

# New and emerging clean technology funds

Angus Dennis, Senior Investment Specialist Sustainable Alpha and RIL, AMP Capital Investors Limited

## 1. Trends in the emergence of new funds

Investment in the clean technology space differs across key investment strategies and financing type, as illustrated below.

Private equity represents a relatively small component of all investment in the clean technology space, and pure clean technology private equity funds investments an even smaller allocation. As it stands private equity makes up less than 20% of capital allocated to the clean tech theme, with over 70% of capital going towards renewable power infrastructure.

Then within the private equity space the investment may be via a range of entities, with only a proportion by specialist clean tech private equity vehicles. Increasingly generalist private equity firms are involved in the space, with clean technology investment growing from under 1% to nearly 15% of global venture capital in the last decade. Traditional venture capital firms are simply finding there are not enough software companies to prop up their traditional model.

Data released for 2009 is supportive of this thesis with about a quarter of all global venture investment capital invested in clean technology in 2009, more than any other category - including software and biotech. Further, while the absolute level of clean technology investment (at \$5.6 billion) declined in 2009, it only retraced to 2007 levels. In contrast the broader private equity market fell to 2003 levels .

It should be noted though that the skill set for clean technology can involve differing expertise in power, utilities, resources and operations which is distinct from traditional IT. This specific expertise is providing a pathway for specialist providers and has also meant a need to extend the skills of traditional venture firms.

Clean technology funds are increasingly being considered by investors worldwide. These funds provide specialist access to companies involved with technology, which is benefitting from strong environmental growth drivers linked to government, corporate and household initiatives in the space. Major areas of focus include renewable power, energy efficiency and environmental services.

In terms of current activity, government stimulus packages across the globe have specifically targeted funding towards clean tech initiatives, which is adding further investment opportunity. At the same time government policy is trending in its support for these initiatives, but formalisation of more carbon markets beyond Europe, in the wake of Copenhagen, will certainly assist some proposed business models.

The focus on clean technology is also increasingly topical with institutional investors. This has been supported by a growing pool of funds (particularly in listed shares) with a track record of taking environmental, social and governance issues into account, together with many funds signing up to the United Nations Principles for Responsible Investment

To date, and particularly in listed markets, the clean technology theme is still most evident in global markets. While there are some larger leading Australian companies in select industries sectors (eg waste and recycling), we are still yet to establish a broad clean tech industry with significant investment depth.

Here we analyse three key factors that are likely to shape the clean technology sector going forward.

Company stage	Technology development	Early commercialization	Company expansion	Project finance
Investment strategy	Early stage venture	Late stage venture	Growth equity & buyouts	Infrastructure
Financing type	Seed/series A & B	Series C and later	Structured Minority Investments, LBOs, PIPEs, JVs, Public Equity, Debt	
Description	Concept stage deals	Pilot plant some revenue	Shipping product scale business	Renewable power assets risk varies by stage of project
Capital invested in 2008 <sup>1</sup>	\$2.1 billion	\$1.9 billion	\$25 billion	\$114 billion

1. Source: Cleantech Network, New Energy Finance & StepStone

## Themes within clean technology

Within the clean technology market it is useful to consider the types of themes which are being tapped into by managers and which are providing competitive returns.

Sectors can be broadly defined as follows:

<b>Renewable power generation</b> <ul style="list-style-type: none"> <li>• Wind</li> <li>• Solar</li> <li>• Biomass and waste</li> <li>• Hydro</li> <li>• Geothermal</li> </ul>	<b>Distributed power and storage</b> <ul style="list-style-type: none"> <li>• Biofuels and catalysts</li> <li>• Advanced batteries and fuel cells</li> <li>• Electric vehicles and components</li> </ul>
<b>Energy efficiency</b> <ul style="list-style-type: none"> <li>• Smart grid</li> <li>• Lighting</li> <li>• Advanced Metering</li> <li>• Green building</li> <li>• IT/software</li> </ul>	<b>Environmental</b> <ul style="list-style-type: none"> <li>• Pollution mitigation</li> <li>• Water treatment and technologies</li> <li>• recycling services</li> <li>• Carbon capture and trading</li> </ul>

Source: Stepstone Group LLC

These themes fit with the categories of funds emerging, with private equity focused on distributed power and storage, energy efficiency and environmental. At the same time infrastructure related raisings focus on renewable power generation.

Without doubt the majority of raisings have been on a global platform. In the global context major renewable power infrastructure raisings have included Hudson Clean Energy, USRG and Carlyle Riverstone.

While the specialist private equity providers undertaking raisings include RockPort, Angeleno Group and Element. These funds have often found that growth equity is the most attractive segment, with the themes of energy efficiency, water, electric cars and solar featuring prominently.

From an Australian context, there has been a lack of specialist private equity providers in the clean tech space locally, in part reflecting the smaller market size for energy efficiency, environmental and distributed power and storage products. And as at 31 December 2009 in Australia's S&P/ASX 200 there are only three companies that fit within the clean technology theme.

The renewable power infrastructure offerings in Australia have also been small in number. However, there are a couple of areas in the Australian market which are having some success and have attracted global capital via venture capital and interest: residential solar, sustainable forestry strategies, waste/recycling and environmental property initiatives. These strategies fit well with the government mandated support for solar, and Australia's global leadership on sustainable property as recognised in many international ratings studies.

## 2. How are clean technology funds performing?

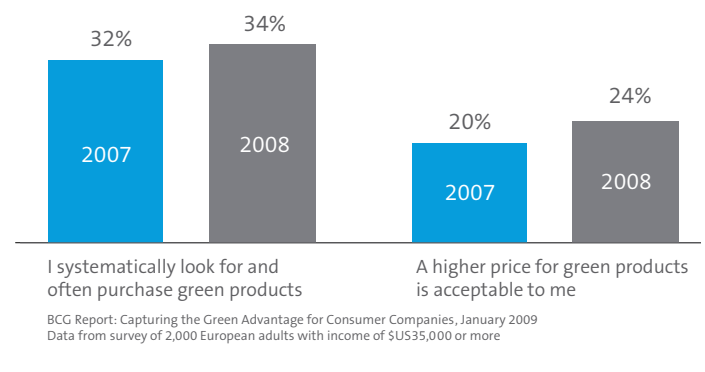
There is a shortage of data on the performance of clean technology funds, as many clean technology funds have not yet been invested for their full time period, with many unrealised investments still within the funds.

However, based on those transactions that did occur battery makers, selected solar and energy efficiency all had some strong successes in recent years. It is interesting to note the particular success in Asia, with a number of large Chinese clean technology companies being listed in Hong Kong (three of the top five globally by market capitalisation in 2009) <sup>2</sup>.

From a listed market perspective, sub-themes of environmental services, efficiency and water management have been consistent performers over the short and longer term, while clean energy and to some extent sustainable transport have been more volatile. <sup>3</sup>

It is useful to consider drivers of returns of the clean technology sector going forward, as well as what's impacted companies in the last few years. Some of the key drivers of financial success include:

- Solar is very dependent on government subsidies and will remain so until grid parity is reached in major markets. Currently Germany accounts for 60% of the global market, and the world market is heavily impacted by the changes to the German feed in tariff. Price is also critical, which has seen China emerge as dominant player.
- Wind is dependent on power purchase agreements, renewable obligations and the availability of finance. During the financial crisis credit markets seized up, which meant that many permitted projects were put on hold. While ongoing renewable obligations are supportive, delay of emissions trading schemes is a negative.
- Efficiency benefits from being able to deliver cost savings (eg lifetime costs of a motor can be up to 100x up front cost). There is an existing business case for many of these initiatives, without mandating legislation. Additionally the government stimulus has supported these types of initiatives.
- Finite commodities with growing population and urbanisation provide a platform for both the water sector, and energy based solutions which are an alternative to oil. Both these solutions are not as government policy dependent. Energy prices have proven a very powerful stimulant of alternative choices - batteries for electric cars are an example of an area of strong current interest.
- Corporate race to be green – globally corporates are focused on their green credentials, with Europe pioneering and big US companies more recently taking up the mantle. This is being done to attract clients and motivate staff as well as drive cost savings. This is a long term trend with considerable momentum. In Australia in particular the green building sector has been supporting many innovative new technologies towards reducing energy and water costs and attracting tenants.
- Consumer demand - regardless of political sentiment there remains a core of consumers that are looking at environmentally smarter products. Studies point toward the robustness of the consumer on green issues in an economic downturn. Charted below is an example during the 2008 downturn.



1. The Cleantech Group <http://cleantech.com/about/pressreleases/20090106.cfm>  
 2. The Cleantech Group <http://cleantech.com/about/pressreleases/20090106.cfm>  
 3. Based on returns of key clean technology themes held within the Henderson Global Investors industries of the future portfolio over one and five years to 31 Dec 2009. This portfolio is invested into by the AMP Capital Responsible Investment Leaders (RIL) International Share Fund.

### 3. What challenges exist for fund managers to attract institutional interest?

Obtaining investment interest in clean technology can offer some challenges. There are typically likely to be three types of buyers for this type of product. Investors or funds with a specialist focus on green or clean tech strategies, mainstream institutional investors that are prioritising environmental, social and governance issues and general investors with no particular prioritisation on environmental or clean tech issues.

With respect to the first category in the case of specialist investors or funds, there is still a relatively limited number of investors that have prioritised unlisted clean tech within their investment strategy. In part this related to scale of these investors required to make an allocation to private equity, and specifically clean technology private equity.

The second category is more material as there is a growing audience of generalist investors that are addressing environmental, social and governance issues via their involvement in the United Nations Principles for Responsible Investment. These investors often have significant scale (particularly superannuation funds), which means they are well positioned to invest in private equity, and consider clean technology strategies.

The third category of investor in many ways is similar to the second, with the key difference being less time allocated from the relevant investment professional to consider environmentally driven strategies.

In terms of more general comments, it should be added private equity generally has been a difficult asset class to raise funds within in more recent times. As listed asset prices have fallen, unlisted allocations have risen and this has led to lacklustre interest across the board for private equity.

Another challenge is to attract investors into funds without a history of effective investment exits. While there have been some high profile floats, and a growing number of listed clean tech securities, obtaining a full private equity fund history can take up to 10 to 12 years, a time period for which few specialist clean technology funds have been operating.

For investors with a focus on responsible investment, there is also a growing universe of alternative and unlisted options beyond clean technology which fit within the environmental, social and governance parameters. Ranging from sustainable forestry to social infrastructure, the choices are expanding. And in competing there is also the issue of which funds have more attractive liquidity and fees.

Additionally, established private equity players tend to have an inherent edge in attracting funds, which has meant that as they expand into clean tech this does it make it more difficult for newly established specialist clean technology funds.

## Contact us

If you would like to know more about how AMP Capital can help you, please visit [ampcapital.com.au](http://ampcapital.com.au)

**Important Note:** AMP Capital Investors Limited (ABN 59 001 777 591, AFSL 232 497) ("AMP Capital") is the responsible entity for the AMP Capital Responsible Investment Leaders funds. To invest in any AMP Capital Responsible Investment Leaders Fund ("Fund") investors must obtain the Fund's current Product Disclosure Statement ("PDS"), from AMP Capital. The PDS contains important information about investing in the Fund and it's important investors read the PDS before making any decision whether to acquire, or continue to hold, units in the Fund. Neither AMP Capital, nor any other company in the AMP Group guarantees the repayment of capital or the performance of any product or any particular rate of return referred to in this document. While every care has been taken in the preparation of this document, AMP Capital Investors makes no representation or warranty as to the accuracy or completeness of any statement in it including, without limitation, any forecasts. This document has been prepared for the purpose of providing general information, without taking account of any particular investor's objectives, financial situation or needs. An investor should, before making any investment decisions, consider the appropriateness of the information in this document, and seek professional advice, having regard to the investor's objectives, financial situation and needs.