Special Reports - Cleantech 2006

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Plugged in

A select group of cleantech investors gathered for a roundtable discussion to talk about exit opportunities, the investment outlook and whether the buzz on ethanol is nothing more than irrational exuberance.

When the term “cleantech” was brought to market a few years ago, few investors could have foreseen how hard they’d be working today.

But all you have to do is look at the recent investments stats for evidence that the venture industry’s growing enthusiasm for cleantech investments is rising.

Cleantech venture capital investing in North America notched its eighth consecutive quarter of growth as investors pumped $843 million into cleantech deals in the second quarter, more than double the $368 million invested in the same quarter a year ago, according to the Cleantech Venture Network.

As a result of another hot quarter, cleantech deal activity surged ahead of two previously dominant VC investment categories — telecom and med tech. Cleantech now ranks third behind biotech and software.

Meanwhile, more and more VC firms are turning green. Vinod Kholsa, a onetime partner at Kleiner Perkins Caufield & Byers, is one of the biggest venture enthusiasts behind ethanol production. Firms such as Expansion Capital Partners, Technology Partners, Nth Power, VantangePoint Venture Partners, DFJ Element and Kleiner Perkins, to name a few, have either closed funds or are still out in market seeking capital for cleantech dedicated funds.

So now that cleantech is part of the lexicon of investors, one wonders if the enthusiasm will gave way to a bubble. And, are there enough exit opportunities to make all the expanded fund-raising worth the attention. After all, the industry doesn’t have too many SunPower Corp’s to wear as an epaulet on its shoulder. SunPower, a developer of solar power products, saw its stock rise 40% in its first day of trading last year, and the company’s stock has continued to trade well since its IPO. But its aftermarket success hasn’t opened the door for a flood of cleantech IPOs, as of yet.

So who’s got a beat on the next SunPower? Is it some ethanol producer or other alternative energy manufacturer? To discuss the state of cleantech investing, we hosted an editorial roundtable and culled together a panel of investors, including a blogger, a banker and an industry observer.

In attendance were **Alastair Goldfisher**, managing editor of *Venture Capital Journal*; **Nick Parker**, co-founder and chairman of the **Cleantech Venture Network** (and moderator of the roundtable); **Robert Koch**, principal of **NGEN Partners**; **Matt Jones**, principal of **Nth Power**; **Rob Day**, principal of **Expansion Capital Partners**; **Erik Straser**, general partner of **Mohr Davidow Ventures**; **John Woolard**, EIR of **VantagePoint Venture Partners**; and **Bob Hambrecht**, managing director, **W.R. Hambrecht & Co.**

The following comments were edited for content and clarity.

The setup here is that we’re seeing growth in cleantech venture deals, with energy taking an increasingly bigger chunk of that. Now, roughly 60% of cleantech is clean energy in North America. In Europe, cleantech is more than 10% of total venture flows. There’s been lots of media attention paid to the sector lately and there lots of exciting trends taking place. So what's different? What's driving this cleantech push? Is this about $70 for a barrel of oil?

Jones: There are multiple drivers all happening at the same time. We have growing populations with growing economic capability in the world, and, therefore, there’s a demand for power, which puts a strain on limited resources, and causes security issues, as we've seen of late. Plus, we have an aging infrastructure and global environmental issues to deal with.

The confluence of all of these different drivers is what’s prompting a groundswell of entrepreneurs and investors to be more aware of the clean energy opportunities out there and to compel them to go start a business.

Day: Another factor at play here is that we’re seeing many technologies continuing to mature. So, part of the reason that you're seeing a lot of investor interest in cleantech is not only because of the macroeconomic drivers, but part of it is also that a lot of these technologies are now ready for primetime, whereas before, they weren't necessarily living up to the promises.

This is true, particularly on the solar side, and we’re seeing biofuels, for example, actually coming forward and living up to the promises that these technologies promised.

Woolard: So, what you’re asking is, “How far would oil have to fall for it to change the dynamic?” Well, even if there a correction in oil prices, let’s say, and it drops down to $50 a barrel, that's not going to necessarily affect anything we look at or invest in.

Koch: About 50% of all the energy generation is from coal, so global warming is certainly a large driver here in the sector. But, right, even if oil prices were to fall, we're still looking at a lot of pollution abatement type of deals and other technologies that offer alternative ways of creating energy.

We don't use oil to generate electricity.

Jones: Not in this country.

Right. Not in this country. So there's kind of a disconnect here between a lot of the issues discussed in the media, with the rising

prices of oil, related to how we use energy and our reactions to the sticker price of what we're paying per barrel. And the media relates the cost of oil to the rise in alternative energies and investment opportunities.

Day: Yes, a lot of headlines are driven by oil prices and gas prices. To many, the sticker shock at the pump is the most visible tangible piece of evidence that electricity prices are rising. And our demand for electricity and our demand to produce and use every single electron we can find, that is what's driving a lot of this venture activity.

Let's move further into the biofuel discussion as we have an outlook to the future. Everybody is talking about biofuels, such as ethanol. Is this a venture play? And is it a panacea for our energy problems?

Koch: I'll be the contrarian here and say "No" and "No." Primarily, I think this is a project financing play more than anything else. There might be a couple of niche technologies with ethanol that eventually can be rolled out.

And in terms of a panacea, I think that our firm would probably come down on the side of the academics who argue that ethanol is energy-negative and that the media has over-hyped this

OK. Who wants to have a go at this? From the other end of the table?

Woolard: You're right about ethanol, under standard fermentation techniques, being a negative equation on the energy balance. But there are very interesting venture-backed entrepreneurial opportunities for a disruptive technology that actually increases the yield of ethanol to improve the energy balance.

Straser: We can talk about the benefits of ethanol, but let's talk about the not so pleasant side, which is that it uses a ton of natural gas. It's used in food products today, and it's not CO2-neutral. You're using natural gas to make the stuff; lots of it sometimes. Ethanol has a number of issues that are good about it, but to think that something is a panacea just misrepresents the problem, which is one of the biggest issues that the popular press has done to damage and harm this area.

There is no panacea; there's no silver bullet here. All of these things are part of a panoply of solutions. The question is whether, on a mass-market basis, ethanol becomes a blend or a substitute?

Jones: This is where we're going to see some interesting syndicates being formed that cross the biotech industry with the energy industry, in order to solve some of these technical problems. Whether it's a new heat stock based or new ways of engineering green algae or new ways of processing cellulosic residues into an ethanol plant, these are technology areas in which venture investments will plays well.

Day: Yes.This debate about whether corn-based fuel is net-negative or net-positive on the energy balance perspective is just a false debate. If you look at corn-based ethanol, for instance, it as a gateway drug. It …

A gateway drug?

Day: Yes, a gateway drug. You know, it gets people sucked into its use, but at the end of the day there's no way we're going to be able to supply the mandate, our government-imposed mandate, with corn-based ethanol. So we're going to drag out the studies on cellulosic ethanol, and those studies are the same studies which are debating whether or not corn-based ethanol is net-negative or net-positive.

In regards to that, it's close enough that it's better than taking something directly out of the ground, like coal, and just burning it up and putting it in the atmosphere. But secondly, the next-generation of ethanol producers are really going to make a dramatic improvement.

Woolard: It's not just corn; ethanol is a broad array of heat stock. No one would think of it as a corn-based solution.

What about this phenomenal interest in solar. It seems that there are many wonderful opportunities for venture capitalists right now. Are we at the tipping point where solar goes mainstream?

Straser: Well, last time I checked, the sun is only up about 10 hours a day, so I don't think solar is going to be at base load, unless you improve the storage capability or other technologies are created in combination with solar power.

But, solar is going to be a very important market in this area for a very long time. It just has so many advantages. You're going to see the solar industry is the place where I think we're going to see multiple hits. I don't know whether it'll be from any of the companies around the table that are represented here. But without a doubt, you're going to see a proliferation. The potential here is just enormous.

Woolard: Solar is the highest and best form of electricity we can generate. Solar is very clean and it's going to be a more and more relevant and an important piece of the energy equation.

Hambrecht: The point is that this is a long-term exciting market. We are just at the beginning of solar having an impact. But pricing is an interesting question, because silicon supplies right now are keeping the costs up. Over the next couple of years you'll see the silicon prices come down. You know, I'm getting a business plan a week, it seems, from another guy who wants to build a poly-silicon production facility. There's a real great opportunity over the next two or three years, and it's going to drive public market interest and venture money into the space.

Day: I think of solar the way I think about semiconductors, which is the underlying trend is very positive, very fast growth, but around that you're going to get boom and bust cycles. Everybody is identifying that right now we need to build bigger capacity solar photovoltaic plants. But what happens when they all build them at once and all of a sudden the price goes down? So there's going to be a lot of peaks and troughs, but the underlying trend is very positive.

OK, guys, open your kimonos. What are some of the other hot areas that you're jazzed about that you think will get more attention over the coming two or three years?

Koch: We just did a photovoltaic (PV) deal, and are looking a lot in the area of concentrators. Another interesting technology—and there's certainly a significant amount of risk associated with it—but we like low-cost displays. We see the opportunity to marry some of these display technologies with RFID tags.

Jones: We're a mobile wireless world. More and more, a driving factor is energy storage. It's our batteries, and how long we can be disconnected from the grid? So, battery technologies and fuel cell technologies in the long-term future are really going to enable that to continue.

Right now, users want to use their Blackberry all day long and it becomes difficult. So the more we can invest in battery technologies, then we're enabling people to do things that they haven't been able to do in the past.

Straser: I don't think there's a short list. The limiter is not going to be market opportunity; it's going to be construction of great management teams. And the most positive thing we've seen is that great managers and great entrepreneurs are coming to this area, and that will be the indicator of where we're going to see activity.

Woolard: We're going to see more on the utilities, the large scale solar deals. That's interesting and there's something to be done there, as we talked about. Then there's the ones we haven't talked about, such as the transportation sector, whether electric or plug-in hybrids, but radicalized new approaches to more efficient transportation, where you can get north of 100 miles per gallon and still have really nice performance and without the compromise of driving something slow.

None of these solutions are going to be enduring and permeate society until people feel like they're not giving up performance for efficiency. Dick Cheney wearing a sweater and turning a thermostat down isn't the answer. We mean things like much more efficiency with fuels in the transportation sector, more efficient cars and more efficient energy technologies.

Hambrecht: I look at things as a banker. So when I think of what's hot, I ask where are the near-term IPOs? And there will be more solar deals coming out. There are some deals emerging in the silicon/poly-silicon supply chain that are going to be very interesting.

I'd like to see some energy efficiency deals come out, too. There are some real interesting business models emerging, and they're getting closer to producing numbers that will get the attention of the public markets.

Day: Well, the next two things are going to be water and energy efficiency. In terms of investment payback for a buyer, I think the best thing out there will be some kind of energy efficiency play. It could be on the software animation side. Or it could be simply replacing inefficient lighting, things like that, with new technologies.

And one of the things that drives visibility in the venture capital world is IPOs. And if you start seeing some IPOs on the energy efficiency side, then that will really raise visibility there.

Water and energy efficiency may not be the sexiest technology, but the needs are so huge. Just look at China, for instance.

Speaking of IPOs, if you take a look some of the energy IPOs within the last year—such as SunPower Corp. (Nasdaq: SPWR), Suntech Power Holdings (STP), and VeraSun Energy Corp (NYSE: VSE)—the industry is hardly lighting up the public market right now. So, what are the prospects for a vibrant cleantech public market in North America over the next, say, 24 months? Are these IPOs a sign of things to come?

Woolard: Yes, there will be some interesting opportunities in the next 24 months. Certainly, I think it will build up even more after that as technologies and companies mature. There are not that many companies that have the scale, size or revenue base to go to market now, but you'll see them over the next 24 to 36 months.

Day: From what I hear, well over a dozen solar startups are being sweet-talked about coming out to market soon.

Koch: Sweet-talked?

Day: Yes. And nobody talks sweeter than Bob here (laughter). But there's a lot of enthusiasm about particular sectors right now. And whenever that happens, it becomes very tempting to say, "Hey, this [IPO] is another form of financing that happens to be a very attractive form of financing right now. Let's take advantage of that."

Straser: The reality is that in the venture business you have to have appreciation in price to sales and price to earnings and reward for pay. If you get that, the venture industry business models tend to work very well. If you don't get that, it doesn't work as well.

Jones: Of note is that there has been an emphasis over the last year in establishing analysts at the banks to cover the energy stocks, and they're continuing to build that demand for these types of companies. Granted, they have to be real businesses.

Hambrecht: Yes, but there are not enough of these companies out there yet with the necessary market caps and doing the necessary trading volumes to justify analysts. There are, however, a bunch of people out there who are investing and betting that that will happen soon.

Instead of a traditional IPO, what about something that your firm has been keen on, the Dutch auction process?

Hambrecht: The auction is a real good fit for this sector, because if you look at some of the IPOs that have gone out in the last year, those first-day pops that you saw on a SunPower or a Sun-Tech or a VeraSun, suggest that there's a lot of public market investors, outside of the traditional institutions that want to participate in those IPOs. And those are the kinds of guys that run in the first day and buy—you know, run the stock price up on the first day. An auction brings those guys in at the offering and allows the company to get more of the proceeds and get a fairer price for their stock.

We've been talking about the public markets, but are there other exit opportunities, such as M&A?

Day: Yes, we're seeing large, major, companies getting into this market. General Electric, in fact, is making itself to be a bit of a poster child for that, but there are a lot of other companies out there, as well. So the path to exit is not nearly as long as a lot of major companies will be jumping on these venture-backed companies and helping them exit earlier and earlier.

Woolard: With that being said, however, utilities are a really important part of this value chain because they can block a lot of technologies. PUCs, for instance, are very important in terms of the regulatory barriers in place. So you have to understand the utility environment, the regulatory environment and all the complexity of delivering a product. It's not as simple as delivering new routers for the telecoms; it's much more nuanced from a regulatory perspective.

Koch: Right, it won't be the utilities driving this. But we've mentioned GE. And we see Siemens and 3M now getting into it. There definitely are areas of concentration where the major corporate players are trying to accumulate new energy technology.

Hambrecht: It's interesting to see that there's a broad number of technologies addressing a broad number of markets. Certainly, the GEs and some of the big industrial companies have an opportunity to capitalize, and I think there will be a lot of quality companies built. Will there be pinnacles of excellence that rise above the surface? It's not clear yet.

Day: Right. I agree. But I think we're also about to see a round of consolidations in several sectors. I'm thinking specifically about solar. Solar is very prime for consolidation for a number of reasons. Number one, the technologies are really starting to get proven now. Number two, we're all discovering that there's not going to be one winner-take-all technology for solar. There are lots of people on the solar installation side. And there are very different technological approaches, so it just makes sense for somebody to be consolidating all these different technologies. Whether that will be a GE or an existing solar player, I don't know. That's an open question.

Hambrecht: I'm not sure. These technologies first have to prove themselves out. A year from now, if some technologies are really proved out—or maybe it's a couple of years from now—then we'll see that a big company would be willing to step up and consolidate the industry. There's still a ways to go before that happens. Usually the big corporates don't pull the trigger until it's a no-brainer. You have a bureaucracy in a big corporation and no one is going to take a chance. The VCs around this table, however, will take the chances.

Woolard: Especially if you have the luxury of being value shoppers. When I was with PG&E, we were able to pick up wind and solar for relatively small amounts of money.

Day: Maybe it will be the folks like SunPower that will be the early consolidators. Yhese IPOs we've mentioned are opening at such high valuations, that if I'm looking at the need to consolidate this space and I'm looking at the possibility of my early acquisitions going out at really high valuations, I might want to jump in on that and consolidate them sooner rather than later.

By Alastair Goldfisher