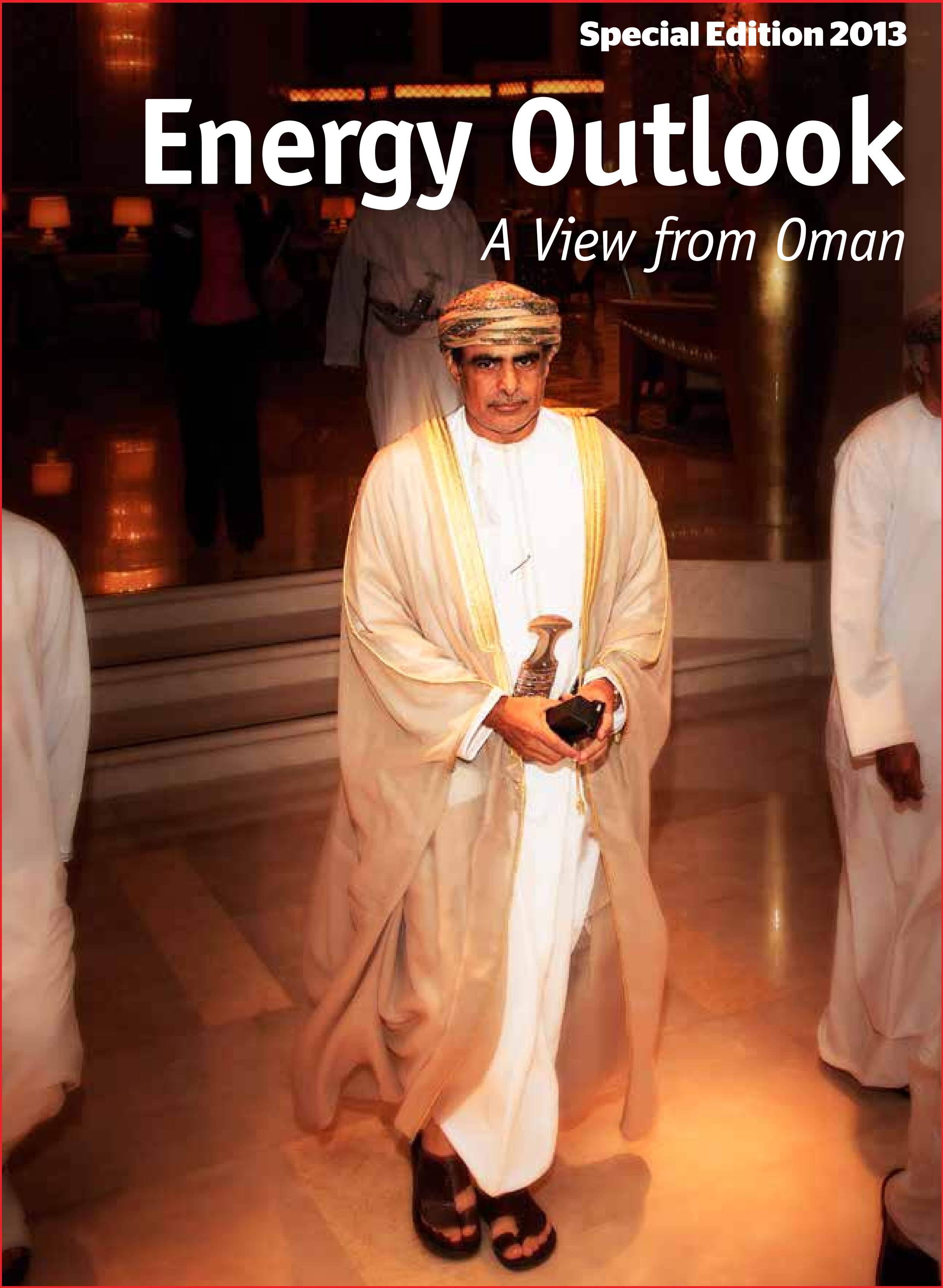
Special Edition 2013

Energy Outlook

A View from Oman



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Pioneering Days

OMAN has been widely credited with having pioneered enhanced oil recovery in the Middle East, introducing techniques such as miscible gas injection, steam injection and polymer flooding to stem and reverse a decline in domestic oil output.

The sultanate's pioneering spirit has also been reflected in maintaining the long-established partnership of Oman's national oil company PDO with international oil major Shell, which owns a 34% stake in the incumbent. In a region, where national oil companies essentially control all the hydrocarbon resources, Oman's NOC-IOC partnership stands out, also because it has been an important driving force behind the success of the country's EOR rollout.

More of that pioneering spirit will be needed going forward. Like other countries in the region, Oman has to reduce its dependence on hydrocarbon income and diversify its economy. For that to happen it needs both a domestic push towards creating more value domestically, for example by developing more downstream industries, and bringing all key stakeholders—local and international—together to support the creation of a qualified and skilled Omani labor force that can be absorbed by an expanding economy.

Equally important, and probably most sensitive, will be the introduction of measures aimed at cutting back on high energy subsidies, which have led demand to spiral and contributed to a domestic natural gas shortage. The days for pioneers are far from over in Oman.

Sean Evers
Managing Partner, Gulf Intelligence

The Sultanate – Pioneering in the Energy World

HE Mohammed Bin Hamad Al Rumhy, Minister of Oil & Gas, Sultanate of Oman

WE'RE LIVING through exciting and challenging times. I don't know if we realize this but just think about what was going on five, 10 years ago and one can see the evolution our industry has gone through. New terms are being introduced in our industry; policies are changing; new ones are being created. But because we live through it, sometimes we take these things for granted and we don't realize them. It's at a get-together such as this and when you have a pencil or pen and piece of paper, trying to write your speech, when you realize that the evolution is unfolding in front of our eyes. New oil is being found, which is good. Unconventionals wasn't a term used 10 years ago. Today, it's on the tip of our tongue. Today, the focus is also on places like East Africa, for example Mozambique. Five years ago, nobody talked about Mozambique except tourists and the tourism industry. Market behavior is changing. If we zoom in on some of these issues, then it confirms what I've been saying about the evolution taking place in our industry.

In our region, behavior, policy and progress are making us serious energy consumers; we aren't just producers. The GCC nations, the six of us, are now reportedly consuming more hydrocarbons than Japan when our combined population is less than 25% of that of Japan. Part of this is normal. A normal trend in consumption shows growth in progress, growth in living standards, so that's good. But let's admit it, there is economic growth and, unfortunately, a good part of this is wastage that can be attributed mostly to policy issues. Subsidy, for example, is killing us. Our behavior in energy consumption needs to change, as a country and as a region.

We have an organization attending here today called International Energy Forum and they're supposed to bring consumers and producers together. But we don't need to go very far. Bring us together within the GCC; let's talk about this, because we are consumers as well as producers. Perhaps we should start close to home.

Our industry, our region, and definitely Oman, face other challenges as well. On the upstream side, we face mature fields, where the so-called easy oil and gas have both been found and have been produced. To sustain and hopefully to see growth in our production, we need both innovation and intervention. While Oman has started with some degree of success, enhanced oil recovery as well as unconventional hydrocarbon exploitation will no doubt be needed to sustain not only our economy and our growth, but, unfortunately, to sustain our behavior as well, as a nation and as a region.

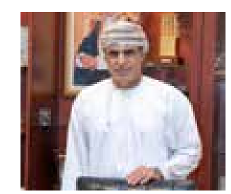
We have and continue to apply all the methods that are available to us here in Oman. This trend will spread to our friends across the borders. We are sick; our fields are sick and you're going to catch this cold very soon. We would be happy to share all our experiences in enhanced oil recovery and other methods. Trials and new ideas are welcomed here. And we have reasons to be optimistic.

Contractually, Oman has also been open to innovative agreements between ourselves and our partners. We've had the belief for many decades now that partnerships ought to serve both the host government as well as the IOCs, whether they're super majors or small emerging players. We don't discriminate between them here. We welcome anyone who wants to give it a go and we have their offices in Muscat to prove that. And I'm proud to say that some of them have had good success. We have small players, both in services as well as in exploration and production. We have had success with these policies and we believe that our approach to contracts is paying off.

The market is changing in front of our eyes. Movements of both oil and gas are changing. I think we need to be innovative and open in how we trade. Oman did not hesitate to ride this wave of change. We took part in, an indeed active part, supporting the Dubai Mercantile Exchange. I'm not selling the DME here. But it's our belief that it is necessary to accept changes when the call for change is needed. DME is a platform of change in trading for our region. And this is not criticism to our neighbors but I think it's time that we reconsider our role in trading and marketing of our most precious commodity: crude oil.

To conclude, there are two issues that are close to my heart and to my colleagues here in Oman that I'd like to share with you. One is our drive to promote what we call in-country value. For those who are coming from abroad, I will need to explain this a little bit. We've been spending a lot of money in our industry and most of this expenditure is not within our economy, it's from outside, which isn't wrong. But in-country value is a policy of promoting economic activities within the country. Growth, in our opinion, should not be limited to barrels and cubic meters of gas, or barrels of oil, but should be measured by what we as a nation are capable of doing.

The last issue, which isn't new to all of us in the industry, but I think we need to remind ourselves of time and again, is the social impact of our business. What we call here: social license. And this is a bid to engage society in our business. Times are changing; information flows fast; transparency is the name of the game and we need to engage people in the context of our business. ■



HE Mohammed Bin Hamad Al Rumhy, Minister of Oil & Gas, Sultanate of Oman

Gulf Region Must Reduce Domestic Energy Consumption ‘Drastically’

HE Mohammed Bin Hamad Al Rumhy, Minister of Oil & Gas, Sultanate of Oman

THE GULF REGION Must Reduce Domestic Energy Consumption 'Drastically' - HE Mohammed Bin Hamad Al Rumhy, Minister of Oil & Gas, Sultanate of Oman, tells Dyala Sabbagh of Gulf Intelligence in a Feature Interview.

DYALA SABBAGH (DS) The past five years have seen Oman's significant investments in EOR projects pay off returning the Sultanate to a path of rising oil production and setting it on target for 1 million barrels a day by 2015. Is this upward trend sustainable? (See Graph1)

Your Excellency, if I could have your thoughts on this question on what you have voted for and what opinion you might have.

HE MOHAMMED BIN HAMAD AL RUMHY
I agree with those 31%: I think it's too early given the evolution and the changes that are happening in the industry right now. What will happen 5 years from now? I really don't know. In the context of the country, there are lots of leads and we are very excited. Whether these leads will produce results that we want—we think they will – but they may not and that's the nature of our business, unfortunately. We are very optimistic. If you ask many of us who wake up every morning to go to work, we think answer number 1, 'of course it is', and we believe that we can sustain production for a long period of time. Incidentally, this is our policy here, sustainability more than any spikes. But surprises do happen and technology does evolve, even though 5 years is too short.

DS Would you agree with 20% of the audience who said that crude prices have to stay at least at $100?

HE MOHAMMED BIN HAMAD AL RUMHY
Not necessarily because the cost of our production is much, much less than $100. Theoretically, a price of $85 will make Oman oil tick. But, of course, we don't accept that in our business. The oil price so far is not an issue, unless it drops below $70 of course; then there will be a serious discussion before one invests.

DS The next survey question is: "Like its regional neighbours, Oman is heavily subsidizing its gas price, as well as fuel, electricity and water, which has contributed to a surge in energy demand over the past decade. What needs to be done to overcome the twin challenges of tackling subsidies and gas shortage?" (See Graph2)

HE MOHAMMED BIN HAMAD AL RUMHY
I agree. And this is what we are doing right now. We are raising the gas price gradually. There is no new project now that's getting cheap gas. What is cheap gas? It's all relative; but our gas price is definitely much, much higher than our neighbours'. We are also very aggressive in exploration and we are talking to our neighbours about importing gas. I have been campaigning for a gas market in the region. One day it will happen, where maybe we'll be exporting and importing. Let's let the consumers decide on where to buy their gas. This is what's going on in the advanced economies. One day it will happen here in the region, once we have the network.

With regard to the first option: "if India can do it, so can the Gulf States". I partially believe that but India has something else that we don't – human resources. But I fully agree that we need to do everything. Maybe there's another answer there that we need to sit down and think about: conservation, that we need to save. There is too much wastage of energy, definitely in Oman. And it's not just gas but oil as well. There is too much wastage in our system. We waste electricity; we waste water. There's so much we can do to save, plus use renewables. We've had a fantastic experiment in PDO where we use solar, for example, to generate steam, which has saved gas and has the potential of saving more gas. This is what we need to do.

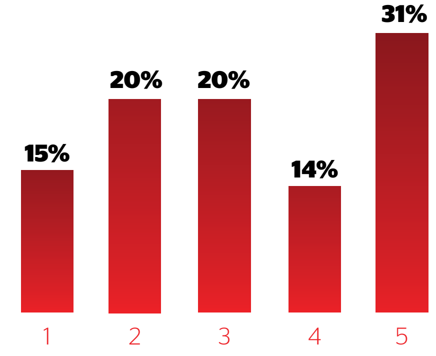
> "There is too much wastage of energy, definitely in Oman. And it's not just gas but oil as well. There is too much wastage in our system. We waste electricity; we waste water. There's so much we can do to save, plus use renewables."

AUDIENCE MEMBER 1 What is Oman and what are the Gulf States doing in terms of preparing for alternative sources of energy, like bio fuels and solar for electricity and power?

HE MOHAMMED BIN HAMAD AL RUMHY
I think in the short term we really don't need to

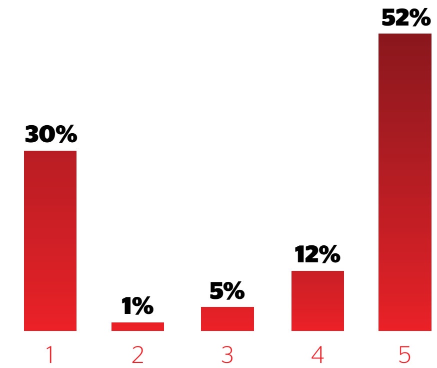
GRAPH 1: The past five years have seen Oman's significant investments in EOR projects pay off returning the Sultanate to a path rising oil production and setting it on target for 1 million barrels a day by 2015. Is this upward trend sustainable?

1. Of course it is!
2. Only as long as crude prices stay above $100 a barrel
3. Given depletion rates, production will probably plateau around 1 million b/d
4. No, it's just temporary spike that will be difficult to sustain due to high cost & depletion
5. It's much too early to say, technology always surprise to the upside



GRAPH 2: Like its regional neighbours, Oman is heavily subsidizing its gas price, as well as fuel, electricity and water, which has contributed to a surge in energy demand over the past decade. What needs to be done to overcome the twin challenges of tackling subsidies and gas shortage?

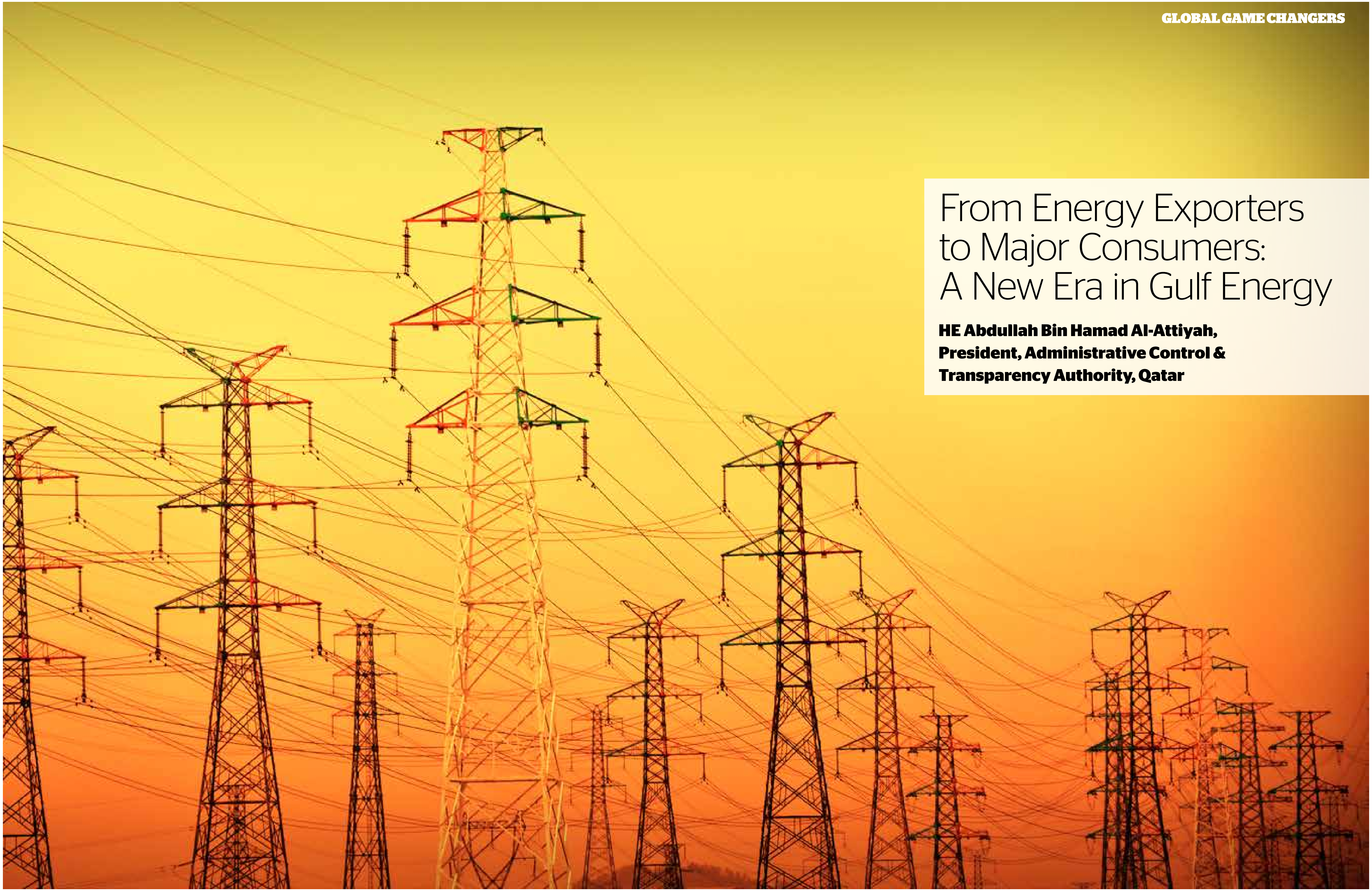
1. Raise prices gradually! If India can do it, so can the Gulf States
2. With all the exploration, there'll be enough gas to keep Oman going and prices low
3. Oman will start importing gas to meet domestic demand - and hike the prices
4. Oman needs to find alternative revenue sources to stem its subsidy bill
5. All of the above



do a lot – if we can just fill those holes that leak energy, and we can do this tomorrow, actually today as a matter of fact. When we go home, we need to switch off that light that we don't need. But we don't do this. We can conserve energy, I would say at least 30%, if there is enough of a campaign. Unfortunately, we are not doing it. We don't need to invent new alternatives. I don't think we need to bring nuclear power to Oman. I don't think we need to start bio fuel in Oman. I don't think we need to import coal to Oman. If we import gas, it will be effective. And we need to conserve to fill the gaps that leak energy. We are wasting too much energy and we're not talking about it. This is, in my opinion, a disease that we need to start campaigning about. I think there is enough gas in the world so that we don't need to panic into finding all these exotic sources of energy as others are doing. We don't have the knowledge to do nuclear, for example. And I don't think we need to get that excited about sources like nuclear. Let's be realistic: there's plenty of gas in the world for the next 100 years or more and all we need is to make sure that we use it wisely; but that is something that we are not doing.

AUDIENCE MEMBER 2 - ARGUS MEDIA
Regarding gas imports from Iran, how close are you to an agreement? And is the price now the same price that was agreed before? What is that price?

HE MOHAMMED BIN HAMAD AL RUMHY
The price was never agreed before. Iran is very close to Oman geographically and as I said, I think it will happen. We are now connected with the UAE and Qatar through the Dolphin Project. And the connectivity is more important, to me, than actually agreeing prices and so on. These are all short-term issues. What we need is to connect ourselves. Once we have that, the next stage, or the next step, will be to start an open market. And we don't need governments to be in between these issues. This is, I think, the ultimate goal and the ultimate destination. I hope it will happen one day. ■



From Energy Exporters to Major Consumers: A New Era in Gulf Energy

HE Abdullah Bin Hamad Al-Attiyah,
President, Administrative Control & Transparency Authority, Qatar

GULF COUNTRIES aren't just among the world's largest oil and gas exporters. They are also emerging as major energy consumers in their own right, driven by a rapidly expanding industrial base, higher living standards and strong population growth.

Today, the six Gulf Cooperation Council (GCC) states consume more primary energy than the whole of Africa even though their population is only one-twentieth the size of the continent's. Domestic oil consumption among Organization of Petroleum Exporting Countries (OPEC) has increased seven fold in 40 years, to 8.5 million barrels per day (bpd). The 12 countries that make up the group now consume almost as much oil as China.

Naturally, this trend brings with it a very specific set of challenges. The rapid growth in oil consumption in GCC states may hamper their ability to increase oil exports in the long term, thus undermining export revenues and in turn ambitious government spending programs brought under way in recent years across the region.

To reverse this development, Gulf countries must move towards curtailing energy consumption drastically, reduce subsidies and boost efficiencies to ensure that the region's rapidly rising oil and gas demand is being kept in check.

Subsidies on energy in particular are a major concern. Heavily-subsidized energy has fuelled consumption growth in the region in recent years and led to rising energy subsidy bills for governments. According to International Monetary Fund estimates, energy subsidy costs in GCC countries ranged from 9-28% of government revenues in 2011. This trend isn't sustainable.

The status quo of high income and low energy prices in the GCC states has created great inefficiencies and waste, adding pressures on hydrocarbon resources and the environment. The trend of soaring energy consumption in the Gulf States is already adding substantially to world carbon dioxide (CO_2) emissions, with only 0.6% of the global population located in the GCC accounting for 2.4% of global greenhouse gas emissions.

A general reduction of subsidies would help drive the region's competitiveness and boost efficiencies in the longer term. At the same time, subsidizing renewable energy initiatives may be feasible for the sector to gain some momentum in the GCC, while introducing benchmarking programs for efficiency in energy-intensive industries in the region may help determining subsidy flows.

The time has come to take action on overcoming the subsidy challenge and to attaching a realistic price tag to the region's energy prices. India, a low-income country, earlier this year raised gas prices in a bid to manage soaring energy demand, while Iran has successfully hiked fuel prices. Gulf countries should be able to do the same.

To be sure, lowering subsidies and reducing energy prices will need to happen gradually – but it needs to start urgently. The process needs to be managed carefully to avoid any negative impact on the region's economies and any such move should be embedded into a broader energy strategy for the GCC states. After all, this isn't a single country issue, it's a GCC problem.

Other initiatives would have to go hand in hand with subsidy reductions. Upgrading existing energy and industry infrastructure to operate more efficiently, for example, could go a long way reducing the need to invest in Greenfield energy facilities and manage demand. Encouraging this type of investment would require putting in place GCC-wide regulations and policies that incentivize spending on boosting efficiencies, and coordinating each country's energy strategies.

> "Gulf countries must move towards curtailing energy consumption drastically, reduce subsidies and boost efficiencies to ensure that the region's rapidly rising oil and gas demand is being kept in check."

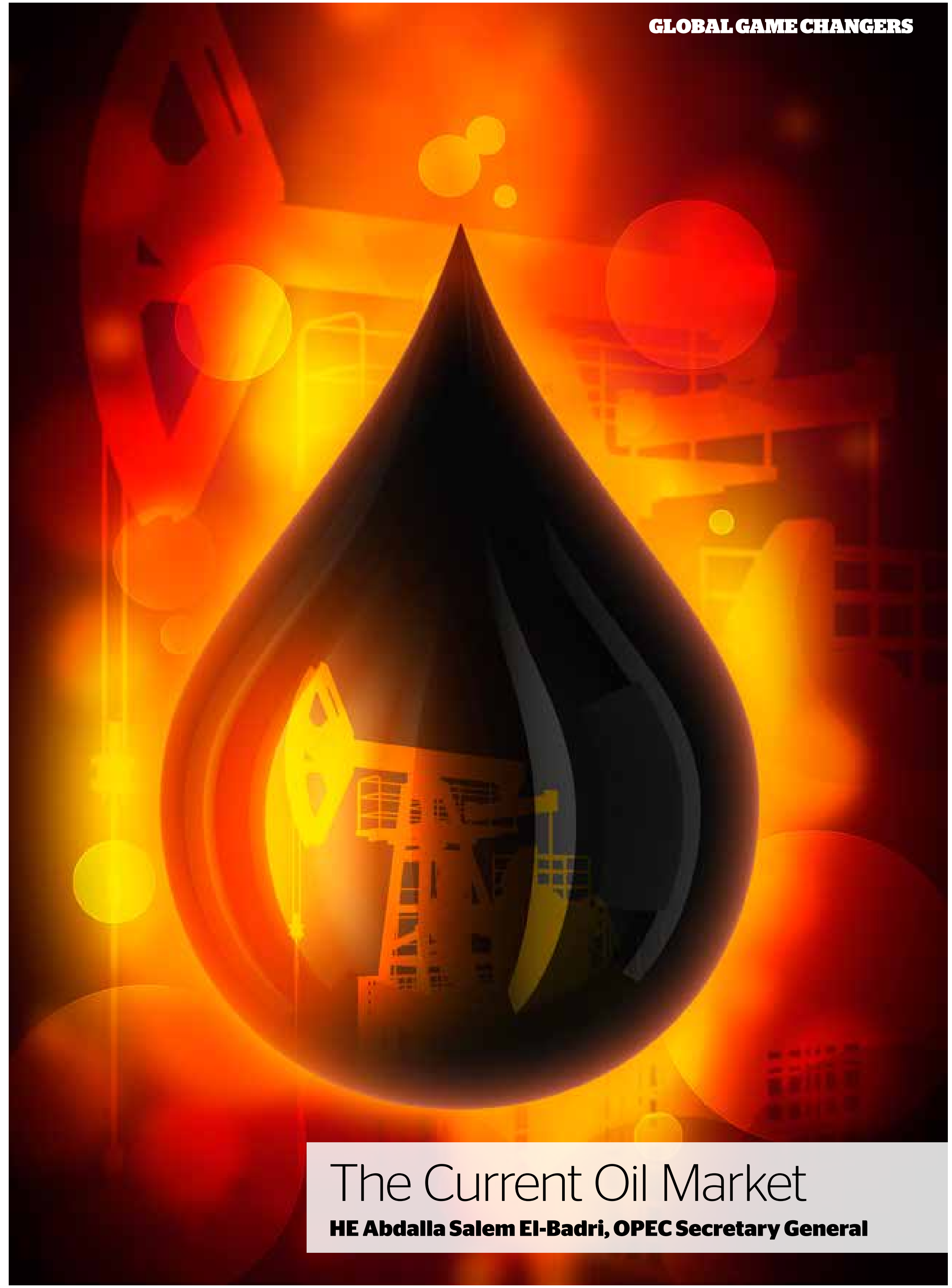
Greater efficiencies can also be achieved through greater economic integration. As such, the GCC states would best embark on more initiatives aimed at integrating regional energy infrastructure such as the landmark Dolphin gas pipeline that connects Qatar with the UAE and Oman, and the GCC-wide electricity grid interconnection.

There is a customer aspect to this too of course. For customers in energy-hungry Asian nations in particular, which rely heavily on oil and gas imports from the Gulf, the trend of rising domestic energy consumption in the region is worrying and may potentially impact their long-term energy strategies.

This means, Gulf countries need to reassure consumers, while at the same time ensuring demand security for their home markets. This issue could be addressed by stepping up joint investments in upstream and downstream infrastructure to boost overall oil and gas output, and by being more transparent about production capacity, supply and demand.

Given the trend we're observing in Gulf countries emerging as major energy consumers, it is clear that the region has entered a new era. It will now require managing runaway energy demand, lowering subsidies and boosting efficiencies combined with fostering collaboration between GCC states and between Gulf producers and consumers to make sure this era will be remembered as one of outstanding achievements. ■

HE Abdullah Bin Hamad Al-Attiyah, President, Administrative Control & Transparency Authority, Qatar



The Current Oil Market

HE Abdalla Salem El-Badri, OPEC Secretary General

OVER THE YEARS, Oman has been an important part of the international oil and energy markets. In terms of oil, its current production stands at around 900,000 barrels per day (bpd) and the country has plans to invest even more to help boost reserves and capacity further. It is proving an excellent example of how you can get much more from natural resources by using enhanced oil recovery technology.

Moreover, Oman has seen increasing investments in downstream, as well as in storage, trading and shipping, and has major plans to expand its natural gas sector. The country has decided to take some risks and invest considerable resources to expand its oil and gas capabilities, which is something OPEC welcomes. And it is clear that Oman is now reaping the rewards from it. Given its location at the crossroads of the energy corridor that connects Africa, the Middle East and Asia, there is no doubt that Oman will remain an important player in the global energy market.

As for the current oil market, over the past few years it has not been driven purely by the fundamentals of supply, demand and stocks, as it has been in the past. There are many other factors at play, such as the role of oil as an asset class, speculation, the futures market and spot prices, and—of course—the current economic environment.

In looking at 2013, while some might suggest that it has been less volatile than other recent years, it has remained a testing time for the global oil industry. The year continued to see a number of uncertainties and challenges, including in relation to the future of the global economy, its recovery as well as geopolitical events and their potential and actual implications on the oil market. In addition, markets faced some supply issues, particularly in North Africa and the Middle East.

Despite these issues and others, however, there has been no shortage of oil in the market, which means market fundamentals remain balanced today.

Nevertheless, as we approach the end of 2013 and head into the next year we need to remain vigilant. The economy remains the major worry, particularly in the short- and medium-term.

In the U.S., we continue to see some economic recovery, with improvements in the labour market, the housing market and stronger numbers for manufacturing and services, as well as improved consumer confidence. Thankfully, the U.S. government also stepped back from the brink of defaulting on its debt. OPEC anticipates stronger U.S. growth in 2014 at 2.5%, up from 1.6% expected this year.

In Japan, which continues to enjoy government-led support measures, challenges remain for the government in its ongoing recovery and fiscal consolidation efforts.

The Eurozone continues to be a region of mixed messages. While there has been some improvement in output and sentiment, labour markets remain a major challenge, particularly in places like Greece, Spain, Portugal and others. However, as the economy is coming from very low levels of output, there is expectation of a slight recovery later this year and into 2014.

In China, recent data suggests that the economy has slowed somewhat. The country's economic growth for 2013 has slipped from a predicted 8 percent at the start of the year to 7.6 percent today – a figure that's still very positive. India too has seen this year's predicted growth lowered to 5 percent.

In developing countries in general, there are some concerns over the economic impact of an expected reduction in U.S. monetary stimulus, which will affect the inflows of investment and accordingly reduce demand for their exports. Growth is still expected to remain fairly robust in the developing world.

Overall, the outlook for 2014 is better than for 2013. According to OPEC's Monthly Oil Market Report in September, global GDP is seen at 2.9 percent in 2013 and at 3.5 percent in 2014.

Other challenges remain, notably the importance of eliminating excessive speculation. While speculation and volatility can't be avoided altogether—it is part of the market after all—it is essential to mitigate extreme volatility and excessive speculation. Trading continues to be made on the perception of a supply shortage, rather than evidence of any actual or impending shortfall.

Even though oil prices have largely stayed in the $100-110 range this year, a range that's acceptable to producers and consumers alike, it is important that prices do not witness extremes – on the high or the low side.

On the supply side, there have been some disruptions in a number of producing countries in the Middle East and North Africa, as well as in the North Sea. Still, these developments have had minimal impact on the market. At the same time, supply continues to increase, with non-OPEC output expected to rise by 1.1 million bpd in 2013, and 1.2 million bpd in 2014.

Non-OPEC supply increases are led by rising tight-oil production in the U.S., which OPEC considers a welcome development as it adds depth to global supply, aids market stability and provides further proof to consumers that the world is not running out of oil. There is very little talk of 'peak oil' today.

> “ In the U.S., we continue to see some economic recovery, with improvements in the labour market, the housing market and stronger numbers for manufacturing and services, as well as improved consumer confidence. Thankfully, the U.S. government also stepped back from the brink of defaulting on its debt. “

However, while recent developments in the U.S. have been transformative for its energy industry, it remains to be seen how sustainable this type of production will be in the longer term. For instance, tight oil wells witness steep decline rates in the first year, which means that operators need to 'drill, drill and drill' just to maintain production.

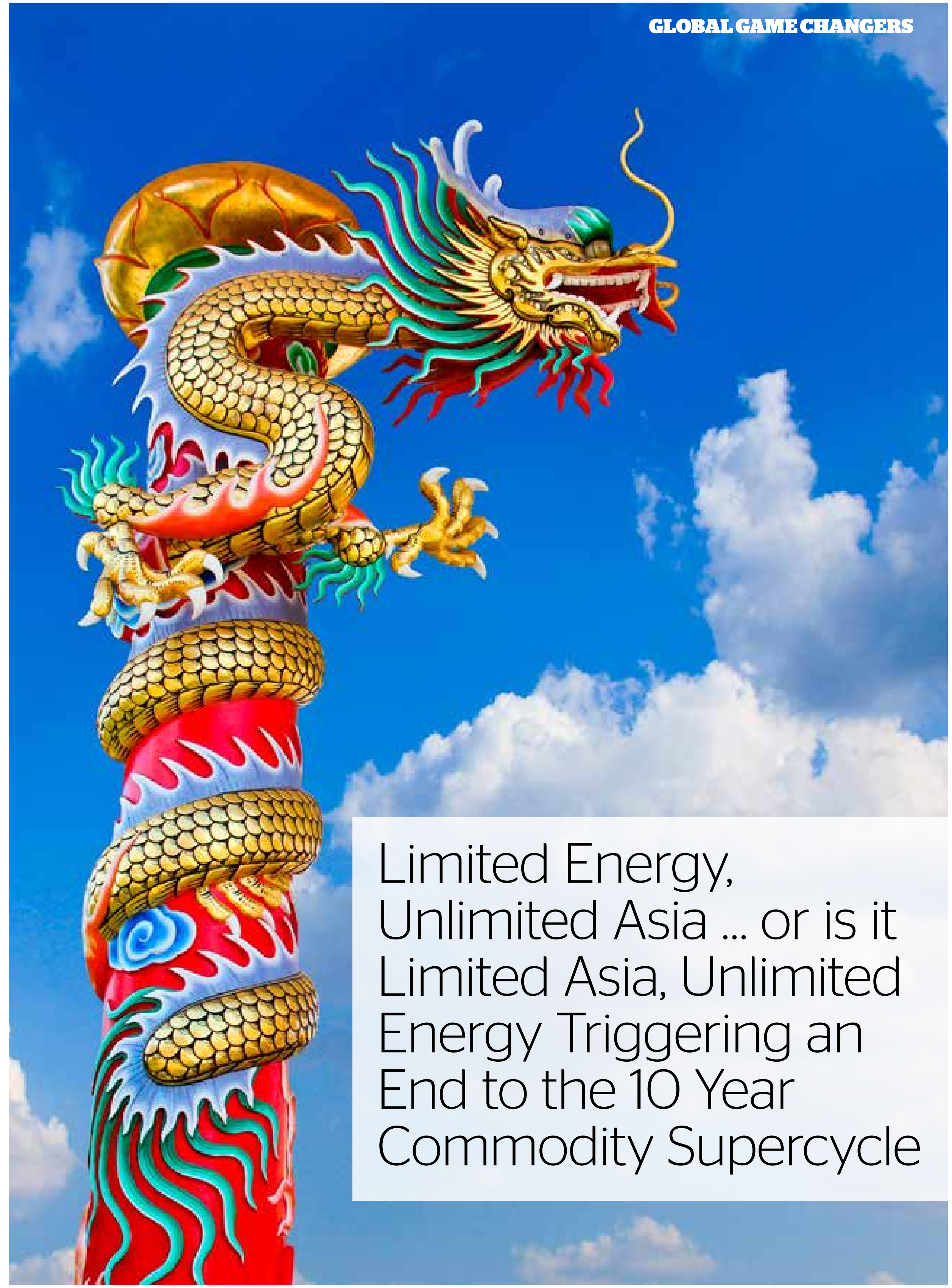
In terms of OPEC crude production, it is currently just over 30 million barrels a day. At the same time, spare capacity remains at comfortable levels for the foreseeable future.

From the perspective of stocks, the numbers are fairly robust. Stock levels in the OECD remain relatively healthy and there has been a steady build up in commercial and strategic petroleum reserves in non-OECD regions such as China and India. Forward demand cover is currently 58.6 days, which is above the five-year average.

Given that world demand growth is forecast to increase by 800,000 bpd this year and 1 million bpd in 2014, there is clearly enough supply to meet rising demand.

In short, there has been, and there remains, more than enough supply to meet demand for the rest of 2013 and into 2014, and stock levels and OPEC spare capacity continue to support the future supply and demand outlook.. ■

HE Abdalla Salem El-Badri, OPEC Secretary General



Limited Energy, Unlimited Asia ... or is it Limited Asia, Unlimited Energy Triggering an End to the 10 Year Commodity Supercycle

SEAN EVERS of Gulf Intelligence moderates a debate with HE Nasser Al Jashmi, Chairman, Undersecretary Oman, Ministry of Oil & Gas, James McCallum, CEO Senergy, Chris Fix, CEO DME, on whether supply or demand will present the biggest challenges in the coming years.

SEAN EVERS The heading of this session has put two questions against each other:

"Limited Energy, Unlimited Asia," has been a theme that we have lived with for a while, you might say for the last decade, with oil prices quadrupling to $100 a barrel.

Or as we look forward, are we looking at the possibility of "limited Asia"? i.e. slowdown in India and Indonesia, uncertainty about China although they do have great ability to keep the engine going - coupled with "unlimited energy": shale, new tight oil supplies, Iraqi production maybe going to 12 million barrels a day, America becoming a net exporter of energy, LNG, and so on.

James, I'd like to start with you - you go to China a lot, your business is in China and other parts of Asia. How do you see that playing off?

JAMES MCCALLUM One of the really interesting things which I've noticed in the last 4 or 5 years in traveling to China is the real representation on the street of the change of the Chinese economy, away from an economy which entirely relied on export for its growth, to actually creating an internal marketplace within China itself. And not enough is made of that. Consumer spending is high and not only by tourists but the Chinese themselves. HSBC in-country told me on a recent visit that there's is real effort going into monitoring the spending power of the local Chinese middle class and when it actually kicks in. And they have got some very hard statistics of when the local Chinese population actually spend money. And with its 160 cities and massive population, we have a long-term sustainable growth economy in China.

SE So limited energy, unlimited Asia. Chris - your thoughts?

CHRIS FIX Well, I've been going to China for 28 years. I was one of the first foreign exchange students from New York State to go to Beijing in 1986. I speak Chinese and I spend a lot of time in China. And I brought that demand element to the DME when I became CEO. There's just no slow down, especially in the energy sector.

SE But the commodity super cycle ended 5 years ago. It's 5 years flat even though oil is at $100.

CHRIS FIX Right now we're talking about China overtaking the U.S. as the largest oil consumption nation. We're also talking about China as the biggest car buyer in the world. So the other commodities aside, China has never demonstrated a slowdown in oil demand.

SE Then why hasn't oil kept on marching beyond $100?

CHRIS FIX I think China is keeping oil above $100 period, by itself. And I see this continuing not only for the next decade, but for the next three. If you add to the mix Southeast Asia, which is another strong story, despite some slowdowns in Indonesia, you're going to see a tripling of their oil imports by 2035. That's from 80 billion to 240 billion just in Southeast Asia. If you added on 500 billion a year to China, you're pushing a trillion dollars.

The World Bank said that if China maintains a growth rate of 7-8%, it will account for 30% of global GDP growth. So what we're talking about is demand shift. The demand story is significantly changing and that presents a lot of challenges for the Middle East because right now the U.S. is producing more energy and becoming less of a demand destination and all of it is shifting east. And this will affect the dynamics of the market from the east of Suez for the next three decades.

SE Your Excellency, are you as optimistic as our friends?

HE NASSER K. AL JASHMI If you take that by 2035 global energy demand will increase by 52%, then we don't see a slowdown. When we also take the benchmark statistic of the Chinese economy, the consumption per capita is below many other developing countries like Brazil, so they still have to catch up.

CHRIS FIX I think that we should address where the demand is going to shift to. It's clear that Europe, even if it does come back, is going to consume less energy, and the U.S. as well because of its own production capacity at the moment. So the demand corridor will go from the Middle East—starting here in Oman—to Shanghai, with India growing its middle class and China continuing to be a consumptive economy.

But, there's also a danger that demand for

> "The demand story is significantly changing and that presents a lot of challenges for the Middle East because right now the U.S. is producing more energy and becoming less of a demand destination and all of it is shifting east. And this will affect the dynamics of the market from the east of Suez for the next three decades."

Middle Eastern oil will be impacted because local economies are consuming too much of their own oil output. There are also other sources of crude coming on stream and the Chinese are actually buying less as a percentage from the Middle East than they are lifting from other parts of the world. Also, what if Iraq comes out with 9 million barrels? What if peace breaks out in the Middle East and Iran all of a sudden puts 5 or 6 million barrels on the market?

SE What if the opposite of that happens. The question, James, presented a little earlier is: why, if this bull run is so strong, have we seen commodities and the oil price, plateau?

JAMES MCCALLUM I think there's a nervousness in the traditional markets. A perfect example of that is, we are the principal company that drills outsource wells in the North Sea, and over the course of the last 6 to 7 years we have never seen capacity in the offshore drilling rig market.

Within the U.S. also, there has continued to be a nervousness surrounding activity in the Gulf of Mexico, but this has been somewhat overshadowed by the huge rise in onshore drilling activities associated with the tight oil story or shale gas.

But when you look at China and how it's been investing strongly and quietly behind the scenes over the course of the last decade in the development of East Africa, and then look at the middle class in China, Africa and India which is stepping up from a moped to a car, this far outweighs any drop in economic activity in the West, or measures being taken anywhere else on energy demand efficiencies.

SE Your Excellency, if we can look at the energy corridor mentioned earlier and take into account this bullish demand outlook from Asia, where is Oman's opportunity as part of this corridor and how would you see that changing from what it has been?

HE NASSER K. AL JASHMI As you know, Oman started in 1970 with almost no infrastructure. Now that we have achieved good results in that area, we are focusing on In Country Value. It used to cost us about $5 to produce a barrel of oil; nowadays it costs us more than $20. When we did the study on ICV, we found out that we were spending about 82% of that outside the economy so our priority now is to capture some of that locally, invest locally and maximize the local participation in the activities of the oil industry. Capture the value chain and retain it - capitalize on the strategic location of Oman as a hub for storage for the whole region and potentially beyond. We are already seeing interest from China and India to use Oman both for strategic and commercial storage; we are building a new refinery in Duqm; we are talking to some of our neighbours to extend a crude pipeline to Oman or invest in a refinery; we're building more ships to carry crude, LNG and gas and we are building new ports.

SE Interesting. Chris - your thoughts on that. Oman's role is obviously central to your activity at the DME.

CHRIS FIX Oman punches above its weight and has been successful at integrating a trading company in OTI. No one checks Middle Eastern sour crude prices without checking the DME amount first. Oman has been successful at building refineries, successful at taking knowledge within a system and maximizing the resources of the country, and that's very well recognized by having a benchmark price that's already setting Middle Eastern crude. And let's not forget, the other benchmarks in the North Sea and in the U.S. are light sweet crudes that are 8, 9, 10 time zones away. The only crude that matters right now is the crude that's coming out of the Gulf. And nobody can really price that crude without looking at DME Oman first. So that success is being built upon by other infrastructure projects and building an ecosystem around it. And this is where I think Oman has been visionary.

SE James, in terms of the idea of an East of Suez energy corridor, we see Singapore historically as an entrepôt serving the industry at that end of the corridor. Does this end of the corridor need a comparable entrepôt center? Dubai has aspirations of a level but it's not on the coast and it's not a big refining center... is there a need or room for a more physical center of oil here along this coast?

JAMES MCCALLUM I think there is. There are debates as to where that actually is. Singapore exists today because of its very location and not for any other reason. Clearly what we're witnessing, if you like, at the present moment as the energy landscape changes to embrace East Africa, West Africa, Asia, is that the Middle East is positioned in a pivotal place.

SE But if I was in Asia and a customer of Middle East crude, I think I'd be getting a little bit concerned by the energy consumption graphs that we're seeing for this region. If carbon-rich countries such as OPEC states, Russia and others continue to heavily subsidize energy, their domestic consumption will continue to rise, eating into exports and push up global commodity prices. Should Asian customers take note and plan for other supply sources? Your Excellency, your thoughts on that?

HE NASSER K. AL JASHMI Yes - Asian customers have to be worried. Saudi Arabia will be consuming 8.5 million barrels by 2030; that's a lot of crude for a country with a relatively small population of 26 or 27 million people. We have to become energy efficient and we have to find solutions.

SE James - what would Asian consumers' alternative options be to Middle East crude? Is this a narrative you hear them talk about at all?

JAMES MCCALLUM If you look at China's investment activity in Africa 10 or 15 years ago and use a specific colour to indicate where it's happening, it would be a pretty dotty map, but if you look at it today, the whole of Africa would be a solid colour where China is investing in infrastructure equally in exchange for longer term energy contracts going forward. If you look at Malaysia, it's moving beyond having Petronas and the IOCs develop their existing large oil fields and looking to domestic companies to emerge and develop some of the smaller oil fields on the edge of those fields which are no longer being considered attractive by the bigger players. Indonesia is revitalizing many of its standard fields which were shut down in the late 1980s. So there's lots of activity going on in Asia around finding additional sources of energy for the greater economy.

And in fact in China, there are huge reserves that exist that are not being developed in the same way as they are in the United States; they exist in relatively remote areas but the wonderful thing about tight oil reservoirs is until you actually drill into them and take the oil out of them, it stays exactly where it is.

> ❝ Singapore exists today because of its very location and not for any other reason. Clearly what we're witnessing, if you like, at the present moment as the energy landscape changes to embrace East Africa, West Africa, Asia, is that the Middle East is positioned in a pivotal place. "

SE So money in the bank -let's consume Angola's oil first and then we'll get to our shale oil later. That's an interesting point. Any closing thoughts Chris?

CHRIS FIX One of the issues that's going to be critical in the future of the demand-supply picture in Asia is pricing. I do think that the customer is going to determine the behavior of the supplier and that demand security for Gulf oil producers is going be an issue. There is no doubt that the Middle East will continue to be the largest production base on the planet. But in terms of allowing customers to go forward and buy crude oil on a clean transparent basis where they can plan month on month for them to be able to take that oil into their economies, that's where I think it's going to change. The DME has been offering that to Oman, so Oman has been able to see forward and doesn't have any problems with their demand security.

SE Your Excellency some closing thoughts on this session?

HE NASSER K. AL JASHMI All countries have to take measures to change the situation. I also believe that the Middle East will continue to be the major producer and supplier. We are talking about 12 million barrels coming from Iraq; there is additional capacity in Saudi Arabia; hopefully Oman also will be able to produce more on the whole; Kuwait will be producing 4 million - and all of this without much additional investment needed, compared to for example Canada or Venezuela. ■

Driving In-Country Value to New Highs

HE Nasser Bin Khamis Al Jashmi, Chairman, Undersecretary Oman, Ministry of Oil & Gas

2013 HAS been a busy year on the in-country value (ICV) front in Oman's oil and gas sector. When the oil and gas ICV programme was launched in February 2012, it was set to be driven at industry level in order to deliver true opportunity and value for the country. It aimed at getting the government, operators and contractors to align and work closely together, with a focus on:

- Transforming today's oil wealth into a broader based industrial wealth
- Investing in Omanis, particularly the youth with a focus on technical skills training to international standards and accreditation
- Developing Omani industrial competence that will induce growth in the economy and sustain it after oil and gas
- Developing Omani manufacturing and services capability that will provide service to Oman, the region and beyond

Are we there yet? Definitely not; some equal ICV development to a marathon, not a sprint. Implementation of ICV programs requires extensive co-ordination between the main players, i.e. government, operators, the contracting community and academia. Given these challenges, Oman has gotten off to an excellent start across all fronts, with work under way to create a sustainable pan-industry ICV program.

Some of the achievements to date include:

- The Ministry of Oil and Gas now has dedicated resources working on ICV, while operators and many contractors have appointed ICV managers
- Introduction of standard ICV provisions in oil and gas contracts
- Development of a standard approach to evaluating ICV in the contracting and procurement process, thereby introducing consistency in how the oil and gas sector approaches ICV
- Appointment of a local SME to setup a joint registration system for suppliers catering to the oil and gas industry

In addition, an ICV blueprint strategy review was completed, which has been the result of great collaboration across the industry. The review looked at the goods, services and technical skills requirements of the top nine operators across the oil and gas value chain and identified their current requirements in goods, services and skills. The review also included a high level assessment on market capability versus extrapolated requirements in 2020. These 'gaps' are the opportunities that will be shared when the blueprint strategy will be launched and rolled out this December. It will include over 50 ICV opportunities.

Some are referring to this launch as the 'tipping point'. Once the contractors and suppliers start addressing the opportunities, ICV in oil and gas is set to gain real momentum, adding significant value to the country.

Skills training is one example of what is being worked on. One of the subcommittees of the oil and gas ICV committee, the ICV HR managers committee, which drives the HR ICV agenda, is working on harmonizing the technical training standards of the oil and gas industry for all skills – from welding to HSE supervisors to design engineers and beyond.

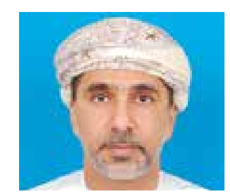
With representatives of the Ministry of Manpower sitting on this committee, there is clear evidence that the government is working with the private sector on delivering value to the nation.

The subcommittee recently completed a pilot on electrical technicians training, wherein all operators agreed the technical standard Oman would like its youth to be trained in; and appointed an internationally recognised competence-development body to assess existing private and public training centres against this standard and other international standards for delivering technical training, for example looking at the qualifications of lecturers, the curricula presently being offered, and available teaching aids etc.

The next step will be to look into how both public and private training centres will need to be upgraded to deliver the standard required by the oil and gas industry. It is important to assure that the required international training standards are met and maintained, and that the selected institutes' training programmes are internationally accredited. This will be repeated for all the required oil and gas technical competences. This doesn't just provide Oman with world class technical staff, but also assures that training institutes meet the standards required by the industry.

At the professional level, Oman Oil, PDO, Shell, Schlumberger and others are looking at how best to deliver required geosciences and subsurface training required by the industry, again to internationally accredited standards.

Looking ahead, in 2014 we will be looking at what more needs to be done to support SMEs and encourage businesses to address innovation in business and products. This is an era in which innovation is the driving factor for economic growth. As such, we all need to place more emphasis on research and development, and the adoption of new technologies. ICV is a journey and to be successful we all need to work together for mutual benefit and the economic growth of the Sultanate. ■



HE Nasser Bin Khamis Al Jashmi, Chairman, Undersecretary Oman, Ministry of Oil & Gas

Seeking Economic Diversification: Oman's Road to Creating Value

Mulham Basheer Abdullah Al Jarf, Deputy Chief Executive Officer, Oman Oil Company S.A.O.C

LIKE OTHER Gulf States, Oman has embarked on a strategy of economic diversification in recent years in a bid to reduce its dependence on income from hydrocarbons, add value to its oil and gas resources, and create jobs for its young and growing population.

While the strategy aims at reducing the Sultanate's dependence on the energy sector by fostering the development of new industries, oil and gas-related activities will remain firmly at the center of the national economy for years to come.

Today the Energy Sector in Oman accounts for more than 50% of the Gross Domestic Product (GDP). It powers industry and people, drives economic growth and generates billions of dollars worth of revenues for the government every year. Oman is the largest oil producer in the Middle East that is not a member of the Organization of Petroleum Exporting Countries (OPEC), pumping nearly 920,000 barrels a day of crude in 2012. And the sultanate has set ambitious targets to boost that further by 2021 through ambitious new Enhanced Oil Recovery (EOR) projects in a bid to sustain a five-year trend of rising crude production levels.

At the same time, activities of local and international energy companies in and outside the country, including Oman Oil Company (OOC), provide fundamental support in deepening and widening the domestic industrial base, and driving the country's broader socio-economic development.

Downstream initiatives such as the Duqm refinery and later a petrochemical complex in the country's southeast are one example of energy companies adding value to the local economy. Value is also being created by other downstream initiatives in the areas of storage, trading, shipping, petrochemicals and specialty chemicals – all of which add value to the local economy.

Creating this kind of In-Country Value (ICV) today sits at the core of the government's diversification strategy. According to the government's own definition, ICV refers to the "total spend retained in-country that benefits business development, contributes to human capability development, and stimulates productivity in Oman's economy," with a particular focus on the oil and gas sector.

As part of its ICV strategy, the government has put in place Omanization schemes and incentives while supporting the creation of a qualified and skilled Omani labor force that takes on a bigger role in the country's economic development going forward.

Oman Oil Company, which today has over 40 investments in 12 countries, has made significant investments along the energy value chain, contributing 4% to the GDP in 2012. The company's focus is set on the development of oil and gas-based industries and other energy and energy-related projects in partnership with international industry players to capture the energy value chain. The firm's investment portfolio ranges from exploration and production as well as related services in oil and gas to infrastructure, shipping, refining, marketing, petrochemicals, aluminium and power generation.

As a fully government-owned company, OOC's remit essentially is to identify strategic investment opportunities that maximize economic value from existing assets and selective growth projects that contribute to ICV, whilst creating meaningful employment opportunities.

Oman Oil Company's latest acquisition, OXEA, the world's largest supplier of Oxo chemicals, is a case in point. The transaction strengthens the company's position in the global chemical sector and contributes to its long-term downstream strategy.

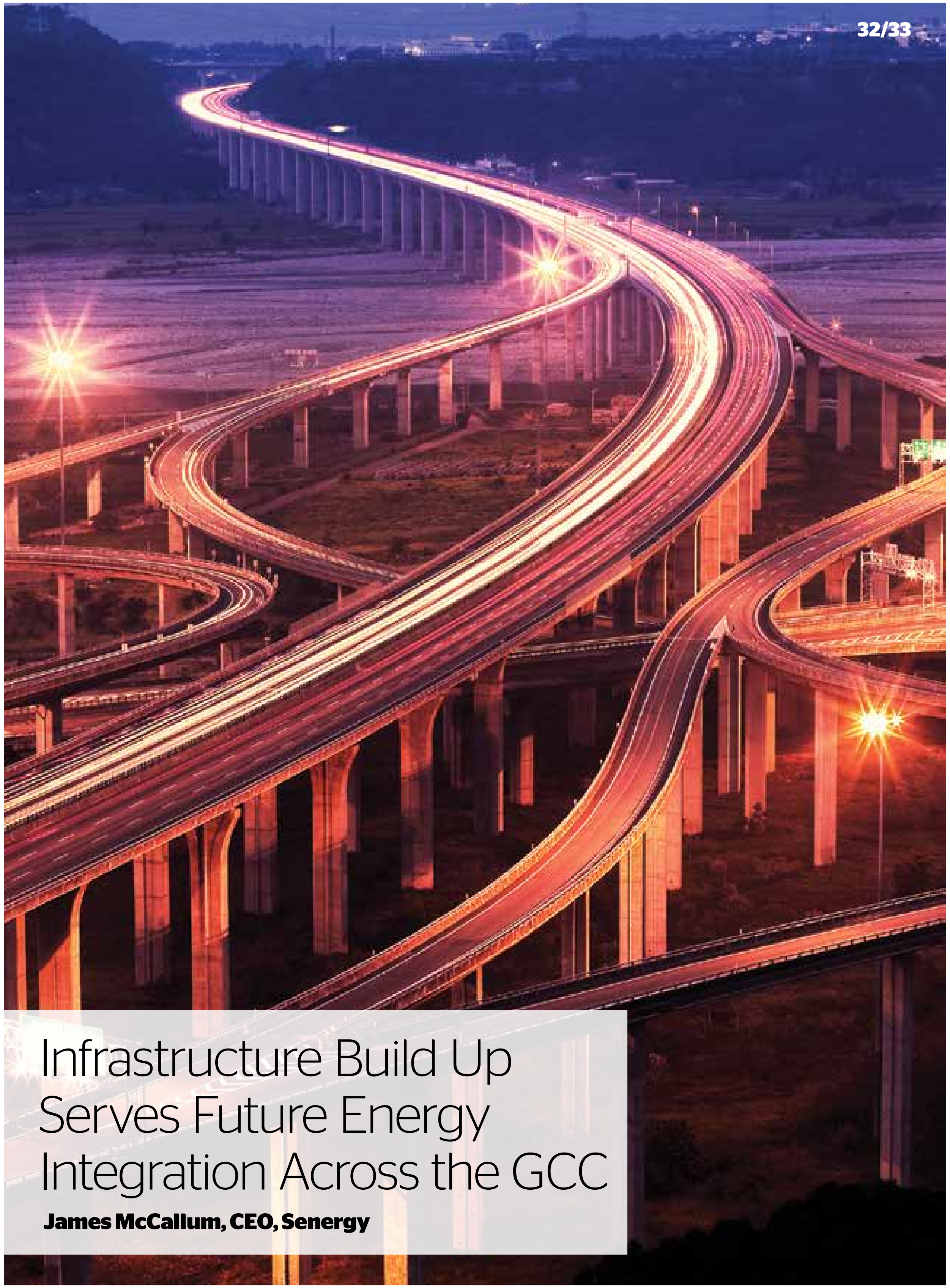
Due to OXEA's strong market position and expertise—sales reached around 1.5 billion euros in 2012—the company also provides adequate scope for growth in the special economic zone in Duqm as well as other planned projects in industrial areas in the Sultanate. Moreover, the jobs created in this relatively uncharted sector, and especially from projects of this magnitude, will develop a platform for further human capital development and growth.

At the same time, OOC continues to attract new investments to the country to unlock resources, and to introduce new technologies and new ways of thinking to the industry whilst maximizing the socio-economic impact and reach of the company's businesses. The company is also supporting the country's efforts to maximize value from local resources, raising the skill levels of the Omani workforce through development and training programs, and identifying new ways to increase ICV.

As a country, Oman is in an advantageous position, being strategically located at the gateway of the rapidly expanding regional as well as Asian and African markets. Targeting these markets and forging new partnerships will be a key for Oman to sustain growth and achieve the goal of economic diversification.

The Sultanate has already played a pioneering role in the energy sector, leading the Middle East into the post-easy oil era by implementing EOR schemes on a large commercial scale. It now has the opportunity to become a pioneer in successful economic diversification. ■

Mulham Basheer Abdullah Al Jarf, Deputy Chief Executive Officer, Oman Oil Company



Infrastructure Build Up Serves Future Energy Integration Across the GCC

James McCallum, CEO, Senergy

FEW REGIONS have pursued their infrastructure ambitions as rigorously as the six-member Gulf Cooperation Council states (GCC) over the past decade. From ports to airports to railways and pipelines – fueled by windfall oil revenues, Gulf states have been able to finance and implement a long and growing list of world-scale infrastructure projects.

The infrastructure build-out is part of the GCC states' broader strategy to diversify their economies away from hydrocarbons, transform themselves into knowledge economies and ensure sustained long-term economic growth. So far, the approach has served the GCC countries well.

The region has become a global center for trade, transport and energy, benefitting from advanced logistics infrastructure, good road networks and modern facilities for air, sea and land transport, strong shipping connections, and liberal market access as a result of free-trade agreements and low trade barriers. This in turn has fueled economic growth and driven the expansion of the region's non-oil economy.

The infrastructure-led approach has gone some way towards fostering economic integration between GCC states. The GCC electricity grid interconnection is a case in point. The project has provided benefits to all member states by increasing efficiencies in the regional power sector and reducing investment requirements into new electricity generation capacity.

Similarly, the Dolphin pipeline, which transports natural gas from Qatar to the UAE and on to Oman, serves as an example of how cross-border initiatives can create value for all stakeholders. At the same time, intra-country initiatives such as the Abu Dhabi-Fujairah pipeline in the UAE support domestic development but could also potentially benefit the wider region if incorporated into a broader energy strategy.

The GCC-wide railway network, which is presently at an early stage of development, will offer an unprecedented level of regional integration once completed, connecting the region's main cities and transportation centers, facilitating intra-regional and external trade, and offering environmental benefits.

The overall rationale for greater economic integration is clear. It streamlines the flow of goods, labor, capital, and services within those countries, and puts them into a stronger position vis-à-vis the rest of the world to negotiate trade agreements. Increased intra-GCC trade, investment and development in turn would leave hydrocarbon-exporting GCC states less exposed to global economic conditions and resulting swings in oil prices.

The case for integration among GCC states is further supported by the fact that the region shares a common history and values, and features similar economic structures – notably countries' ongoing reliance on hydrocarbons and expatriate labor.

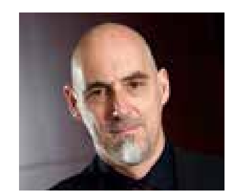
Successful integration can bring enormous economic benefits. According to Booz & Company, the European Union's common market generated 2.75 million new jobs over a 15-year period and 2.2 percent of additional GDP. These gains were due in particular to the standardization of customs and border regulations, which facilitated the movement of goods, services, and labor between nations, the consultancy said in a report on GCC integration.

At a time when GCC countries are faced with young, growing and ambitious populations, the benefits arising from closer economic integration could, in the long run, address the region's labor market challenges.

Although GCC-wide integration initiatives have produced encouraging results, much more needs to be done. With global economic competition intensifying, GCC states need to push forward with even deeper integration. Long-awaited initiatives such as the GCC monetary union or open skies agreements are still pending, just as the removal of trade barriers and further integration of the region's energy infrastructure, via oil and gas pipelines for example, have yet to be tackled.

At the same time, GCC states need to adopt policies that aim at and support the creation of complementary, rather than competing, economies – in particular in sectors such as transport and downstream energy that offer scope for integration but at present mostly compete with each other.

A sustained and joint push by GCC countries towards building out and integrating their transport and energy infrastructure further could produce great benefits. Sitting at the crossroads of old and new trade routes such as the south-south energy corridor, which links Africa, the Middle East and Asia, the Gulf region has an opportunity to use its strategic geographic location and advanced infrastructure to capture a growing share of the ensuing trade. This in turn would also enhance the region's global standing as a leading trade and energy hub. ■



James McCallum, CEO, Senergy

Building Partnerships for the Post Easy Oil Era

Aldo Flores-Quiroga, Secretary General, International Energy Forum

PARTNERSHIPS HAVE always been integral to the oil industry. But just like the industry as a whole, their shape and structure have profoundly changed over time.

Throughout the first half of the 20th century, technology, expertise and financial capabilities were firmly in the hands of international oil companies (IOCs), making them the dominating players in their partnerships with the governments of hydrocarbon-rich states, including in the Gulf, that were keen on developing their resources.

With resource nationalization in the 1970s and 80s, the balance of power began to shift away from IOCs to the national oil companies (NOCs) that controlled the hydrocarbons on behalf of their governments. But IOCs' technical expertise and financial strength still remained integral to resource extraction.

Over the past 20 years, partnerships in the industry have undergone yet another period of transformation. NOCs today control more than 90% of the world's oil and gas reserves, compared with less than 10% in the 1970s, which has enabled them to build up their own technical and financial capabilities – and strengthen their position vis-à-vis IOCs. Today, NOCs may opt to partner with IOCs on an equal footing or challenge them as competitors in projects anywhere in the world.

As recently as 2010, the concept of NOC-IOC partnerships was alive and kicking, focusing on cooperation in the development of harder-to-reach reservoirs as the world entered the era of post-easy oil. However, with the onset of the unconventionals revolution in North America, new methods of boosting oil and gas output emerged, prompting companies into new types of tie-ups with partners that offer different skill sets and technologies. As a result, inter-industry partnerships have become more complex.

With the oil industry's evolution continuing amid ongoing technological advancements that bring ever-more-remote hydrocarbons within their reach, partnerships are likely to become even more diverse going forward. Today, the industry may still talk about NOC-IOC cooperation, but a wave of new partnerships is under way between NOCs and independents, NOCs and service companies, as well as national international oil companies (NIOCs), NOCs and IOCs. The list of combinations doesn't end here.

The trend is driven by technology as well as economics. The new frontier in oil and gas production involves two very different sets of projects: mammoth ones, which are commonly located offshore and often complex, expensive and technologically more demanding to develop; and small to medium size ones, with very different fundamentals that are mostly located onshore.

On large offshore projects it is unusual even for large oil companies to singlehandedly stem the cost, manage the risks, and provide the technology required to produce the hydrocarbons. On these projects, a pooling of resources—whether among IOCs or between NOCs and IOCs—will be the most likely scenario, depending on the rules set by the host government. Before the unconventionals revolution, this is how partnerships were mainly pursued and thought of.

For smaller-scale onshore projects, the size of companies getting involved tends to be smaller too. Still, the costs involved in developing these schemes are often too high in comparison to the financial muscle of these firms. New forms of partnerships, including between independents and NOCs, are emerging in this space too.

The relevance of partnerships is also changing due to the need to manage country risk in various parts of the world as production becomes more transnational. This is especially the case for NIOCs, who will have to learn to partner with both the private and the public sector to manage risks better. This is an area where IOCs have developed an advantage, but NOCs are beginning to catch up.

> “The evolving industry landscape isn't just changing the shape and structure of partnerships between companies, but also between producers and consumers, in particular in the area of natural gas. Many consumers want to open a new era of partnerships with producers – one that relies on a new gas pricing mechanism and a more diversified set of suppliers”

The evolving industry landscape isn't just changing the shape and structure of partnerships between companies, but also between producers and consumers, in particular in the area of natural gas. Many consumers want to open a new era of partnerships with producers – one that relies on a new gas pricing mechanism and a more diversified set of suppliers. These consumers want to replace the current method based on oil-indexed pricing with one that relies on hubs.

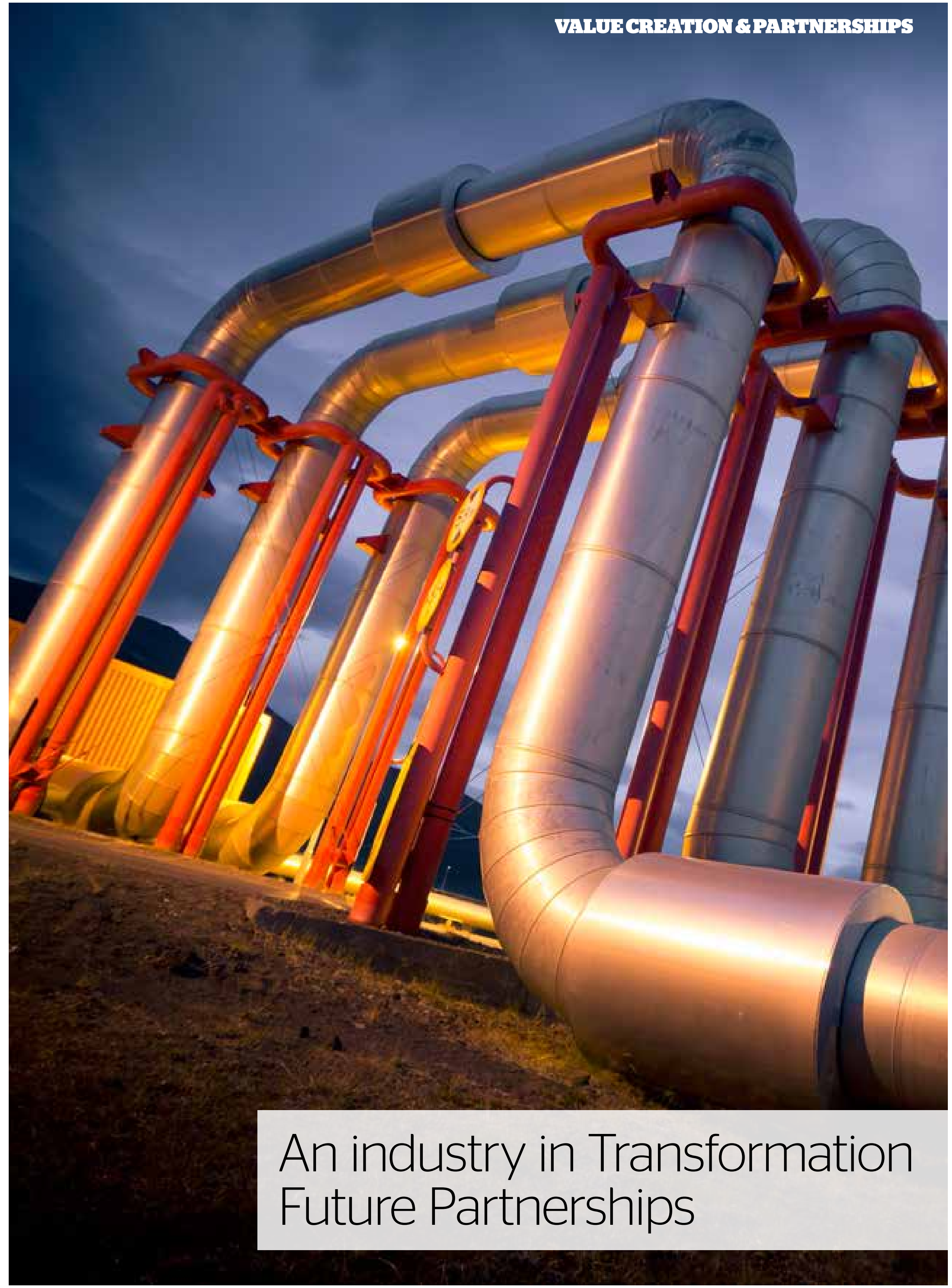
This is a major point of contention, especially for producers. The good news is that the issue is being discussed under a cooperative framework. However, the pace at which this is happening is not satisfactory to many consumers, who are mulling purchases of producing assets abroad or creating procurement consortia to try to bring gas prices down.

In recent discussions at the Asian Ministerial Energy Roundtable, two things about partnerships stood out. First, producers and consumers are already striking deals and cooperating closely. Technology and capital from Asia—a net gas consumer—supporting the output expansion in the Middle East region, which is a net producer, are a case in point, and a clear example of how embracing interdependence makes for good business and enhanced energy security.

Second, partnerships, which rely on trust, require more transparency when it comes to data sharing and the use of markets. Information like that provided by the Joint Organizations Data Initiative (JODI), which integrates production, consumption, exports, imports and inventory data from all corners of the world, can still be improved upon and made more broadly available with the cooperation of more governments and companies. But this depends on recognizing the important role that transparency plays in making markets work better.

There can be little doubt that partnerships will remain at the core of the industry. But they need clear rules for investment and the distribution of rents. They also must have the flexibility to cope with large sets of issues that may come up in the course of a project's investment cycle. Dialogue, mutual understanding, trust, and recognition of interdependence supported by transparency are key factors to sustain this type of partnerships and steer them in the right direction as circumstances change. ■

Aldo Flores-Quiroga, Secretary General, International Energy Forum



An industry in Transformation
Future Partnerships

EITHNE TREANOR of Gulf Intelligence moderates a debate with Mulham Al Jarf, Deputy CEO, Oman Oil Company, on the changing shape of the energy industry where old definitions are no longer relevant.

EITHNE TREANOR Mulham - as the region looks to new partnerships, is the Omani energy sector a model for others in the Middle East? What is the model here that has worked so well?

MULHAM AL JARF The Oman Oil Company has always included a partner - not for the sake of having a partner, but we believe that we can leverage both our and the partners' strengths. What's also very important is managing each other's expectations; I think there have been instances elsewhere where there's no meeting of minds and so the partnership is not sustainable. That's where the challenge lies.

EITHNE TREANOR Jay - there are other partnerships that we're seeing happening around the region with service companies like Petrofac. How are you moving into that sphere?
JAY PEARSON There is an evolution in the industry with regard to the lack of capability and capacity within companies to do what they have to do. In many parts of the world there are small, not complex oil fields which really don't appear on companies' radar at all because they have other bigger and more difficult things to do. That's where oil service companies like ours can provide a service to actually carry out the development for them on their behalf.

EITHNE TREANOR Aldo, in your conversations with IOCs and NOCs, what's the formula to get a partnership that works in terms of serving the host government and the needs of the country, and simultaneously presenting a profit for IOC shareholders?

DR. ALDO FLORES-QUIROGA There must be something in this partnership that helps not just to bring expertise from abroad but to develop expertise at home so that the human capital gap is addressed. So the idea in the end, even though it may affect an IOC's or service company's business model, is that the expertise is also available for the NOCs in-house so that they can develop more. But this will also depend on the laws and the structure of incentives set up by each country.

MULHAM AL JARF I think interdependence is here to stay, but the skills required are changing mainly because of the nature of the challenges. Right now, a huge challenge from unconventionals is that not all countries have the expertise that is required. We have a scarcity of geologists and engineers to develop these type of resources and this will take time and will require more experts from independent companies and service companies to provide advice, and maybe to partner.

JAY PEARSON If you look across the industry, I defy anyone to identify an oil company that does everything, that doesn't need an oil service company to be doing something for it. If you look at Schlumberger and the number of employees they have, to do what they do, to try and replicate that inside one company would be impossible. I'll use Pemex as an example - Pemex wants companies like Petrofac to come in and help them with the oil fields which were developed in the '40s and '50s because they want to put their petrophysicists on the new oil fields, the giant oil fields that they have in the Gulf of Mexico. They don't have the capability and capacity to do everything, but they do want to make sure that these millions of barrels of oil are looked after and developed.

EITHNE TREANOR Aldo - What about the trend of NOCs moving to acquire international assets? What will the implications be for them venturing outside their home territory?

DR. ALDO FLORES-QUIROGA The key question is how they're going to manage risks abroad. Are they going to become purely commercial risks or also political bilateral relations risks between countries.

AUDIENCE MEMBER 1 I would like to make an observation on this point if I may - and that is that as Asian NOCs move into upstream opportunities in Africa and increasingly in this part of the world, they may be very price competitive but not so technically advanced as the existing majors or IOCs. And yet, they can compete to win contracts based on price. The NOCs are often being guided by security of supply rather than profit, but this ability to compete at price point may not necessarily be what's best in the long-term for the field or reservoir. In Africa for example, there seems to be some pushback now against this model, where China has come in and not really offered any transfer of knowledge or development footprint. Surely there is a possible legacy consequence of that?

JAY PEARSON I think it's a fair point. I would also point out that to enter into any contract with any government with regard to their assets, requires a commitment from that company to

" There must be something in this partnership that helps not just to bring expertise from abroad but to develop expertise at home so that the human capital gap is addressed. So the idea in the end, even though it may affect an IOC's or service company's business model, is that the expertise is also available for the NOCs in-house so that they can develop more. "

do certain things. Even though they may not come with the technical pedigree which perhaps they should have, they certainly still have to fulfill that contract or partnership. And I would recognize that as a potential opportunity for the oil services companies to step into that gap which the NOC may have.

AUDIENCE MEMBER 2 As long as the IOC's maintain the edge on innovation and technology and intellectual property, there will still be a great deal of cooperation between IOCs and NOCs and any other players in the marketplace. For us, at the receiving end of technology, expertise and investment, we find that the diversity of people that are coming into our markets is encouraging and I think we should be accommodating that.

MULHAM AL JARF My personal view is that the lines have become increasingly blurred between IOC and NOC and that's only natural. NOC's have a national agenda, but I think going forward it's going to be more of a global agenda with a national interest. We will perhaps have even more service companies ready to serve them, rather than less.

EITHNE TREANOR What about the terms of contracts being offered by NOCs in some countries? You find IOCs lobbying for better terms, such as in Iraq. Jay, what would you say about this?

JAY PEARSON I'm going to answer your question with an analogy if I may. In the United States, the evolution in shale development was not started off by NOCs or IOCs; this was started off by small companies who saw an opportunity, who had very little capital behind them, had very little capability and capacity behind them. What they did was they went to the service sector and said, "Can you help?" And so the subsurface geniuses came in and provided service equipment on a tariff basis. That meant that the small companies didn't have to put up lots of capital; and they proceeded to create a partnership with the landowners, which has lead to a boom in the United States.

EITHNE TREANOR Aldo - what about the transparency of statistics particularly in the global gas market, and how that affects partnerships and contracts. We see so much activity coming into the gas market - do we know how much gas is out there? How are you actually managing to track it?

DR. ALDO FLORES-QUIROGA Early next year, we will be launching the very first official global database on production, consumption, exports, imports and stocks of gas - called JODI. This has been made possible because of the efforts of organizations, but also because of a political mandate from Ministers who are ready to see the growth in LNG trade and the greater role that that is going to play. Without this information, it would be difficult to do the planning for infrastructure, investments and the like that are needed for this very expensive business.

I would also like to highlight that we should never speak of gas in its own right - it's always gas with renewables, gas and climate change, gas as a rich fuel, LNG growth around the world.

Another question about gas as a game-changer is whether it's going to be a destination fuel or a bridge fuel as it is now. The jury is still out on this but we've seen that there is every effort being made to make it a destination, to ensure a cleaner energy future.

EITHNE TREANOR If I can stay with you for one more thought Aldo and ask you about the "partnership" between producers and consumers? Do you believe that the dialogue between these two parties has improved in the last few years? Is it not essential that OPEC and your organisation the IEF, get this right, particularly when one looks at the fact that there has been a legacy of this not working well in the past, which has had an impact for example on environmental initiatives.

DR. ALDO FLORES-QUIROGA The reasonable answer is to say that the nature of dialogue has improved and yet more is required for this dialogue to deliver on its promise. Greater understanding of mutual consequences and weaknesses is needed, as well as launching initiatives that improve the quality of the information and interpretation of information, such as the JODI report which I mentioned.

This partnership has to move to one that is more results oriented and that can be more effective in addressing opportunities, and not just dealing with challenges.

The dialogue was born during an international oil crisis, during the Gulf War. Now it has to be successful in the absence of crisis, and deal with a broader range of subjects other than oil and gas. ■

> “If you look across the industry, I defy anyone to identify an oil company that does everything, that doesn't need an oil service company to be doing something for it. If you look at Schlumberger and the number of employees they have, to do what they do, to try and replicate that inside one company would be impossible”

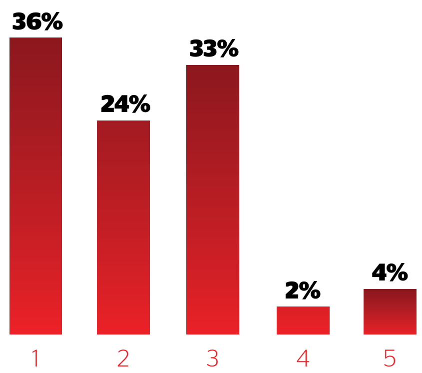
Survey Says: Oman's NOC-IOC Partnership Could be Model for Others, According to 150 Gulf-based Energy Industry Executives

OMAN HAS undeniably pioneered enhanced oil recovery in the Middle East, introducing techniques such as miscible gas injection, steam injection and polymer flooding to stem and reverse a decline in domestic oil output. The partnership of Oman's national oil company PDO with international oil major Shell, which owns a 34% stake in the incumbent, has played an integral role to the sultanate's successful production trend reversal.

According to the 150 Gulf-based energy industry executives who were surveyed at the Oman Energy Forum in October, at a time when the region looks to new partnerships in the energy sector, PDO may serve as an example for others to follow, in some way or another. More than one-third of respondents thought the model could be adopted by other countries to provide a greater win-win between NOCs and IOCs, while another third believed countries may want to adopt parts of Oman's model, though not all of it. ■

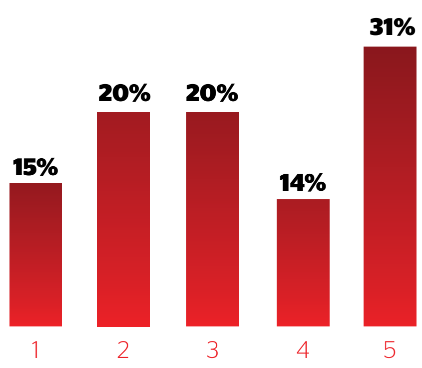
Q1. Oman isn't just a pioneer in the application of EOR techniques in the Middle East. Unlike other NOCs in the region, PDO is 34% IOC (Shell) owned, while OTI is a public-private joint venture company executing to the highest global standards as a professional trading house – As the region looks to new partnerships, is the Omani energy sector a model for others in the Middle East?

1. Yes, the model could be adopted by others to provide greater win-win between NOC and IOC
2. No, each country is different and requires a different model
3. Other countries may want to adopt parts of Oman's model but not all of it
4. For Oman and others the goal should be full privatization of the energy sector
5. NOCs should move towards greater autonomy from IOCs



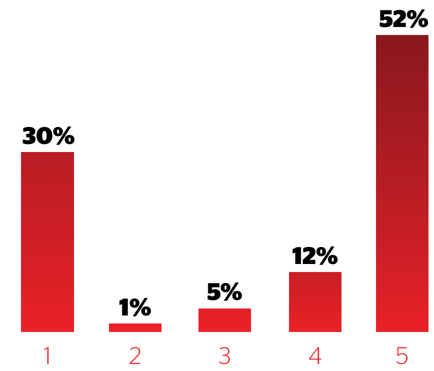
Q2. The past five years have seen Oman's significant investments in EOR projects pay off, returning the sultanate to a path of rising oil production and setting it on target for 1 million barrels a day by 2015 – Is this upward trend sustainable?

1. Of course it is!
2. Only as long as crude prices stay above $100 a barrel
3. Given depletion rates, production will probably plateau around 1 million b/d
4. No, it's just temporary spike that will be difficult to sustain due to high cost & depletion
5. It's much too early to say, technology always surprises to the upside



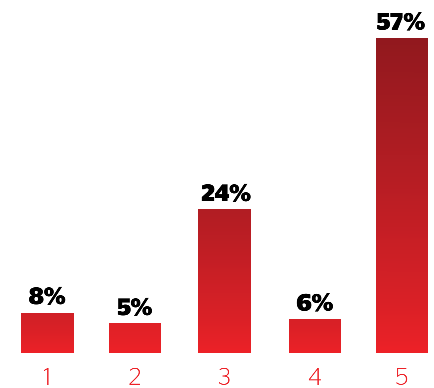
Q3. Like its regional neighbors, Oman is heavily subsidizing its gas price—as well as fuels, electricity and water—which has contributed to a surge in energy demand over the past decade – What needs to be done to overcome the twin challenge of tackling subsidies and gas shortage?

1. Raise prices gradually! If India can do it, so can the Gulf States
2. With all the exploration, there'll be enough gas to keep Oman going and prices low
3. Oman will need to start importing gas to meet domestic demand – and hike prices
4. Oman needs to find alternative revenue sources to stem its subsidy bill
5. All of the Above



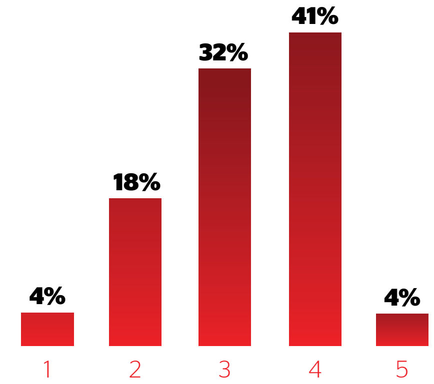
Q4. Gulf States aren't just among the world's largest energy exporters; they are also emerging as major energy consumers in their own right. In Saudi Arabia, for example, domestic oil consumption is projected to increase to anywhere between 5.5 million to 8.5 million b/d by 2030 – What will be the biggest consequence with emergence of Gulf energy exporting nations as major consumers?

1. Gulf states will be able to raise production capacity to sustain export levels
2. Oil prices will soar above $200 a barrel if Saudi oil consumption forecasts are realized
3. Development of Shale and Nuclear will accelerate to make up for lower oil exports from the Gulf
4. No problem! Increased efficiencies globally will reduce demand anyway
5. Gulf States will have to curtail subsidies to lower consumption



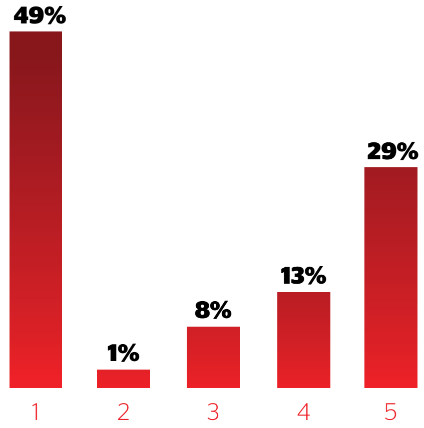
Q5. Brent & Oman crude oil Prices appear to have been locked in close to $110 a barrel over the last 2 years regardless of what has been going on in the world - What price will Brent crude oil average over the next 24 months?

1. $130 a Barrel or more
2. $120 a Barrel
3. $110 a Barrel
4. $100 a Barrel
5. $90 a Barrel or less



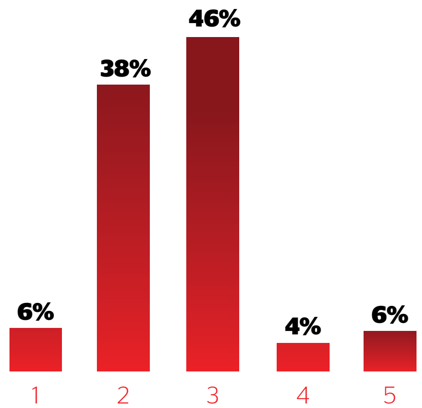
Q6. What will be the biggest game changer at play in the global energy industry over the medium term that will have a lasting impact?

1. Shale oil and gas developments
2. Coal is Back!
3. Ongoing technological advances in IT filtering through to the energy industry
4. NOCs Advancing Operational Capacity and going global
5. Meeting the challenge presented by the Nexus of Energy, Food & Water



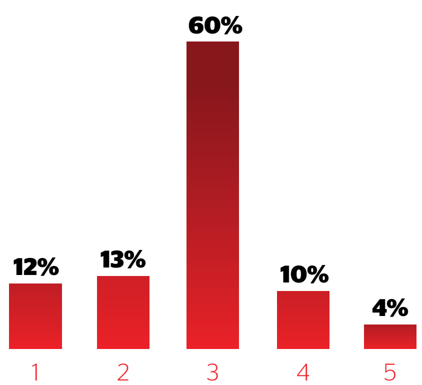
Q7. Increasingly, NOCs are exploring ways to rely less on IOCs and independents, and to work directly with oil service companies while maintaining overall project management and procurement strategy responsibilities – Is this trend the beginning of the end of the IOC as we know it?

1. Yes it is, IOCs won't survive because their business models are outdated
2. No, IOCs still have unique capabilities and financial strengths for post-easy oil era
3. The roles of all industry players will continue to evolve in the foreseeable future
4. It doesn't matter as International Renewable Companies (IRCs) will be the players of the future
5. That's impossible to answer right now



Q8. More NOCs are moving to acquire international assets in a bid to diversify their portfolios and to secure a share of the unconventional oil & gas production boom that has hit their sales to North America, which will lead to a greater blurring of the lines between Private IOCs and 'International National Oil Companies'. – What will be the implications of NOCs venturing out of their home turf?

1. Prepare for the era of the INOCs – international national oil companies
2. It's natural for NOCs to enter promising new markets but won't change the landscape too much
3. We'll see more joint ventures between NOCs and private partners including IOCs
4. There are only a few NOCs interested and capable of doing so
5. It's too early to say



Investing for future generations

Establish in 1996 to pursue investment opportunities in the wider energy sector both locally and internationally, Oman Oil Company aims to maximising value from Oman's resources, creating meaningful employment within Oman and growing local talents, business leaders and professionals.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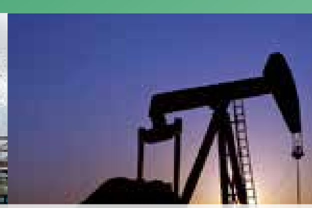
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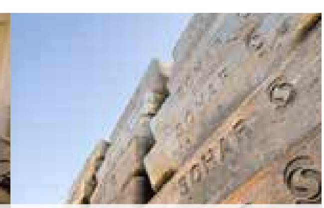
Shipping


Power


Base Petrochemicals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Covering over 40 investments
Spanning 12 countries
Diversified across 7 sectors

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