What Would Be The Role of OPEC Now That The USA (and Increasingly the UK) Have Found And Is Producing Shale Oil and Gas Domestically?

Introduction

With the production of unconventional domestic gas from the shale rock, most countries, the USA and UK inclusive believed this to be the end of their many energy insecurity problems. On the commencement of this, the United States with self reliance seemed a second Saudi Arabia, depicting the world's reliance on them for energy and an end to relying on the politically unstable countries of the Middle East. It is in relation to this that Heather Zichal, adviser on energy matters in Obama's White House, started promoting their own shale production. This shale gas revolution was one believed to provide America with the natural gas for close to a hundred years. Shale gas production was there but this time increased greatly as opposed to the dropping that was there in the decade. This increase is reflected as being equal to that of Nigeria, which is the seventh largest energy producer in OPEC, which in full is the Organization of the Petroleum Exporting Countries (Opec.org, 2013).

Domestic Production of Shale Oil and Gas

Shale gas is produced in the US by means of the hydraulic fracturing technology, in addition to horizontal drilling. This has been greatly embraced, with the reliance on OPEC highly reducing. With the onset of the increased production, new drilling methods such as fracking as well as injecting chemicals came into use. Due to this, shale gas is unconventional, owing to the differences there are in the extraction of conventional gases. Unconventional gas, say shale oil, is more difficult to extract as compared to the conventional one that even attracts more costs (Engdahl, 2013). Through the said methods of horizontal drilling and hydraulic fracturing, the producers have been able to extract large amounts from the shale oil resources that were earlier on inaccessible.

The preferred method of extracting has over time become that of forming a hydraulic fracture by means of pumping a liquid that causes fractures in the wellbore as the pressure produced causes the shale rock to crack. The content of the liquid is not exposed but all that is known is it being toxic and its increased remittance causes larger cracks. The fracture need be prevented from closing to ensure continued supply of the shale oil and gas (Engdahl, 2013).



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The regulatory free rein caused an increase in the natural gas prices as it was supported by the Obama reign owing to its high gains. In the year 2003 in the USA, shale gas production was at 3% of the total gas produced there, while in 2007 the amount extracted rose to two million metres per cubic feet and in 2011 this was more than triple what was there earlier. Thus, around 2010, the production was at 23%. There exists a great paradox in the domestic production of shale and gas oil in that initially, say a century ago, initiatives were in place to avoid over exhaustion of the natural gas resources. The State of Texas, had its Railroad Commission (TRC) authorized to avoid oil wars by ensuring that there was no over production that could in the end result to depletion of the shale gas resources. This increased the success chances of OPEC at the time, as they continued supplying petroleum in large amounts (England, 2013).



Below is a diagram that shows the production of shale in the USA over the years and what is expected in the future, along other natural oil resources. This clearly brings out the minimized dependence on OPEC which from the diagram is even likely to move to none at all, with USA also joining OPEC in export field. It is clear that shale gas started at a very low rate, almost invisible but its growth has increased over a short period of time. In the future it is expected that shale gas will be the highest producer of gas and oil domestically (Webster, 2013).

However, in the current day, there is no such regulation requiring a minimum exploration of the shale oil. This has reflected to an increase in the producers from BP, Chevron, Chesapeake Energy amongst others in the extraction of shale gas. Currently, these producers are encouraged to maximize their shale gas and oil production, not only to stabilize the quantities in the USA but also to reach an amount where exportation can be engaged into efficiently. This is therefore a reduction in the success chances of OPEC as this time their exports are not wanted and further, they could be having a competitor in the export market.

When it comes to matters of shale gas domestic production in the UK, there have also been several identified resources which are seen as a reflector that UK is a potential shale gas producer and that there is a possibility of there being other unexploited resources. Such presence of shale oil and gas reflects into ability to contribute positively to investment, creation of job opportunities, a growth in the economy and increasing the security levels of energy production in the country.

The General Role of OPEC

OPEC, Organization of the Petroleum Exporting Countries, coordinates the member countries with several aims. Among these include ensuring that prices remain stable in the world market, acquiring stable revenue for oil producers, and generally ensuring a reliable, regular and efficient oil supply to the country consumers while ensuring fair return on the part of investors. The leading product is petroleum, but encompasses the energy industry as a whole with cooperation in both national and international levels. OPEC is thus an international organization that includes sovereign states that have a legitimate mission for member countries and their trading partners (Opec.org, 2013).



OPEC therefore has an agreed price mechanism to ensure balances for customers and producers, and this was developed in one of its conferences held in March 2000. This price mechanism is however flexible and has even been added so as to ensure market stability. Among the challenges is the fact that fossil fuels is to remain a dominant energy source that meet almost all energy requirements of the world (Opec.org, 2013). On the other hand, the non fossil fuels are however to reduce, with the renewable energy increasing. In a case where a country meets the goals played by OPEC on its own, then there is no need for them to rely on the organization. This means that with the USA producing shale oil and gas, their energy needs are well catered for and thus no need for them involving OPEC anymore, instead, they only turn out as competitors in the export market.

Frameworks of the Energy Policies

The use of domestic shale gas and oil which is more accessible and cheap has led to consumer energy bills. According to the Energy Information Administration the prices are likely to keep reducing. It is this effect that the UK politicians hope to arrive at in the future, probably in the short run. However, this is not without critic as some think that the extraction of shale gas and the growth of its industry are likely to have barriers. In the UK parliament, there is an energy and climate committee that depicts a substantial uncertainty on the fall of oil prices as a result of the shale gas.

The major countries that produce their own oil and still import an amount need to have a regulatory framework in place in form of energy policies to ensure they are in control. These include the checks and balances enforced by parliament aiming at ensuring stability and at the same time avoid excess that may go to waste. This will include a regulation on what quantity will be imported in relation to what is produces locally and what is actually required. Such policies should at the same aim at increasing the local production while reducing the import so as to reach an independent level in terms of energy sector. This is what the USA needs adopt as it is in a similar state and so is the UK.

Global Challenges and Issues in the World's Oil Industry

The challenges that face the world's oil market may have their impact either on operations, market security or socially.

To start with, there is the operational challenge which encompasses the technology being used in the energy field, in cases of their failure. Further is the possibility of there being an unskilled labour force thus the problem of having to spend time and resources while educating them.

The market challenge comes in cases where the importers are more interested in the natural energy resources, thus lowering the demand levels. An example of this is the USA relying on the domestic shale and gas oil which is enough for them and thus no conventional energy resource is required. The moil market is negatively influenced here since OPEC is for example declared out of the market. The fluctuation of currencies is also a great deal here but has been curbed by the price mechanism in place as the price is set in a standard currency of the dollar (Oilvoice.com, 2013).

The social challenges arise from there being competition as a result of unconventional sources. These in turn trigger the financial standards since the energy supply is in excess. Security challenges are manifested in the infrastructure field. There are places where infrastructure may be poor thus making it difficult for the products to be delivered in due course.

The Role of OPEC with the Domestic Production of Shale Oil and Gas

The British Geological Society has shown the UK has more shale gas than was earlier expected during its discovery. The Energy Information Administration in the US in May 2013 estimated the country to have 623 trillion cubic feet of shale gas that has still not been extracted. However, due to there being a different framework of energy policies, amongst other reasons, the extraction of shale gas is more difficult in the UK than it is in the USA. It is uncertain when the UK's own shale gas will manage lowering prices of gas since the emissions of greenhouses are expected to be on the increase.

The shale oil revolution in the USA, which led the nation to self sufficiency in terms of energy, has made it unable to deal with OPEC in terms of price moderation and markets. In May 2013, the domestic crude output extracted was more than the imports, something that was never experienced in the past sixteen years. In 2012, there was the largest annual increase since the shale revolution began.



This information and more comparisons between the imports and domestic production can be depicted in the graph below, where the barrel productions and imports are shown monthly. It should be noted that the role played by OPEC when there is domestic production of shale oil and gas is marked as the import, and is on the decrease in terms of monthly barrels (Rpc.senate.gov, 2013).

This revolution has been done on state and private lands only, meaning that OPEC still has room for supply. This is however only in the federal lands, where the production of oil has been banned by President Obama and the Senate Democrats. The revolution has deprived the OPEC members of strength and fortitude. A Persian Gulf delegate confirmed this at one of their meetings when he said they were heading some problems. On the part of Nigeria, their exports to USA reduced by 59% and the oil minister regarded this as being a grave concern. Iran's envoy was affected though not a supplier and claimed that their low demand caused by their shale production lowered the prices.

It has followed that in case the subsequent reduction prices lead to below one hundred US dollars, the oil minister in Venezuela will demand that the productions of OPEC be reduced. This minimises the role of OPEC, as not only its market has reduced, but also the production will as well be forced to go down. The members of OPEC are in fact planning to study on the effects of the domestic US shale oil and gas which they earlier dismissed as being only marginal.

In North America the supply of the domestic oil has increased with the global demand reducing to almost nil and this reduction in prices has as well worried OPEC. In return, the OPEC members ought to sell their oil to countries at certain prices commonly known as break-even to ensure balances. These have risen as OPEC is now turning to new market areas and having to spend much in terms of repairing infrastructure to facilitate their supply to the new market (Swint and Bakhsh, 2013).

The increase in the USA production per day has been two million barrels and this has increased the spare capacity of OPEC and this has reduced the oil prices per barrel subsequently by about \$25. There is also a contention on whether OPEC should reduce production or take care of the break even prices, in turn affecting the world oil markets (MercoPress, 2013).

It should not be assumed that OPEC will clear the increases of the USA shale oil revolution, lowering the prices. Reports have shown that the OPEC supply to the USA has reduced by 35000 barrels in a day following their output being higher than expected in the third quarter of the year 2013.

Conclusion

The OPEC World Energy Model, OWEM, has shown that most parts of the world are resorting to natural oil resources and with time this will dominate the world market. The officials in the USA have made it clear that they are not leaving OPEC or isolating themselves any soon (MercoPress, 2013). The fact that the imports by the USA have reduced do not reflect in their disengagement with OPEC as they have not ensured the stability of their shale production in the long run.

The USA has continued and is likely to continue reducing their reliance rates on OPEC for oil and it can be derived that OPEC will remain prominent in the future world market. This is the case as the shale revolution may decline anytime, and just as it shot rapidly, the decrease could even happen at a more alarming rate (neurope.eu, 2013). With the USA being close to independent in terms of the energy sector, this has improved their energy policies.

In the nearest future with all factors constant, then OPEC will be a competitor in the oil exporting market. This is the case because if the barrels of oil produced continue increasing sharply, then USA will produce more than it needs and thus the need to become part of OPEC for exporting purposes (neurope.eu, 2013). However, even at this point, OPEC will remain as playing a vital role in the USA, as their independence may not be full any soon. This is facilitated by the leaders thought that they need not abandon OPEC, and also the fact that the shale revolution gas and oil is not used in the federal lands. The President and Senators who have the majority voice in this case have not approved the withdrawal of OPEC from the USA energy market.



Reference List

- 1. Engdahl, W. 2013. The Fracked-up USA Shale Gas Bubble. [online] Available at: http://www.globalresearch.ca/the-fracked-up-usa-shale-gas-bubble/5326504 [Accessed: 18 Nov 2013].
- 2. England, J. 2013. Deloitte | 2013 outlook on oil and gas | John England. [online] Available
- at:http://www.deloitte.com/view/en_US/us/Industries/d687f0575368b310VgnV CM3000003456f70aRCRD.htm [Accessed: 18 Nov 2013].
- 3. MercoPress. 2013. OPEC admits shale oil boom, mostly in the US, will have an impact on world supply. [online] Available at:
- http://en.mercopress.com/2013/11/13/opec-admits-shale-oil-boom-mostly-in-the-us-will-have-an-impact-on-world-supply [Accessed: 18 Nov 2013].
- 4. neurope.eu. 2013. EU, OPEC discuss trends of European energy sector. [online] Available at: 18. http://www.neurope.eu/article/eu-opec-discuss-trends-european-energy-sector [Accessed: 18 Nov 2013].
- 5. Oilvoice.com. 2013. OilVoice | U.S. reign as top global energy producer will be short lived. [online] Available at:

http://www.oilvoice.com/n/US_reign_as_top_global_energy_producer_will_be_sh ort_lived/39910d5b3549.aspx [Accessed: 18 Nov 2013].

Opec.org. 2013. OPEC: Joint Conclusion of the EU-OPEC Energy Dialogue. [online] Available at: http://www.opec.org/opec_web/en/press_room/2661.htm [Accessed: 18 Nov 2013].

Opec.org. 2013. OPEC: The Role of OPEC in the 21st Century. [online] Available at: http://www.opec.org/opec_web/en/918.htm [Accessed: 18 Nov 2013].

Rpc.senate.gov. 2013. Senate Republican Policy Committee. [online] Available at: http://www.rpc.senate.gov/policy-papers/us-shale-oil-revolution-grave-concern-for-opec [Accessed: 18 Nov 2013].

Swint, B. and Bakhsh, N. 2013. Shale Revolution Spreads With Record Wells Outside U.S.: Energy. [online] Available at:

http://www.bloomberg.com/news/2013-11-15/shale-revolution-spreads-with-record-wells-outside-u-s-energy.html [Accessed: 18 Nov 2013].

Webster, R. 2013. Carbon Briefing: Britain's shale gas | Carbon Brief. [online] Available at: http://www.carbonbrief.org/blog/2013/06/carbon-briefing-ukshale-gas-resource/ [Accessed: 18 Nov 2013].

