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CLEANTECHIQ

INSIDE

Consultants See Uptick As Institutional Investors Eye Non-Traditional Cleantech

INVESTMENTS IN CLEAN ENERGY are on the rise among U.S. institutional investors, though they have a long way to go before they catch up with their European counterparts, investment consultants say.

After a drop-off in demand over the last several years, institutional investors are starting to dip their toes back in the cleantech market and are expanding their interest beyond the traditional solar, wind, and power funds. Consulting firms Mercer, Segal Rogerscasey, and Hewitt EnnisKnupp say interesting opportunities exist in agriculture efficiencies, water use and technology, waste management, pollution prevention, and anything related to the more efficient use of resources.

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>
> SHARI YOUNG
> Senior Private Equity Consultant,
> Hewitt EnnisKnupp

CONSULTANTS SEE UPTICK *(continued on page 5)*

Lessons Learned: How VC Funds Raised Capital in 2013

Re-thinking "cleantech"

WHEN TIM STREIT BEGAN courting investors for Huron River Ventures 1, an $11 million cleantech investment fund that focuses on early stage companies in Ann Arbor, Michigan, he realized his biggest obstacle was one of semantics.

The number one question among the family offices, high net worth individuals and corporate partners with whom he spoke was always, "What do you mean by cleantech?" says Streit.

"The word 'cleantech' instantly brings to mind images of solar and biofuels

LESSONS LEARNED *(continued on page 7)*

U.S. Venture Capital Funds Raised $4.1 Billion During Q1 2013

Year/ Quarter	# of Funds	Venture Capital Funds Raised ($M)
1Q '11	49	$8,111.5
2Q '11	48	$2,713.3
3Q '11	66	$2,116.0
4Q '11	53	$6,105.0
1Q '12	53	$4,704.0
2Q '12	50	$6,316.4
3Q '12	59	$5,098.4
4Q '12	44	$3,320.2
1Q '13	35	$4,053.1

Source: Thomson Reuters and National Venture Capital Association

Fundraising Environment Sparks A Cleantech Revolution

Big cleantech fund moves

IT'S BEEN A TUMULTUOUS YEAR and a half for clean technology investors. A series of reports and studies found that venture investment in cleantech startups dropped significantly in 2012 as traditional investors including insurance companies, pensions, and university endowments pulled out. That caused big failures at Hudson Clean Energy Partners and VantagePoint Partners, which admitted defeat on $2.75 billion in combined fundraising as investor interest flagged.

Venture firms responded by raising smaller funds and refocusing on capital-light startups. Deal volume dropped 25 percent in the first quarter of 2013 from the same period in 2012, and average deal size plummeted 66 percent to $2 million, according to PwC MoneyTree.

The decline in cleantech investment mirrored a larger quarterly trend in venture capital activity in Q1, which saw a 15-percent drop in deal count since Q4 2012, and a 12-percent decline in dollars invested, according to a report by PwC MoneyTree.

U.S. Cleantech Sector Venture Capital Investments, 2010–2013

Quarter	2010		2011		2012		2013	
	# of Deals	Amount Invested	# of Deals	Amount Invested	# of Deals	Amount Invested	# of Deals	Amount Invested
Q1	94	$913,806,900	86	$1,256,751,200	81	$947,213,000	61	$368,693,900
Q2	85	$1,535,209,700	97	$1,080,083,700	56	$965,587,300		
Q3	69	$717,287,100	88	$969,251,300	64	$841,940,400		
Q4	72	$928,021,800	82	$1,310,845,700	70	$570,682,400		
Grand Total	**320**	**$4,094,325,500**	**353**	**$4,616,931,900**	**271**	**$3,325,423,100**	**61**	**$368,693,900**

Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters

Although investment in most cleantech subsectors were down in Q1 2013 vs. Q1 2012, Smart Grid and Energy Storage investment was up 21%.

Cleantech was not abandoned by, however. On the contrary, many recruited fresh investors including corporations, sovereign wealth funds, family offices, and new Asian investors. They also innovated business models such as Garage Technology Ventures, Braemar Energy, and the Westly Group, all of which brought in new levels of corporate participation.

"As long as the traditional venture firms remain constrained, it's a great time for corporates with cash to do some deals," says Sheeraz Haji, CEO of Cleantech Group. "Corporates are really interested in startups, and startups want corporates to participate. The interest is really high on both sides."

Not content to invest in outside funds, more corporations including Shell, E.ON and Google are launching their own venture capital units. Bringing the venture model in-house allows corporations to pursue innovations "too disruptive to an incumbent's core business for it to pursue internally," says Paul Straub, director of Claremont Creek Ventures.

CleantechIQ has compiled a list of the biggest changes in cleantech funds. The capitulations and fresh starts gathered here show an industry that is growing leaner, more diversified, and perhaps more realistic about potential risks and rewards.

Cautionary Tales

Venture investments in cleantech companies have been in free fall. Diminished interest from traditional investors including insurance firms and pensions forced VC's to capitulate, downsize or shift away from cleantech, including:

- Hudson Energy Partners hit a wall. After raising a first round in 2009 worth $1.02 billion, Hudson Clean Energy Partners announced a $1.5 billion goal this year. That effort failed and the firm began downsizing its large team.
- VantagePoint Capital Partners crashed. After finding little interest among potential investors, the firm cancelled fundraising for a $1.25 billion fund, which was to target capital-heavy industries including energy storage, grid-scale efficiency, and electric vehicles, plus sectors hammered by global competition such as solar manufacturing.
- Kleiner Perkins Caufield & Byers, once a Silicon Valley darling has taken it on the chin lately, due partly to its big bets on cleantech firms including Fisker Automotive. The firm dissolved its dedicated cleantech team while refocusing recruiting efforts to bulk up its general IT expertise. Meanwhile Bill Joy and Ray Lane, general partners who led three funding rounds with significant spending on cleantech companies, became partners emeritus.
- Draper Fisher Jurvetson's investment in cleantech firms dropped 37 percent last year, as the firm's emphasis "shifted somewhat toward mobile, cloud and consumer web," said managing director Don Wood.
- Mohr Davidow is shrinking its cleantech focus. The blue-chip VC firm folded its cleantech group into its larger IT vertical. In the restructuring, the firm's cleantech experts including Erik Straser and Marianne Wu failed to make the cut to become general partner, and were named "investment professionals" instead. Others left the firm including Sven Strohband for Khosla Ventures, and Will Coleman.
- Other departures, including Jason Matlof leaving as a partner of Battery Ventures and Ullas Naik from Globespan Capital Partners, left both firms with diminished cleantech groups. Another venture firm, Redpoint Ventures, also moved away from investing in clean technology.

Some big research studies and a big fraud case also cast a pall on the industry, including:

- For CalPERS, "L" is for "Lose." Joseph A. Dear, chief investment officer for California Public Employees' Retirement System, dropped a bomb on cleantech VC's in March when he announced the nation's largest pension fund lost 9.8 percent on its $900-million investment in cleantech companies. "We have dialed back," Dear said.
- Advanced Equities, a Chicago-based investment group that had teamed with established firms including Kleiner Perkins and NEA, shut down its broker–dealer operations and paid $1 million in fines after settling charges with the Securities and Exchange Commission that the company misled investors while raising funds for alternative energy startups.

Hopeful Signs

Cleantech venture activity may be down, but it definitely is not out. Here are some of the biggest recent moves, starting with VC's attracting new investors as some traditional ones bow out:

- Steve Westly, founder of venture firm The Westly Group, may be "more bullish than ever" on cleantech, but his approach to raising his latest $160 million fund shows such confidence requires resourcefulness. Absent were university endowments and pension funds, replaced by some giant strategic investors including German utility E.ON, Citigroup, and South Korea's SK Group.

FUNDRAISING ENVIRONMENT *(continued on page 4)*

FUNDRAISING ENVIRONMENT *(continued from page 3)*

- Attracting funds from family offices as well as insurance companies, banks and mutual funds, SJF Ventures announced it successfully raised $90 million for its third cleantech fund, three times as large as its prior fund.

Corporations accelerated the pace of their energy venture efforts, including:

- Petro giant Shell announced its new venture capital unit will invest "several hundred million dollars" in new tech companies in the coming years. Priorities including exploiting future energy technologies and boosting efficiency through better water treatment, gas production and geophysical imaging could include big cleantech opportunities.
- After staking territory as a major venture presence with Google Ventures, Google launched a second VC fund called Google Capital to invest in later-stage startups.
- Oakland, California-based Claremont Creek Ventures also touted its ability to recruit strategic partners, since "8 of our past 10 energy tech investments have included a corporate partner," director Paul Straub says.
- German utility E.ON announced it is creating a new venture capital unit focused on investing in distributed and smart energy solutions.
- Monsanto, which will focus on agriculture, made a major commitment to venture investing by hiring a key executive from the venture capital ranks.
- As traditional venture firms continued to back away from cleantech startups, major corporate strategics filled in some of the gap, including investment activity by Siemens, Schneider Electric, ABB, American Electric Power and General Electric.

Others tried to invent new venture business models. These included:

- Garage Technology Ventures launched new type of strategic venture fund that partners with corporations who are seeking to outsource their cleantech investments. The new fund is not set up with the traditional venture fund structure, and Garage will be paid a management fee "with an opportunity for upside" for co-managing the fund.
- Greenstart, which began as a cleantech accelerator in San Francisco, announced it is transitioning to become a small venture firm that also will serve as an in-house design company for its startups.
- Energy Foundry, a cleantech venture firm created by the Illinois state government and funded with $22.5 million from utilities including Commonwealth Edison Co. and Ameren Illinois, opened in April. The effort's managing director is Sara Hochman, who previously worked in GE's renewable energy division.

A number of VC's took big swings at the fences:

- LUX Capital turned against the herd. The firm raised $245 million (topping its $200-million goal) for capital-intensive startups in energy, science, and health care.
- Braemar Energy Ventures raised a $300 million clean energy fund from corporate and institutional investors in the U.S., Europe, and Asia, including the Government of Singapore Investment Corporation, a top sovereign wealth fund.

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Farmlogs Bet Looks Small, But Potential Could Be Huge

NVCA Chair Josh Green Unveils His Top Cleantech Picks

- Goldman Sachs announced a goal of raising $40 billion in clean energy investments over the next decade across sectors including wind, solar, biofuels, hydro, energy efficiency, biomass, energy storage, LEDs and transmission. Goldman has a history of exceeding projections in this area; the company pledged in 2005 to raise $1 billion, but it actually raised $24 billion, including $4 billion of its own money.
- Andreesseen Horowitz continues to bet big on cleanweb, as well as other types of web- and app-based efficiency companies including FlightCar, FarmLogs, AirBnB, and $60 million on Zimride/Lyft.

Still others announced simply positive fund creation moves:

- EnerTech Capital, which focuses on later-stage investments, received $20 million from BDC Venture Capital, part of its larger strategy to raise a $150-million fund and invest in "12 to 17" companies.
- Israeli venture firm Terra Venture Partners raised $20 million towards a fund it hopes will reach $50 million targeting investments in "cleanweb" that includes internet, software and mobile investments that help the environment. Investors in the fund include a U.S. private equity firm, a Brazilian bank, European family offices and strategic investors.
- BDC Venture Capital, a Canadian firm, announced it will invest $100 million in Canadian tech firms focused on scalable energy and efficiency.
- Michigan-based Huron River Ventures raised $11 million for its first VC fund from the state of Michigan, DTE Energy and from about 50 private investors.
- Wheatsheaf Investments, a firm owned by one of Britain's richest men (who also owns the utterly ridiculous title of "His Grace Major-General Gerald Cavendish Grosvenor, 6th Duke of Westminster") entered the cleantech investing space by joining in a $13-million funding of green fertilizer company Osatra Nutirent Recovery Technologies. ■

CONSULTANTS SEE UPTICK *(continued from page 1)*

"We think cleantech could have interesting opportunities for clients," said Donna Rosequist, director of private equity and alpha investment research at Segal Rogerscasey, adding that there is more interest in cleantech now than there way a year ago. "From a negative perspective, many investors backed away after the mid-2000s due to a lack of exits or proven technology. Based on this, some investors are still very skeptical about clean energy."

On the positive side, there is less competition for the deals that are around today in the venture capital cleantech space.

But competition looks to be picking up as the definition of cleantech expands. "The definition of 'cleantech' has expanded greatly," said Craig Metrick, leader of the U.S. responsible investment practice at Mercer. "There is still some perception that when you talk about cleantech, you're talking about a technology risk on solar, wind, and biomass." But opportunities exist in energy efficiency, pollution control, water, and waste management, he says.

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>
> CRAIG METRICK
> Principal & US Head, Responsible Investment at Mercer Investment Consulting

"Clean energy is more than wind and solar," Rosequist said. "What is driving this are issues with global population growth and demand for fuel, clean, potable water, and grains for food. From a world perspective, at some point the demand for these will be more than the supply. So the avail-

CONSULTANTS SEE UPTICK *(continued on page 6)*

CONSULTANTS SEE UPTICK *(continued from page 5)*

ability of water and grains is really something that needs to be looked at, rather than just solar or wind."

Shari Young, senior consultant in private equity for Hewitt EnnisKnupp, said she has seen increasing interest in agriculture. "The area we find most interesting is agriculture," she said. "We've seen a number of traditional venture funds that think outside the box and are doing food-related deals. Agriculture takes a lot of expertise in biology and technology and there is a lot of innovation going on there."

This more expanded definition of cleantech has brought in interest from non-traditional investors, the consultants say, as endowments and foundations become more involved in the market. Generational shifts in family offices are also allowing a younger group of investors to become more interested in these investments.

"We are seeing more of our endowments and foundations and family office clients interested in this area," Metrick said. "There is a fossil fuel divestment campaign that is focused on higher education endowments and that is moving to foundations." In family offices, younger generations are much more interested in the clean energy space than older generations, he added.

Rosequist said most of the interest in cleantech comes from investors with an interest in environmental, social and governance (ESG) funds. "For an institution with a large private equity portfolio, an ESG fund is a good play and a good way to get active in the space," she said.

Rosequist cautions that an investor with a smaller private equity allocation, such as an endowment or foundation, may be more negatively impacted if an investment turns sour. "They are less likely to make that commitment unless they have an ESG slant." A smaller investor or a family office that has a slant towards the environment may prefer to access this space by investing in a fund of funds that has an allocation to clean tech, she said.

As investors become more interested in cleantech, more investment opportunities have arisen and cleantech investing has moved beyond just the private equity and venture capital space.

"We have been talking to clients about opportunities in sustainable environmentally-themed investments in private markets and also across other asset classes like private equity infrastructure, sustainability considerations for timber and agriculture, as well as more interest in green bonds," Metrick said. He added that there is also interest in public equity environmental strategies that focus on water, clean technology and renewable energy.

Still, some consultants think the U.S. is behind its European counterparts and has some distance to go to catch up. Private equity and venture capital firms find it easier to raise money from European investors, Rosequist said. "The idea resonates more with countries that understand the need for clean energy, such as many of the European countries that have emissions standards that need to be met by a specific date. The U.S. is a little behind these countries."

At Hewitt EnnisKnupp, investment managers say most of the money comes from Europe. "On the private equity side, our U.S. clients still have waning interest in that area," Young said. "But in private equity and even non-private equity, there has been a pickup in interest from European institutional investors. There is a little money from high-net-worth individuals, family offices, and foundations in the U.S., but most of the interest is from Europe."

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Hewitt EnnisKnupp

Global and multinational corporations and insurance companies are able to take advantage of the international growth in the cleantech space. "Multinational corporations have invested directly," Rosequist said. "They have a long-term view and can wait until an exit occurs. Funds are forced to exit the investments so their returns may suffer from exiting too early. A long-term strategic investor can hold onto the investment longer."

From an investment management perspective, the increased awareness around clean energy has boosted interest. "Certainly the public profile of these issues of water scarcity, food shortages, and climate change point to a potential growth opportunity to investors," Metrick said. "We see investment managers in this area getting longer track records, more experience, and higher-quality strategies as we've moved along in time."

Other investment managers are changing the structure of their firms in order to raise capital. "Sometimes we see people who have no background on this and it's challenging because they suddenly become experts," Young said. "You need someone with a technology background who has an understanding of the scientific side. Firms are getting creative by hiring people who understand government policy."

Even over the last few years, portfolio managers of renewable energy funds are able to find attractive opportunities without taking on as much technology risk in the solar and wind space. And the reduced technology risk has helped grow the sector.

"Funds are getting away from technology risk and we are seeing more funds that are investing in the later stage or a buyout of a growth-oriented company," Rosequist said. "Firms are now looking at companies that are already generating revenue, have a solid management team in place and have prior profitable investments."

Investment managers who focus more on the growth side than the venture capital side have also found a way to protect against technology risk. "Some companies have found ways to take derivative plays in the space to offset technology risk," Young said. "It is structured so you're protected on the downside." ■

LESSONS LEARNED *(continued from page 1)*

and batteries and power generation in more capital-intensive cleantech sectors," Streit says.

But the fund, overseen by Streit and fellow managing director Ryan Waddington, never intended to invest in those kind of companies, which need hundreds of millions of dollars and decades to commercialize. Rather, Streit was focused on smaller early stage companies like Sidecar, a peer-to-peer ride sharing system that started out as a fleet management platform for the University of Michigan bus system. Or a company like Farmlogs, which uses technology to optimize farm output and make farming more profitable.. The firm invests anywhere from $50,000 to $500,000 initially, with the expectation of putting as much as $1.5 million into each company over the course of several rounds of financing.

SJF Ventures says it encountered similar concerns about the term "cleantech" when it raised money for its $90 million fund – the company's third – says founder and managing director David Kirkpatrick. Investors think the sector is risky on account of regulatory, incentive and commodity price issues and because they believe it is reliant on a strong IPO market, which is not always available, Kirkpatrick said.

"We had to convince investors we were different from what they feared. What they feared was early stage, regulatory-driven areas like biofuels," Kirkpatrick says. "We are different from that in almost every way."

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> DAVID KIRKPATRICK
> Co-Founder and Managing Director,
> SFJ Ventures

Besieged by investor preconceptions and concerns about "cleantech," VC's are trying to change investors' minds about the sector, which shrunk 61% in the first quarter over the comparable period last year. U.S. venture capital firms attracted just $369 million in new investments in that period.

As Dallas Kachan, the managing partner of the cleantech research and advisory firm Kachan & Co., pointed out in a recent blog post, "intelligentsia in the sector are distancing themselves from the phrase."

LESSONS LEARNED *(continued on page 8)*

LESSONS LEARNED *(continued from page 7)*

Like Huron River Ventures, SJF's interests lie in energy and resource efficiency, intelligent infrastructure and sustainable agriculture and food, as well as asset recovery, recycling and reverse logistics, and businesses operating in the education, health and wellness sectors. It sells investors on capital efficient companies with proven technology and business models that prosper regardless of government incentives. Kirkpatrick likes to use the term "resource efficiency and sustainability" when articulating SJF's version of cleantech.

The firm invests in later-stage companies already producing revenues and seeking expansion capital rounds of $1 million to $10 million. Its 36 portfolio companies average more than $10 million annually. Backers include large banks like Citi and Deutsche Bank, foundation endowments, insurance and financial services firms like MetLife and Prudential Financial, Inc., mutual and pension funds and family offices.

Most recently, SJF invested in Vital Farms, the country's largest producer of pasture-raised eggs and poultry. For its third fund, SJF did the capital-raising themselves, reaching out to hundreds of investors over a 15 month period. Some potential limited partners raised concerns about the fund's ability to achieve scale.

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>
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> Managing Director,
> Huron River Ventures

"They didn't want to invest in a fund of less than 100 million." Kirpatrick says.

He and Streit stand among a crop of VC's who have successfully raised cleantech funds in recent months. These include the Westly Group, which closed on a $160 million fund on March 16, and Lux Capital, which raised $245 million for a fund partially focused on "energy tech" on Feb. 13. Reaching out to corporate investors, Braemar Energy Ventures raised $300 million.

Other firms haven't had as much success hitting their stated goals. Hudson Clean Energy Partners stopped fundraising for a $1 billion cleantech fund and began scaling back its team in February. Likewise, a lack of interest from potential limited partners caused VantagePoint Capital Partners to halt fundraising earlier this year for a fund the company hoped would reach $1.25 billion

If Huron River Partners' recent fundraising efforts indicate what's in store for the future of cleantech investments, semantic changes are likely to spread industry-wide. Kachan writes of how Deloitte rebranded its annual Napa Valley cleantech event last week as "Energy Tech."

"Is it just a matter of time until others start picking similar monikers," Kachan wrote.

Streit says Huron River Ventures stopped using the term "cleantech" altogether, opting for more specific terms like energy efficiency transportation.

"Because of the very negative public analysis in the cleantech sector related to other industries, and the last generation of cleantech companies, I think the sector as a whole needs to retrench a little bit and rebrand," Streit says. ■

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