Going to Seed:
Building Successful New Energy Companies

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The title of my talk today is "Going to Seed". That doesn't mean I'm advocating for you to let yourself waste away. Rather, I'm advocating something much more invigorating: investing in seed stage energy venture opportunities.

My perspective is that the seed stage energy arena is very fertile ground for savvy companies and investors to more seriously consider.

The flip side of this: continued inadequate attention to seed stage energy ventures could jeopardize the quality of the future stream of acquisition and IPO opportunities in the now relatively buoyant energy technology space.

Three points I want to make in my remarks today:

- First, the good news: the flow of private equity capital into the new energy space is increasing.

- Second, however, is my concern: many of the potentially most compelling energy ventures now just forming may not get the capital they need to reach later stages.

- This leads to my third point: paradoxically, the most attractive financial opportunities in the energy space may lie in these seed-stage ventures that are not getting enough attention.

INCREASING ENERGY VC

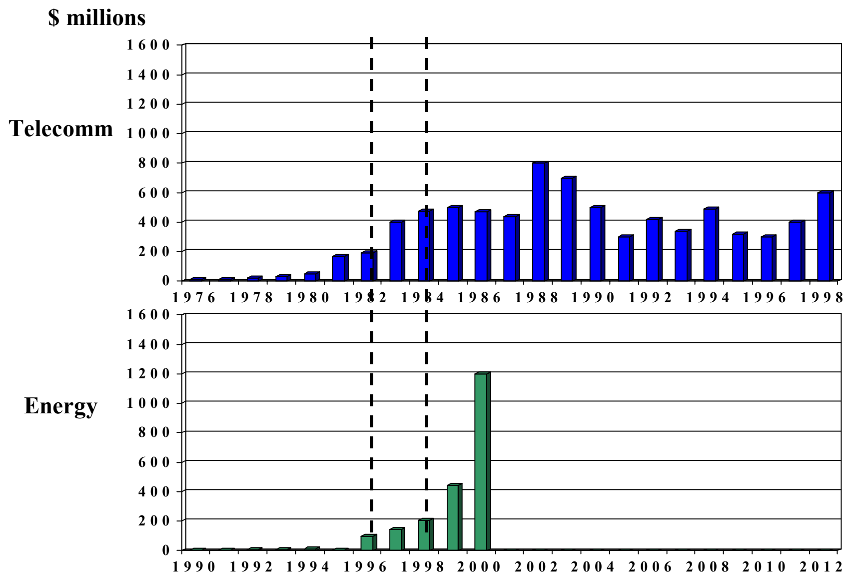
Let's start by stepping back and looking at the bigger picture. There are two notable and indisputable trends that are evident in today's marketplace:

- First, electricity deregulation. This is causing owners of the entrenched asset base on the power grid to fundamentally re-evaluate how they perform their core business activities. These players are looking for new ways to extract long-lasting cost advantages and differentiate their products and services. With increasing and increasingly volatile energy prices – not to mention the rolling blackouts in California – the pressures for change in the energy sector are very strong indeed. These changes will probably come from new technologies and new business concepts, probably launched by new entrants as opposed to incumbents in the energy business.

- Second, the explosion in private equity. In the past several years, the rate of growth in the venture capital (VC) community has been enormous. VC funding of new businesses in the US increased by a factor of 10 – from $11 billion to $104 billion between 1996 and 2000. Of course, we all know about the so-called "dotbomb", and as a result, there has been a decline in VC interest in e-commerce, the Internet and software. Yet, money continues to flow into the VC world at a rapid pace. Of note, the energy sector has launched some successful IPOs even during these difficult times, and as a result Wall Street analysts are picking up on the exciting dynamics in this space.

Together, not surprisingly, there has been an increase in attention by private equity managers to opportunities in new energy technology ventures. As an illustration of how significant the increase in VC attention to energy is, let's compare the situation to the telecomm sector.

TELECOMM AND ENERGY VC



Source: Venture Economics, Stanford Graduate School of Business, Nth Power Technologies, Inc.

In the early 1980's, AT&T was broken up and the telecomm sector began its long march through deregulation (which still continues today). Correspondingly, VC investment in new telecomm ventures increased from very little in the late 1970's to $400 million per year by the mid-1980's and thereafter. For the past several years, the telecomm sector has been one of the hottest and most exciting investment arenas.

In contrast, the energy industry deregulated considerably later than telecomm, and as might be expected, VC interest in energy languished until deregulation really came to the fore in the past few years. Now, from almost zero in the mid-1990's, VC investment in energy reached $1.2 billion in 2000 – more than doubling from the previous year.

There are now several VC funds that focus almost exclusively on energy opportunities. Probably the most well-known is Nth Power, but some big players like Merrill Lynch and JP Morgan/Chase (through their Beacon Group) also have dedicated energy funds.

Several energy companies also have in-house corporate venture groups. While Enron is probably the highest visibility of these, I've seen advertisements on national television touting Exelon's corporate VC group.

And there's more. Many non-specialized funds are increasingly interested in energy deals. New energy-dedicated funds are being formed as we speak.

The attraction of VC to the energy sector has closely followed the acceleration of Wall Street interest. Before 2000, investment banks just didn't care to follow companies that were developing new energy technologies. No analysts were dedicated to the energy technology arena.

However, in the past two years, investment bankers have caught on to the fact that something fundamentally transformational is beginning to occur in the energy sector, led by emerging companies that are developing new energy technologies. And, consequently, many analyst reports started being written about 18 months ago, announcing the new, new thing: energy technology.

The chart below presents a cross-sample of Wall Street sentiments on new energy opportunities from the first half of 2000. The message is consistent: energy technologies are exciting, and potentially a very attractive place to put your money for the next 10 years or more.

WALL STREET ANALYST VIEWS

- "*We believe now is the time to be bullish on energy technology*."
  Hugh Holman, Robertson Stephens, November 1999
- "*We see a distinct group of high growth firms emerging to provide innovative services and breakthrough technologies to a $250 billion deregulating electric industry*."
  Greg Haas & Frederick Schultz, Raymond James, January 2000
- "*The underlying drivers behind new energy technologies are genuine and sustainable*."
  Joe Arsenio, Chase Hambrecht and Quist, February 2000
- "*There's clearly an enormous market potential for many of these [energy technology] companies to succeed*."
  Robert Winters, Bear Stearns, April 2000
- "*We view the techno-revolution of energy as a big, open-ended opportunity*."
  Sam Brothwell, Christine Farkas & Steve Fleishman, Merrill Lynch, June 2000

Now, just about every major investment bank has at least one analyst dedicated to the new energy sector. What happened about 18 months ago to start this surge in Wall Street interest?

Well, one thing captures the attention of investment bankers more than anything else: when someone makes a lot of money. And, people started making lots of money from investments in new energy companies in 2000. This occurred as some energy ventures took advantage of the then-favorable IPO climate to go public, and then watch their stock prices soar.

The four companies listed below saw their stock prices approximately double by late May 2001 since their IPO's 12-18 months previously – even in the face of a very bearish market.

SELECTED RECENT ENERGY IPO's

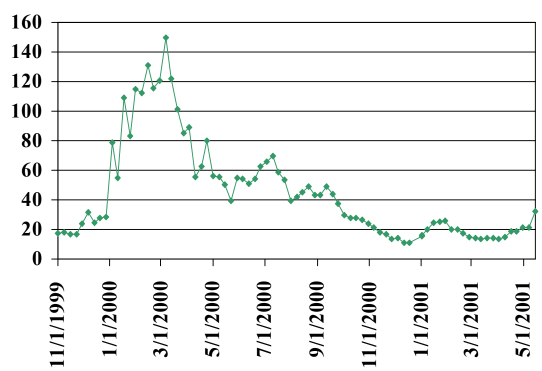
			Equity price		
Company	**Ticker**	**IPO date**	**At IPO**	**5/21/2001**	**% Change**
Active Power	ACPW	8/7/2000	$17	$29.95	76%
Caminus	CAMZ	1/27/2000	$16	$28.67	79%
Capstone	CPST	6/28/2000	$16	$35.51	122%
Plug Power	PLUG	10/28/1999	$15	$32.12	114%

Source: Banc of America Securities

Probably the bellweather was Plug Power's IPO in late October 1999. Plug Power was a catalyst for accelerating interest in the energy technology space in early 2000.

PLUG POWER

Share price, weekly close



Boom and bust, but generally above IPO price (up 114% to 5/21/2001)

Source: Yahoo! Finance

Note how share prices rose from $16 at IPO to nearly $160 just a few months later. Then, Plug Power crashed and burned over the rest of 2000.

Looks like a "dot-com" stock, doesn't it?

Well, in my opinion, not quite. Whereas pets.com and others like it have shriveled up and gone away, Plug Power is very much still alive. What I like to point out is that, even at its worst (so far, anyway), Plug Power stock never has fallen appreciably below its IPO price.

Clearly, the price run-up to $160 was unsustainable, but some positive value for the enterprise is still plausible. The company offers a decent story about the future – not without risk, but a decent story nevertheless – that the market continues to accept.

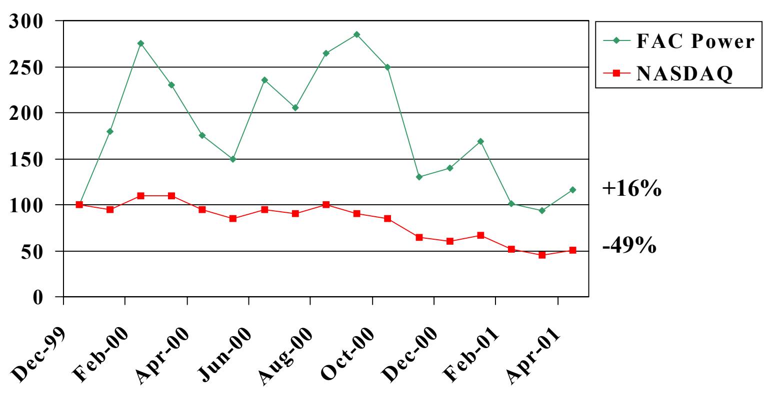
Energy technology companies like Plug Power have the clear prospect of profitability – proprietary technologies, barriers to entry – that "dot-coms" didn't have. This is keeping energy technology ventures afloat today, even in an overall bear environment.

Since late 1999, a composite of energy technology stocks (measured by First Albany) has risen and fallen, but still remains up. In contrast, the NASDAQ index as a whole has gone almost straight down by nearly 50%.

ENERGY TECH VS. NASDAQ

2000 and 1st 4 months 2001

December 31, 1999 = 100

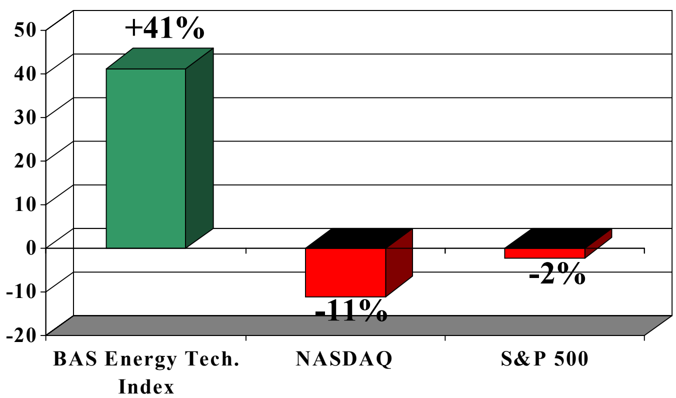


Source: FAC/Equities, NextWave Energy analysis

Yes, energy tech stocks too have fallen by more than 50% since their peak in late 2000, but they've still outperformed NASDAQ in this period. Year to date during 2001, Bank of America's energy technology stock index has significantly outpaced NASDAQ and the S&P 500 more broadly. Energy technology has thus continued to rise while the overall equities market has fallen.

ENERGY TECH APPRECIATION

% Change, YTD to 5/21/2001



Source: Banc of America Securities

What's underlying this against-the-tide strength of the energy technology sector?

Certainly, public awareness of higher energy prices, the travails of the California electricity sector, and the Bush Administration's touted energy strategy arguably suggest to investors that energy opportunities represent one of the few areas in which healthy financial returns might be available even in an uncertain overall economic climate.

Whatever the reason, it's undeniable that more money is moving into energy technology, not just the publicly traded stocks, but also into energy VC.

This is all good news for entrepreneurs leading new energy ventures: money is increasingly available to help in building your companies.

However, some worries remain:

- Compared to the relative size of the energy sector in the overall economy, the amount of VC going to energy is still disproportionately small.

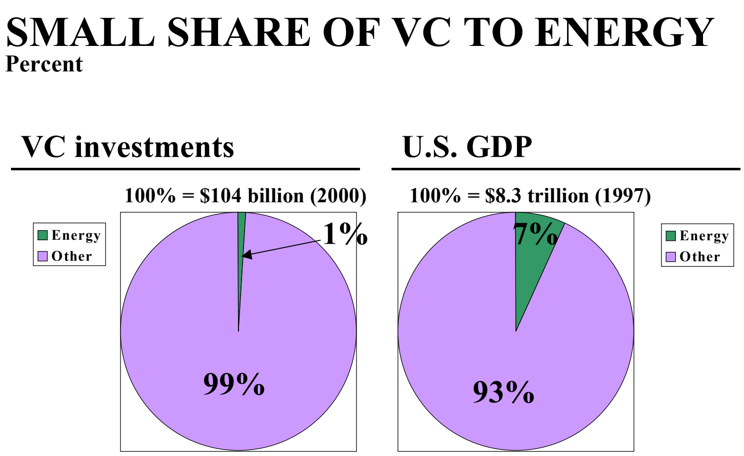
- More disturbingly, very little of this VC is going to the earliest stage companies – who are developing the next round of energy technologies, but who are the most vulnerable to capital starvation in an economic downturn.

This raises the concern that there may not be enough attractive energy IPOs in a few years' time to sustain for very long the momentum that the energy technology sector has developed in the past 12-18 months.

INADEQUATE VC TO SEED STAGE ENERGY

Let's look at each of these three points in greater detail.

Despite the growth of energy VC presented in a previous chart, the truth remains that energy still receives only a small share of the overall VC bounty.



Source: NVCA/Venture Economics, Nth Power Technologies, U.S. Dept. of Commerce, U.S. Energy Information Administration,NextWave Energy analysis

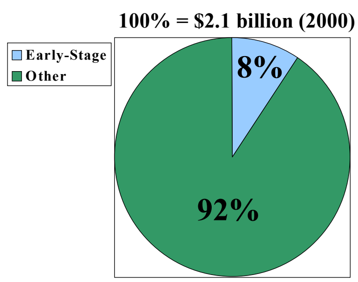
In 2000, a little over $100 billion was invested by VC firms into new enterprises. As mentioned before, about $1.2 billion of VC money went to energy companies. In other words, about 1% of all VC investments went into energy.

In contrast, the energy sector represents about 7% of the U.S. GDP.

A case could be made, therefore, that the amount of energy VC could be several times higher than it currently is.

Furthermore, of the amount of VC money going to emerging energy enterprises, over 90% of funding is going to later-stage private rounds (much of which immediately precedes IPOs). In other words, less than 10% of VC funding goes to earlier stage ventures.

SMALL SHARE OF ENERGY VC TO EARLY-STAGE COMPANIES
Percent



Note: Data is for ECN's so-called "Environmental Technology Sector"

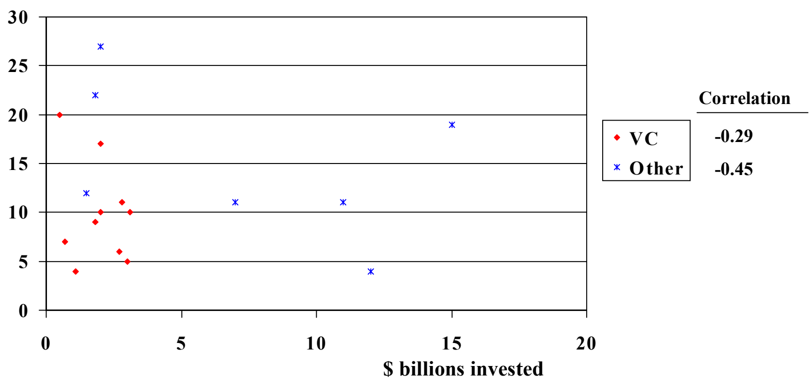
Source: Environmental Capital Network

Of course, an earlier-stage enterprise typically requires less funding than a later-stage firm. Nevertheless, there are many more early-stage ventures than late-stage ones, so the very small proportion of aggregate funding to earlier-stage companies is somewhat disturbing.

What's interesting – indeed, paradoxical – is that when relatively small amounts of capital are invested in an area, it is usually correlated with higher returns in that sector.

LOWER RETURNS WITH GREATER CAPITAL SUPPLY

Average 5-year IRR's, 1980-89, US



Source: Federal Reserve System, NextWave Energy analysis

This is an analysis conducted by the Federal Reserve of annual amount of private equity investment vs. private equity internal rates of return (IRRs) after 5 years throughout the 1980's.

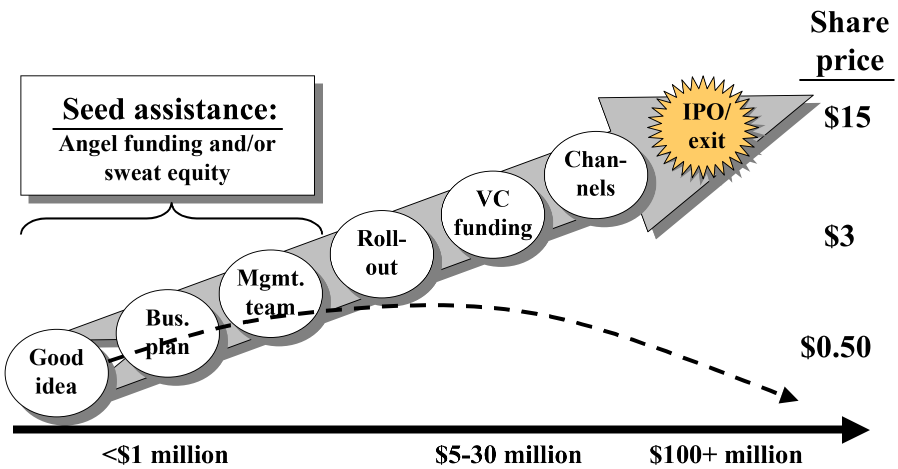
The analysis shows a clear negative relationship between the amount of capital deployed and investment returns. Or, to put it another way, if there is less investment, returns tend to be higher.

ATTRACTIVE RETURNS FROM SEED STAGE ENERGY

Thus, if seed-stage energy companies are getting less than their fair share of VC funding, this analysis suggests that investment returns there could well be higher there than elsewhere. In other words, early-stage energy ventures could generate attractive returns in the coming years.

What does it mean exactly to work with early-stage ventures to generate attractive returns?

GROWING AN ENERGY VENTURE



The goal for any successful venture is to generate an attractive return on invested capital upon attainment of a liquidity event, sometimes a private sale but often an IPO. Considering the case of an IPO, most stocks tend to initially float in the $15 range, raising over $100 million for the company.

Working backwards from that "exit" point, most ventures need 3-5 years to mature to that point. During this time, the company needs to grow from just a good idea into a viable company.

The most obvious milestones -- technology finalization, initial marketing/sales, channel development – usually occur with the assistance of VC funding in years 2-3, often requiring many millions of dollars. This money comes in with the expectation of generating 50% IRRs over about a 2-3 year period until exit (in this case, IPO), meaning stock valuations of $2-5 per share.

But it is the early milestones – the ones required to raise the larger VC rounds of funding – that very often determine the long-run trajectory of the venture, and whether it will ultimately succeed. Failure to attain these milestones will almost certainly doom the venture to long-term failure.

While the gestation phase of a venture burns some capital, the amount of money needed is much smaller than in later rounds – usually less than $1 million. What's really required is blood, sweat and tears – hard work side-by-side with the entrepreneur to get the venture onto a track of long-term viability.

In these early days of a venture, it is feasible to "get in" at valuations well below $1/share. Over the 3-5 year horizon until exit, this can imply IRR's of 75-100% -- or even more.

So, it is seed-stage assistance – either "angel" capital or "sweat equity" to help build the company from its earliest days – than can in fact earn the most attractive returns. And, yet, it is in this space that the private equity community seems NOT to be investing its money, thus further improving the prospects for attractive returns.

But, what happens if no-one works with seed stage companies to help them?

As mentioned previously, companies in their earliest days are at their most vulnerable to failure. If seed stage ventures can be put and kept on track to success from the outset, their long-term prospects increase significantly, with substantial promise of attractive returns. On the other hand, pitfalls must be avoided to ensure that later rounds of capital can be procured.

Several potential deterrents to future successes must be overcome during these early days:

- Misguided strategies. Many early-stage business concepts take advantage of a unique government program that is not sustainable – when the support goes away, so does the business – or that is not extendable beyond the specific limitations of the program. Also commonplace is the practice of seeing someone else's good idea, and modifying it slightly (if at all). VC's will tend not to fund business plans that are subject to faults of this type.

- Implausible analyses. In their zeal, inexperienced entrepreneurs can get carried away with market potential and pricing levels. Unfortunately, if these numbers are unrealistic, VCs will walk away. On the other hand, the numbers do need to be exciting enough to attract investor interest, so a delicate balance between optimism and conservatism must be found and maintained.

- Excessive technical orientation. Lots of entrepreneurs are inventors – engineers or scientists who know their widget inside-and-out. However, people of this type tend not to know as much as they need to know about building and running a business: how to market and sell their widget, how to manage others, how to build a balance sheet, how to run an operation. It is axiomatic that VCs bet on jockeys, not on horses, so it is critical for early-stage ventures to attract a strong commercially-oriented management team that in turn will subsequently attract VC funding.

How can seed ventures be helped to avoid these pitfalls? Even if the entrepreneurs sometimes don't realize it, what these early stage ventures need more than anything else (even money) is business acumen.

They need help in understanding the marketplace, the competitive landscape, how to reach their target customers, what the value proposition should be, what their offering is, how it is priced, and so on.

They need help in putting together a strong business plan and management team. The former requires strategy skills, the latter requires an innate understanding of the business' true talent requirements – as well as an extensive interpersonal network to find the right people to fill these needs.

Only after these prerequisites are completed does help in raising capital truly matter.

This is what we at NextWave Energy do: work with seed-stage energy companies to help them build better businesses with greater prospects for later financability and ultimate commercial success.

Why do we do it?

- As mentioned before, we think the risk-return profile is more attractive here.
- We also don't have to front a lot of capital. We do a lot of our work for equity on a "sweat" basis.
- We are able to stay ahead of the rapidly evolving energy marketplace, by working with the companies that are truly on the leading edge.
- We believe that we are able to have more positive impact on these earlier stage companies than with companies that are more mature and set in their ways.
- Finally, we have fun doing it. Alas, at certain times, this point is debatable.

If these comments have moved you to become more interested in "going to seed" – investing in or working with seed stage energy opportunities – please see me, as I know of a few promising ventures that we're working with that could become winners for both you and us.