

More than just a ripple

Ocean Power Technologies sets its sights high

Although in its early stages of growth, Ocean Power Technologies, Inc. (OPT), a leading offshore wave power technology developer, has set itself some ambitious plans for the future as Alice Hohler found out when she interviewed Mark Draper, CEO of OPT Ltd (OPT Inc's European subsidiary).

Wave power may be a relatively new source of renewable energy, but Mark Draper, chief executive of Ocean Power Technologies Ltd, is not afraid to think big. "We're aiming to build a £1bn company," he says of OPT Inc, the first publicly quoted wave power company in the world (and parent of European arm OPT Ltd) which floated on AIM in October 2003, and is currently valued at around £40m. Before joining OPT in October 2004, Draper spent twenty years with UK energy giant Powergen, most recently as managing director of its 9,000MW generation business.

Wind comparisons

Draper's confidence is based on his view that wave power is now where wind was in the early 1990s. Over the past fifteen years, wind-generated power globally has increased from less than 100MW to over 50,000MW. On the back of this, Danish turbine maker Vestas Wind Systems has grown from modest beginnings to a market cap of Euro2.5bn today. And like OPT, whose core technology is highly scalable, Vestas started out with small units - just 55kW in the 1980s - and is now developing a massive 4.5MW turbine. "If you look at where wind is today, wave power is moving faster and the overall climate for renewables is significantly better than when wind was first established. It has taken the wind industry fifteen years to grow to the size it is today, and we're aiming to make the same growth in wave power, but to do it a lot faster," explains Draper. The fact that someone of Draper's calibre and corporate conventionality is putting his weight behind a new RE

company should reassure sceptics who doubt wave power's potential. Draper thoroughly enjoyed his time at Powergen, but felt he had reached a 'half-term' point in his career. "In big companies you get increasingly removed from man management. I don't get satisfaction from answering 80 emails a day," explains Draper, for whom a good day's work consists of "spending time on whatever is important to get the company going, not feeding its internal machinery". But there is no doubt



Mark Draper, CEO of Ocean Power Technologies Ltd

that Draper was also fundamentally attracted by wave power itself.

"Renewable energy is a field where you can really make a difference, and OPT was too good an opportunity to miss," he says. OPT is not Draper's first foray into RE. Powergen, like its peers, has been working to diversify away from traditional energy sources for some time, and as CEO of its generation business, Draper sponsored the construction of a

60MW offshore wind farm, still the UK's largest. However, wind power did not tempt him. He sees it as a mature technology and is sceptical about its future off-shore growth prospects, for both commercial and political reasons. Wave power, on the other hand, is a new technology. It is a "denser" energy than wind, meaning it takes up less space: a 10MW OPT power station could eventually only occupy approximately four acres of ocean space. It has the added advantage of being usable in a wider range of locations, including mid-ocean - unlike offshore wind generators, which need to be securely anchored to the seabed. The UK, with its extensive and often wave-beaten coastline, is particularly well suited to wave generation, as are other European countries with west-facing coastlines such as Spain, France, Portugal, Ireland and Norway. Wave power is also potentially one of the cheapest forms of RE. The total operating cost of generating power from an OPT wave power station is projected to be only 4-6p/kWh for 100MW once the industry reaches a comparable scale to wind today.

The technology

OPT's core technology is the PowerBuoy® [TM], which uses a 'smart' ocean-going buoy to capture wave energy and convert it into a controlled mechanical force which drives an electrical generator. The rising and falling of waves offshore causes the buoy to move freely up and down, and the resultant mechanical stroking drives the generator. The generated AC power is converted into high voltage DC and is transmitted ashore via an underwater power cable. There is minimal disruption to shipping, and marine life seems to actively thrive on the buoys, adopting the anchoring systems as artificial reefs. For the time being, though, wave technology is at the springboard stage. OPT tested its prototypes with the US Navy and currently

has two 40kW buoys in the Pacific and the Atlantic - accounting for at least half the wave devices in the water worldwide. Its larger 150kW buoy is now at the final design stage, and OPT has three commercial projects in the pipeline: a landmark contract for a 1.25MW wave farm in partnership with Spanish utility Iberdrola; an agreement with Total and Iberdrola for a wave farm in France; and the planned construction of a 5MW wave demonstration plant in the UK.

First steps

However, with total assets of just \$42m, annual revenues of \$5m and a small bottom-line loss, there is a long road to be travelled from here to OPT's £1bn target. Draper is fully aware of the scale of the task ahead. "We're still at the 'proven prototype' stage. It is early days, but we are breaking technical barriers every day. We are in a long-term business chasing a global challenge - you can't solve all the problems overnight," he acknowledges. Over the past year, Draper, who has an MA in Electrical and Mechanical Engineering from Cambridge University, has expanded OPT's European operations from his laptop and his dining room table to six people in an office in land-locked Warwick - renowned, observes Draper wryly, for "its rugged coastline and benign wave climate".

Last October, Paul Jordan joined as business development manager, from a background in Rolls-Royce Power Ventures and the Carbon Trust, where he ran a programme called the Marine Energy Challenge investigating how wave energy can become cost competitive. An experienced engineering manager with significant renewable experience in one of the UK's major engineering firms is due to start in February.

Since joining Ocean Power Technologies last autumn, Draper has also been busy meeting investors with George Taylor, OPT's founder and CEO. Raising OPT's profile in Europe, which will be a key market for the company, is a significant part of Draper's remit, although primary investor relations contact will remain in the hands of Taylor and OPT's CFO, Chuck Dunleavy.

RE: No dotcom bubble

Reassuring and educating investors is of critical importance if the RE sector is to blossom. In the aftermath of the dotcom bubble, talk of emerging technology and far-off profits inevitably sets off alarm bells amongst once-bitten investors. The RE sector, which is technology-driven, relatively early-stage and whose quoted members are highly concentrated on one small stockmarket - AIM (think of the role of Nasdaq or the Nouveau Marché in the dotcom boom) - shares many of the dotcom sector's features. Not surprisingly, Draper argues that the RE sector is different. Firstly, it is underpinned by political support. Governments around the world are determined to reduce their countries' reliance on fossil fuel generated power, and continue to put in place incentive and penalty schemes to ensure this happens. Secondly, renewable energy has strong practical foundations, being inextricably linked with the long-established and fundamentally important power industry, and has the advantage of dealing in tangibles.



OPT's PowerBuoy (TM) which captures energy from the rising and falling of waves

"It's not just a case of 'I've got a great idea' - we bring them pictures of the hardware installed in real conditions. That gives people confidence," says Draper. As should be the fact that OPT is now self-funding. The proceeds from its IPO are still in the bank, and product development is being covered by contract income. With a small net loss in 2004/05 (albeit helped by interest income and forex gains), analysts

expect OPT to reach breakeven in 2007/08, although Draper encourages investors not to focus on short-term profitability, but on the longer-term prize.

However, OPT's long-term potential is not always evident in its share price. Apart from a couple of upward spikes following Draper's appointment and an investor roadshow, it has remained well below its 125p IPO price, and is currently hovering at around 80p. "It will be a mark of success when we get back to parity. I can't think of anything more depressing than doing your best and finding that it is not reflected in your share price. It's a very tangible if sometimes unfair measure of success," says Draper, who admits that he now checks OPT's share price far less frequently than he did when he first started. OPT's languishing share price is partly because the company is perceived as a high risk investment, in spite of its potential and growing credibility. But it is also because OPT's profile is not as high as Draper would like it to be, so good news such as the Iberdrola and Total contracts and key appointments isn't always recognised. Consequently, increasing OPT's visibility is another of Draper's priorities, and he is heartened by the growing number of invitations for him to speak at conferences and to get involved in joint venture funding, steering groups, university programmes and lobbying.

Supertankers & speedboats

It's all a far cry from Draper's big corporate days at Powergen. "The past year's been very hands-on; I've been involved in everything - technology, dealing with customers and recruitment. It is refreshing, but you need a lot of energy, self-belief and confidence," he says. In an appropriately marine metaphor, Draper likens his current role to driving a small boat. "In a big company, you're only on the bridge of a supertanker - it's steady as she goes. Everything runs pretty smoothly and you hardly feel the swell. But being in a small company is like being on a speedboat with a waterskier behind; trying to keep both going is much more exhilarating, if sometimes a bit bumpier."

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