Cleaning Up 2007

Growth in Private Equity & Venture Capital Investment in Clean Energy Technologies, Companies & Projects

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Summary : Cleaning Up 2007

2006 was another record year for Venture Capital (VC) and Private Equity (PE) investment in the clean energy sector, with $18.1bn invested in companies and projects. This represented a 67% increase on 2005 ($10.8bn), and beat New Energy Finance's original forecast.

However, this rapid growth in VC & PE investment only tells half the story: a significant amount of money ($2bn) resides in funds and has yet to be invested. During 2006 clean energy VCs invested only 73% of the total money available to them – a symptom of a competitive market where demand for deals is outweighing supply, thereby driving up company valuations.

New Energy Finance has identified 1,859 VC/PE investors who have either made investments or stated their intention to do so. We have recorded 193 funds that invest in clean energy, and analysed 521 VC and PE deals in 2006, totalling $8.6bn for companies and $9.5bn for projects. This trend has continued, with a total of $10.6bn invested in the first half of 2007.

We estimate that the total VC and PE invested in clean energy will grow at a compound annual rate of approximately 17% through to 2013. During this period, we expect over $262bn worth of VC and PE funded deals to be completed, absorbing $146bn of equity. This will be leveraged in terms of later stage deals, buyouts and project financings, although the recent squeeze in the credit markets has yet to have an impact, and may slow down growth in some areas.

Note on Terms Used & Methodology

Terms Used

The terms Venture Capital and Private Equity are used in a number of different ways in the finance industry and in different parts of the world. Throughout this report, we have used the terms in the following way :

Venture Capital is used to describe the funding of development and initial commercialisation of technologies, products and services. These are generally high-risk, high-return investments which do not attract leveraged funding.

Private Equity for Companies is used to describe investment in later-stage companies that have sufficiently mature businesses to allow some leverage. Investment can be required for a management buy-out or buy-in, or to fund expansion for an existing business particularly where this involves investment in assets, such as plant and equipment or renewable energy generation or biofuels processing capacity.

Private Equity for Projects is used to describe investment in individual renewable energy or biofuels projects, or portfolios of such projects. Occasionally, the same players will make Private Equity investments in both companies and projects, but this is the exception rather than the rule.

Private Investment in Public Equities (PIPE) is used to describe transactions in which a private equity-type investor takes a significant stake in a company quoted on the public markets, whether the main markets or over-the-counter.

In classifying investors and transactions into these types, there is a very substantial gray area. From the outside it is not always possible to find enough information on a deal to be certain of its nature. Nevertheless, because investors in unquoted equity are segmented into different groups based on the type of investments they make, we believe it is useful to make these distinctions.

The following geographical areas have been used: **AMER** for the Americas (North & South) ; **EMEA** for Europe (EU and non-EU, Middle East and Africa ; **ASOC** for Asia and Oceania (Australia and New Zealand).

Methodology

New Energy Finance research staff of 45 (based in London, Washington, New York, Beijing, Shanghai, New Delhi, Tel Aviv and Perth) track deal flow in venture capital, private equity, M&A, public markets and asset finance around the world.

All figures in this report, unless otherwise credited, are derived from the New Energy Finance Desktop - an on-line portal to the world's most comprehensive database of investors and transactions in clean energy.

The NEF Desktop collates all organisations, projects and investments according to transaction type, sector, geography and timing. It covers 15,000 organisations (including start-ups, corporates, venture capital and private equity providers, banks and other investors), 5,500 projects and 6,000 transactions.

Each transaction is assigned a deal value based on information provided by the participants. Where the deal value is not disclosed, NEF assigns an estimated value based on the average value of similar transactions. Deal values are rigorously back-checked when further information is released about the particular organisation and/or project.

Investment totals include all known transactions (both disclosed and estimated deal values), plus an allowance for unidentified transactions (for example, where the total investment into a specific sector within a country is known, but all the individual deals have not been identified). The investment totals are referred to as grossed-up values in the notes to each chart.

The following renewable energy projects are included: all biomass, geothermal and wind generation projects of more than 1MW, all hydro projects of between 0.5MW and 50MW, all solar projects of more than 0.3MW, all marine energy projects, and all biofuels projects with a capacity of 1m litres or more per year.

Data

Data is displayed as data labels on charts where possible. Where not, it is included in Appendix I, Figure Data

Disclaimer

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1. Executive Summary

2006 was another record year for Venture Capital (VC) and Private Equity (PE) investment in the clean energy sector, with $18.1bn invested in companies and projects (see Figure 1). This represented a 67% increase on 2005 ($10.8bn), and beat New Energy Finance's original forecast.

However, this rapid growth in VC & PE investment only tells half the story: a significant amount of money ($2bn) resides in funds and has yet to be invested. During 2006 clean energy VCs invested only 73% of the total money available to them – a symptom of a competitive market where demand for deals is outweighing supply, thereby driving up company valuations.

During 2006 more investors sought out opportunities in clean energy, in response to high oil prices and the need for action climate on change. New Energy Finance has identified 1,859 VC/PE investors who have either made investments or stated their intention to do so. We have recorded 193 funds that invest in clean energy, and analysed 521 VC and PE deals in 2006, totalling $8.6bn for companies and $9.5bn for projects. This trend has continued, with a total of $10.6bn invested in the first half of 2007 (see Figure 1).

Out of the total VC & PE investment of $18.1bn, 61% ($11.1bn) represented new money into the clean energy sector, as investors provided capital for technology development, company expansion and project construction. The remaining money, $7.0bn, was used to finance company buy-outs, and re-finance and acquire projects.

All regions experienced significant growth in 2006 (see Figure 2). $7.1bn was invested in the Americas (AMER) - an increase of 83% on 2005 – as mainstream investors woke up to the opportunities in clean energy, especially in biofuels. Europe, Middle East & Africa (EMEA) saw $9.2bn invested (67% increase), mainly driven by PE investment in companies and projects. Companies and projects in the Asia & Oceania region (ASOC) received $1.8bn in investment (26% increase), driven by pre-IPO PE investments in Chinese solar companies and clean energy activity in other developing countries such as India.

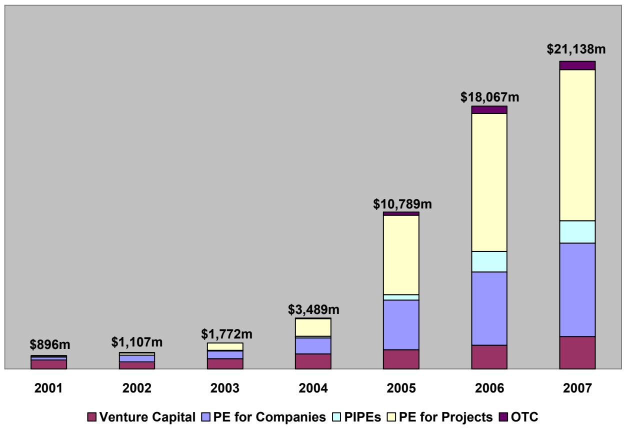
At a sector level wind ($8.4bn), biofuels ($4.7bn) and solar ($2.3bn) attracted the majority (86%) of VC/PE investment (see Figure 3). Mature technologies, such as on-shore wind and first generation/corn-based ethanol, attracted PE money for expansion and roll-out of production capacity. Solar raised a significant amount of money via the public markets, but also attracted the highest level of classic VC investment ($428m) typically into thin film and non crystalline silicon technologies. VC investment in in second generation biofuels technologies, including cellulosic ethanol, also increased ($235m).

Encouragingly the average VC deal size has increased in the past year at almost each development stage (see Figure 4). Average series C/third round investment rose 29% to $14.8m and average series D/fourth round deal size almost doubled to $20.7m indicating investor confidence in companies with technologies closer to commercialisation.

Our annual report of VC/PE activity in clean energy technologies, companies and projects examines the investment trends in 2006 and the first half of 2007. We divide deals into the following investment types (see Note on Terms for further information):

- **Venture Capital** describes the funding of development and commercialisation of new technologies, products and services. Of the $8.6bn total investment into companies 2006, classic venture capital for technology and expansion accounted for $1.6bn, with the US based companies receiving $1.3bn (81%).
- **Private Equity for Companies** is investment in later-stage companies which have sufficiently mature businesses to allow some leverage, or which require capital to fund business assets. $3.2bn of private equity investment into companies was recorded, as European and Asian companies geared up for further fund raising via the public markets. A further $1.8bn changed hands

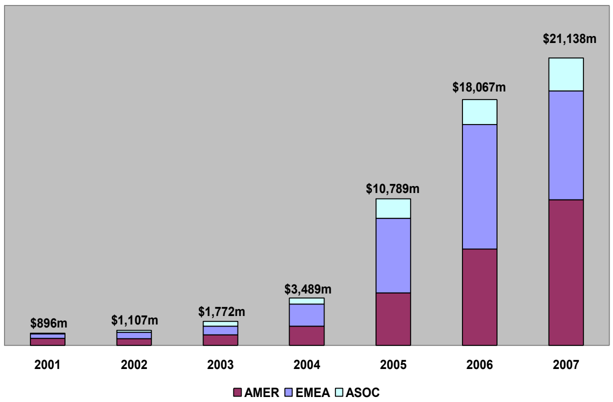
Figure 1. Global VC & PE investment by type, 2001 – 2007: $m



Note: 2007 is annualised total based on H1 investment. Total deal value, including any debt.

Source: New Energy Finance

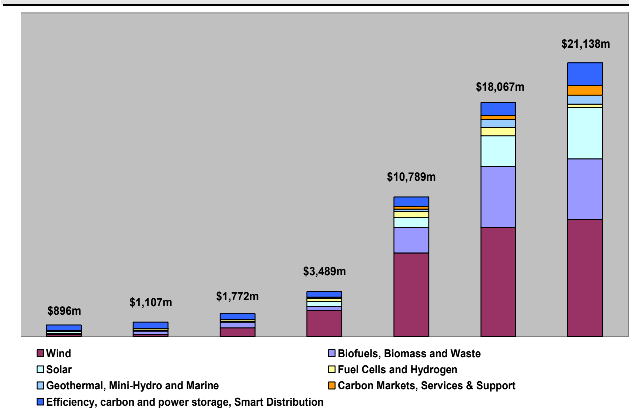
Figure 2. Global VC & PE investment by region, 2001 – 2007: $m



Note: 2007 is annualised total based on H1 investment. Total deal value, including any debt.

Source: New Energy Finance

Figure 3. Global VC & PE investment by sector, 2001 – 2007: $m



Note: 2007 is annualised total based on H1 investment. Total deal value, including any debt.

Source: New Energy Finance

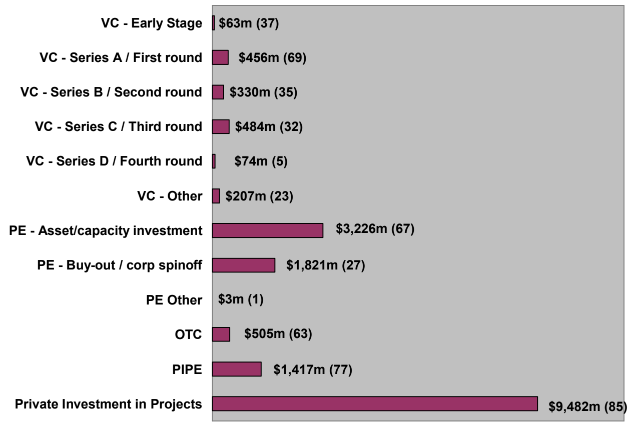
through buy-outs and corporate spin-offs.

- **Private Equity for Projects** defines investment in individual renewable energy or biofuels projects, or portfolios of such projects. A massive $9.5bn worth of renewable energy projects were financed in 2006 by PE investors (utilising significant leverage), with wind the dominant sector ($6.7bn), then biofuels and biomass ($1.7bn).
- **Private Investment in Public Equity** (PIPE) is a transaction in which a PE-type investor takes a significant stake in a company quoted on the public markets. New investors drove PE investment in over-the-counter (OTC) markets and PIPEs to a total of $1.9bn, more three times the investment in 2005.

The outlook is positive, as an increasing number of investors seek out VC/PE investment opportunities across a range of sectors and countries. A healthy pipeline of 866 development stage pure-play clean energy companies is complemented by proven exit routes. The leading investors are establishing successful track records and experiencing traditional venture style returns. All stages of VC and PE have seen a continued growth in investment activity in the first half of 2007, with VC investments already putting on a strong show.

Based on industry-standard levels of leverage, we estimate that the amount of equity deployed during 2006 was $9.4bn. This represents 9% of the total transaction volume in clean energy in 2006 ($100.4bn).

Figure 4. Global VC & PE investment by type & round, 2006: $m

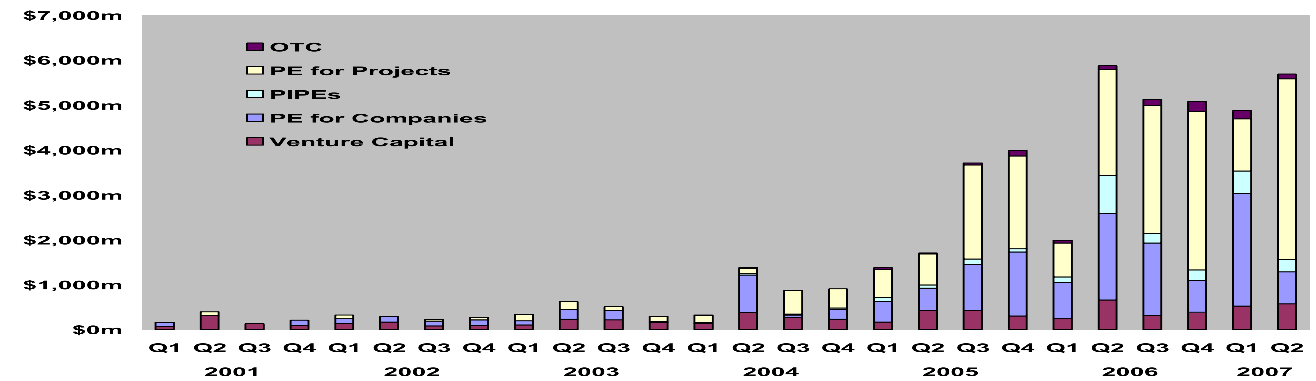


Note: Total deal value, including any debt. Number of deals in brackets

Source: New Energy Finance

New Energy Finance has updated its forecast of VC/PE investment from 2007. We estimate that the total VC and PE invested in clean energy will grow at an annual compound rate of approximately 17% through to 2013 (see Figure 6). During this period, we expect over $262bn worth of VC and PE funded deals to be completed, absorbing over $146bn of equity. This will be leveraged in terms of later stage deals, buyouts and project financings, although the recent squeeze in the credit markets has yet to have an impact, and may slow down growth in some areas.

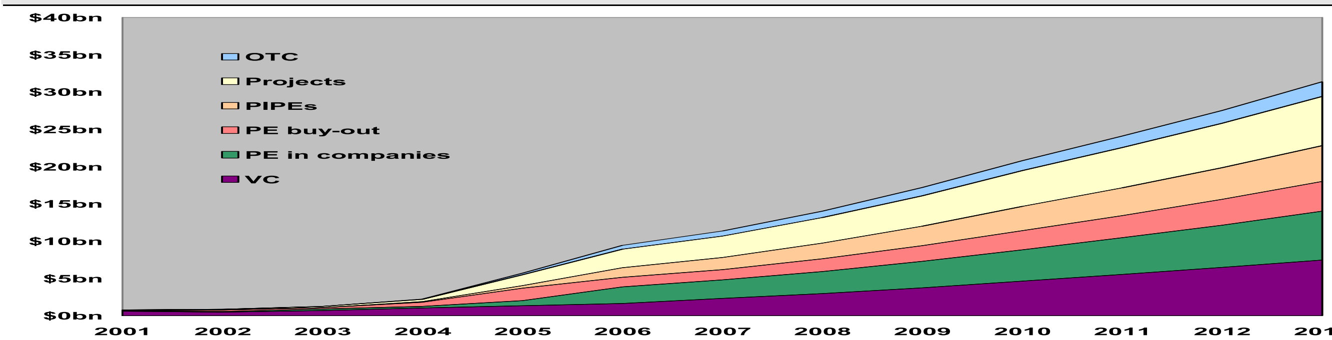
Figure 5. Global VC & PE investment by type, 2001 – 2007: $m



Note: 2007 figures are to end June. See Note on Terms Used for definitions. Total deal value, including any debt

Source: New Energy Finance

Figure 6. Total PE investment worldwide – historic & forecast, 2001 – 2013: $bn



Note: Equity value only – i.e. not including debt component. Forecast for 2007 to 2013. Includes MBOs and projects

Source: New Energy Finance

Appendix III: About New Energy Finance

New Energy Finance is a specialist provider of information and research to investors in renewable energy, low carbon technology and carbon emission credits. We offer a range of services which include the following:

New Energy Finance VC/PE Insight. NEF's premier member-driven research service combining deep analysis of the VC/PE market with rapid-response analysis on breaking developments. Core components of the service include:

- **Analyst Reactions** giving timely insight on market events, political and regulatory changes.
- **Research Notes** analysing long term regional and sectoral trends.
- **Focus Reports** analysing and defining the market for clean energy investment, market size and asset valuation by sector, technology, country and region.
- **Analyst Access** providing rapid response to quick questions about the market, value chain or deal activity.
- **Dedicated Annual Research Presentation** for member-institution boards, staff and/or customer groups.

New Energy Finance Desktop. The award winning portal to the world's most comprehensive database of investors, opportunities and transactions in clean energy, covering 15,000 organisations (including start-ups, corporates, venture capital and private equity providers, banks and other investors), 11,000 people and 6,000 transactions.

New Energy Finance Newswatch & Alerts. Bundled with the New Energy Finance Desktop, the Newswatch service sends you a daily email with your tailored selection of clean energy investment news. The Alert service allows you to set a flag on any company, fund, person or project you want to track, and receive an alert by email whenever there is any relevant news.

New Energy Finance Briefing. The definitive source for clean energy analysis and finance review.

New Energy Finance Network Events. Lunches, breakfasts, round-tables and workshops for investors to learn about opportunities and meet each other.

Wilderhill Global New Energy Index (ticker symbol NEX). The first global index of clean energy companies to be calculated and quoted in real time.

New Carbon Finance. Subscription-based service providing price forecasting for the carbon pricing in the European Emissions Trading Scheme and nascent US markets, based on a fundamental supply / demand / abatement cost-based models that has been proven resource for traders and participants in global carbon markets.

Analytics. Customised research into investors, projects and recipients of funds in the clean energy sector worldwide, based on data-mining our Desktop or other analytical means.

Consulting. Dedicated consultancy services to help corporate and financial investors make informed decisions when committing funds to the clean energy industry. Types of work include: country, policy and technology assessments; deal-flow development; opportunity screening; economic due diligence; strategic and business planning; policy evaluation. NEF also produces reports or white papers on contract, to support PR activities or fund-raisings.

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