan Sverdrup.

But it doesn’t stop there. We need to keep up the momentum, continuously improving the way we work so that our business and the broader industry is financially sustainable regardless of the oil price.

One big opportunity for the industry to reduce costs is standardising equipment and processes. Digitalisation is another. Using digital technologies to automate processes from exploration to production and mining data from the industry has the potential to provide yet more savings.

There is further potential for the industry to work together to benefit everyone. For example, through new commercial models with greater sharing of both risks and rewards between operators and suppliers, such as the one we formed last year with Aker BP and Subsea 7 for work off Norway.

Upstream: What impact will climate concerns have on the operations of oil and gas companies over the next five years and beyond? Does the US decision to pull out of the Paris accord actually change that outlook?

Araujo: Oil and gas will continue to be an important part of the future energy mix. But that doesn’t mean we aren’t looking to reduce the amount of energy we use in our operations and the emissions from our industry.

Regardless of the US decision to pull out of the Paris accord, climate concerns are already driving the oil and gas sector to improve how they operate and manage existing assets as well as changing how new investments are evaluated. Those climate concerns are also pushing along the development of technologies that reduce emissions, such as renewable energy and carbon capture and storage.

Our offshore and subsea expertise means we have a lot to offer in terms of renewables, such as offshore wind power. And we are already a leader in carbon capture and storage — a vital tool in reducing emissions and meeting climate targets. We are seeing a lot of interest in our CCS technology, which is proven and ready to go to market.

Upstream: Is gas becoming more attractive than oil for companies and, if so, what implications does that have for the business?

Araujo: The use of natural gas is critical to achieving a more sustainable future as it is the cleanest burning fossil fuel and an important transitional fuel to get us to a lower carbon future.

At the same time, we’re seeing a major shift to gas as many oil companies rebalance their portfolios to develop more gas. This is opening up new business opportunities around the world for the whole sector, from engineers to suppliers, to equipment and service providers, to producers themselves. We are already working on big new gas projects like Zohr in Egypt and South Coral in Mozambique and we see more new developments in the pipeline globally.

Upstream: Can large-scale multi-billion-dollar conventional oil and gas developments, including in deep waters, compete for capital against short-cycle shale and unconventional developments in the US and beyond?

Araujo: Absolutely. Many companies are developing deep-water assets in tandem with onshore unconventional resources to create a balanced portfolio. Shale production is very responsive to oil prices and can ramp up or be reduced very quickly providing short-term volumes, while offshore developments provide longer-term value.

The good news is that competition from shale is spurring further cost reductions and more efficient ways of working offshore and subsea. With additional improvements from the supply chain and hardware optimisation to new technologies and business models, deep water will continue to be a competitive and substantial part of many companies’ portfolios.

The increased focus on gas plays to our strengths and we have some great technologies. This includes the world’s first subsea gas compression system, which we delivered in 2015 for Statoil’s North Sea Åsgard field. Subsea compression improves recovery rates, lowers costs and minimises the environmental footprint. We’re now working with MAN Diesel & Turbo on the next generation in these systems and expect to reduce their size and weight by at least half in the future.

Upstream: What financing challenges does the industry face and will addressing such challenges involve more mergers and acquisitions?

Araujo: Many operators are still spending more than their cashflow despite delaying major new investments in projects that are needed just to keep production steady. This is opening up opportunities for the industry to use new business models to develop assets that are currently too expensive to develop.

Companies that have the strongest balance sheets are using their cash to buy into proven offshore resources discovered by others, rather than embarking on major M&A.

At the same time, private equity is becoming more active in buying mature assets from major operators. These new companies are typically backed by experienced management teams and in a position to do well from the assets when oil prices increase. However, if oil prices remain low for much longer, history has shown us that further industry consolidation is likely.

Upstream: Where do you expect the oil price to be by the end of this year? And by 2020/2021? Why?

Araujo: Rather than looking at oil price forecasts, I think it’s important for the industry to maintain a laser sharp focus on improving cost efficiency to ensure we can be profitable even in a lower oil price environment. That way we will be prepared for any volatility.
Super Puma ban lifted in Norway and UK

Aviation authorities clear helicopter models after imposing new safety measures

BEATE SCHJOLBERG
Oslo

NORWAY and the UK are allowing two Super Puma helicopter models back in service, more than one year after a fatal helicopter crash in Norway.

The two countries’ air traffic authorities will lift the restrictions on the EC225LP and AS332L2 models on 14 July, after a new safety regime has come into force.

“Our demands for new safety measures have now been adopted by the European Aviation Safety Agency. These new and stricter safety requirements mean that we now consider it safe to fly these helicopters,” director Lars Kobberstad of the Norwegian Civil Aviation Authority said.

Norway and the UK grounded the Super Puma models from Airbus Helicopters after a fatal crash in Norway and another Super Puma accident in Bergen on 29 April last year. That killed 13 people at Turoy near Thisted in Denmark.

The investigation board has not yet delivered its final report. “We would not have made this decision unless we were convinced that the changes to the helicopters and their maintenance restore the required airworthiness standards,” said John McColl, head of airworthiness at the UK Civil Aviation Authority.

Approval

The European Aviation Safety Agency (EASA) allowed the helicopters to resume service in October, while the UK and Norway have maintained their ban until now.

The additional safety measures include a new type of gearbox, which is safer than the one that caused the 2016 and 2009 crashes.

The gears have been fitted with a new detection system that is meant to be better at revealing metal particles in the gear oil, an early sign of gear damage.

Inspections will be more frequent, and the planet gears have to be changed after fewer hours of flying than before.

Offshore workers’ unions both in the UK and Norway have campaigned to ground the Super Puma helicopters for good, and are critical to allowing the aircraft back in service.

“We are very disappointed that the air traffic authorities choose to lift the ban when the root cause of the Turoy accident has not yet been found,” said Henrik Solvorn, Fjellstø, head of the helicopter committee of the Investigation Board of Norway.

An ongoing probe into the latest crash being carried out by the Accident Investigation Board Norway and Airbus has so far established that the crash was caused by a fatigue fracture in one of the eight second stage planet gears in the main rotor gearbox that resulted in the rotor blades becoming detached in mid-flight.

The investigation board has not yet delivered its final report.

“We would not have made this decision unless we were convinced that the changes to the helicopters and their maintenance restore the required airworthiness standards,” said John McColl, head of airworthiness at the UK Civil Aviation Authority.

The safety of those who travel offshore helicopter flights is a key priority for both the UK and Norwegian aviation authorities,” McColl said.

It will take some time before the Super Puma models can resume service, as the aircraft will have to undergo thorough inspections and documentation updates before they are given the green light.

In Norway, use of the helicopter type will be limited, as dominant operator Statoil has opted for other helicopter models.

Statoil dry off Canada

NORWEGIAN operator Statoil has completed two exploration wells in the Flemish Pass basin off Canada without finding oil or gas, writes Beate Schjolberg.

The company and partner Husky Energy had hoped to increase resources for a possible development of their Bay du Nord oil discovery, where volumes now remain unchanged at 300 million barrels including the Bay de Verde and Baccalieu discoveries made last year.

“They are very disappointing, and we had hoped to add additional optionality to the near-field area at Bay du Nord,” said Trond Jacobsen, vice president for exploration at Statoil Canada.

“We will now take the time needed to evaluate the results before firming up any plans for additional drilling near-field to Bay du Nord,” Jacobsen said.

The two wildcats were drilled with the semi-submersible rig West Aquarius in a remote deepwater area about 500 kilometres east of St Johns, Newfoundland.

In addition to looking at further drilling, Statoil is working on development options for Bay du Nord.

“While these results mean a reduction in optionality for a potential project development, we continue to work on this project,” said Paul Fiddon, president of Statoil Canada.

Wood wins Culzean job

UK CONTRACTOR Wood Group has landed a three-year award on Danish operator Maersk’s Culzean gas condensate field in the UK central North Sea.

The contract will see Wood Group deliver mechanical and management services for the hook-up and commissioning work at the field, supporting the new three-platform, high-pressure, high-temperature development.

Wood Group said it expected the award would create roughly 200 new jobs, at peak manning, with work to start immediately.

Culzean is currently scheduled to start-up in 2019 and involves three bridge-linked platforms — the central processing platform, an anodes plus living quarters and a wellhead platform — plus a floating storage and offloading vessel for the field’s condensate.

Requirements:
Norwegian Civil Aviation Authority
director Lars Kobberstad

Photo: AFP/SCANPIX

Approved: an EC225 helicopter in action

Photo: ALEKSANDER NORDAHL/DN

Photo: STATOIL

Work: the West Aquarius

Photo: STATOIL
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Spotlight on gas as the key growth area to come

**Energy source** set to play greater role in meeting demand around the world **though affordability and competition from alternatives are significant issues**

**MARK HILLIER**
Istanbul

**SPEAKERS at a natural gas panel on the first day of the World Petroleum Congress 2017 highlighted the potential for the fuel to provide a key role in transformation of the energy sector that will allow its significance to grow in the coming decades.**

Geoffrey Hureau, secretary general of French natural gas research group Cedigaz, noted the downturn in the European natural gas market in the first four years of this decade amid higher prices and falling market share, followed by recovery in 2015 and 2016 as prices for coal rose notably because China reduced its production.

He asked whether the trend of recovery might continue and suggested the prospect of that happening was bright, with China still targeting a relatively high price for coal — of $72 to $83 per tonne — and natural gas prices destined to stay relatively low amid surging liquefied natural gas supply.

Hureau suggested European demand for gas for power should be supported in the period to 2025 by pricing and other factors, including carbon pricing, in markets such as the UK.

However, he cautioned that such improvements could be offset by falling industrial and home heating demand for gas amid efficiency gains by consumers in those sectors, and by alternative supply sources such as district heat and power.

Meanwhile, Tristan Aspray of ExxonMobil reminded delegates of the key role played by gas in helping to reduce US carbon emissions amid the shale gas production boom, and spoke of the ability of the sector to deliver the same kind of change in other international markets.

To help encourage investment, he highlighted ExxonMobil’s call for a predictable and uniform carbon pricing model.

Prabhat Singh, managing director and chief executive of PetroChina Southwest Weiyuan Shale Gas Operation Company, highlighted the potential for natural gas in India and China, respectively.

Singh argued that the Indian government is strongly in favour of natural gas as a fuel but added that affordability would be a key factor in addition to competition with coal, and as time goes by with solar power.

Fu noted that natural gas is an attractive fuel for China thanks to its ability to provide significantly more energy per tonne of CO₂ emissions compared to coal.

He highlighted China’s aim to boost the shares of both natural gas and renewables in meeting the country’s energy demand going forward as the government favours cleaner burning fuels.

Natural gas meets about 6% of Chinese demand now, and its share is forecast to reach 10% by 2020 and 15% by 2030.

**LNG rising as cleaner fuel option**

**CHALLENGES TO OVERCOME**

The role of natural gas in providing cleaner fuel is seen as a key driver for liquefied natural gas growth even though the sector faces significant challenges from a rush of new supply coming on stream and high project development costs, among other factors, writes Mark Hillier.

Steve Hill, executive vice president of Shell Energy in Singapore, told delegates attending a WPC session on the “role of LNG in security of global energy supply” that renewables provide clean and increasingly competitive power. He added, however, that they alone do not supply reliable power, whereas the combination of renewables and natural gas does that.

Responding to concerns about natural gas oversupply, Hill said that was not an issue that he was overly concerned about, arguing the sector would be helped by its role in meeting demand growth outside the power sector.

He explained that natural gas has the potential to capture new markets in areas such as transportation fuels and city heating, helped by its clean burning properties.

On top of that, LNG demand is forecast to grow more rapidly than that for natural gas, and for instance, by its flexibility in supplying seasonal markets. LNG is also able to make use of existing infrastructure in countries such as Pakistan and Jordan, where original domestic supply sources are running short.

Laurent Vivier, president of gas for French giant Total, spoke of how LNG import projects can be developed much more quickly and cheaply now, citing the five years it took his company to develop the large Dunkirk onshore facility in France and comparing that to the 18 months that are planned to get a project online in Ivory Coast using a floating import facility.

UK-based Chris Pateman-Jones of consultant EY acknowledged LNG’s advantages but warned of what he saw as the lack of adequate investment going into LNG right now. He argued that the scale of projects and their high investment requirements remain a challenge.

He also noted that renewables can grow faster than the original assumption and can come online initially at a smaller scale, thus needing more modest investments.

That means, he suggested, that LNG players need to focus on developing their projects as economically and innovatively as possible, making use of strategies such as modular construction.
INTERVIEW

On the eve of WPC 2017, Upstream surveyed many of the leading figures in the international oil & gas industry on topical issues shaping the sector. Offshore Oil Engineering Company (COOEC) president Jin Xiaojian gives his view

HAS the industry adjusted to the extent that companies can operate profitably in the current lower price environment for oil and gas? If not, what more needs to be done and by whom?

JIN: This is a question better answered by an oil company president. However, we have seen the signs of profitability just looking at the books. It depends on whether oil companies are willing to invest in conventional oil and gas as well as mature areas, and increase capex. If they increase capex, they will probably make a profit. The books of oil and gas companies don't look bad in the first quarters of this year. So long as oil stays above $50 per barrel, oil companies are likely to make a profit. The books of oil and gas companies have seen the signs of profitability just looking at the books. It depends on whether oil companies are willing to invest in conventional oil and gas as well as mature areas, and increase capex. If they increase capex, they will probably make a profit. The books of oil and gas companies don't look bad in the first quarters of this year. So long as oil stays above $50 per barrel, oil companies are likely to make a profit.

UPSTREAM: What impact will climate change have on the operations of oil and gas companies over the next five years and beyond? Does the US decision to pull out of the Paris accords actually change that outlook?

JIN: It is difficult to make a judgment because there are too many factors such as geopolitics affecting climate change. It is not easy to give a yes or no answer. It seems like the US withdrawal could be constructive for the oil and gas industry and will help fossil fuels to extend its longevity.

UPSTREAM: Is gas becoming more attractive than oil for companies and, if so, what implications does that have for the business?

JIN: Natural gas is here for sure for large-scale developments thanks to its lower emissions. Above all, recent major discoveries are mostly natural gas, which naturally prompts oil companies to prioritise gas developments, and natural gas now enjoys an even wider application. In the past, gas in China served only as feedstock for the country’s chemical industry, but now it is being liquified for remote transportation to be used as town gas and as feedstock for power plants.

In trading terms, it is similar to oil, making gas more easily accessible to users. That’s why natural gas will see significant growth if the shipping industry can catch up.

More gas discoveries and gas infrastructure projects such as LNG tanks, LNG modules and FLNG have set up even higher industry standards for engineering and fabrication companies like COOEC. The high requirement of such projects will push the research and development and fabrication technology development of EPC companies.

UPSTREAM: Can large-scale, multi-billion-dollar conventional oil and gas developments, including in deep waters, compete for capital against short-cycle shale and unconventional developments in the US and beyond?

JIN: There is no conflict here in terms of energy efficiency. At the end of the day, energy prices have the final say. Oil companies will spend money and develop oil resources that are marketable with good prices that can earn profits for the shareholders.

UPSTREAM: What financing challenges does the industry face, and will addressing such challenges involve more mergers and acquisitions?

JIN: Financing challenges come with low oil prices. In a low oil price environment, it will be difficult for oil and gas companies to get financing if they can’t make money. M&A won’t do much to help financing. A better M&A strategy focuses on the restructuring of existing assets so as to cut the workload and high cost projects.

UPSTREAM: Where do you expect the oil price to be by the end of this year? And by 2020?

JIN: This year, everyone is tending to be conservative. Most companies have budgeted their projects at oil prices in the range of $40 to $50 per barrel. This is a survival price. In the past, companies hoped prices would stay between $60 and $70, but now the reality is around $50, with little hope of climbing to $60. The industry will flourish at $70, and will be fairly well off at $50 to $60, but will be struggling at $40 to $50. However, the price in the third quarter, especially in August and September, will be more or less representing the average price for the whole of this year. If the price drops below $40 per barrel, it will be disastrous for the oil and gas industry. People became quite nervous when the price fell below $50 at the end of June.
AWE spins appraisal drillbit at Waitsia onshore gas field

AUSTRALIAN operator AWE has spudded an appraisal well at the Waitsia gas field in Western Australia’s onshore Perth basin, writes Josh Lewis.

The Waitsia-4 well spudded over the weekend and will be directionally drilled to a total depth of 3834 metres to appraise the gas potential in the eastern extension of the field.

The well is expected to take roughly five weeks to complete and will primarily target conventional reservoirs in the Kingia and High Cliff sandstones.

Waitsia-4 lies about 3.3 kilometre north-north-east of the Waitsia-3 well which recently confirmed the southern extension of the field after encountering strong gas shows across a 150-metre gross interval.

“Waitsia-4 will be the last appraisal well drilled by the joint venture before we reach a final investment decision on Waitsia Stage 2 development,” AWE chief executive David Biggs said.

“The data from Waitsia-3 and Waitsia-4 will provide us with a sound basis for upgrading our estimated 2P reserves for the Waitsia field before the end of 2017 calendar year.”

Waitsia’s proven and probable reserves are currently estimated at 460 billion cubic feet of gas plus 232 Bcf of best estimate contingent resource. The field was brought on stream last year through a two-well extended production test, while Stage 2, if sanctioned, is expected to produce first gas by 2020.

The second stage of development is expected to have the capacity to supply 100 terajoules per day, or 10% of Western Australia’s domestic gas needs, for 10 years. AWE operates the Waitsia field in a 50:50 partnership with fellow Australian company Origin Energy.
In the picture...

Scenes from the show

Photos: TOLGA SEZGIN