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General News

By: Angus Grigg and Emma Connors

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Baby steps taken on clean energy

Federal money is helping to bridge the funding gap in commercialising clean technology initiatives, write **Angus Grigg and Emma Connors.**

Clean technology may be creating as much buzz as the internet boom of the 1990s, but it is yet to attract big institutional dollars in Australia. Despite multibillion-dollar support from federal and state governments for the development of renewable energy technologies, there is only a handful of dedicated funds and a small listed sector.

But expectations are high that this is about to change despite the disappointments of the Copenhagen summit. As an appetite for risk returns to financial markets, banks and fund managers are taking the first tentative steps in embracing an investment theme likely to dominate the coming decades.

Queanbeyan solar power company Dyesol is typical of this market. Its technology has been embraced in Germany and is being commercialised by Britain's largest steel maker, but it is almost unknown in Australia.

No major broking houses cover its stock and it does not have a local partner – when it needed capital in 2008, Asian and European investor funds stumbled up.

Asset consultants are still leery of the sector but super funds are interested, according to Starfish Ventures investment principal Michael Panaccio. Starship runs a \$185 million venture fund.

“There is intent on behalf of super funds. What we need to do is provide more opportunities and proven success,” he says.

There is also a suggestion that one of the country's big fund managers is preparing to back a clean technology fund to invest in listed equities.

Although the Copenhagen climate change summit failed to set binding emission reduction targets, new energy technology developers and venture fund managers are optimistic. Globally, investment flows are impressive.

The United Nations Environment Program estimates more money was invested in clean energy last year than in traditional coal or gas-fired generation. In the United States, clean technology attracted \$US5.8 billion (\$6.3 billion) in venture capital last year, placing it third behind information technology and biotechnology. But in the third quarter it eclipsed these two sectors for the first time, attracting a record \$US1.6 billion.

Inevitably Australian money must follow. And while many expect the next Google to

come from the clean technology sector the similarities with IT end there. Other than being high risk they have little else in common, according to Jan Dekker, the principal of Clean Tech Ventures – an \$80 million venture fund in Melbourne.

Dekker says clean technology is capital intensive, highly regulated and often requires the support of large utilities that have not been early adopters of technology.

“Unlike a software firm, which can prove its technology by printing off a few hundred CDs, our companies might need tens of millions to build a pilot plant,” he says. This is known as a “capital hump”.

The consequences of such high capital needs were evident in the collapse of Victorian company Solar Systems last year.

The private company was placed in receivership despite securing \$125 million in state and federal government funding. But the commitment, which was never drawn down, was not enough. Solar couldn't raise additional private sector money to build its \$425 million solar power station near Mildura.

“There is a reticence about clean tech because it is such a new space with no track record,” says Dekker.

Equally, he says venture capital is yet to prove itself in Australia.

“The major point is that super funds are historically conservative and they're still learning about clean technology and the returns that can be generated from investing, but as yet only a few have made actual investments, including VicSuper and IFM [Industry Funds Management].”

The other issue for clean technology is that the capital required is often too much for a venture capitalist, and the technology is not developed enough for large infrastructure investors.

But Dekker is optimistic about the future, despite the lack of local institutional support and the perceived failure of Copenhagen.

“The clean tech investment data already has venture investing back at 2007 levels, so it's bounced back [from the global financial crisis].”

The funding gap is being partially plugged by the federal government, which has become by far the biggest clean technology investor in the country. All up, the federal government has committed \$4.5 billion to clean energy over the next nine years. The US allocated \$US167 billion in grants and loan guarantees in its stimulus package.

Even taking out Australian funds allocated to commercialising clean coal, there is more than \$2 billion for other emerging technologies including wind, solar, geothermal and wave power.

“This money helps partially de-risk a

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project and then private companies like us can come in," says the director of clean energy and power at Investec, Mark Schneider.

To lessen the technology risk on such projects, Investec typically looks to run rigorous early-stage testing before building a demonstration plant.

"It's an intermediate step that shows us the technology works on a commercial scale without building a very expensive pilot plant," says Schneider.

This technology risk explains why wind power is expected to account for more than half of the federal government's mandated renewable energy target. The British renewable energy consultancy Garrad Hassan estimates this will drive \$25 billion of investment in the sector over the next decade as companies scramble to ensure 20 per cent of Australia's power comes from renewable energy by 2020.

"Wind is essentially off-the-shelf technology," says Schneider.

The lower risk profile of wind is a prerequisite for Investec to negotiate financing for the \$750 million Collgar wind farm in Western Australia, which will produce 260 megawatts.

AGL Energy has been active in the sector and late last year netted \$88 million in

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JAN DEKKER, CLEAN TECH VENTURES

development fees from selling off its Hallett 4 wind farm in South Australia.

AGL has three operational wind farms, two under construction and at least five more under development. It is the largest wind generator in Australia. Infigen Energy (the old Babcock & Brown Wind Partners), Origin Energy and Pacific Hydro are also active in the sector.

The lower risk profile of wind has squeezed funding for technologies such as wave and solar and forced the likes of Dyesol and

WA-based Carnegie Wave Energy to venture offshore.

Dyesol has partnered with Anglo-Dutch steel maker Corus, which has licensed its "paint-on" solar technology.

Instead of applying paint to corrugated iron roofs, the steel maker, owned by Indian conglomerate Tata, will lay down solar cells. These cells are not only cheaper to produce than conventional photovoltaics, which rely on expensive silicon, but can also operate efficiently with far less sunshine.

Corus plans to have a pilot plant commissioned in June and begin large-scale manufacturing by next May.

And it has big ambitions for the technology.

Dyesol managing director Sylvia Tulloch says Corus plans to devote 20 per cent of its production to "solar steel", which is likely to be used by warehouses and shopping centres to lower their power bills and allow them to sell electricity back into the grid.

Despite having myriad applications, including attachment to glass, cars and electronic equipment, the company has been unable to secure a local partner.

"Yes, that's sad," says Tulloch. "But it has forced us to be globally focused from the beginning."

Even Dyesol's share register is an international affair. German retail investors hold 25 per cent of the stock and the company has begun marketing to institutions in Germany.

"They [German investors] have given the stock an international valuation," says Tulloch.

Since listing in 2005 at 25¢ a share, the stock has traded erratically but is now trading above 90¢, giving it a market cap of about \$125 million.

"The policy drivers have just not been there for solar in Australia, but I hope that is changing and we might have a local partner one day," says Tulloch.

Carnegie is also looking offshore for project opportunities and raised funds last year from European institutional investors. Chief executive and managing director Michael Ottaviano says it has recently become a joint-venture partner with the French energy giant EDF Energies Nouvelles, and in December signed an agreement paving the way for the joint development of commercial wave energy projects.

Although Carnegie didn't win federal government support last year for a 50 megawatt wave power project, the listed company announced last Wednesday that it had received the first instalment of a \$12.5 million grant from the West Australian government for a smaller, five megawatt project.

Ottaviano sees Copenhagen as a fundamental step forward in the development of new energy technologies.

"It's not surprising we couldn't reach formal agreements with 150 countries in the room," he says. "But it's the first time we've had the two biggest emitters, China and the US, committing to CO₂ mitigation."

He says it opens the way for institutional solutions to be negotiated between smaller groupings of nations. He also believes China could rapidly move from using others' technologies to becoming an innovator, developing intellectual property and selling it to countries like the US.

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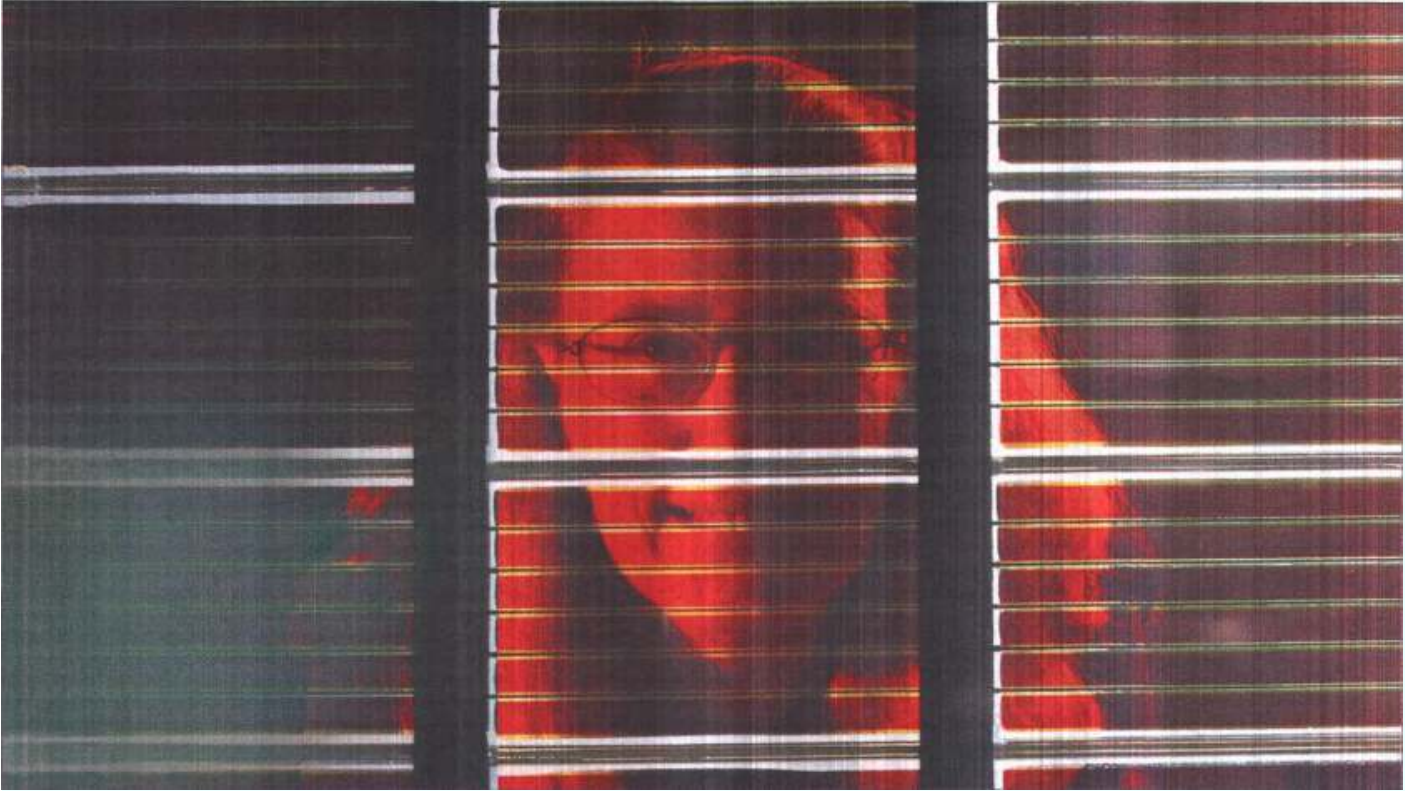
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Local interest has been lacking, but Dyesol managing director Sylvia Tulloch hopes to find an Australian partner eventually