

Alternative energy finance: The thrilla from Cuadrilla

BRAVE Partners describes its energy business as “alternative energy”. This is to reflect the fact that we seek to work with businesses that are not the major companies in the energy sector. It seems as if the firm has hit on the zeitgeist in the industry. Whilst often controversial (and BRAVE Partners does not shy away from controversy) “alternative hydrocarbons” seem to be a theme.

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The Thrilla from Cuadrilla

Our friends at the outstanding Energy Institute (<http://www.energyinst.org/home>) invited BRAVE Partners to a lecture given by the Director of Exploration at Cuadrilla. The gentleman in question was charming and highly informative. It was clear that as an academic on the brink of retirement running the

What seems to set Cuadrilla apart from many other exploration businesses is their willingness to accept the issues that the exploration is causing and tackle them. The earthquakes are possibly a matter for public communication. The population looks at Fukushima and hears the word earthquake. The tremors caused by fracking are extremely unlikely to get to the size of the Sendai earthquake – that was driven by tensions building up on a major fault line over hundreds or thousands of years.

gauntlet of a small (there were possibly only two people), but highly vocal, protest outside the venue was not what he had in mind for his last flourish of working life. Whilst the lecture did not dwell on the subject it was also refreshing to hear him admit that Cuadrilla’s activities had caused the two small earthquakes close to Blackpool. Many of Cuadrilla’s American contemporaries continue to deny any link between hydraulic fracturing (fracking) and a major increase in the frequency of small earthquakes in Ohio.

The headline grabbing item aside, what really thrilled BRAVE Partners was to hear the term “alternative hydrocarbons”. This was used to refer to companies that sought to exploit different sources of hydrocarbon than traditional oil and gas.

It is all in the shale

Shale gas has become a huge phenomenon. The USA leads the field and is heading back towards energy independence on the back of a boom in production - although, as an aside, the USA does have to

add significant infrastructure in order to make full use of the gas production. Poland and the UK are following rapidly behind. Overall the Energy Information Administration (EIA) has identified 48 shale basins in 38 different countries.

Shale oil and oil sands

Oil sands are a well established potential source of oil. It consists of a mixture of sand, clay, water and bitumen (or "tar"). As the oil price rises these deposits become more attractive to exploit. Alberta, Canada is perhaps the best known deposit. Over time the in-ground prices of oil sands have progressively risen as the price of oil rises and conventional resources become scarcer and more expensive to extract. As the technology to extract oil from sands improves and the oil price looks set to stay high, the value of oil sands is rising.

Shale oil deposits are also increasing in value. These are not to be confused with oil shale, which is ultimately the topic of this commentary. Shale oil is conventional oil trapped in shale deposits. Oil shale is something different and an emerging alternative hydrocarbon.

Oil shale

Oil shale is a sedimentary rock that contains significant amounts of kerogen. Kerogen is not oil, but rather a mixture of organic compounds which release crude oil or natural gas when heated.

Sourcey

Both shale gas and oil shale are thought to be source rocks. These are the beginning of the process that has so far generated the conventional oil and gas reserves. These reserves are therefore immature and this is perhaps the reason why the hydrocarbons are harder to extract. As an aside, whilst BRAVE Partners sees the extraction of alternative hydrocarbons as necessary to provide the energy needs of the world today, this activity does really look like it is plundering the future. The need to extract alternative hydrocarbons does highlight the urgent need to find alternative sources of energy in general.

Alternative hydrocarbons are necessary to feed the global energy demand. However, there is a real air of raiding the future. Mankind must not rely on these as they once did on conventional oil and gas. The search for sustainable energy must go on.

Shale extraction

It is this difficulty in extraction that has kept shale oil in the shade. Some of the majors experiment with technology around the Piceance Basin in Colorado. Shell has an in-situ facility. As extracting oil shale requires temperatures of up to 930 degrees Fahrenheit it is a costly and potentially polluting process. However, that said, there are a number of technologies that are being developed to tackle the issue. Wikipedia provides a good overview (see: http://en.wikipedia.org/wiki/Shale_oil_extraction).

Expectation

The UK, Alternative Investment Market (AIM) now displays the most telling sign that oil shale extraction technologies are coming of age and the process will be economically viable in the foreseeable future.

The drum beat

TomCo Energy plc is a UK listed company that owns oil shale leases in Utah, USA. From a share issue price of 1p, literally a penny stock, the price began to rally in October, 2011 and peaked at over 3p a

share. As with all penny stocks this is a highly volatile and speculative play. However, as almost a pure play on oil shale reserves, it is an extremely useful benchmark for valuing in ground oil shale reserves.

The sharp rally in the share price was driven by the announcement that Red Leaf Resources, Inc. that it was close to securing funding for a full scale test of its EcoShale technology to extract oil from shale. Whilst not there yet, the market seems to have revalued oil shale assets on the assumption that the technology and oil price will be favourable for profitable extraction within the foreseeable future.

One trick pony

The revaluation of oil shale is not a bet on a single technology either. In addition to the technologies mentioned in Wikipedia, a little digging on the internet will find Blue Ensign Technologies in Australia which is also developing a process for extracting hydrocarbons from oil shale. The momentum would seem to be behind these assets.

BRAVE Partners adopted the phrase “alternative energy” early on. The firm has focused on this idea and continues to be highly successful in working with companies and investors in the sector.

The Thrilla from Cuadrilla is therefore not the earthquakes – but more the concept of alternative hydrocarbons.

Alternative energy

So, BRAVE Partners, as is often the case, seems to have been a little ahead of the times by embracing alternative energy, rather than purely renewable energy. Renewable energy must be developed. No matter how large the finds of alternative hydrocarbons, the world’s supplies are finite. Moreover the impact of carbon dioxide emissions on the world is reasonably universally accepted. As one speaker that BRAVE Partners saw recently described it (rather well), the impact of carbon dioxide is the entropy cost of the world’s energy use. However, mankind has not yet developed a viable method of reliably producing the power that it needs in the mid-term. Alternative hydrocarbons will be essential to this. BRAVE Partners is assisting with funding the development of all these new, alternative sources of energy.

BRAVE Partners services

BRAVE Partners is successfully advising and raising financing for a range of energy and clean tech projects around the world. The firm is currently mandated on the following:

- Raising finance for a management team to buy and develop a biomass power station in Wales.
- Raising finance for the Australian owner of an oil shale asset to develop a technology to extract it.
- Raising finance for a management team in America to build a test plant to convert municipal solid waste into carbon black and oils.
- Raising finance for a German entrepreneur to develop a plastics recycling and pyrolysis business.

The partners are expected to agree more mandates in the short term.

BRAVE Partners has a strong technical knowledge that enables the firm to identify winning businesses and technologies. The firm has developed a strong investor network with an appetite for alternative energy businesses. This combination allows BRAVE Partners to assist the management of a alternative energy business develop and present an investable business plan and obtain the financing required by their business.

Interaction

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If you would like to comment on the content of this piece, then please send an E-Mail to discussions@bravepartners.com

- BRAVE Partners is a boutique investment bank with specific expertise in the alternative energy sector.
- The firm adopted the notion of alternative energy early on; being anything – including renewable – that is not main stream oil and gas.
- BRAVE Partners LLP has established itself as a leading advisor in the alternative energy sector.
- BRAVE Partners can:
 - Advise on investments in energy projects and assets.
 - Advise management teams on developing investable business plans and find investment for projects.
 - The firm has experience across a number of geographies and technologies.
- BRAVE Partners has:
 - A track record in successfully sourcing investment for energy projects.
 - Recently obtained an offer of over £60m of funds for UK generation capacity.

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