

# Alternative energy finance: The New Order describes the State of the Nation

---

On January 25<sup>th</sup>, President Obama gave the annual State of the Union address. Energy policy featured highly in this address with Obama mapping out an all-of-the-above energy policy. BRAVE Partners looks to make some sense as to what all-of-the-above is, especially as some of it is definitely below [ground].

FEBRUARY 3, 2012

## Follow the solar stocks

Solar stocks pretty much summed up the nation's reaction to Obama's speech as they gyrated through the days ahead, but ended on an up note.

The United States still seems to grapple with their energy policy. The country is a vast consumer of energy. Whilst it is not the highest energy user per capita (that honour probably falls to a country like Iceland where simply keeping warm is quite energy intensive), it is the highest energy user per capital of countries with a significant population. So far this energy need has been fed by imported oil, but this is proving unsustainable for two reasons.

America has not just had to import a lot of oil, its desire for cheap oil has left the feeling of exploitation within many of the populations of many of the countries that sell oil to the USA – making the country somewhat unpopular in these critical locations.

Energy independence is heading up the political agenda in the USA rapidly.

Firstly, oil is starting to run out and there is more competition for the resource from the developing economies of China, India, etc... Secondly, the USA has not ingratiated itself with the populations of many oil producing countries. The USA has perhaps been more concerned with supporting regimes that will ensure the delivery of oil to the USA, rather than those that will benefit their people. The end result has been more competition for less oil, produced by countries that tend to look upon the USA unfavourably – and an increasing trend in this direction. Interestingly, Japan, which has no

domestic oil, has maintained good relations with all of the oil producing nations.

## Energy tops the policy agenda

Energy began to hit the policy agenda in the run up to the 2008 Presidential elections. Even through and through oil-man T. Boone Pickens came out with the Pickens Plan. The Pickens Plan commenced with a significant investment in wind energy in the middle of the American continent, which was dubbed "the

Saudi Arabia of wind". However, this plan was progressively replaced by a shale gas plan. The shift in the Pickens Plan was possibly driven by two factors. The mid-west is ideal for wind power generation, but most of the population is on the coasts. The problem of transmission is huge in the USA. It is simply difficult and expensive to get power generated in the middle of the USA to the population centres on the coasts. One thing that BRAVE Partners has recently learned is that US electricity bills include two line items – one for the actual electricity consumed; the other for the transmission costs of delivering that power. Generally the transmission costs are double the cost of the power itself. The second factor driving the change in the Pickens Plan seems to be the success of Aubrey McClendon and his company Chesapeake Energy in exploiting shale gas.

## Jumpin' Jack Flash

The success of shale gas in the USA has driven the price of natural gas to very low levels. On the face of it, the shale gas is being sold at non-economic levels, but in practice a lot of liquids, and even oil, are extracted with the methane, which changes the economics substantially. As BRAVE Partners has previously commented, the USA does not have significant infrastructure for the use of natural gas as a fuel. Whilst that will change over time, the current situation is that there is significantly more supply than demand.

## It's a gas, gas, gas

Natural gas is clearly going to form an important part of the USA's energy future. The main issue that it faces in the short term is how to exploit it while the infrastructure that it requires is being built. Some of the most interesting ideas in this field are technologies that efficiently convert methane gas into methanol, a liquid. Methanol products continue to command high prices.

Other uses are emerging rapidly. A recent deal to power a truck fleet on LNG, saving around \$1.25 per gallon on their current fuel costs, is a great example. BRAVE Partners believes that it will not be long before the USA develops a number of uses and markets for natural gas and gas prices there start to head higher.

In the USA, natural gas is pricing something like ice would price in Iceland. BRAVE Partners believes that this will soon reverse. US gas prices are significantly below those almost anywhere else making export as LNG attractive. Moreover, the USA itself is developing more uses for the resource all the time. Above all, the USA is still not self sufficient.

## Out of gas

Whilst natural gas looks to be the answer to the USA's energy needs for the foreseeable future, it should look over to the UK for a warning. The UK was self sufficient in natural gas. Much of the UK's domestic heating and cooking switched over to natural gas following the oil shocks in the 1970s. More recently sufficient volumes of power generation in the UK switched to natural gas as coal mining diminished and concerns about sulphur and CO<sub>2</sub> emissions rose.

Over recent years, the UK has become "out of gas" – well not out of gas, but not self sufficient in gas. This makes the marginal pricing of gas in the UK market dependent on the pricing from Norway and

Russia. This gas is priced with oil, rather than supply and demand in its own market, so it has become increasingly expensive even with the significant supply of gas in the USA.

Even with the huge shale gas finds, the USA is still not self sufficient in gas.

## All of the above

This lack of self sufficiency in gas, together with a limited lifespan for production means that President Obama's "all-of-the-above" approach to energy is clearly required. But it is easy to be bold in rhetoric – it is much harder to determine what of the above will deliver the required energy in sufficient volumes to the places that it is needed.

## Solar's day in the sun

Solar power is starting to look promising in the sunnier south of the USA. Rising panel efficiencies and falling prices mean that today about 10% to 20% of the population live in areas where domestic solar is economically viable without any form of subsidy. This is particularly true where transmission costs are significant.

## The windy day

Onshore wind power does have a significant place in US energy in the future. The biggest issue is that the best location, the mid-west, is also one of the most sparsely populated. The biggest question of wind power in the USA is whether the energy intensive industries will eventually move to what could potentially be a significant cheap and sustainable power source for them.

## Biomass

Biomass is a growing business in the USA, but really for export. The US domestic biomass market is really a bagged product for domestic use. The pricing is highly dependent on the weather and with 2011 to 2012 being a warm winter, pricing is low. The export markets remain reasonably buoyant. The European adherence to CO<sub>2</sub> reduction targets is bringing biomass firmly onto the agenda as a source of power generation in Europe. Demand is strong and with a lack of forests, import for the US East Coast is going to grow.

## Some of the above

"All-of-the-above" is bold rhetoric. Clearly not all of the above will work. The size of the USA does give it some advantages over smaller countries, such as the UK. The different climates and environments mean

that some technologies will work well in some places. The UK is not well suited to solar where substantial, but falling, subsidies are still doled out for domestic solar installations. When investing in energy in the USA, the focus has to be on what works and where.

Obama's bold "all-of-the-above" strategy in cold commercial terms needs to be "some of the above – in the right places"

## BRAVE Partners services

BRAVE Partners is successfully advising and raising financing for a range of energy and clean tech projects around the world. Mandates include:

- 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

If you enjoyed this commentary and would like to receive a weekly update by E-Mail, then please contact BRAVE Partners on [commentary@bravepartners.com](mailto:commentary@bravepartners.com)

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

[enquiries@bravepartners.com](mailto:enquiries@bravepartners.com)

[www.bravepartners.com](http://www.bravepartners.com)

OFFICE: +44 844 997 0271