

Konarka

<http://www.forbes.com/sites/petercohan/2012/06/05/konarka-mitts-bankrupt-solar-bet/>

Konarka: Mitt's Bankrupt Solar Bet

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Konarka Technologies (Photo credit: Wikipedia)

Governments should not pick business winners and losers according to former Massachusetts Governor, W. Mitt Romney. Which Mitt was that? The one who criticized President Obama for backing Solyndra or the one who used \$1.5 million in Massachusetts taxpayer money to back Konarka?

Last Friday, Konarka Technologies, a Lowell, Mass.-based solar technology company that got \$1.5 million in state loans during Romney's governorship, liquidated itself through [Chapter 7 bankruptcy](#).

Hypocritically enough, this did not stop Romney from holding a press conference in front of the Fremont, Calif. headquarters of Solyndra, a solar company that failed after getting \$535 million in funds from the U.S., according to the [Boston Globe](#).

Konarka appeared promising on the surface in January 2003 when Romney touted a plan to loan it \$24 million from the state's renewable energy trust fund. Konarka claimed a Nobel Prize-winning co-founder and had raised more than \$170 million in private capital investments and \$20 million in government grants, according to the *Globe*.

George W. Bush's administration gave Konarka a \$1.6 million US Army contract in 2005 and \$3.6 million from the Department of Energy in 2007. And President Obama included Konarka among 183 clean energy companies that got \$2.3 billion in tax credits as part of the 2009 stimulus, reported the *Globe*.

Not surprisingly, Konarka's product could not compete. Its thin-film solar panels – called *Power Plastic* – were designed to charge electronic devices by sticking to the fabric of a messenger bag or a soldier's tent. The *Globe* reported in 2010 that *Power Plastic's* short life spans – at most five years – and its inefficient conversion of light into electricity – 3% to 4% – compared to traditional solar panels –15% to 20% – made the product a tough sell.

So it's not a big surprise that Konarka filed for bankruptcy and fired its 80 employees.

What is a little surprising to me is that Romney cites his business experience creating jobs as a reason to elect him President. I know from personal experience that his Bain Capital shunned start-up risk.

After all, in 1995 I presented a business plan to two of Romney's partners to develop an e-commerce business in a sector of the financial services industry. They rejected my idea and instead suggested that I help Bain Capital find existing companies that they could acquire.

The reason they gave for rejecting my idea? Too much start-up risk. I spent the next several months finding such companies and introduced them to a few. I found the Bain Capital partners to be very straightforward, smart, and professional.

I bring this up because I know Romney to be a person who is uncomfortable with start-up risk (and not just the one I proposed) – when he agreed to run Bain Capital, Bill Bain promised Romney that he could return with honor to the consulting firm if the private equity start-up failed.

So I am surprised that Romney was willing to lend state money to Konarka. Moreover, given his reputation for analytical savvy, I would have expected him to see what a lousy investment solar cells are.

This is clear from doing a very basic job of industry analysis – something that Romney could not have escaped learning as a consultant and private equity firm runner. Industry analysis – detailing the forces that determine a market's profit potential — was made more sophisticated by Harvard Business School professor, Michael E. Porter, with whom I worked.

That analysis could have been done because all the factors were public knowledge in 2000 – three years before Romney backed Konarka. As I [wrote last August](#), the basic lesson is that fast growth in an industry does not equate to high profitability. In 2000, the solar industry accounted for 175 megawatts worth of energy represented by the solar panels it produced. By 2010, the industry had grown to 16,000 megawatts at a compound annual growth rate of 57%.

But this rapid growth attracted competitors from China who were able to manufacture solar cells with far lower labor costs and they cut prices to gain market share.

These price cuts led to some nasty financial results for the now bankrupt, but formerly publicly-traded Evergreen Solar – another bad Massachusetts bet. In the first quarter of 2011, for example, Evergreen suffered from

- Shrinking revenue (\$35.3 million, 60.4% below the previous quarter) and
- Declining shipments (17.8 megawatts, down 62% from the previous quarter),
- Negative gross margin of 63% meaning its prices were way below its costs,
- Falling prices (to \$1.86 per watt down 2% from the quarter before), and
- Dwindling cash reserves (\$31 million, down 49% in the quarter).

Was it reasonable to foresee the problems that the U.S. solar cell industry faces? Absolutely. Evergreen Solar's August 2000 initial public offering prospectus laid out the risks quite clearly.

How so? The company had lost money every year since its 1997 founding. 11 years before its bankruptcy filing, Evergreen Solar told investors, "We believe that there is a variety of competing solar power technologies under development by other companies that could result in lower manufacturing costs than those expected for our solar power products."

Since Konarka was privately held, all this industry information was not as readily available to the public as it must have been to Romney. But the lessons from government's foray into lending money to solar cell companies are clear:

- The government should generally avoid lending taxpayer money to start-ups because they do not have the cash flows to repay loans – they lose money for years developing a product that will likely either fail (high probability) or succeed wildly (tiny odds);

- If government insists on being a capital provider for businesses, it should at least do a much more thorough job of analyzing the industry and competitive position of the companies to which it lends; and
- Romney should consider skipping criticism of his opponent for doing something that he did himself – it weakens his credibility.

<http://www.solarcurator.com/2012/06/08/konarka-snark-meets-pv-pipeline-exuberance/>

Konarka-snark meets PV pipeline exuberance

Failed OPV company draws fire, anti-PV politricks, 3GWs of optimism

The Curator was in Austin most of this week, attending the 38th IEEE Photovoltaic Specialist Conference for the technical community's annual data dump and small-town-style networking. Although I fired off Tweets a-plenty from the event (with the requisite Tweature compilation coming soon), the Fresh Picks feature has been wanting, so here's a quick one on some recent content of note around the solar circuit.

The news of Konarka's descent into Chapter 7 bankruptcy ([announced via Businesswire in classic bury-the-story fashion](#), late last Friday afternoon, June 1) drew the attention—and ire—of many media and analyst observers. Recommended reading includes [Lux Research's concise, to-the-point commentary](#) about the organic photovoltaics developer makes it clear that the company's failure (and failure it is—this ain't no Chapter 11 with hope of corporate redemption) **had nothing to do with the current difficult market conditions and everything to do with the particularities of the company's technology and business plan.** "Finding market success in emerging technologies takes many factors, but a viable technology underpins all of them, something that Konarka never had and no credible path to attain," says one particularly cogent excerpt.

<https://gigaom.com/2012/06/01/solar-thin-film-maker-konarka-files-for-bankruptcy/>

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[Konarka Technologies](#), a maker of organic solar thin films, said Friday it's going bankrupt, an announcement that may not be so surprising to many who have watched and waited for the venture-backed company to try to build a viable business.

The Massachusetts company filed for Chapter 7 and plans to liquidate its assets to pay back creditors. The company developed organic thin films that it wanted to see installed as part of

building façades, and despite raising [close to \\$200 million](#) by our last count, it struggled to find success.

The fact that Konarka, founded in 2001, has lasted this long has been puzzling to some. The low efficiency of organic thin films – the company was selling products that could convert only a few percent of the sunlight that falls on them into electricity as of last year – and the difficulties of finding buyers in the building design and construction market have been [persistent challenges](#) for Konarka over the years.

Konarka’s technology used a photo-reactive material printed onto plastic, and they are quite different from the silicon or cadmium-telluride semiconductors used in conventional solar cells today. Instead of encasing the films in glass like other solar panels on the market, Konarka makes its films in protective polymer layers so that they are flexible.

“Konarka has been unable to obtain additional financing, and given its current financial condition, it is unable to continue operations. This is a tragedy for Konarka’s shareholders and employees and for the development of alternative energy in the United States,” said Howard Berke, chairman and CEO of Konarka, in a statement.

Konarka was able to sell its organic thin films for [lining umbrellas](#) and shoulder [bags](#), but it wasn’t clear whether these sales and shipments amounted to any significant volumes. Konarka marketed its thin films to architects and builders in the building-integrated photovoltaic (BIPV) market, which has barely emerged and is a tough market to crack. Architects like the idea of adding eco-friendly features, but they tend to balk at the added expense and worry about the logistics of embedding, operating and replacing electrical equipment that isn’t likely to last as long as the buildings. The lackluster housing market in the past few years also hasn’t helped.

In 2010, the company raised \$20 million [from Konica Minolta](#), which wanted build a manufacturing joint venture in Japan. Konarka had lined up many [other investors](#), too, including Draper Fisher Jurvetson, Good Energies, 3i, Mackenzie Financial Corp., Pegasus Capital, Asenqua Ventures, New Enterprise Associates, Vanguard Ventures, Chevron Ventures, Massachusetts Green Energy Fund, NGEN Partners, Angeleno Group and Total, the French oil and gas giant who [invested \\$45 million](#) in 2008.

<http://www.businesswire.com/news/home/20081007005342/en/Konarka-Opens-Worlds-Largest-Roll-to-Roll-Thin-Film#.VELYkqTwthE>

October 07, 2008 10:00 AM Eastern Daylight Time

LOWELL, Mass.--([BUSINESS WIRE](#))--Konarka Technologies, Inc., an innovator in development and commercialization of Power Plastic®, a material that converts light to energy, today announced the company has opened the largest roll-to-roll flexible thin film solar manufacturing facility in the world, preparing for the commercialization and mass production of its patent-protected thin film solar material, Power Plastic. Located in New

Bedford, Massachusetts, the 250,000 square foot building was previously the location for Polaroid Corporation's most advanced printing technologies.

"This facility has state-of-the-art printing capabilities that are ready for full operation, with the future potential to produce over a gigawatt of flexible plastic solar modules per year," commented Howard Berke, executive chairman and co-founder of Konarka. "Our technical leadership and innovation in flexible thin film solar, along with this facility's capabilities of producing in excess of 10 million square meters of material per year, will allow us to produce Power Plastic for indoor, portable, outdoor and building integrated applications."

With this U.S. based manufacturing location, Konarka further expands its presence in Massachusetts and accelerates its aggressive plans to develop and commercialize its polymer-based organic photovoltaic (OPV) technologies worldwide. In addition to acquiring the fully automated roll-to-roll manufacturing line, the company has also hired the leading technology and process engineering teams from Polaroid, with plans to hire over 100 additional employees as production increases toward capacity over the next two to three years.

Konarka's advanced photovoltaic technology started with the work of the late Dr. Sukant Tripathy, an internationally known polymer materials scientist, provost at UMASS Lowell and founder of the Plastic Innovation Center and Dr. Alan Heeger, Konarka's chief scientist, who was awarded the Nobel Prize in chemistry in 2000. The ground-breaking discoveries from both founding scientists led to Konarka's underlying technology leadership, including a manufacturing process at relatively low temperatures, which enables the use of low-cost plastic substrate films. As a result of these pioneering innovations, the company has secured over \$100 million from leading venture capital and private equity funds, as well as \$18 million in government agency research grants from the U.S. and Europe.

"Since 2001, Konarka has taken revolutionary lab discoveries from its founding scientists to pilot production for initial customers and now to full-scale manufacturing with the near future capacity of one gigawatt per year, which could contribute to the power and electricity needs of our nation and the avoidance of CO₂ emissions," commented Rick Hess, president and CEO at Konarka. "As one of the original recipients of the Solar American Initiative (SAI) awards in 2007, Konarka is furthering the U.S. Department of Energy's (DOE) vision to reach its goal of making solar electricity from photovoltaics cost-competitive with conventional forms of electricity."

In addition to global and national interest, the project has been assisted by various Massachusetts departments and quasi-public agencies, including the Massachusetts Governor's Office, the Executive Office of Housing and Economic Development, the Executive Office of Energy and Environmental Affairs, MassDevelopment and the Massachusetts Technology Collaborative's Renewable Energy Trust Fund and Green Energy Fund.

"With our nationally recognized technology expertise and resources, Massachusetts is becoming a global center for alternative and renewable energy, and Konarka is helping to solidify our commitment to a clean energy future and ongoing economic development and job growth in the Commonwealth," commented, Daniel O'Connell, Massachusetts Secretary of Housing and Economic Development.

The company has also partnered with the City of New Bedford to become a Certified Project under the Massachusetts Economic Development Incentive Program (EDIP). Under the EDIP, Certified Projects receive favorable state and local tax treatment in exchange for committing to certain job creation and private investment criteria. The EDIP is designed to increase economic activity within the Commonwealth's identified Economic Target Areas (ETAs) and the City of New Bedford has historically utilized the EDIP as one of its key economic development planning tools.

Scott W. Lang, Mayor of New Bedford, added, "We are excited that Konarka is bringing new jobs to help further drive the economy and interest in the city of New Bedford, and we are proud that our city is home once again to an industry leading manufacturing plant."

Constructed and further expanded in the 1990's for Polaroid's advanced technology development and large-scale manufacturing, Konarka's New Bedford facility has been retrofitted to immediately begin initial production of Power Plastic. Using multiple in-line processing stations with precision multi-layer manufacturing processes that are adaptable to a variety of printing and coating technologies, the facility will enable the company to further develop and advance nano-enabled polymer photovoltaic materials that are lightweight, flexible and more versatile than traditional solar materials.

NOTE TO EDITORS/PRODUCERS: Photographs and B-Roll footage are available upon request.

About Konarka Technologies, Inc.

Konarka develops and manufactures solar plastic films that convert light to energy – anywhere. As the leading developer of polymer-based, organic photovoltaic (OPV) technology that provide a source of renewable power in a variety of form factors, Konarka has a broad portfolio of patents, technology licenses and an accomplished technical, scientific and manufacturing team. Manufactured at low cost and low energy consumption, the company's Power Plastic® technology is lightweight, flexible, scalable and adaptable for use in a variety of commercial, industrial, government and consumer applications. Konarka Technologies is headquartered in Lowell, Mass., U.S.A. and has a full scale production manufacturing facility in New Bedford, Mass. U.S.A., with European headquarters in Nuremberg, Germany, business development offices in Asia and a research and development facility in Austria. For additional information, visit <http://www.konarka.com>.