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Fujairah
an Emerging Hub on the South-South Energy Trading Corridor

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The Outlook is Bright for Fujairah

The Energy Sector's Transformation Offers New Opportunities for Fujairah

BY H.H. SHEIKH SALEH BIN MOHAMMED BIN HAMAD AL SHARQI, CHAIRMAN OF THE DEPARTMENT OF INDUSTRY AND ECONOMY, FUJAIRAH & CHAIRMAN OF THE BOARD OF PORT OF FUJAIRAH

Transformation has been the overarching theme in the world's oil and gas markets in recent years. The drivers behind this transformation are as diverse as they are complex.

Energy production and consumption centers are shifting: Five years ago, shale developments in North America weren't on most people's radar – today shale oil and gas are integral parts of the global energy debate because of their impact on trade flows and – as witnessed in recent months – on prices; oil prices have fallen well below the $100-a-barrel mark amid abundant supplies on the back of record US output levels and despite geopolitical volatility. The long-term energy demand outlook meanwhile continues to point up, thanks to rising consumption in Asia, Africa, Latin America and the Middle East. At the same time, new technologies continue to push the industry's boundaries, enabling the development of ever-more remote and complex hydrocarbon reserves.

As the global energy sector is transforming so is Fujairah, the UAE's only emirate located on the Arabian Sea coast. Geography puts Fujairah at the crossroads between Europe, Africa and Asia, and places it at the heart of the new energy corridor opening up East of Suez to Asia. The emirate has established itself as a world-scale bunkering and storage center; home to some of the biggest company names in energy. Additionally, Fujairah has become an important crude oil export center and is on the verge of emerging as a downstream destination – all thanks to a unique mix of geography and the strategic vision of the UAE's rulers.

This vision has been reflected most noticeably in the construction of the Abu Dhabi Crude Oil Pipeline, which came on stream in 2012 and provides Abu Dhabi with an export outlet for crude from its Habshan field via Fujairah. Arguably a game changing development for the emirate, the strategic pipeline has added further momentum to Fujairah's already tremendous growth over the past decade and bolstered its position as a destination for investments along the energy value chain, with refining, petrochemical and LNG regasification facilities all to be added in the near future.

> "Fujairah's increasingly international posture makes the emirate a platform for local, and regional, companies to expand their footprint into other parts of the world by utilizing the existing infrastructure in the emirate."

On a global level, the importance of strategic pipelines and storage in key locations such as Fujairah is becoming even more important at times of increased geopolitical instability. It should therefore not come as a surprise to anyone that new crude and product storage will continue to open in Fujairah in coming years. After all, pipelines and storage facilities are crucial to keeping the world's economic engine running, ensuring perennial access to much needed oil and gas supplies, and providing long-term supply and demand security for both energy producers and consumers. In addition, with global energy demand on an upward trajectory, rising volumes of oil, gas and hydrocarbon products are being transported to and stored in key locations and leading energy industry hubs such as Rotterdam, Singapore and Fujairah, from where they are forwarded to consumers.

The economic contribution of oil and gas transportation and storage infrastructure is significant. The spin-off benefits of pipeline infrastructure extend deep into the downstream sector, with refineries, petrochemical plants and distribution companies generating gross domestic product (GDP) contributions and providing employment and income. On top of this, Fujairah's increasingly international posture makes the emirate a platform for local, and regional, companies to expand their footprint into other parts of the world by utilizing the existing infrastructure in the emirate.

With this in mind, the combined initiatives under way in Fujairah will not only add further to the emirate's aspirations of becoming a truly global energy hub; they will also bring tremendous benefits to the local economy and support the emirate's ongoing development in line with the Fujairah 2040 Framework Plan.

As the transformation of world energy markets and Fujairah continues, there can be little doubt that the emirate's outlook remains bright. ■

H.H. Sheikh Saleh Bin Mohammed Bin Hamad Al Sharqi, Chairman of the Department of Industry and Economy, Fujairah & Chairman of the Board of Port of Fujairah

Pipelines and Storage at Times of Geopolitical Instability

Source: An industry roundtable conducted in Fujairah under the Chatham House Rule

MODERATOR
How does the arrival of the huge crude oil pipeline from Habshan to Fujairah transform the potential of the UAE as an energy hub?

FUJAIRAH OFFICIAL
This is a 36-inch pipeline with a current capacity of 1.5 million barrels per day, which is 70 percent of Abu Dhabi's production capacity. The pipeline can go up to a capacity of 1.8 million barrels per day, our storage facilities are at eight tanks of one million barrels each, and we have foundations to add another four tanks.

MODERATOR
The pipeline has been an economic game changer for the Emirates, a huge source of energy now available to store, here in Fujairah. But does it risk discouraging diversification of the economy?

After all, people have tried to build diversification off the back of major energy projects for example in Saudi Arabia, where it sometimes hasn't worked. What are you going to do differently?

FUJAIRAH OFFICIAL
Being an economy that is dependent on oil is a concern, but the UAE now looks at crude oil as a raw material for other industries. Abu Dhabi has a very comprehensive program to develop better chemicals so this is an example of diversification and added value.
Similarly, here with the storage in Fujairah, we don't have our own oil so we are planning to refine better chemicals. And from better chemicals, we can then go onto develop another chain of projects which doesn't require seafront facilities, and so on.

MODERATOR
What could be done to make it easier for you to make a bigger commitment here in Fujairah?

OIL TRADER
I believe Fujairah can be the energy hub in the region; it has all the necessary requirements to be successful, from market participants, to investors and suppliers.

Like anything else, if you create the infrastructure, then the demand will come as people find a way to participate in the market. Every trader knows that to have a successful market you need storage, liquidity and money and all three things are available in Fujairah today so I think it's just a matter of time and I believe the private and public sector should work together to transform Fujairah into an energy hub.

MODERATOR
Do you think that the GCC faces any difficulties politically or with regards to allocating the kind of capital required to build more of this pipeline infrastructure that's still needed?

OIL TRADER
I don't think there's any lack of funding; in fact there's a lot of idle money looking for a proper opportunity, whether it's a private-public partnership, private sector entirely, or governmental. And there is definitely some integration and cooperation on all levels amongst GCC member states, especially on electricity.

FUJAIRAH OFFICIAL
I agree - I think the GCC are in support of all infrastructure projects which link them and consolidate them together.

MODERATOR
What's the European experience on pipeline logistics and how can that inform Gulf nations?

EU OFFICIAL
From the market point of view, pipelines are security for the producer and consumer. We have 70 percent of our gas supplies come by pipelines and more than 30 percent of our gas supplies are via LNG. So nobody knows better than the EU how important pipelines are to the free market.

“Every trader knows that to have a successful market you need storage, liquidity and money and all three things are available in Fujairah today so I think it's just a matter of time and I believe the private and public sector should work together to transform Fujairah into an energy hub.”
Oil Trader

Secondly, when you see the geopolitical tensions in Europe, you see how pipelines and storage become strategically important in terms of security. Despite what's happening in the Ukraine at the moment, we don't have an energy crisis in the EU because we have pipelines and storage.

Thirdly, we have market prices which nobody is going to interfere with - however, even in case of disruption, pipelines and storage strategically provide spare capacity.

MODERATOR
Given that pipelines and storage have been so successful in insulating the EU in this very difficult time, do you think that there's an argument for the EU to increase its commitment towards strategic petroleum reserve on a scale that the U.S. has in place? The U.S. has something like 700 million barrels of oil in storage.

EU OFFICIAL
If you take the International Energy Agency in Paris, its members have more than a billion barrels of oil stocks - so can you imagine what we could do with these stocks.

What's happening now in this region is highly important for the future. When we speak about pipelines, you have the question of third-party access; everybody should have access if there is spare capacity. You have the question of bunkering; you should never accept that someone will control your strategic pipelines.

These are areas where we would very much want to continue working with the region, in particular to establish a regional gas pipeline network system on the basis of the EU model.

MODERATOR
How is the nuclear power development in Abu Dhabi going to change gas demand in the UAE? Is it going to free up natural gas currently being used for desalination and power generation, potentially for export at some point, and maybe from Fujairah?

FUJAIRAH OFFICIAL
When the four stations of the nuclear power station are ready, that will still only meet 20 percent of the total requirements of UAE, and the country is continuously expanding. So nuclear power development is diversification but it's not a replacement of natural gas.

“Being an economy that is dependent on oil is a concern, but the UAE now looks at crude oil as a raw material for other industries. Abu Dhabi has a very comprehensive program to develop better chemicals so this is an example of diversification and added value.”
Fujairah Official

MODERATOR
What difference will Iran make to this story over the next 10 years? At some point there is going to be a deal and Iran is going to start exporting a lot more gas and a lot more oil and there may be an impetus to have pipelines coming from Iran into the UAE, and maybe even electricity from the UAE going to Iran – How will that change things?

OIL TRADER
I'm not sure about the next 10 years, but at least in the short term, if a deal happens, it is going to have an impact.

The Iranians more or less are starting to build their own facilities on the other side of the Gulf so in the short term that may bring additional capacity, but it won't be as big as Fujairah, so it won't have a negative impact. Fujairah is still the only port in the region of a certain magnitude and diversification in terms of quality of storage. And the beauty of it also is that most of the terminals that are being built now will have full flexibility to switch between different products. This is very important.

MODERATOR
Could you envisage a day where we could see an onshore liquefaction plant in Fujairah that is processing Iranian gas and shipping it?

FUJAIRAH OFFICIAL
I don't see why not - if we can acquire natural gas directly from Iran and build an LNG plant for exports, this would be good. I believe there are negotiations with Oman to have a pipeline connecting from Iran to Oman, and if this could be extended to Fujairah and the UAE, this would be welcome.

MODERATOR
Fujairah is the second largest global oil bunkering terminal – there's a growing market now for LNG bunkers – is Fujairah well equipped to be a contender for this?

OIL TRADER
There's a bit of a risk for this because a lot of ships are being converted into LNG utilization instead of fuel oil. But I'm sure Fujairah will pick up on this very rapidly; it will simply need to have proper gas tanks and proper barges that can transfer the gas, just like the bunkering which is taking place right now. This change to LNG is worldwide but it is important for Fujairah to keep up in the next few years. Major LNG carriers like Qatargas for example have started to add a couple of ships, either newly built or converted.

I would like to raise another point here – on the importance of new technologies.

For example, we are talking to two U.K. companies about compact gas to liquid technology – not conventional GTL. They have been quite successful, and are building their first plant in Kazakhstan.

Then you have another new super technology which came out in the U.S. which makes coal as clean as nuclear power but without the dangers. It's called "coal direct chemical looping". Basically, instead of burning the coal, it just heats it up and utilizes the heat to produce energy.

All of these types of new developments will impact the viability of certain current pipelines and storage centers.

> "The energy sector should be a jobs creator and we do have global challenges, such as the environment, so we want to extend our technological and R&D cooperation with the GCC and other countries in the region, to find technologies that can handle all these challenges."
> *EU Official*

MODERATOR
If you look at fracking and how people viewed that technology ten years ago, many have been surprised by what's happened.
Are there any other big technological leaps that are a concern to the Port of Fujairah or to the wider hydrocarbons industry? What about renewables like solar and wind?

EU OFFICIAL
You touch on a relevant point. The energy sector should be a jobs creator and we do have global challenges, such as the environment, so we want to extend our technological and R&D cooperation with the GCC and other countries in the region, to find technologies that can handle all these challenges.

FUJAIRAH OFFICIAL
This is something to consider, but as far as Fujairah is concerned, for the foreseeable future it's oil that will be in demand, either as a raw material or as an energy source. And this needs to be moved and stored and that's what the Fujairah facility will remain, regardless what happens with technology. ■

The Race is on as Middle East Refining Capacity Ramps up for the Future

BY DAVE ERNSBERGER, GLOBAL EDITORIAL DIRECTOR FOR OIL, PLATTS

The global refining and storage industries are undergoing a period of profound transformation amid dramatic shifts in product supply and demand patterns. North American refiners are increasingly sourcing US and Canadian crude oil, while rising volumes of Middle Eastern crude are refined domestically, as a result of which overall crude trade is expected to decline over the next five years. Far Eastern crude imports, led by China, will continue to rise however amid spiraling energy demand, supporting the argument that Asia needs a new, internationally-traded pricing benchmark reflecting the regional balance of supply and demand. The changing supply-demand dynamics are also reflected in the global storage industry, which is responding by expanding capacities in existing and new locations.

Who knows what is going to happen as Middle Eastern refining capacity continues to grow. The Possibilities are considerable – The shuttering of uneconomic European refineries? A threat to Indian refining?; A boom in exports from the Middle East to Europe or China?; A sustained drop in the price of refined products across the region?

Everyone has a different view but we all agree on one point. One way or another, the trend will have a marked impact on the global refining industry. The reality is this: in the next year or two, Middle Eastern and Chinese refining will account for nearly two thirds of global expansion contributing to a worldwide surplus. According to some estimates, more than 20 new refineries or expansions to existing plants will be completed in the Middle East region by 2020, adding more than five million barrels a day to capacity. This is a crucial time for the downstream sector.

By conventional thinking, any refinery in the modern age verges on the competitive and economically viable. There was a time when many countries around the world used to talk about strategic refinery security, ensuring security of supply in times of national emergency. For the most part that seems to be a thing of the past. These days few newly commissioned refineries below the threshold of 15 million tonnes represent attractive financial propositions. But the Gulf region seems to be different. Heavy subsidies distort the regional market making conventional economics less important. And it looks like subsidies will be going nowhere any time soon.

With that in mind, refining development in the Middle East is following a strategic pattern. This combines economic decisions to meet booming regional demand and carve out an export industry with political goals aimed at greater regional industrialization and work force creation. Across the Gulf, demand is rising.

In Saudi Arabia and the UAE, imports of gasoline and other fuels continue unabated, creating ballooning costs. Saudi has major new refining capacity coming up with international partners: Yanbu, Jubail, Jazan – three projects that will add 1.2 million b/d refining capacity when fully operational. The UAE too has big expansion plans. There is sufficient belief that product prices will drop as this capacity comes on line. If this happens, in economic terms, the case for greater refining capacity in the Middle East will be less justifiable as a result.

Refining capacity across the Middle East is expanding rapidly at a time when expansions are also under way globally – **What does the supply build up mean for regional refiners?**

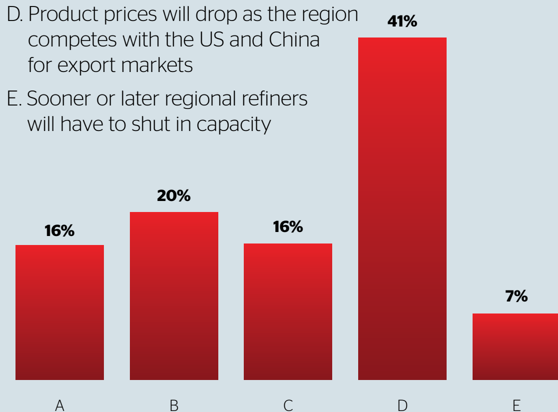
A. Domestic demand in the region will rise fast enough to absorb the additional products

B. Europe will absorb the products as more refineries are shutting down there

C. As usual, China will be there to absorb the additional capacity

D. Product prices will drop as the region competes with the US and China for export markets

E. Sooner or later regional refiners will have to shut in capacity



> There was a time when many countries around the world used to talk about strategic refinery security, ensuring security of supply in times of national emergency. For the most part that seems to be a thing of the past.”

The UAE has its own goals, targeting refining capacity of up to 1.1 million b/d by the end of 2017, according to statements made by the UAE minister of energy last week. And these are less political and more economic in nature. Its booming demand is driven by the upheaval across the region. From Libya to Egypt, from Syria to Iran, people continue to flock into the Emirates as a safe haven from the insecurity in their home countries, pushing up refining needs in the process and spiraling the bill for its subsidized fuel prices.

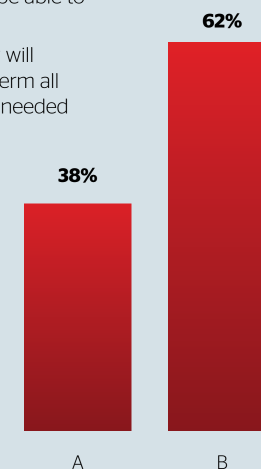
Currently the UAE can barely produce 60 percent of its needs domestically. That is set to change soon. Plans include the doubling of capacity at Abu Dhabi's Ruwais refinery from 415,000 b/d by the end of this year and the 200,000 b/d Fujairah refinery that is set for completion by the end of 2016. Again in purely economic terms, is Fujairah financially feasible? It is inextricably linked to the Habshan-Fujairah oil pipeline and clearly would not have been built in its current location if the opportunities from the export terminal did not exist.

Beyond that, there is a regional drive towards extending down the value chain and taking advantage of the exports market. From Saudi Arabia, a sizeable amount of diesel is now shaping up for export, most likely destined for Asia. That could play into the hands of places like Fujairah where localized spot markets are being created. There is also talk of extending the value chain through the development of further petrochemical plants and this is likely to be more directed towards export markets, especially towards Asia. At this stage, there are few concrete answers on how that trade will play out.

The wider Gulf region will see major additions of oil storage capacity in locations such as Fujairah, Sohar, Ras Markaz and in time Duqm in Oman – **Will this result in too much storage capacity within the region?**

A. Yes, they will never be able to fit all these tanks

B. No, build it and they will come - in the long-term all this capacity will be needed



And then there is Iran. Heavily isolated from the international market by economic embargoes imposed by the US and its allies, the Islamic Republic has faced problems in accessing sufficient quantities of refined products on the market and has looked to strengthening its own capacity as a result. Several refinery projects have been delayed but with restrictions on its crude oil trade, Tehran has already exploited the benefits of exporting refined products to neighbouring countries to earn valuable revenues.

The bottom line is this: the country will be self-sufficient in gasoline production by 2016 or 2017 when new capacity comes on stream, according to recent statements by Iranian officials. At that time, it will likely look to ramp up exports of all excess fuels in its bid to reclaim its former glory as a regional energy superpower. Much is dependent on whether it strikes a nuclear deal with world powers that would result in major sanctions relief and a boost to its domestic economy and industries.

This is just another variable that will affect the trajectory of the downstream sector in the future. One way or another, these are exciting times. Needless to say, the outlook remains as clear as mud. ■

Crude Oil Pricing – Time for East of Suez Benchmark?

BY DAVE ERNSBERGER, GLOBAL EDITORIAL DIRECTOR FOR OIL, PLATTS

I think the attention that's been levied on price benchmarks has been very valuable and very helpful. I think, the conversation around how prices are formed in the wholesale oil markets, but also the wholesale gas markets, as we just heard, is a really interesting conversation and a great opportunity to talk about how those markets are fundamentally different from financial markets – how some of the characteristics that were there with libor or other benchmarks that had some serious problems demonstrably, aren't the same challenges that we faced when we looked at the physical commodity markets.

So the conversation around how cargos of crude oil trade, how do barges of refined products trade, how do pipelines of these products price in and out of the market has been a wonderful one, actually. Now, that's not to say there haven't been important questions asked. I think the public's willingness to really look at any issue for particularly long is always one question. The more you get into it, the more people's eyes glaze over and the more they stop paying attention. And that's because I think the questions around physical commodity benchmarks are complex and important but deserve also a fulsome conversation.

From Platts point of view, when you're looking to understand the value of a cargo of crude oil or a barge of a refined product or really any commodity, it's really important to be clear about the way the market's trading, who's providing the data and what the data actually is. And then I think if you can answer those first three questions, the value that's being published, whether it's a Platts benchmark or somebody else's benchmark, is a much more comprehensible thing to discuss.

> “One of the questions regarding Brent as a benchmark is its relevance and suitability for the east of Suez market, and so triggers the debate on the need to establish a price benchmark for the Gulf region.”

So we've welcomed the debate over the last five years or so, and we did get a valuable one that we're keen to keep on leading, frankly.

One of the questions regarding Brent as a benchmark is its relevance and suitability for the east of Suez market, and so triggers the debate on the need to establish a price benchmark for the Gulf region. In November last year, we put forward our proposals for the industry's response around the actual changes we will in fact implement in our spot Middle East price discovery process, and they regard things like cargo sizes and delivery dates. We're now proposing to go firm with them in early part of next year. So, actually, they are the first critical changes – formalizing the sizes of the cargoes and changing the delivery – we assess are the first two concrete step towards.

I think, what is being asked for is a flat price discovery in the Middle East, but, of course, the trading community needs to do its part too and to provide flat prices for price discovery. ■

Dave Ernsberger, Global Editorial Director for Oil, Platts

Global Refining Map Redrawn: As New Product Supply & Demand Centers Emerge, What are the Threats & Opportunities for the Middle East's Downstream Sector?

Source: An industry roundtable conducted in Fujairah under the Chatham House Rule

MODERATOR

Who knows what is going to happen as Middle Eastern refining capacity continues to grow. But it is important to discuss what this really means as we think about the world in 2015 and 2016. The world is expected to add around about three million barrels a day of refining capacity between now and the end of 2016. Two million barrels of that is expected to come in 2015. In the next year or two, Middle Eastern and Chinese refining will account for nearly two thirds of the new expansions going on.

Refining capacity across the Middle East is expanding rapidly at a time when expansions are also under way globally – What does the supply build up mean for regional refiners?

A. Domestic demand in the region will rise fast enough to absorb the additional products

B. Europe will absorb the products as more refineries are shutting down there

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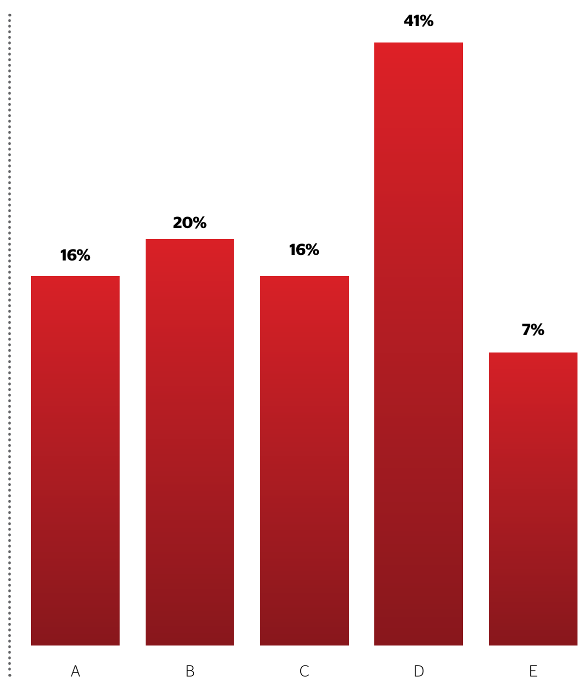


ENERGY INDUSTRY CONSULTANT 1
I feel quite strongly that the decisions being made in this region are much more strategic in nature, with energy security high up on the agenda. So I think the question needs to be looked at in a much broader spectrum, including a focus on the petrochemical supply chain and other areas, including building up a local work force, capturing a larger part of the value chain and playing a bigger role in what oil producers can do. In this respect, it's much less about addressing the total price or real competition. Regarding Saudi, they wouldn't mind all that much if this expansion doesn't bring out the normal target margin that you see in Europe or in the US.

INTERNATIONAL MEDIA EDITOR
Going into this conversation the important thing is the background of the markets. You have Europe which was viewed as the mainstay demand source for a lot of new refineries coming up, which is now stuck between a flood of diesel from the west, losing its gasoline market and vast volumes from Russian upgrades. So it is difficult to see how Europe will be able to support new refineries in this part of the world. At the same time, there is the story in Asia, with a lot of closures. We have seen that happen in Australia and now we are seeing it in Japan as well.

Coupled with that, in China there are refineries being added? Of course, if you were sitting on top of a very large refinery in Southeast Asia, you might be a bit worried as China gets these new refineries. Probably the most difficult place to be in the world at the moment would be one of those Indian refineries, if not a private provider in North Asia. South Korea is where people are bound to be asking questions.

AUDIENCE MEMBER 1
A lot of oil production is coming through and local demand is going up because of subsidies. Today, for example Saudi is importing gasoline and fuel because they can't meet local demand. And this is going to affect the refining margins. But this does not affect the economics. For them, it's more strategic and not profit-driven. And as such, it will have an impact on the refining margins across the region.

AUDIENCE MEMBER 2
Any refinery coming up in future has to be competitive. It has to be economically viable. Economics may vary from region to region. There was a time when every country used to talk about strategic refinery energy security, but a small country, an African country for example, cannot talk about a small refinery being strategically important because it's not viable, unless they combine capacity and build a refinery of 15 to 20 million tonnes. Nowadays, any refinery that isn't to a level of 15 million tonnes is not economic. In this region because the funds are available more cheaply, maybe even small refineries can become bigger.

ENERGY INDUSTRY CONSULTANT 2
Let's also remember that the new refineries opening in Saudi Arabia are with international partners. Against the mainstream argument of continuous import demand from growth in Asia and so on, look at Indonesia, Ukraine, Malaysia, China—they're all planning self-sufficiency. There could be another scenario in which there won't be so much product export available for Asia.

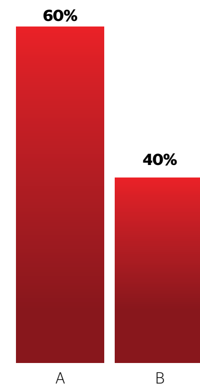
MODERATOR
To what extend would you say Saudi's international partners are driven by participating in the petrochemical side of the business rather than purely refining -- Isn't this where they really see there's value added rather than on the refining side?

ENERGY INDUSTRY CONSULTANT 2
In Saudi they need gasoline, but in fact they're building diesel machines just to make them economical. If you run the economics of diesel on the export price that you have in Asia, I think they're much more economical.

MODERATOR

Survey question: Will refining capacity additions across the Middle East, the US and Asia lead to a period of product oversupply in the medium term?

A - Yes
B - No



We heard in the last week or so from HE Suhail Al Mazrouei, the UAE's Minister of Energy, that the UAE would increase its refining capacity to 1.1 million b/d by the end of 2017. So it is almost online now. But it's also this Green Field Refinery in Fujairah, which, I think is being built. It is now estimated to be at 200,000 b/d but when it was first conceptualized it was 500,000 b/d.

What advice would you have about what the right sort of size is for a refinery in the Middle East these days? We heard earlier that a refinery has to be 15 million tonnes or bigger. Is that the case? Because the UAE refineries are quite a bit smaller than was originally considered.

ENERGY INDUSTRY CONSULTANT 1
I think you need to take a step back. I don't think any single operator at the moment has built a refinery from the same set of blueprints. The one in Fujairah is highly linked towards the pipeline and what's going on here. Otherwise, it probably would not have been built here. In terms of size, I think that's also very dependent on what you want to do. If you want to compete with U.S. refineries, that is a completely different picture. But maybe you don't want to export to the same type of customers.

MODERATOR
What sort of advice do you give companies building refineries around the kind of exposure that should be taken at the spot market? Because a number of companies look to move into trading after they build a refinery but they don't have that competency yet.

ENERGY INDUSTRY CONSULTANT 1
I don't think it's a one-size-fits-all. It has to do with the cost models that different companies have which make it attractive or not attractive to be in downstream. If you're an integrated oil company, upstream is where you make the money and downstream is where you have to be. And we've seen over the period of last 15 years or maybe even longer, in Europe, in the West in general, a steady move of the big guys moving away from retail to distribution to storage.

> *I feel quite strongly that the decisions being made in this region are much more strategic in nature, with energy security high up on the agenda."*
> *Energy Industry Consultant 1*

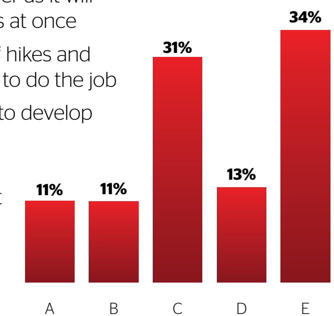
AUDIENCE MEMBER 3
I've been trying to get my head around some of the big refinery developments here, particularly the ones in Saudi Arabia. One thing I've noticed is that the motivation isn't 100 percent economic. A large part of it is political. Using the Jazan Development on the Red Sea Coast as an example, that is a sprawling integrated development, a huge refinery combined with what looks like a massive petrochemicals complex. It is also tied into integrating the oil supply from the east of the country with demand from the west side of a country and tied into increasing electricity supply for the west. And it is also tied to developing a much more diversified industrial - particularly heavy industry - base through the development of the new industrial city there.

This has to be driven in part to promote economic stability, any kind of stability in the kingdom, because they see regional instability encroaching, not just from ISIS in Syria and Iraq, but also they also have Yemen on their southern border, Bahrain is getting restive again and Saudi is economically vulnerable because it is highly dependent on oil. So it has to invest in broadening the kingdom's industrial base. And if there are going to be exports, they're more likely to be petrochemicals than oil products.

AUDIENCE MEMBER 4
In this region, you look at us as producers rather than consumers. But when you take the Gulf countries, including the bigger ones like Saudi Arabia and UAE, for example, and you look at the statistics on the consumer side, you'll find that the figures are much, much higher than in Europe or the U.S. And when you say that these projects are more strategic than economic, that's right. When you look at the expansion of Gulf countries, combined with the influx of people coming because of all the political problems happening in the Arab world, the governments aren't coping with demand. Regarding existing figures, our capacity can barely fill 50 or 60 percent of our requirement. So whatever is produced will be consumed locally.

GCC countries are facing heightened pressure to use their energy resources more efficiently in order to supply their growing populations, free up hydrocarbon resources for export, and address concerns about climate change and pollution – What should be GCC governments' priority?

A. Push renewable into the mainstream
B. Ramp up nuclear power as it will resolve all these issues at once
C. Across-the-board tariff hikes and subsidy cuts will have to do the job
D. Invest heavily in R&D to develop innovative energy-efficient technologies
E. Implement a coherent joint energy strategy within countries and for the GCC region



> “Whenever you have a product surplus, what do you do with it? That’s when spot markets arise.”
> *International Media Editor*

> “Against the mainstream argument of continuous import demand from growth in Asia and so on, look at Indonesia, Ukraine, Malaysia, China—they’re all planning self-sufficiency.”
> *Energy Industry Consultant 2*

MODERATOR
How important is it for Iran similarly to get some refinery projects up and running. I think the last time I looked at a list there were at least six or seven imminent projects that Iran wanted to pursue and then maybe another half a dozen that were further down the road. Where is Iran in bringing some of its newer refineries to market? And how important is that to addressing Iran’s own energy security needs in the next few years?

IRANIAN OFFICIAL
In the past, whatever the political situation going on, we required a lot of finance in order to go ahead with all these plans which are, at the present time, pending. And I believe that this issue is hopefully going to be resolved in the near future.

AUDIENCE MEMBER 5
Iran is growing and the demand for fuel is growing. And because of the sanctions, their limited funding is limiting that growth. Right now, all the pictures look more positive. And I think if sanctions are eased and with the inflow of funds, a lot of refineries you’ll see catering for the local demand. If that works out, then we’ll see a transformation with respect to growth export and the local refining capacities.

MODERATOR
Asian petrochemical makers switching to cheap US LPG feedstock is only the beginning of a new trend that will drive down product prices from the Middle East – do you agree.

INTERNATIONAL MEDIA EDITOR
We have seen this flow increase. But as a direct result, you’re also seeing LPG freight rates at multi-year or all-time highs. So, I think, the picture has been dampened by the freight costs. That’s not to say it won’t carry on. Regarding the Middle East, we did see two cargoes of gas oil from the U.S. come to Saudi last year. And we saw gasoline going from the U.S. to Saudi last year, which definitely are emblematic stories. But we’re not going to suddenly see a sudden rush of U.S. products.

MODERATOR
How prominent does Asia feature in your thinking around the advice you offer entities looking to get into the refining business?

ENERGY INDUSTRY CONSULTANT 1
The majority of the refineries being built up in this region are for use locally. And all the petrochemical stuff that comes with it brings an opportunity to build a local industry with the workforce and all these things. And you can see some fun discussions happening, such as, “Gee, what do we do with all this sulfur?” Can the market ever sustain the output if we start building these petrochemical complexes? But I think from that side of the picture, yes, these are definitely elements of the equation regarding Asia. From the refinery side, I don’t think it’s that much of it.

MODERATOR
The number that jumps up in my mind is China now has 12 million barrels a day of refining capacity - which is the same as United States, by the way.

> “In the past, whatever the political situation going on, we required a lot of finance in order to go ahead with all these plans which are, at the present time, pending.”
> *Iranian Official*

AUDIENCE MEMBER 5
Saudi will be looking outward for exports to Asia. I know Saudi was at a deficit of 120,000 in diesel. With 600,000 to 700,000 barrels of additional diesel capacity now, it will be in surplus of 300,000 to 400,000 barrels. So that would be a major surplus from Saudi. That will be the next challenge, how to place diesel.

INTERNATIONAL MEDIA EDITOR
Whenever you have a product surplus, what do you do with it? That’s when spot markets arise. That’s when you need a market to clear the balance between supply and demand. And that’s why Fujairah definitely can play more of a role.

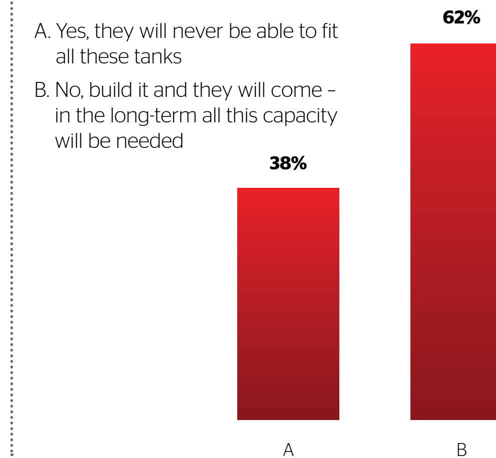
MODERATOR
Does it make sense to build new oil and product storage close to or in consumption centers rather than production centers?

AUDIENCE MEMBER 6
You know, if we build near the consumption sites then you may have do multiple handling because you don’t know where the demand is. But if you build near the production centre, there is no issue about the demand. It’s a more economical decision.

MODERATOR
Investments are happening on both sides. I think the consumption centers of which the Middle East is absolutely a critical voice increasingly turns the security of supply. If your refined products come from 400, 800 or 1000, 2000 miles away, how do you handle some sort of disruption to shipping?

INTERNATIONAL MEDIA EDITOR
You’re going back to strategic versus economic question. On a very basic economic level, if you have stored your product in a consumption centre, you’ve already paid for shipping one way; your options revolve around that market. If you store it close to production centers, you haven’t taken it anywhere; you haven’t made that shipping decision. And when then the options come up, you can take it to any location. ■

The wider Gulf region will see major additions of oil storage capacity in locations such as Fujairah, Sohar, Ras Markaz and in time Duqm in Oman – **Will this result in too much storage capacity within the region?**



Investing in the Energy Value Chain: A New Era for Commodities Trading Firms

Trading firms are evolving more into vertically-integrated energy companies

BY DYALA SABBAGH, PARTNER, GULF INTELLIGENCE

The world's leading Commodity trading houses are stepping up their investments into the energy supply chain, buying upstream, midstream and downstream physical assets such as oil fields, storage tanks, refineries, and even retail marketing businesses and power plants in a bid to diversify margins. Driven by rising competition, new transparency regulations and adverse conditions, trading firms are evolving from the light-on-asset firms they used to be into vertically-integrated energy companies with large ownership interests across – and greater control of – the energy supply chain.

Always known for operating in a cut-throat, low-margin environment, commodities trading firms have seen pressure on arbitrage margins accelerate in recent years as their superiority of market knowledge has been eroded by the dissemination of market-relevant information and data, while the number of new players entering the business has increased rapidly over the past decade; in Geneva alone, the number of commodity trading firms doubled to about 400 between 2006 and 2011. This in turn has pushed up the need to deploy more capital to generate the same or even smaller returns – a proposition that industry executives say is neither attractive nor sustainable. In response, trading firms have turned to a trading-plus-asset strategy, investing up and down the value chain.

"The necessity to integrate into the supply chain has meant that companies such as ours have entered into the storage business, the distribution business and—more recently—into the refining business," said Vitol Group's Executive Director Chris Bake. "This isn't new. We owned refineries in 1990 and we sold them in 2004 and 2006. We bought some back over the last few years."

GROWING LIST OF DEALS

The list of deals initiated by trading firms in recent years is long and growing. Earlier this year, Vitol bought a power plant in northern England from oil refiner Phillips 66 and completed the acquisition of an oil refinery and petrol station network in Australia from Shell for $2.6 billion. The transaction followed Vitol's buyout of Shell's downstream assets in Africa in a deal first announced in February 2011. Competing trader Trafigura meanwhile spent about $800 million in 2013 on two petrol station and oil import terminal companies in Australia.

Similarly, trading firms Mercuria and Gunvor have adjusted their strategies and invested into different types of assets along the energy value chain. Mercuria in 2010 bought a coal concession in Indonesia and, a year later, entered into a financing and partnership agreement with US coal producer Bowie Resources, while also acquiring a 5.7 percent stake in Optimum Coal Holdings of South Africa. Gunvor in 2012 acquired two refineries, one in Antwerp, Belgium, and one in Ingolstadt, Germany from insolvent Swiss refiner Petroplus.

Trading companies are pursuing their strategies at a time when a rising number of international oil companies (IOCs) are under pressure to sell downstream assets to place a stronger focus on upstream activities in order to maximize returns, thus creating significant opportunities for independent commodities trading firms to gain market share and increase their footprint. Apart from Shell's asset sales in Australia and Africa, oil majors such as BP, Statoil and Total have also divested assets, especially downstream, to shore up finances.

"The IOCs have been incentivized for a considerable period of time to spend their capital on exploration development. The capital pool available to them and the returns on capital have been historically higher in that area. They have the resources, the risk appetite and the capacity to take on these ever-more complicated oil and gas development projects, and the equity markets have made the capital available to them to do that – but haven't given them any credit for downstream distribution and refining at all," said Bake. "So the exit from that market has been a long steady road."

> "Trading companies' more active posture in the up-, mid- and downstream sectors comes at a time when investment banks are scaling back their activities to comply with new and upcoming regulation in the US and UK."

EXTRACTING VALUE

For trading houses buying up assets such as oil fields, fuel distribution networks, refineries and power plants in many ways is a logical extension to their existing business model. It ensures ongoing demand for oil, gas and other commodities that sit in their storage facilities to serve their refineries, distribution networks and power plants, while investments in upstream assets guarantee product volumes for trading. The thinking behind this strategy is that by integrating market-related supply with efficient distribution, value can be extracted out of that proposition.

In addition, trading firms are seeking to extract greater value from the assets they acquire by driving greater efficiencies and cost benefits from the integration into their unique portfolios. There is another benefit that's arising from the acquisition of physical assets along the value chain. The new ownership positions are providing trading firms with unique insights on factors behind market price formation – information that in turn can be used to their advantage.

Opportunities for trading companies to pick up assets along the energy value chain are also arising from other developments. Trading companies' more active posture in the up-, mid- and downstream sectors comes at a time when investment banks are scaling back their activities to comply with new and upcoming regulation in the US and UK. As a result, banks, which became heavily involved in physical commodities trading over the past decade, are selling more and more of their physical assets.

"Several key pieces of upcoming regulation are likely to have a significant effect on the banks' ability to trade on their own account, and to hold hard assets including warehouses, storage tanks etc and commodity trading houses are likely to benefit as a result," legal firm Clyde & Co. wrote in a 2013 report titled 'Trends in the Oil & Gas Trading Sector'.

COMPETITION

As trading firms evolve more into vertically-integrated energy companies, they are increasingly finding themselves locked into competition with emerging national oil companies (NOCs), which are seeking to secure new resources by buying up productive overseas assets on the one hand, and to gain access to international knowhow and technology on the other.

The transformation of NOCs into heavyweights with global reach has had several important implications for trading firms. Not only do NOCs increasingly acquire assets abroad, they also continue to control their own, vast domestic resources with little or no access to international players, while selling their output and products directly to their customers. As a result, NOCs today control a significant size of the tradable oil market, which in turn is limiting the business opportunities for trading firms. The acquisition of productive assets is one way for trading houses to secure a greater market share.

As trading firms' business models are changing so is their funding requirements. Companies' expansion strategy has meant that firms have had to raise funds beyond their existing balance sheets and secure longer-term capital and financing – at a time when risk appetite of traditional trade finance banks has crumbled in the face of new regulations and higher capital requirements. To this end, some trading companies have opted to tap international debt markets or form strategic partnerships, while others have brought in minority stakeholders or launched initial public offerings – although the latter option is unlikely to become a broader trend.

"The growing financial needs of private trading companies are pushing up against the structural limitations of employee ownership and forcing new funding approaches," according to financial services firm Deloitte. "Whilst a handful of international trading organizations are public companies, many observers are skeptical that this could develop into a sector-wide trend. After all, the opportunistic risk management style and earnings volatility intrinsic to commodities trading could fall foul of external shareholders' expectations of orderly growth and controlled debt management."

CHALLENGES

As trading companies are pursuing their new strategies, they are also likely to face a number of other challenges. Financing and transaction costs will increase as new regulations such as Basel III or the Dodd-Frank Act come into force. Also, due to firms' greater market concentration resulting from their expansions, the regulatory burden and compliance obligations on them may increase, with the result that regulatory approvals and clearance from competition authorities will be required for future merger and acquisition transactions.

At the same time, the ownership of physical assets in key energy-producing and/or transit countries such as Libya, Iraq, Ukraine and Nigeria makes trading houses more vulnerable to risk factors such as resource nationalism, sanctions or increased instability. Meanwhile, different kinds of risks are arising for trading firms investing in North American shale assets. Located in politically stable, well-regulated environments, the challenge here will be the technical complexity and geology of the developments.

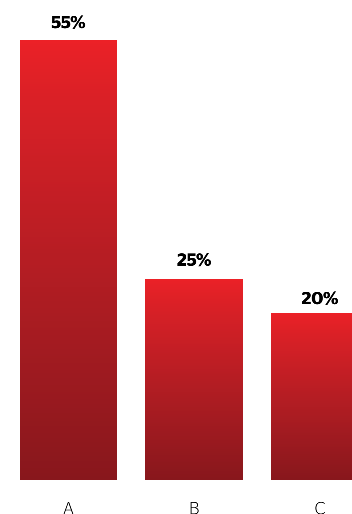
But the challenges don't end there. With oil prices at two-year lows and other commodities prices also receding amid sluggish global economic conditions and slowing growth in China, trading firms will be watching closely to determine their next moves. While trading firms tend to be price indifferent because they're not speculating in any direction, lower commodities prices potentially impair the value of their assets – and their business. However, at the same time the lower values may create new deal opportunities.

The list of challenges for trading firms is undeniably long. If an industry survey conducted at the Gulf Intelligence Energy Markets Forum in September is anything to go by, trading companies are moving into the right direction however[1]. When asked whether trading firms will successfully extract more value from the downstream assets they have acquired from IOCs, more than half of all respondents comprising senior energy industry officials and executives agreed, while 25 percent didn't believe they would and the remaining 20 percent said it was too early to say.

The new era for trading firms has only just begun. ■

International commodity trading firms have been on an aggressive push to acquire assets and expand into other parts of the energy value chain, while IOCs have been shedding downstream assets to focus on upstream – Will trading firms successfully extract more value from the downstream assets than IOCs could?

A. Yes
B. No
C. Too early to say



1. See Graph 1 – Survey conducted among 160 senior energy officials and executives at Gulf Intelligence Energy markets Forum in Fujairah on Sep. 23, 2014

Dyala Sabbagh,
Partner,
Gulf Intelligence

Commodities Trading Firms Investing in the Value Chain – New Integrated Energy Companies in the Making?

Source: An industry roundtable conducted in Fujairah under the Chatham House Rule

MODERATOR
One overarching question hangs over the move by trading firms to acquire energy assets and move up and down the energy value chain – "Such integration may improve trading margins but only by getting the commodities firms into lots of low margin capital intensive businesses like shipping and mining. It may work well when commodity prices are stably rising but it leaves them woefully exposed to the next recession."

So, is this the reality?

ENERGY TRADING FIRM
There are two sides to consider – firstly, there are assets available, and secondly, does anybody want them? There are a lot of refineries up for grabs that nobody wants. There are some mines up for grabs that nobody wants, and so the trick here is, why would a trading company want these assets in the first place and which ones?

So broadly speaking, the margins are always under pressure in trading as information becomes more and more readily available, both through electronic forms and through a proliferation of trading firms around the world. The arbitrage margin is thinner and thinner and harder to come by. Essentially you have to deploy more and more capital just to make 10 cents. That's not sustainable and that's not very attractive. So, companies like ours have gone from being barge traders in Rotterdam and Antwerp, to a global network of physical trading, followed by being able to handle price risk management – so what's next?

One of the reasons assets are interesting is because it gives you a more permanent position in the market for storage. This allows a trader some options as it means he doesn't have to take something from A to B or from A to B and to C. He can actually stop and hold because he has a view on the future or because he has a view on seasonality or view on breaking bulk or making bulk.

But as soon as you start doing that everybody starts doing that and then there's no margin again.

The view on acquiring distribution networks, like we were fortunate enough to get into in Australia and 16 countries in Africa, is that they are there to be served now. You're always going to have to serve that system and although there may not be that much margin in serving that system, but because you always have vessels going to those countries, if something happens nearby, you can always serve those nearby countries whereas, before you couldn't.

So it's how do you build on this physical global network with certain assets that add to that network, more than the assets themselves have to make money in their own right. We hold everything at an arm's length from the trading business.

The other thing that we've seen change in the last 10 years is the cost of money. As an example, we had an asset that we were trying to divest 8 or 9 years ago and many of the buyers of those assets wanted to make 20 to 25 percent return on equity. On assets that are utility type asset where you should be looking at 10 to 12percent, private equity firms, hedge funds and speculators all wanted to make 20 or 25 percent return on their money as if it was FMCG, media, telecoms or oil. That's insane. This is a 20 year stream of cash flows that's pretty much guaranteed and you still want 25percent. The world is changed and money is now a lot cheaper.

> "If you have a platform that works, although every product is different and every market is different, if your trading business is predicated on access to low cost capital and good management of information about markets and good touch points with customers and suppliers, then you can replicate that in new markets across products and without adding too much incremental cost."
>
> *Energy Trading Firm*

ANALYST
I think there will always be vulnerabilities for trading companies who don't control energy resources, with NOCs now holding about 85 percent of total resources. It's more and more difficult even for the IOCs to get in, so their trading companies are being squeezed. We've seen a slight improvement in refining margins, in Europe particularly, because the price of oil has fallen. But in the past year or two we haven't really seen that much volatility, which are your bread and butter if you're a trading company.

INDEPENDENT ARAB ENERGY COMPANY
The first thought is about one of the major challenges that oil and gas companies, upstream companies, are facing worldwide today which is the increase in the cost of integration and development, both. And that is a major concern to the majors and to even the smaller midsize companies, worldwide. Total is divesting a number of its assets worldwide and the main driver is the cost. The cost is going to drive a lot of E&P companies to either streamline their activities or basically to cut down their activities in different places.

Integrated European Energy & Utility Company:

We are a very big utility company in Europe so our expectations on returns in Great Britain for example are 9 to 10percent. So, in parts of our business, across the value train, we have, say a slightly different edge because our expectations are not 20 percent or 80 percent. And the thing that has driven us into greater integration and the international space is simply regulation. You know, our core money making machine sits in a much regulated environment in Europe. And also an environment that actually we don't get to have any form of consistency with. The European Union is forever changing the rules by which we're allowed to conduct our business.

MODERATOR
Here we have one company diversifying to get away from regulation, yet the trading companies are moving under greater regulation by diversifying vertically, how will that play out?

ENERGY TRADING FIRM
The regulated question is an interesting one because we bought a power plant last year in the UK, which puts us into a traded market, but a heavily regulated market.

But equally it depends on what you define as regulation, you're talking about price regulation, labor regulation's not something that we've ever had to worry about but now we have 2700 employees in Africa, over 2000 employees in Australia. It's a new world for us. And then obviously the more assets you own, the more you have to look at things like health safety and environment. So we have to – and have – build up our own teams around understanding these skill sets but we also very much need to make sure that these entities that we buy have world class management from that space. You know, we don't stick traders into these assets and say you are now an operator. We stick asset managers into the assets, in the countries that understand the regulations to make sure that the assets are run in accordance with the way they should be run.

It's a different model!

MODERATOR
Are you running the risk of morphing into a new business, that that would change the way you were defined before, and then would that change your ability to access capital that's similar to the oil companies and the returns that they require?

> "We've seen a slight improvement in refining margins, in Europe particularly, because the price of oil has fallen. But in the past year or two we haven't really seen that much volatility, which are your bread and butter if you're a trading company."
>
> *Analyst*

ENERGY TRADING FIRM
I think fundamentally we're still a trading company. And we like that nimbleness; we like being able to move quickly and respond to market changes and respond to customers and suppliers. But it's an ongoing evolution. We don't have a master plan where we're going to end up looking like Shell in 10 years. It's an evolution that's occurred in response to the market and a response to opportunities; and it has its challenges but it also has its benefits. It has a different cash flow profile for us than it used to, less volatility around cash flow, more opportunity created from the assets themselves.

But I don't think we have the answer yet around what does it look like at the end. It's just going to keep evolving. In terms of accessing capital markets, all trading firms are different. Glencore for example is very asset intensive, and so it needs to borrow lots and lots of money to keep funding mines. We are, let's say, picking certain parts of the value chain in oil that suit the platform we're trying to build from. So we did not have to go to the capital markets, meaning the public markets, to raise money, we still seem to be operating okay on the back of our equity and off the back of our borrowing base. And Trafigura and Gunvor and everybody else, they're all different in their own special ways and all of us are different from the majors.

MODERATOR
Let me just open it out here to the audience. Yes sir?

AUDIENCE MEMBER
The upstream business is very capital intensive – if you look around at the purely upstream companies that would've been in business for the last 10, 15 years, some of them have not done a very good job for returning share holder value in the upstream sector. If there are more well-funded players coming into the market place from the trading community, do you think that the trading community is going to be doing, or absolutely must do, a better job than the traditional players?

ENERGY TRADING FIRM
I think it's very situation-dependent. I think the entry of a trading company into, per say, into pure Exploration is not. I think the one thing that the majors have is the

depth of capital structure and the appetite for risk that most trading companies – I don't think there's a lot of people in the trading field that feels very comfortable putting up half a million dollar hole in the ground with a 1 in 10 success. It's not something that's in our DNA, it's not. You know, we like to mitigate risk and that's not good risk mitigation. So you need to have a very different entity. Also, if you're going to put that kind of resource in the ground, you need to have 100s of people who're focused on making sure you put in the right place at the right time and right setup.

> "The cost is going to drive a lot of E&P companies to either streamline their activities or basically to cut down their activities in different places."
>
> *Independent Arab Energy Company*

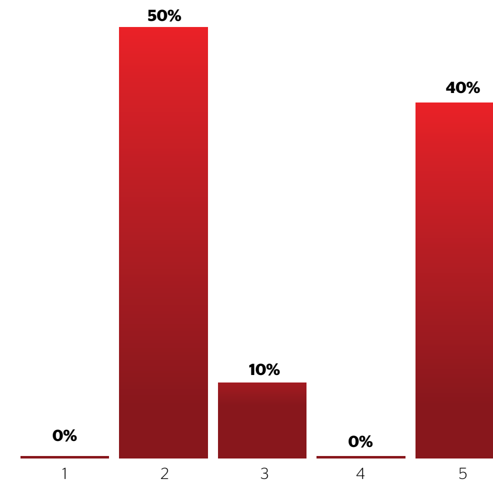
MODERATOR
But yet Trading firms are buying up gasoline retail stations, that puts you in a very unfamiliar low margin business of selling groceries – How does that fit the trading firm culture and model?

ENERGY TRADING FIRM
The thought is that by integrating market related supply with efficient distribution, that you can extract some value out of that proposition. For example, Shell had tens of people in their data services center servicing a fairly unique network in Africa, and we're operating that same resource with 8 to 10 percent of the personnel that Shell was. Just because of looking at the proposition differently, where the cash is collected or the cash is maintained and what kind of reporting structure we require versus, so we're developing a lot more from the asset rather than trying to manage everything, you know, through London and Rotterdam. Time will tell if it's right or wrong but that's just the case in point where there are efficiencies in the system that can be taken out without compromising health or safety.

If you have a platform that works, although every product is different and every market is different, if your trading business is predicated on access to low cost capital and good management of information about markets and good touch points with customers and suppliers, then you can replicate that in new markets across products and without adding too much incremental cost. So it's not a huge surprise if smaller niche companies who are being squeezed in one area want to spread their cost over other areas. It's not a slam dunk, because gasoline is very different than fuel oil. But that the underline platform of money and information is similar and risk management.

As trading firms grow into different parts of the value chain, including upstream and retail, which of the following is the most significant issue they must address?

1 - HSE, as operators of assets
2 - Managing tradeoff between asset profitability vs. trading margins
3 - Managing long-term vs. short-term priorities
4 - Restructuring the balance sheet
5 - Investing in IT to manage integration and gain competitive edge

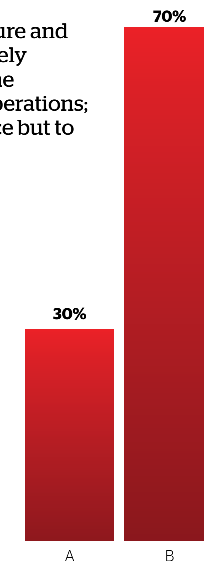


AUDIENCE MEMBER
I think there's another factor, we're seeing the major suppliers, all the national oil companies, actually start to become traders themselves. And that is replacing what was our meat and potatoes, which was what we did. So that's actually pushed us out to survive, to look for something else. So actually taking an asset that we know can then have a flow, it might not make a lot of money, but it gives us a flow. Without that flow we can't trade. So maybe the asset that gives us this flow means that we have a terminal that is giving us that flexibility to supply the asset which then we can supply somewhere else.

AUDIENCE MEMBER
It is interesting to see how trading companies run assets like refineries, because most operators look to run it more or less on full utilization, with not much thought on what the market is doing. But the traders, on the other hand, react very quickly. They see a margin is going down, we'll reduce rates; they see changes, they immediately react to that. So the way the trading companies run these assets is much more flexible, much more commercially driven. The trader's basically run these assets rather than engineers. ■

Increasing competitive pressure and customer sophistication is likely to lead to further erosion of the profitability of core trading operations; leaving trading firms no choice but to step up integration.

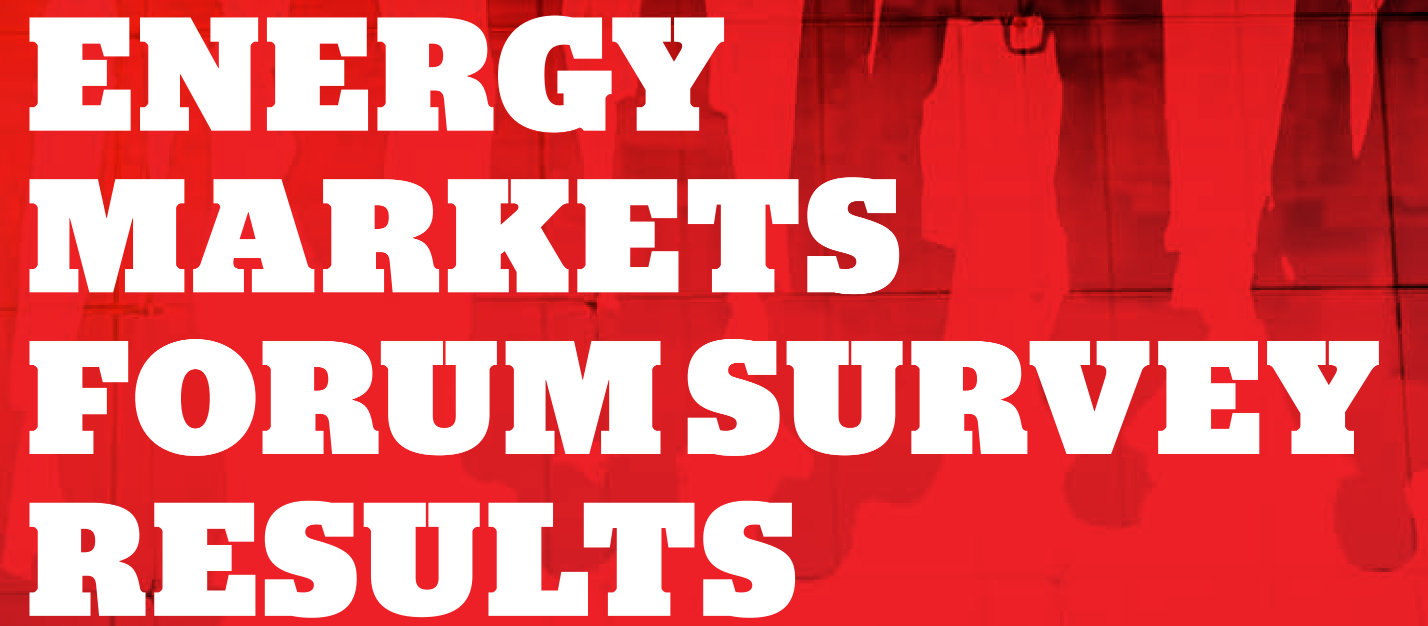
A - Agree
B - Disagree



The expansion of trading houses is a regulatory concern because it creates giants that are too big to fail.

A - Agree
B - Disagree

ENERGY MARKETS FORUM SURVEY RESULTS



Brent crude prices have been trading at two-year lows below $100 a barrel since Sept. 8 – **What levels will Brent be at by year end?**

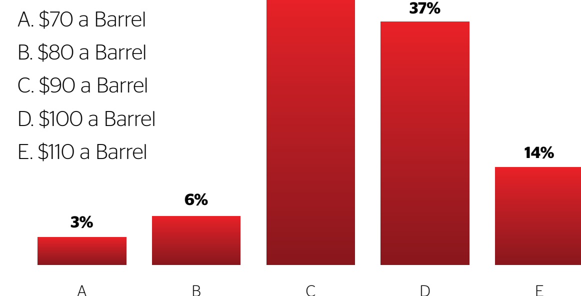
A. $70 a Barrel

B. $80 a Barrel

C. $90 a Barrel

D. $100 a Barrel

E. $110 a Barrel



WTI crude price levels are nearing the $85-a-barrel, below which many US shale oil projects won't be economically feasible – **What would you expect to be the most likely reaction if WTI fell below $85 a Barrel for a sustained period?**

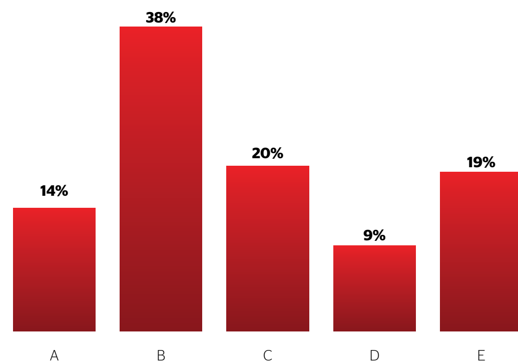
A. US shale oil production capacity would start to decline as expansion plans are put on hold

B. OPEC would curtail production levels at November meeting and so push prices back to $100

C. Shale production plans outside the US –Europe/ China/ Argentina/ –would be curtailed

D. Russia would step back from standoff with West to ease sanctions as oil revenue declines

E. All of the above



Which of the following will have the biggest impact on the global economy in 2015?

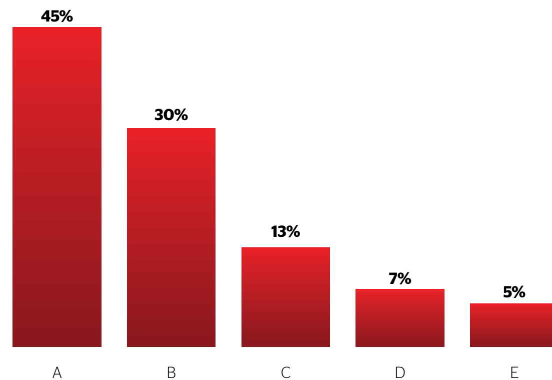
A. Geopolitical tensions

B. Slowing growth in China

C. The US Fed raising interest rates

D. Lower energy prices

E. I wish I knew!



Oil and gas production is diversifying away from the Middle East, with North America, Latin America, Australia and West and–soon–East Africa all adding capacity – **Will this trend erode the clout of traditional energy-rich nations by 2020, including the Gulf states?**

A. Yes, Gulf States will see their influence on global energy markets wane significantly

B. The balance of power may be shifting, but Gulf States will remain key players

C. Not a chance! Given long-term energy demand trends, Gulf States' influence will increase

D. Everybody will win as global energy demand is set to soar over the next 20 years

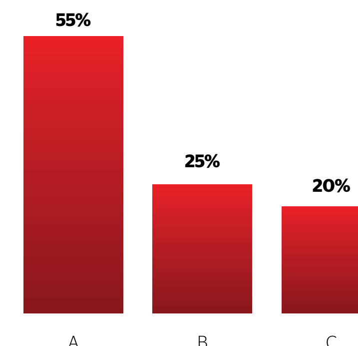
E. It's too early to say

International commodity tradingfirms have been on an aggressive push to acquire assets and expand into other parts of the energy value chain, while IOCs have been shedding Downstream assets to focus on Upstream – **Will trading firms successfully extract more value from the Downstream assets than the IOCs could?**

A. Yes

B. No

C. Too early to say



The US just approved two LNG export projects, at a time when Australia, Canada, Malaysia and Papua New Guinea are also ramping up output, and energy demand in Asia is slowing – **Who will lose out most? Gulf states?**

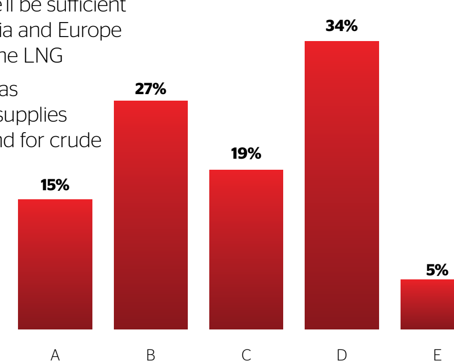
A.High-cost LNG producers such as Australia and Canada

B. The hopefuls in East Africa because they'll be late to the market

C. All gas producers will suffer

D. No one! There'll be sufficient demand in Asia and Europe to absorb all the LNG

E. Oil Producers as more energy supplies erodes demand for crude



Refining capacity across the Middle East is expanding rapidly at a time when expansions are also under way globally – **What does the supply build up mean for regional refiners?**

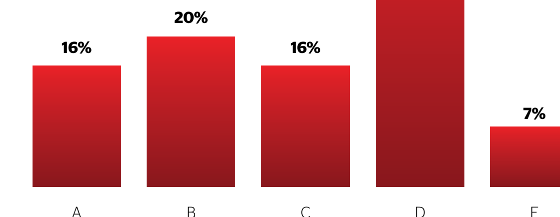
A. Domestic demand in the region will rise fast enough to absorb the additional products

B. Europe will absorb the products as more refineries are shutting down there

C. As usual, China will be there to absorb the additional capacity

D. Product prices will drop as the region competes with the US and China for export markets

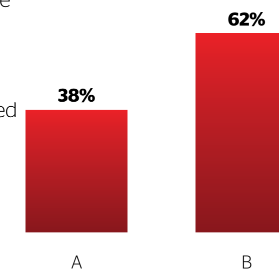
E. Sooner or later regional refiners will have to shut in capacity



The wider Gulf region will see major additions of oil storage capacity in locations such as Fujairah, Soharand RasMarkazand in time Duqmin Oman – **Will this result in too much storage capacity within the region?**

A. Yes, they will never be able to fill all these tanks

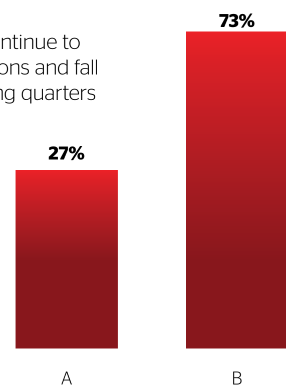
B. No, Build it and they will come -in the long-term all this capacity will be needed



China's economic engine sputtered in August as industrial production growth slowed to its lowest level since the 2008 global financial crisis -most analysts have downgraded their expectations and forecast that China will probably miss its 2014 GDP target growth of 7.5% – **what is your outlook for China?**

A. China to engage in massive stimulus programmeto reverse decline

B. China GDP growth to continue to underperform expectations and fall through 7% in the coming quarters



In light of the Ukraine crisis, the EU is seeking to diversify its gas sources away from Russia to enhance energy security – **who will be the EU's biggest supplier of natural gas in 2020?**

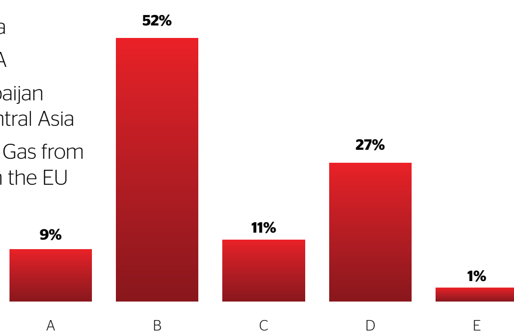
A. US

B. Russia

C. MENA

D. Azerbaijan & Central Asia

E. Shale Gas from within the EU



GCC countries are facing heightened pressure to use their energy resources more efficiently in order to supply their growing populations, free up hydrocarbon resources for export, and address concerns about climate change and pollution – **What should be GCC governments' priority?**

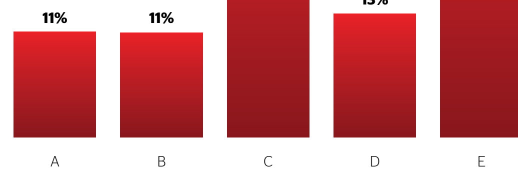
A. Push renewables into the mainstream

B. Ramp up nuclear power as it will resolve all these issues at once

C. Across-the-board tariff hikes and subsidy cuts will have to do the job

D. Invest heavily in R&D to develop innovative energy-efficient technologies

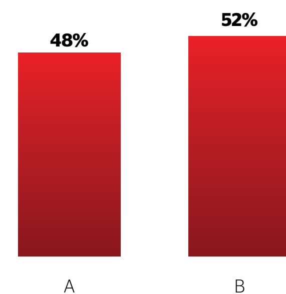
E. Implement a coherent joint energy strategy within countries and for the GCC region



Energy Security has emerged as one of the top agenda items for most political leaders across the world - producers & consumers – **Which is a bigger threat to the balance of global oil markets over the next year or two?**

A. Supply Security

B. Demand Security



BP led a group of companies last December signing a $45 billion deal to pipe natural gas from Azerbaijan's Shah Denizfield to Italy, offering the European Union an alternative to Russian supplies. **Does this represent a viable alternative to Russia?**

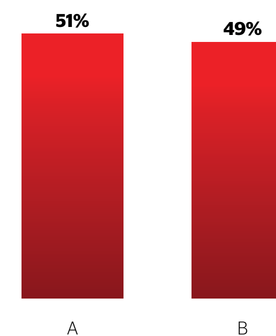
A. Yes

B. No

Japan and South Korea represent 50% of global LNG demand --importers across Asia are increasingly vocal against the – Asian premium – charged in gas prices for security of supply. **Would an Asia-wide gas buyers club - including India, Japan, China, and South Korea, the world's "big four" importers, be a successful strategy to pursue to counter a gas producers cartel?**

A. Yes

B. No



In light of Europe's energy security concerns – **what will be the most prevalent source of power generation in the EU by 2025?**

A. Gas

B. Coal

C. Nuclear

D. Renewables

E. Liquids