

## Trends Bode Well For Clean Tech IPOs This Year

Nat Goldhaber

Over the years, venture capitalists have invested in clean technology and renewable energy with the expectation that returns will take a long time. The VCs were right.

Development of technologies such as solar cell manufacturing, utility-scale renewable energy projects and genetically engineered algae for bio-fuels do indeed have great promise. But they require great patience.

Yet, with the naturally long return cycle of these companies and the down economy of the last few years, patience has started to wear thin. The vigil for the elusive clean tech initial public offerings seems to have been interminable.

Fortunately, the wait may be coming to an end. Given the success and reasonable resilience of the few 2010 IPOs — such as Tesla Motors Corp. — the stock market appears ready to embrace new clean technology and green technology IPOs.

Clean technology has become serious business, not a fad. Today, new clean tech companies are appropriately valued for initial and follow-on venture capital investments. Not only are many of these clean tech companies appropriately valued, they are based on mature, superior business models. All of this works in favor of a robust and sustainable clean tech IPO market.

The only caveat is the health of the economy. If the business malaise of 2009 returns, all bets are off. If the economy and the stock market continue to improve as they have in the last couple of quarters, however, clean technology investors could be richly rewarded for their patience through public enthusiasm for clean technology and renewable energy.

The globally strengthening economy has propelled an increasing demand for

conventional energy, causing prices to rise sharply. A market-driven “oil tax” caused by increased demand will result in rising prices that may well offset some of the benefits of economic stimulus measures.

Still, many economists believe the economy will grow 3.5 percent in 2011, perhaps more, which would make it the best year since 2007. If these economic improvements manifest, they will be sparked by the extended personal income tax cuts, new cuts to business payroll taxes, the Federal Reserve’s quantitative easing program and emboldened consumers.

An improving economy and stock market almost always portend a stronger IPO market, and clean tech companies are the leading IPO candidates. Several relatively established players already have annual revenues exceeding \$25 million.

### Factors Favor Clean Tech IPOs

Additional factors also favor clean technology companies. It is inevitable that some form of cap and trade in California and a few other states will take hold, even without federal action. This will significantly spark demand for alternative energy, renewable energy and for energy conservation. State public utility commissions are mandating that utilities help drive energy conservation among their rate payers.

Further, utilities are being mandated in many states to increase the contribution of renewables to their electrical generation mix. Utilities will be rewarded for achieving these green goals and penalized if they don’t. In most states, the days are long gone when utilities make money simply by selling power.

Clean tech IPOs are becoming more common globally. In China, the leading clean tech IPO market, 63 clean tech

companies went public last year — at a valuation of nearly \$10 billion — and China market watchers say that pace will continue in coming months. In January, Chinese wind turbine maker Sinovel alone raised \$1.4 billion in an IPO.

In the United States, several clean tech companies are waiting in the wings for an IPO with an S-1 on file — the ini-

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tial registration form required by the U.S. Securities and Exchange Commission before a public company can broadly sell shares to the public.

These hopefuls include Gevo, a next-generation biofuel developer; PetroAlgae, which makes technology for the production of algae; and SemiLED, a maker of LED-based solid state lighting. A number of the most exciting clean tech startups have been quieter, but are also known to be interested in going public if the IPO window opens further.

Here are three clean technology companies that could well go public this year:

■ **BrightSource Energy.** Its mission is to make solar energy cost-competitive with fossil fuels by developing, building and operating the world's most cost-effective, large-scale solar energy projects. The company already provides clean, reliable and low-cost solar energy for utility and industrial companies worldwide.

BrightSource now has more than 2.6 gigawatts of power under contract with Southern California Edison and Pacific Gas & Electric, and it's developing more than 4 gigawatts of solar power projects in Southwestern states — enough to power 1.4 million homes.

■ **Enphase Energy.** This company makes micro-inverter systems for photovoltaic arrays, which places a small energy transmission inverter on each module. Photovoltaic arrays are typically connected to form strings, which are then wired to an inverter.

In a conventional setup, owners often cannot determine whether a module is underperforming without time-consuming investigation. Enphase's micro-inverter system solves the problem by simultaneously improving output and allowing a problem panel to be easily identified.

■ **MiaSole.** This company makes an unusually efficient and inexpensive solar cell. Its current cells turn 10.5 percent of the light that hits them into electricity and has produced cells with an efficiency of 15.7 percent.

This compares to the best silicon cells, which commonly cost as much as three times as much per watt of power.

Other trends that favor future U.S. clean tech IPOs — in addition to newer, more reasonably valued startups with better business plans — include the likelihood of a substantial upswing in business for companies that make new solar project installations.

Congress recently extended a popular grant program that helps cover 30 percent of the cost of installing solar projects, but projects must start by the end of this year. The deadline will prod companies to quicken the pace of their

project development.

In addition, the three major utilities in California — by far the nation's biggest state — have been mandated to buy enough renewable energy to make up 33 percent of their supplies by 2020, another major stimulant for new solar project installations.

Additionally, U.S. venture capital investment in clean tech companies continues to rise. It rose to \$4 billion last year, up 8 percent from \$3.7 billion in 2009. And the number of venture-backed deals rose 7 percent to 278, according to an Ernst & Young analysis based on data from Dow Jones VentureSource.

### Washington Developments 'Promising' for Clean Tech

Another positive factor for clean tech IPOs is substantial regulatory and financing in Washington. There is growing public support for a national energy plan that would create a national clean energy standard — one that would set an escalating requirement for low-carbon energy production, but let states and regions choose how to comply. It would incorporate nuclear power and clean coal in addition to renewable energy and energy efficiency technologies.

At this point, the goal is for America to shift 25 percent of its energy production to clean energy by 2025 and 50 percent by 2050.

The thinking, probably correct, is that some form of a clean energy standard might actually bridge the difference between Democrats and Republicans and enable lawmakers to create needed incentives to make a national clean energy standard a reality.

A provision that would allow states to decide how to comply with the new standard is a particularly good idea. Some would favor nuclear. Some would favor wind. Some would favor geothermal. And some would favor up-and-coming clean technologies and still others that do not yet exist.

What is important is that there would be built-in choice and flexibility, a theme that has become mandatory in making things work in America in the 21st century.

Another promising Washington

development is proposed legislation that would create a series of initiatives in the federal Department of Energy loan guarantee program, including the creation of a new Clean Energy Development Fund. A new entity would be housed in DOE — the Clean Energy Deployment Administration — with strong financial expertise and a specific purpose to create an attractive investment environment for the development and deployment of new clean energy technologies.

This would help developers cross the financing "valley of death" that often prevents demonstration-scale projects from developing into commercial-scale ventures.

Talks also persist over the possible implementation of national low carbon fuel standards, which would ultimately force dramatic reductions in the use of oil, natural gas and especially coal. It would expand on existing laws, regulations and decrees, such as the EPA's ruling that carbon dioxide endangers human health and welfare. The EPA and White House believe the U.S. can easily limit hydrocarbon use and switch to eco-friendly wind, solar and biofuel energy at low cost and minimal harm to families, businesses and jobs.

This idea is fraught with peril. Contrary to Washington-based perceptions, it would inflict a lot of economic pain in the short- and mid-term while America works to readjust its lifestyle. In a healthy and dynamic economy, this sort of provision might make sense. But the U.S. economy is not robust, at least not at the moment, and the trade-off now would be counter-productive.

The one scenario that is highly likely is the debut of more clean technology IPOs in 2011. This will create the kind of momentum upon which capitalism thrives. It boils down to the reward of innovation, an inherently self-sustaining process that not only benefits business interests, but society at large.

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