The Abdullah Bin Hamad Al-Attiyah
International Foundation for
Energy & Sustainable Development

~ **Whitepaper** ~

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Gulf Energy Outlook on The Year Ahead

What's Next?

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– What's Next?

THE ONLY CERTAINTY IN 2019 – EXTREME UNCERTAINTY

The one thing you can say with certainty about 2019 is that there will be more uncertainty. The global outlook on politics and economics is as volatile as at any time since the global financial crisis ten years ago, and the world's energy markets will reflect that unpredictability.

Multiple factors are coming together to potentially spark the "perfect storm" in international affairs. From west to east, policymakers are grappling with seemingly intractable problems. In the USA, an embattled president is increasingly under fire from a Congress he no longer controls; in Europe, Brexit is challenging the core of continental convergence; in China, demographic and structural issues belie the surface solidarity of one-party rule.

The Middle East - as ever - is the cockpit of uncertainty. The fundamental confrontation between Saudi Arabia and Iran is being made more volatile by domestic tensions in the Kingdom, exacerbated by foreign entanglements and commitments, while the Islamic Republic faces its own challenging internal dynamics. The Gulf Co-operation Council is fractured by the ongoing stalemate over Qatar, while the festering sores of Yemen, Syria and Iraq are as painful as ever. Turkish and Russian intervention in the region are further forces for destabilization.

The global economic situation is more gloomy than for many years. In the USA, the stimulus from President Trump's tax cuts will fade as 2019 goes on, and most economists expect growth to slow; highly valued financial markets are looking fragile, especially in the all-important technology sector.
Growth is forecast to fall significantly in Europe too, with the IMF predicting less than 2 per cent GDP increase. Where UK growth ends up after the Brexit chaos is almost impossible to predict.
The world has come to rely on growth in its most populous economy, China, but may have to adapt to a slow pace next year. India is expected to take over the title of world's fastest grown major economy with more than 7 per cent GDP growth, the IMF predicts.

Perhaps most ominous of all the major indicators, global debt is at an all-time high of $184 trillion, with the USA, China and Japan accounting for more than half of that pile. Each human being on the planet owes $86,000 with policymakers having learned little from the 2009 crisis that almost crashed the global financial system.

On top of all these worries is the looming prospect of a trade war between the two largest economies, China and the USA. The so-called "ceasefire" that was declared between Presidents Xi and Trump in Buenos Aires is looking very brittle. All these threats to economic growth and financial stability pose risks to the demand side of the energy equation.

In this ocean of economic volatility, the Middle East can offer little respite. While the IMF is forecasting slightly better GFP growth next year, the central strategic goal of economic diversification away from oil dependency is painstakingly slow. In the biggest oil-exporting economy, Saudi Arabia, it has virtually ground to a halt, with the postponement of the flagship Aramco IPO and a dramatic drop in foreign investment.

This is the geo-political and economic background against which energy policymakers have to chart a course in 2019. It will make for a challenging year.

THE OIL PRICE - CRUDE CALCULATIONS

It has been a tumultuous few months in the oil market, and the signs are that 2019 will probably see a continuation of that volatility, with question markets hanging over the key factors in the crude equation: supply, demand and price.

On supply, the world has never had as much productive capacity as it does going into 2019. With American output rising inexorably, Russian oil at post-Soviet record levels and Saudi Arabia having plenty of spare capacity, the world is potentially awash with crude.

How much of that comes to market remains to be seen. The OPEC+ meeting in Vienna pledged to reduce supply by 1.2m bpd: Iran got a reprieve of sorts from sanctions when President Trump gave waivers to eight of the biggest economies in the world from the renewed US sanctions, but which could be just as easily reversed by the mercurial US leader; and US shale is still facing pipeline, logistical and financial limitations that might hold back its incredible growth.

> “
> Geopolitical uncertainty is manifested in instances of instability which is likely to stay with us for a while to come."

> “
> The gas market is becoming more important with Qatar's recent decision on OPEC."

But for the time being, there is plenty of oil in the world, either already being pumped by independent and national oil companies or capable of being pumped very quickly if circumstances require. The dire warnings of 2014, when the plunging oil price raised fears of a supply crunch in coming years as lack of investment hit production, have not yet materialized.

The "big three" of the USA, Russia and Saudi Arabia can keep pumping the product, but the dynamic between them is complicated. The prospect of the Americans rising to 14m bpd over the next couple of years from around 12m bpd at the moment, while Russia hangs on 11m, is not convincing; nor is the prospect of Saudi Arabia taking up all the slack while its two biggest rivals cash in.

Another big factor in supply is the situation in Iraq, one of the key drivers of OPEC growth. Forecasts for Iraqi production this year are more positive than they have been for some time, but the country faces perennial political and structural challenges to realizing its potential. The same considerations apply, multiplied a thousand-fold, in Venezuela.

Most of the variables, however, are on the demand side of the price equation. The world has become accustomed to oil demand growth of between 1.3 and 1.7 million bpd additional demand year on year, but that is dependent almost entirely on continuing expansion of the leading economies, particularly the two big oil importing giants, China and India. The biggest oil importing zone, the European Union, has its own unique problems, ranging from Brexit to the threat of Iranian sanctions.

With global growth forecasts falling for 2019, there is a growing consensus that oil demand next year could struggle to meet the 1.3m bpd comfort level. In the economic textbooks, plentiful supply in the face of dubious demand equals falling prices, and the history of the oil industry would seem to confirm that some structural adjustment to the crude price in on the way.

In the course of 2018, Brent traded in a wide band between roughly $86pb and $59bp, with the lower end of that spectrum coming towards the end of the year. Consensus forecasts for next year range from $50pb to $70pb, with the possibility of several spikes - upward or downward - in the course of the year. But many oil experts worry that if the price does not get above $60pb it

is not enough, especially for the energy revenue dependent economies of the Arabian Gulf.

It seems the days of $100pb are gone forever, barring major geo-political shocks. But who could rule those out of the current global scenario?

US RESURGENCE - THE PERMIAN BECOMES PERMANENT?

The Saudi-Russia energy entente aside, the most important trend in the global energy business in the past few years has been the remarkable resurgence of the American shale business, especially in its white-hot epicenter, the Permian basin in Texas and New Mexico. Shale fields in the eastern USA and the north west are also beating previous production records, but American oil executives talk of a "tsunami" of oil from the Permian, and the figures seem to bear them out. The USA now produces around 12m bpd of oil, more than any other country, and more than 3 million of them come from the Permian basin. The south west of the USA has become the single most important oil region in the world, on its own producing as much as Kuwait. With output forecast to double by 2023, the fortunes of the Permian - and the rest of the US conventional and shale output - will be closely watched next year.

Although the consumer politics of the American domestic market makes the oil price a sensitive issue, the oil industry is unanimous - rising prices are good of their business and the US economy. The country is now a net exporter of oil, and the balance of payments deficit so detested by the President is reduced with each dollar on the barrel.

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The oil price collapse that began in the summer of 2014 actually did US shale a favor. It panned out the weakest shale operators, and forced technology and cost efficiencies on the industry. Now shale operators can keep on making money at $40 a barrel, or even $30 by some estimates. At current crude prices, the profit margins are enough to attract the biggest in the oil business, with the likes of Shell and Exxon investing heavily in US shale.

For 2019, the challenges in US shale are the kind that many oil companies would like to have: they are simply producing too much crude for a distribution and refining system that is struggling to cope. New pipelines are promised next year to deal with the surge in supply.

Is the Permian unique in the global energy business? Similar geological for formations have been found in Argentina - at the Dead Cow field in which Qatar has an interest and which produces oil and gas - and in China and Mexico. But probably only in West Texas and New Mexico has the right combination of geology, technology and finance come together to such transformational effect - so far.

The relentless rise of US shale production has changed the economics of the global energy industry and the strategic relationships that govern it. How that develops in 2019 will be a major indicator.

OPEC PLUS – MINUS QATAR

The big three - the USA, Russia and Saudi Arabia - are clearly calling the shots in the global oil industry, but the smaller producers still have the capacity to surprise. Qatar delivered one such shock just before the Vienna meeting, with the announcement it was to withdraw from OPEC. There is much speculation as to what the reverberations of that decision will be in 2019.

Qatar's exit unlikely to materially affect the global oil supply situation. The country has a mere 2 per cent share of the world oil market, and its economic power in the oil cartel reflected that relatively small output.

The stated rationale for its withdrawal was that Qatar had a long time ago taken a strategic decision to focus on gas, where it is among the biggest in the world and a market leader in production, supply and distribution of LNG. Qatar wants to be a big fish in the LNG pool, and sees no point being a minnow in the oil ocean.

This is especially so when that ocean is dominated by increasingly unfriendly predators. Qatar has come to see OPEC as dominated by "one country" - Saudi Arabia - but is also under the influence of another - Russia.

With the Saudi-Russia relationship replacing the previously more consensual OPEC decision-making process, and with

> "The OPEC cuts and the rise in price are going have an impact on demand even if it takes some months to feed through."

the UAE seemingly in thrall to the Saudis, there seems to be little for Qatar to get out of an ongoing presence in OPEC - at least while the current blockade of the island is continued. There is no sign of a rapprochement within the GCC on that score.

Nonetheless, Qatar would be forgiven for feeling a little nostalgic after 57 years membership of the oil cartel. The country played a prominent role in OPEC's administrative and deliberative functions, and was regarded as a "neutral" voice when the going got tough between the other members. Its long-standing connections with the other Gulf states made its seat at the diplomatic table worth having.

OPEC members come and go, with countries like Gabon, Ecuador and Guinea joining in recent years. But none of them have the international clout Qatar has in the global energy business, nor the "soft power" it projects in other fields, like finance, sport and culture.

Perhaps a better comparison is with Oman, which is not a member of OPEC but which is probably the most significant member of the OPEC Plus alliance after Russia. Oman - smaller than Qatar in oil output - punches above its weight purely because it is outside the OPEC tent and has to be invited in on any significant deliberations.

Qatar insists that its withdrawal from OPEC was not a political decision, emphasizing the strategic role it plays in the gas industry. Nonetheless, its exit is a sign of shifting sand within the oil producer's organization. The Russia-Saudi axis has certainly changed the dynamic.

Will others follow Qatar's example? Maybe Iran, which is increasingly the black sheep of OPEC? Probably not, but the Vienna meetings will be closely watched in 2019 for any further sign of dissidence.

> "The US administration is getting very concerned when oil prices were above 80 dollars a barrel."

IMO 2020 – ON YOUR MARKS

There is one pressing issue on the energy calendar: by the end of this year the International Maritime Organization, the regulator for the shipping industry, will insist on radical new rules on vessels' fueling sources. The IMO plan has the potential to throw out energy calculations significantly, and could also have political repercussions in an increasingly fractured global environment.

The new rules - aimed at reducing the polluting effects of high-sulphur fuels - could stoke global inflation by increasing oil prices and adding to the cost of transportation on the high seas; they could also catch out a refining industry unprepared for the changes, despite ten years' notice.

As things stand, by this time next year the world's maritime fleets will have to replace existing high-sulphur diesel - "bunker" fuel with around 3 per cent sulphur - with a maximum 0.5 per cent sulphur mix; or to have installed "scrubbers" on ships funnels to remove the polluting sulphur from the air. Environmental lobbyists say the air around ports and refineries is among the dirtiest on the planet.
The shift could add $7 to the cost of a barrel of oil, according to S&P Global Platts Analytics, while the scrubbers could cost between $2m and $5m to install. With 80,000 vessels plying the world's oceans, many of them carrying energy products, that could all add up to an economic cost of $1 trillion over the next five years.

There are other challenges with IMO 2020 too. While some ports - like Singapore, the biggest in the world - have signaled they are going to apply the new regulations on scrubbers stringently, there is no guarantee other will be as conscientious. Bunkering charges are a large element of shipper's costs, and less meticulous operators might use the new regime to try to win markets share. There are any number of ports in Asia that would like to take top spot from Singapore. Shipping lines and energy companies too are a mixed bag when it comes to obeying International regulations. Big Oil, under increasing pressure from ethical investors, can be reasonably expected to ensure the ships they transport cargo in are compliant, but the same cannot be said for every corporate involved in the maritime business. There are question marks too over the track record of IMO as a regulatory body to enforce such a radical step.

There is a particular challenge to the Gulf region, which trades in high sulphur fuels across its length. But that fuel is not going to be able to charge a premium when demand for its falls significantly.

It is not all gloom. Experts in the refining business believe the industry can pretty quickly adapt plants to turn out the new low-sulphur fuel. There has been a surge in the installation of scrubbers, especially on very large container vessels and tankers. Much of the work can be done while the vessel is at sea, minimizing the disruption to normal business, by on-board engineers.

And the industry may find it has more time than it thinks. President Trump, opposed to climate change theory and environmental regulation, is reported to be considering requesting a delay in implementing the changes.

Longer term, the solution could lie in the concept of LNG fueled fleets, a solution Qatar and Russia have pioneered. But that strategy will probably fall outside the scope of 2019.

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LNG – THE DASH FOR GAS SPEEDS UP

Natural gas is increasingly regarded as the acceptable face of fossil fuel, in comparison with its dirtier rivals, coal and oil. With the world in the middle of an energy transition away from carbon towards renewables, gas - and LNG in particular - could be the big gainer in that shift in 2019
In the biggest and fastest growing markets of all - China and India - gas is regarded as the clean option to coal for industrial processes and power generation if they are to get anywhere near their responsibilities under the Paris Accord on climate change.

The analysts expect demand for gas to continue to increase steadily until at least 2025, and even if growth falls off after that as power requirements change and renewables kick in, it will carry on rising to replace its carbon rivals. By about 2040, oil and gas should be about equal as the world's primary energy sources.

LNG will drive that supply growth, and China will continue to drive demand. The annual increase in LNG production ran to about 10 per cent over the past two years, with the Peoples' Republic to thank for about half of that rise. China is now the second biggest importer of LNG, after Japan and ahead of South Korea.

India has also lifted its demand, and in the past has shown a significant price elasticity, going for coal when it believes gas prices are too high, which is not the case at the moment.
But while demand looks assured, supply is becoming increasingly complicated. As in oil, gas from booming US shale fields has turned America in to a net exporter, right up there with Russia, Australia - and of course Qatar.

In the Middle East, Qatar continues to be far and away the biggest producer, as its decision to quit OPEC underlined. Qatar has decided its strategic future lies in LNG, and it has also begun looking at investment in the US and South American markets, as well as further big investment in its North Field.

> "China also has the capacity to reduce their LNG demand if they want."

But, having had the regional LNG field to itself for so long, it is now facing sterner competition from Arabian Gulf rivals. The two biggest energy companies in the region, Saudi Aramco and ADNOC of the UAE, have declared their serious intention to grow in the LNG business, both for domestic consumption and for export. Elsewhere, Oman is producing at full capacity while Egypt has once again become an exporter of gas.

How these big exporters approach the changing circumstances of the LNG market will be another one to watch in 2019. Many end user markets have liberalized their regimes, and customers can now buy in shorter term contracts and smaller quantities. Fewer buyers are credit rated, which is another complication for the producers. Suppliers are going to have to show flexibility towards their customers' needs in these new market conditions.

In these circumstances, you would expect prices to come under pressure, and that was the case for most of 2018. But a jagged recovery in the second half of the year has given some analysts confidence that next year will see an increase in line with rising secular demand.

$1 trillion
S&P Platts estimate of total economic cost of IMO 2020 over 5 years

$50-70 pb
informal consensus trading range of Brent in 2019

2%
maximum IMF forecast for EU GDP growth 2019

14m bpd
potential US oil output by 2021

57
numbers of years Qatar was a member of OPEC

$86,000
amount owed by each human being on the planet

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