

## BUSINESS

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Paint it green: John Browne has gone to great lengths to establish BP's environmental credentials.

## More than just hot air?

With the launch of an alternative-energy division, BP is taking steps to show that it is serious about 'clean' technology. Emma Marris reports.

Back in 2001, BP shrugged off its full name of British Petroleum and began suggesting in its adverts that, if anything, the two letters stood for 'beyond petroleum'. Since then, the world's second-largest oil company has been working hard to promote itself as greener than its competitors.

Now it has channelled its efforts into a newly minted division: BP Alternative Energy. With 2,500 employees, this unit faces the task of rapidly expanding BP's clean-energy business. It will develop and sell technology that makes more efficient use of fossil fuels, as well as equipment for producing energy from renewable sources. In addition, the unit will use its technologies to run its own power plants.

BP says that in the run up to 2008 it will invest US\$600 million a year in the new unit, with more to come thereafter. It expects the division to generate revenues of \$6 billion a year by 2015.

"Our aim is to become the leading player in alternative energy," says John Browne, the BP veteran who has sought to cultivate the company's green image since he became chief executive in 1998. "We aim to grow the business five- or tenfold, and to establish it as a significant contributor to the restoration of energy security here in the United States and across the world," he told the Brookings Institution in Washington DC on 29 November 2005.

The strategy contrasts sharply with that

of BP's arch-rival, Texas-based ExxonMobil, whose fierce opposition to mandatory cuts in carbon emissions has riled environmental groups.

Yet not all those groups are fully convinced by BP's latest pronouncements on alternative energy. Rob Bradley, an energy specialist at the World Resources Institute, an environmental group in Washington DC, says that the investment is small compared with the company's massive annual profits. BP, he notes, is spending almost as much on advertising to build its green public image as it is ploughing into the new division. "They are never guilty of underselling what they are doing," he says.

The new division will be led by Steve Westwell, who previously ran BP's successful solar unit. One of its top priorities will be to find ways to cut carbon emissions from natural-gas power stations.

BP plans to road-test these technologies at a \$600-million plant in Peterhead, Scotland. Here, natural gas will be mixed with steam over a catalyst to produce hydrogen and, after another process, carbon dioxide. Burning the hydrogen will generate 350 megawatts of electricity, while the CO<sub>2</sub> will be pumped underground to flush out remaining oil from natural reservoirs under the North Sea.

So far, schemes such as this work only on paper. A decision about whether to move ahead

will be made at the end of 2006. Renewables specialists are watching with interest. "It is a complex new technology that has certainly not been proven at a commercial scale," says Doug Arent, a strategist at the US National Renewable Energy Laboratory in Golden, Colorado.

For these plants to be commercially viable, it would have to be cheaper for power companies to use them and sequester carbon underground rather than simply to emit carbon by burning raw natural gas. The US Department of Energy estimates that it costs \$150 a tonne to sequester carbon with current technologies; on Europe's young emissions trading markets, firms can buy the right to emit a tonne of carbon for about \$25 (see *Nature* 438, 1077; 2005).

BP and other advocates of sequestration say that in time it will become cheaper to store carbon underground and more expensive to emit it. "I think they will make money ultimately, because I think the policy framework that rewards this will be developed," says Michael Liebreich, chief executive of New Energy Finance, a London consultancy that specializes in alternative energy sources.

BP's new division also incorporates its existing renewable-energy businesses, including the unit that makes solar panels. This holds about 10% of the fast-growing global market for such panels; last year, it generated revenues of more than \$400 million and turned in its first profit.

In addition, the company plans to erect and run more wind turbines. It already has two small wind farms in the Netherlands, and wants to build some larger ones in the United States, the first of which would generate about 200 megawatts of electricity.

The division also includes the oil company's combined-cycle gas-turbine business, which makes more efficient use of conventional gas turbines to provide heating for industrial or domestic use as well as to generate electricity. Not everyone would see that as alternative energy, but BP says it is just being practical.

"Our inclusion of it here is a pragmatic acceptance of the need for a mix of strategies," explains David Nicholas, a spokesman for BP.

**"BP is never guilty of underselling what it is doing." — Rob Bradley**

"We are trying to set this up as a business that will actually generate money and returns. It's kind of a hedge mix."

Markets reacted without any great enthusiasm to the launch of the unit: on the day of the announcement in late November, BP's stock slipped by 2.5%. And the scale of the move doesn't amount to much compared with the firm's 2004 profits of about \$15 billion.

"It's an investment," says Arent, "but they are not betting the company on it. I see it as the next step in their evolution from being an oil company to being an energy company." ■