

New Thin Film PV Start-Up SoloPower Emerges

By Jonathan Shieber

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Milipitas, Calif. - SoloPower Inc., a new challenger in the market for manufacturing thin-film solar cells, has emerged from stealth with a novel production process and the backing of two large multi-tier private equity investors, VentureWire has learned.

Founded in late 2005, SoloPower raised \$10 million in a mid-2006 first round of funding from multi-stage venture capital and hedge fund investor Crosslink Capital, fund manager Firsthand Capital Management Inc. and individual investors.

Even with its deep-pocketed investors, SoloPower enters a market already crowded with well-funded competitors. In October 2006, Santa Clara, Calif.-based Miasole raised \$35 million in a Series C round, and earlier that year Palo Alto, Calif.-based Nanosolar Inc. raised \$75 million in private equity financing.

Such buying power doesn't bother SoloPower Chief Executive Officer Homayoun Talieh. "In general, you've got to think that at the end of the day it's the best technology and the best company that wins," he said. "During the bubble so many companies got started every week and how many of them survived?" he asked.

Unlike its competitors, SoloPower uses an electro-plating process to affix its copper indium gallium diselenide-based photovoltaic material to a substrate. Other companies use a sputtering technology that Talieh said is not as efficient in its application of the materials.

"To date, most of the CIGS technologies were around sputtering techniques and evaporation techniques, which were vacuum-based technologies," Talieh explained. Using these deposition methods, only about 30% of the material goes on the substrate, he said, adding that with electro-plating nearly 100% of the material is applied to the substrate.

"Most of the other start-ups in this space have had to raise tens or hundreds of millions of dollars to just do the research and development for their technology," Talieh said. "They have to build expensive vacuum systems, while we can start basically from a beaker that we buy in the store next door."

SoloPower has already sent thin-film cells to the National Renewable Energy Laboratory for testing and according to Talieh, the NREL tests found that the conversion efficiencies of SoloPower cells exceeded 10%, which is a benchmark for the industry.

Now, with the tests done, SoloPower will seek an additional round to build out its manufacturing capability and further prove its technology, Talieh said. But unlike his competitors, the next financing will be significantly under \$100 million, he said.

"If I needed hundreds of millions of dollars just to get out of the chute, there is something wrong," Talieh said.

At the end of the day, he explained, solar companies need to focus not on their costs compared to other solar manufacturing processes, but on their costs compared to fossil fuels.

"The subsidies will have to go away for this technology and this industry to be sustainable," Talieh said. For the companies that can significantly lower the cost per watt of electricity, "that is where the differences are made," he said.

<http://www.solopower.com>