



# Renewables – the prospects look bright

Carpathia  
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**A**s the Federal Government's response to the challenges of climate change increasingly focuses on renewable energy targets, investors may be wondering at the investment merits of emerging renewable technologies.

A decade of outstanding growth is forecast for the renewable energy sector if Government follows through on recently announced commitments to increase the proportion of electricity derived from renewable sources by 2020 (to 20 per cent from less than 5 per cent now), and to improve the viability of the sector through an increase in the premium above the price of electricity generated from fossil fuels that can be achieved by companies generating renewable energy.

The eventual introduction of an Emissions Trading Scheme would further improve the competitive position of renewable energy by placing an impost on the cost of electricity generated from fossil fuels. Passage of these reforms into law will prompt a stampede to develop all viable wind, biomass and hydro projects. These are proven technologies that have a well-understood cost structure and low risk profile. Capital will become available from infrastructure investors as the viability of these projects will be virtually assured.

However, the proposed Renewable Energy Target (RET) of 20 per cent provides ample opportunity for new technologies as well as the tried and tested. There are insufficient traditional renewable projects available to achieve the RET from traditional renewable sources alone.

The challenge for investors interested in emerging renewable technologies is to identify likely winners in a sector that includes more than 15 listed companies focused on areas such as geothermal, solar and wave energy. Of these companies, only three have a market capitalisation above \$100 million and none has conclusively proved a capacity for commercial electricity supply at a price competitive with wind, the leading source of renewable energy.

Uncertainty as to whether a technology will work in the real world as well as it does in the research lab is the initial risk. The recent experience of Geodynamic, Australia's

largest geothermal company, highlights that even the best planned projects are not risk-free. An incident occurred in a geothermal well last month that saw steam and water flow to the surface in an uncontrolled fashion early in the "commercial demonstration" phase. The impact of this incident on Geodynamic's plans to harness the geothermal potential of the Cooper Basin is not yet understood.

The capital required to commercialise a new technology and the time frames to profitability also present a challenge for investors in these small companies. Renewable energy businesses invariably have a huge capital requirement – a commercial pilot plant for a technology such as geothermal or wave energy can cost as much as \$250 million.

Carnegie Corp, a wave energy company which has demonstrated its highly promising CETO technology off the coast of Fremantle since 2005, is taking an innovative approach to managing the capital challenge. With a market capitalisation of \$120 million, Carnegie believes that the dilution required to fund even a 50MW commercial demonstration plant would be unpalatable for existing investors. Therefore, the company is preferring to raise project-specific equity and debt financing for each project undertaken. For a proposed commercial demonstration project Carnegie is working with Investec, an investment bank with renewable energy expertise. Raising capital for the commercial demonstration project may not be easy in skittish equity markets, but successful execution of the project will most likely result in funding being more straightforward in the future.

Carnegie will seek an equity position in each project commensurate with the technology and skills that it contributes. If the economics of the project stack up, a 20 per cent interest in the project may be negotiated.

For a 100MW project coming into production in 2015, Carnegie's indicative modelling suggests that post-tax cash flows of about \$10 million a year would accrue to a 20 per cent investor. Interestingly, this modelling relies on Carnegie achieving a premium to the current price of wind energy – an assumption that the company justifies on the basis that wave energy is more consistently available than wind, a feature highly attractive to potential customers.

Applying a 10x PE multiple to Carnegie in 2015 implies that each 100MW facility that the company constructs by that date would



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give rise to \$100 million of market capitalisation in 2015. These metrics suggest that Carnegie would need to have four 100MW plants in operation by 2015 for a dollar invested today to be worth more than \$3 in six years' time – a reasonable objective for an investor in the current market.

Thus far, Carnegie has publicly identified five sites on the coast of Western Australia, South Australia and Victoria as having high potential for its technology, but the time frame for development has not been disclosed. International markets with favourable wave, population location and energy pricing characteristics – such as Chile – may also provide opportunities.

Carpathia is wary of placing a buy recom-

mendation on any stock until valuation is possible using techniques based around a multiple of current earnings. No matter how promising a technology, until that point is reached there is too much scope for share price volatility.

Nevertheless, the underlying drivers for renewable energy technology are as strong as for any sector, and will remain in place for so long as climate change remains a concern. These characteristics justify close attention as milestones are achieved and future prospects become more certain.

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