

FALLING BEHIND – EUROPE'S CLEAN ENERGY VENTURE CAPITAL AND PRIVATE EQUITY DEFICIT

Europe is being left behind in the race for technological leadership in clean energy as venture capital and private equity investors focus on opportunities in the US and Asia.

Global venture capital and private equity investment in clean energy companies¹ soared by 68% to \$8.6bn in 2006, from \$5.1bn in 2005. The Americas saw the biggest growth, up 138% from \$2.2bn to \$5.3bn. Asia saw growth of 45% from \$930m to \$1.3bn. Investment in Europe, however, dropped 2% from \$2.0bn to \$1.9bn (see Figure 1).

The total number of venture capital and private equity investments in the Americas rose from 189 in 2005 to 222 in 2006, and in Asia from 22 in 2005 to 33 in 2006. In Europe the figures dropped from 86 in 2005 to 79 in 2006.

When it comes to earlier stage, technology-driven venture capital-type deals, the difference between Europe and the US becomes even more dramatic. Of a total of \$1.5bn of such deals, no less than \$1.1bn (78%) was invested in the Americas, mainly in the US. Only \$213m (15%) was invested in Europe and \$109m (7%) in Asia.

The only area in which Europe saw growth in 2006 was in larger, private equity-type transactions. There, investment in Europe grew by 1% to \$1.4bn between 2005 and 2006. The US, meanwhile, saw growth of 139% from \$1.2bn to \$3.0bn, driven in large part by the boom in investment in biofuels.

The poor European investment volumes are in spite of the fact clean energy venture capital has provided excellent returns. In September 2006 New Energy Finance undertook the landmark European Clean Energy Venture Returns Analysis on behalf of the European Energy Venture Fair, which found that energy technology showed all the characteristics of other mainstream venture capital sectors.

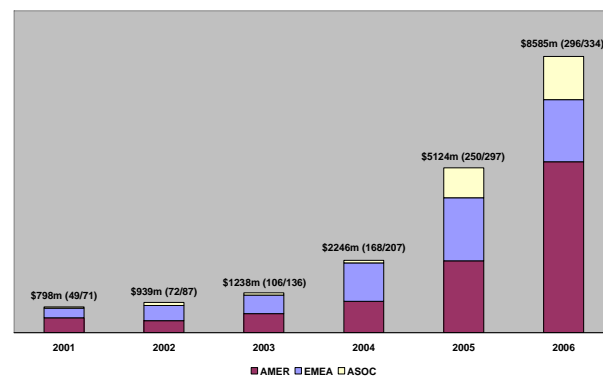
The figures will make depressing reading for European policy-makers, who have set great store by achieving leadership in clean energy, as well as in innovation.

New Energy Finance calls on Europe's clean energy industry, its investors and policy makers to focus on changes in the following eight areas:

1. Improve general macro-economics for innovation and entrepreneurship
2. Identify and break down regulatory barriers to markets for new clean energy providers
3. Reduce investment risk by improving stability and longevity of clean energy support mechanisms
4. Use the public sector to create markets through preferential procurement of clean solutions
5. Increase available market sizes by rolling out pan-European standards for clean energy, fuels and technologies
6. Promote the development of supporting services such as testing & certification, training, information provision and insurance
7. Avoid the temptation to pick winners, whether through green funds or any other mechanism
8. Decouple all technology support programmes from social and political goals

¹ Venture Capital is used here to describe investments in companies developing new technologies, services and products, which are typically unleveraged. Private Equity is used to describe larger, leveraged investments, typically either in existing businesses with cash flows or in assets such as factories, renewable energy generating capacity or biofuels refining plants.

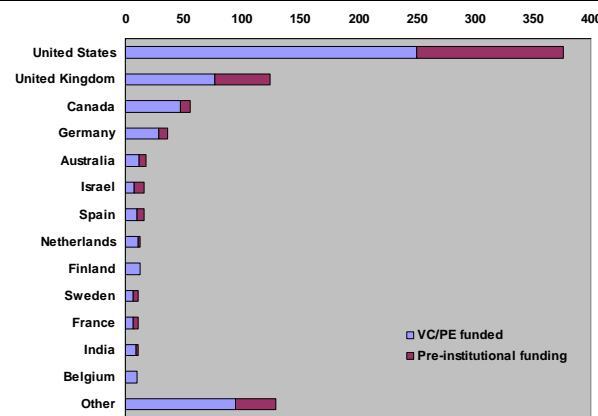
Figure 1. Global clean energy venture capital & private equity investment, 2001-2006: \$m and number of transactions



Note: Note: Includes venture capital, private equity, PIPE and OTC investment. Excludes direct investment in renewable energy and biofuels projects. Includes buyouts.

Source: New Energy Finance

Figure 2. Clean energy startups: funded and pre-funded, by country



Note: Figures are based on New Energy Finance Desktop database of 14,954 organisations active in clean energy worldwide

Source: New Energy Finance

Venture Capital

When it comes to technology-driven, venture capital-type deals, the difference between Europe and the US becomes even more dramatic. The evidence is that US venture capital investors have simply reacted more quickly than the Europeans to the rapid emergence of clean energy as a mainstream investment opportunity.

During the period 2002-2004, the US out-invested Europe by an average of just over two to one. By 2005 the figure was nearer to three to one, and in 2006 it was over five to one.

Of a total of \$1.5bn of clean energy venture capital deals worldwide in 2006, no less than \$1.1bn (78%) was invested in the Americas, mainly in the US. Only \$213m (15%) was invested in Europe and \$109m (7%) in Asia (see Figure 3).

Perhaps most extraordinarily, the amount of venture capital investment in clean energy in Europe peaked at \$326m in 2004 and has been dropping since then, reaching only \$213m in 2006 (see Figure 4).

The poor investment figures have occurred despite the fact that clean energy venture capital has provided excellent returns for European investors. In September 2006 New Energy Finance undertook the landmark European Clean Energy Venture Returns Analysis (ECEVRA) on behalf of the European Energy Venture Fair, which found that energy technology showed all the characteristics of other mainstream venture capital sectors.

Among the findings of the inaugural ECEVRA were the following:

A representative sample of 19 investors with 57 portfolio companies had achieved annualised returns of 86.7% by investing in the sector since 2001.

Five companies had completed initial public offerings on the stock markets. A further three had been sold to trade buyers. Nine had undertaken further investment rounds at higher valuations than the initial venture investment, yielding returns on paper of 14.9%.

Six of the 57 companies had been liquidated, with the majority of the funds invested being lost.

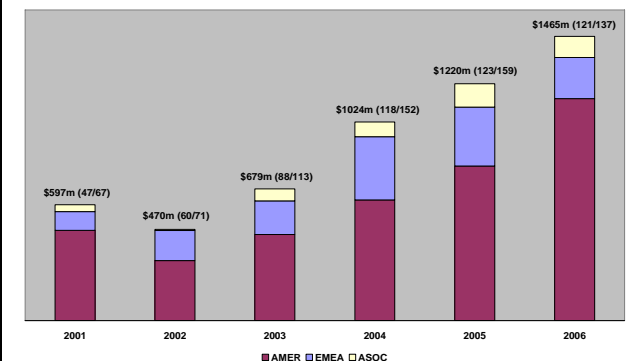
Clean energy venture capital investment has created an estimated 33,000 jobs in Europe, consisting of 9,000 jobs in clean energy companies, and 24,000 indirect jobs.

Private Equity

The only area in which Europe saw growth in 2006 was in larger, private equity-type transactions. There, investment in Europe grew by 1% to \$1.4bn between 2005 and 2006. The US, meanwhile, saw growth of 139% from \$1.2bn to \$3.0bn, driven in large part by the boom in investment in biofuels (see Figure 5).

There is some good news in the figures for Europe, as the split between private equity investment flowing into companies, as opposed to funds used to buy out companies from previous owners, skewed in favour of new investment. 2005 saw \$217m of new private equity investment versus \$1.1bn of buyouts, whereas 2006 saw \$848m of investment versus only \$522m of buyouts (see Figure 6).

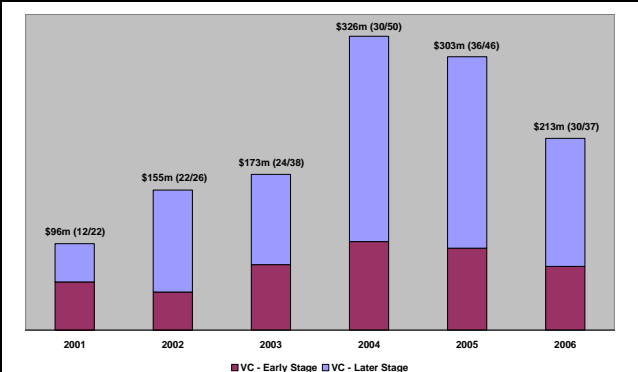
Figure 3. Global venture capital investment, 2001-2006: \$m and number of transactions



Note: Excludes direct investment in renewable energy and biofuels projects.

Source: New Energy Finance

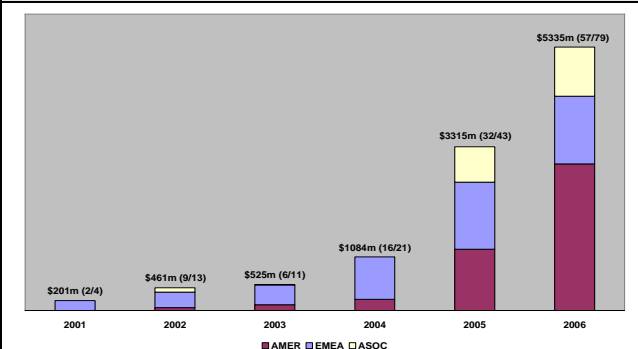
Figure 4. Venture capital investment, 2001-2006, \$m and number of transactions by stage of investment, EMEA



Note: Excludes private equity (leveraged deals), PIPEs and OTC transactions

Source: New Energy Finance

Figure 5. Global clean energy private equity investment 2001-2006: \$m and number of transactions



Note: Excludes direct investment in renewable energy & biofuels projects. Inc buyouts.

Source: New Energy Finance

Public Markets

Europe's poor investment performance in clean energy venture capital and private equity is particularly baffling given the success of European public markets in attracting investors to the sector

In 2006 a total of \$12.3bn was invested by public market investors in clean energy companies worldwide. Of this, \$6.9bn (56%) was raised by companies based in Europe, compared with \$4.2bn (35%) raised by companies in the US. When the impact of US companies raising money on Europe's markets, in particular London's AIM, Europe's strength is even more apparent (see Figure 7).

Policy Environment

The news will make depressing reading for European policy-makers, who have set great store by achieving leadership in clean energy, as well as in innovation. There are many possible reasons for the continued – or even growing – gap in venture capital and private equity investment in clean energy in Europe, compared with North America.

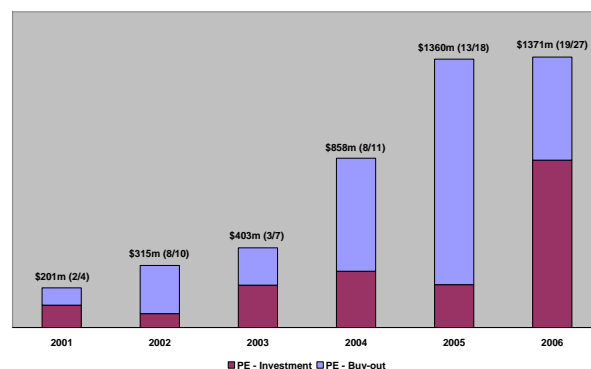
The EU has taken a leadership role globally in the push for clean energy and reductions in greenhouse gases. It has recently pledged to meet a number of targets by 2020, including 20% of total electricity supply to come from renewable energy, a binding minimum target of 10% for the share of biofuels in overall transport fuel consumption and a firm target of a 20% cut in greenhouse gas emissions (increasing to 30% if countries such as China, India and the US also take firm action). Europe is also home to the world's most advanced and liquid market for CO2 emissions.

Europe has also recognised the importance of innovation. In March 2000 the European Council announced its Lisbon Agenda: by 2010 to make Europe "the most dynamic and competitive knowledge-based economy in the world". The environment was one of the industries singled out during the process as an area of particular strength for European industry. In November 2004, however, former Dutch Premier Wim Kok issued an interim report on the Lisbon Process, announcing that "the growth gap with North America and Asia has widened". In April 2007, a leading European market-oriented think tank, the Stockholm Network, released a report in which it stated "The EU should be brave enough to understand that although the sentiment was right, they got it wrong with the Lisbon Agenda. It needs to be more focused in order to achieve its goals and changing it now to ensure it is successful should be the priority, not saving face for those that put it together."

Among the factors which contribute to Europe's sluggish investment in clean energy venture capital and private equity are the following:

- The traditional weakness of Europe's venture capital industry, as compared with the US. With less money available from institutional investors, there are fewer experienced venture capitalists, fewer serial entrepreneurs and fewer experienced service providers. Returns from European venture capital are systematically lower than in the US, which perpetuates the cycle.
- Balkanised national markets, each of which is smaller and less attractive than the US, each with its own set of regulations to support the development of renewable energy and low-carbon technologies.
- Excessive regulation in the labour markets, which serves to depress the growth rate of small companies.
- Bureaucratic processes for technology support at the national and, particularly, the EU level. The EU's technology support funds are all targeted at increasing pan-European research collaboration, in the absence of any evidence that this leads to the creation of leading global technology companies.
- Excessive state involvement in research. The percentage of R&D funded by business in the EU was 55% in 2004, compared with 64% in the US and 75% in Japan, according to figures from the EU. Universities in Europe employed 37% of all researchers, vs just 15% in the US and 26% in Japan. Business employs 50% of researchers in Europe, compared with 80% in the US and 70% in Japan.

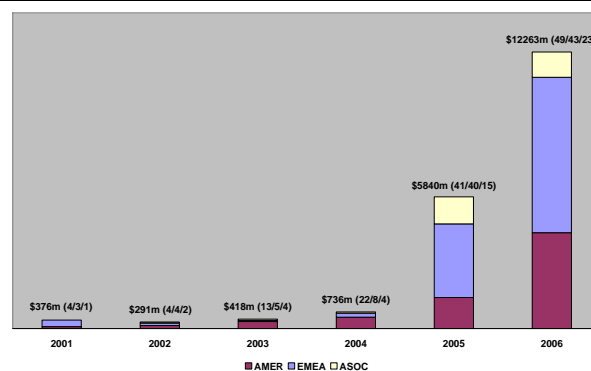
Figure 6. Clean energy private equity investment, 2001-2006 by type of investment, EMEA



Note: Excludes venture capital (earlier stage deals), PIPEs and OTC transactions

Source: New Energy Finance

Figure 7. Global clean energy public market investment 2001-2006: \$m and number of transactions



Note: Includes funds raised by companies as well as those paid out to exiting investors

Source: New Energy Finance

- A resurgence in economic nationalism, particularly in the energy sector. This saw, for example, an attempt by the Spanish authorities to keep energy group Endesa under Spanish control when economic logic might have dictated that a bid from German rival Eon should be allowed to succeed.
- Weak dollar, which continues to make the US an attractive place for overseas investors.

Call for action

In April 2005 New Energy Finance first identified the deficit in Europe's clean energy innovation, and called for action. We encourage Europe's clean energy industry, its investors and policy makers to focus on changes in the following eight areas:

1. Improve general macro-economics for innovation and entrepreneurship
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Appendix: Chart Data

Subscribers to New Energy Finance's VCPE Insight Stream will receive a version of this paper complete with data for all charts.

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