

Interview Vivienne Cox, ceo BP Alternative Energy

A time for choices

The economic downturn is sharpening the focus of clean energy investment, says Vivienne Cox, the head of BP's Alternative Energy business. Cox detects an increasingly business-like approach that the industry is taking towards new investment. 'It is a time for choices.'

| by Alex Forbes

Of the major oil and gas companies, BP was an early mover in promoting and pursuing the business of clean energy, although the company has not been immune to environmental controversy. Its "Beyond Petroleum" re-branding of 2000 may have been overstating the case – and a little ahead of its time. However, the decision to appoint an executive of the calibre of Vivienne Cox to establish and lead a fully fledged Alternative Energy subsidiary in 2005 underlined BP's commitment to this new business area. Last year's decision to increase annual investment in clean energy to \$1.5 billion further emphasised this commitment. In this exclusive interview, Cox, widely regarded as one of the most powerful women in the energy business, speaks of her vision of how the clean energy industry is developing and BP's strategy within it.

When you spoke at this summit last year, clean energy had been through several years of massive percentage increases in investment. But growth fell to just 5% last year. How has the business changed? And how has BP's strategy evolved?

There are still a lot of people wanting to invest in this sector, and there is still a lot of opportunity, but it has become more focused and more business-like. Some of the froth has gone out of it. A year ago people were very excited by the possibilities and prepared to invest in a lot of things which didn't generate short and medium term returns. So if there was a bubble, I think it's burst. What is now paramount in people's minds is the need to come up with business propositions that make money – that look attractive in the short, medium and long term. What BP has done reflects that. In the context of a limited pot of capital – which needs to be flexed with the oil price – we've

chosen to focus our alternative energy investments. A year ago we were looking at a wide range of different technologies, trying to assess which ones were going to be the winners. We can't afford to keep scanning that horizon, so we've had to make choices.

What choices have you made? And why?

We've chosen those technologies that are most competitive in the short term for big investments: biofuels, wind and solar. Increasingly, money will be invested in carbon capture and storage (CCS), particularly the Hydrogen Energy power plant we're involved in here in Abu Dhabi. We're still investing some money in longer term projects, such as \$500m over a ten-year period in the Energy Biosciences Institute (EBI). We also have some investment in our venturing group, which makes equity investments in new start-ups. That's a way of getting access to what's going on, seeing what's happening in technology, and potentially getting access to some of the intellectual property. So – we're much more focused in terms of where the dollars go and trying to keep some of the longer term options open.

The backdrop to alternative energy has changed. Oil prices are lower and we have the economic downturn. To what do you attribute the relatively low rate of investment growth in clean energy last year?

It's largely connected with the economic downturn. It's because so many of these projects can't be debt-funded. A lot of the wind projects in the US have just stopped because there isn't any project financing available. A lot of the start-ups can't get funding. It is as much as anything about the availability of cash.



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Photo: BP p.l.c.

Some people are saying that with oil prices as low as they are, who cares about renewables. What's your answer to that?

There is a fundamental driver behind this business which is society's need to resolve the issues around climate change. The fact that so many people have come to Abu Dhabi for this summit is testament to the fact that there are still a lot of people who believe it's both necessary and that there are business opportunities associated with this space. This is something that the world needs to take seriously. There is a need for alternative energies and I believe that they can be cost-competitive in the very near term – in the next three to five years.

You've said that there is still a lot of uncertainty out there, referring specifically to the business community. What will it take to push climate change concerns up the list of business priorities?

Extraordinarily, in the business world there is still hesitation about climate change. I'll give you one example. There were thousands of executives that took part in PricewaterhouseCoopers' global CEO survey last year. When asked what their list of priorities was, they didn't put climate change as number one – perhaps understandably – or number two or number three. It was number ten on the list of things they were concerned about. The lack of urgency in that survey

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contrasts markedly with the findings of the Intergovernmental Panel on Climate Change, which indicate that emissions must be cut rapidly. What would make the most difference would be real clarity around governments' positions – having a clear price for carbon, and some certainty over the long-term mechanisms for that price delivery. The European Emissions Trading Scheme (ETS) is all very well but it doesn't go far enough. It stops in 2012 and that's no good for anybody to make a business decision. We need to know that carbon will be priced. We need to know whether that's going to be through taxes or through trading systems. And we need to know what the long-term structure is going to be. That will encourage business to make investment.

How might that price be established in a global sense?

It will take time for it to happen globally. But I'd take regional price systems. We already live with different taxation and regulation and so on in different parts of the world. It's not ideal but you could accept that as a business. Provided you know what the US is going to do for the next 20 years, you can decide whether you're going to invest in the US. The reason that the price of carbon should be global is because climate change is a global problem. We need a mechanism to transfer funds from

the developed world to the developing world, and that's what a global price of carbon would be.

You mentioned the Hydrogen Energy plant that your business is involved in here in Abu Dhabi. Where you are with that and what will the next steps be?

We're doing the project through a company called Hydrogen Energy, which is a 50:50 joint venture between ourselves and Rio Tinto, and we are partnered with Masdar. It's a big and complicated project, commercially as well as technically. Our part of it is a 420 MW hydrogen power plant. We'll put gas in, separate the gas through a reforming reaction into hydrogen and CO₂, and the CO₂ will then be captured and available for storage. The CO₂ will be taken by the Abu Dhabi National Oil Company (ADNOC) and used initially for enhanced oil recovery (EOR) and eventually for storage. The combination of the power plant and the storage is likely to be one of the first CCS plants operational around the world and therefore could act as an important demonstration of the technology at scale. The component pieces of the technology have been proven in other industries, but nobody has yet put them together at scale. It's going pretty well. We expect the front-end engineering and design (FEED) to be completed in the second quarter of 2009. That's being done by Foster Wheeler. The structure for the deal is becoming clearer. We currently think that the project will be commissioned in the early part of 2013. Last year we were saying the end of 2012 – so it's slipped a few months, but nothing too concerning.

When would you hope to reach final investment decision (FID) to meet that start-up date?

Sometime during 2009. Hopefully, the end of the second quarter.

And have you any idea of what kind of investment will be required?

That's not something we wish to talk about at this stage – a hostage to fortune.

BP is one of the pioneers of CCS, in Algeria, with this project in Abu Dhabi, and with others. But many people remain sceptical about CCS. How do you convince the sceptics that CCS is a realistic part of the answer to mitigating climate change?

First of all I'd point to the fact that a lot of what's needed has already been done. EOR has been around for 30 years. To begin with, we'll capture the CO₂ and use it for EOR. That helps the economics and there's a lot of need for CO₂ around the world for EOR. We also know about CO₂ storage. It's been done in the US for a considerable period of time. We know how to build models of reservoirs. We know how to model the movement of hydrocarbons or CO₂ through those reservoirs. And we can monitor to see whether it's happening the way we expect it to happen. So this is something that technically is not that difficult. The issue is that it will only happen if people believe that climate change is a real problem, because it doesn't create energy. You have to be paid to take this stuff out of the environment and store it.

Renewables, with the best will in the world, will not solve the problem. They account for 3% of energy at the moment, and that includes 65% hydro, plus all the wood that's burnt in the world. I don't know what the actual alternative energy piece is of it but it must be 1.25-1.5%. So even if this industry grows fivefold, which would be extraordinary, it's still not going to solve the problem.

At some point – and I can't predict when that will be – society will realise that this is something that has to be resolved, at which point CCS becomes very important.

A year ago CCS looked very difficult, except somewhere like Abu Dhabi where a very particular set of conditions make it worthwhile. If you'd asked me last year would this be universal in the next ten years, I would have had to say, "um, very tricky". But there has been huge movement by governments in the last 12 months – in the EU, in Australia, in Alberta, in the US. Governments are really stepping up to the plate on this. They're falling over themselves to find projects to invest in.

There's an interesting parallel between Abu Dhabi, an oil-and-gas-rich state taking a leadership position on clean energy, and BP, the early mover of the oil companies in alternative energy. How important is your business within the context of BP?

We have had a solar business for 30 years, so we have been in alternative energy for some time. But in 2005 we said "alternative energy is worth making into a business in its own right and allocating a pot of long-term capital associated with its growth". When we launched Alternative Energy inside BP we said that we would invest \$8 billion over 10 years. We've pretty much stuck with that. The source of the funding is the source of all funding in BP, which is a mixture of debt and equity, and comes through the normal BP capital allocation process. Which means the alternative energy investments have to compete with other investments in BP's portfolio.

We are still predominantly an oil and gas company. Our DNA is oil and gas. I'm always very conscious that I have to compete for capital against those traditional businesses. I have to demonstrate that there is a business case that makes sense – that I'm not wasting shareholders' money. I'm really pleased that up until now we've been able to do that. And the

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more of a track record I can demonstrate, the easier it gets when we bring forward the next investment. By the end of last year we had more than a gigawatt of onshore wind capacity operational. We've managed the safety risks, we've managed the construction risks. That gives credibility to the business.

How big is BP's alternative energy business as a proportion of the whole group?

It's less than 10%. But what's interesting is that it really engages people inside BP. The staff are very keen for us to be seen to be playing in the renewables space. We gained some benefit because we took a first-mover position and we have to make sure now that we follow that with good business. We can't do this for charitable reasons. But I'm confident we can build a good business around this and so I ask for no special treatment. I don't do it on the basis of saving the planet; I do it on the basis of "here's a good business opportunity". If everybody does that, the industry will prosper. ■

Who is Vivienne Cox?

Vivienne Cox, Executive Vice President at BP, leads the group's activities in clean energy, which include solar, wind power, biofuels, hydrogen energy and natural gas-fired power generation. In 2005 she led the creation of BP Alternative Energy, of which she is Chief Executive. It aims to become a major low-carbon power producer and wholesaler by 2015. In 2008 BP expanded Alternative Energy to incorporate a broader range of renewable and alternative energy activities and doubled its annual investment rate to \$1.5 billion. A graduate of Oxford and INSEAD, Cox is also a non-executive board director of Rio Tinto and Climate Change Capital. In 2006 she won the Veuve Clicquot Business Woman of the Year award. She is married with two daughters.



Photo: Alex Forbes