



Abound Solar's New CEO Ramping Up CdTe PV

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by Eric Wesoff

"We'll be well under a dollar per watt production cost."

Tom Tiller is new to the solar industry. He joined VC-funded [Abound Solar](#) about 90 days ago as the new CEO and has the daunting challenge of ramping up a cadmium telluride photovoltaic company from a relative standing start to confront market behemoth First Solar and China's crystalline solar dragons. Tiller was CEO of Polaris Industries (NYSE: PII) for nine years, a maker of snowmobiles, motorcycles and other recreational vehicles. Before his stint with Polaris, Tiller was with General Electric for 15 years as general manager of GE Silicones, and before that, he was the vice president of manufacturing at GE Appliances. I spoke with him last night.



The cadmium telluride materials system is not a slam dunk. It took First Solar a few decades to get it right. Abound's technology is not new either -- it's based on 15 years of research undertaken at the Colorado State University's Material Engineering Laboratory. Other solar firms looking into CdTe include [PrimeStar](#), [Solexant](#), [Wakonda](#), Sunovia, Willard & Kelsey, and Xunlight26.

Abound, based in Loveland, Colo., already has 370 employees and is growing fast. The firm started production about six months ago and expects to reach \$1 per watt manufacturing cost quickly with a [65-megawatt line in a factory in Longmont, Colo.](#)

Tiller claims that Abound's patented technology is dramatically simpler than that used by First Solar. The CEO claims that First Solar uses six different steps in the semiconductor process and that Abound uses one machine. He also claims that his equipment has a 60 percent smaller footprint and a lower cost with their "close space sublimation process."

Tiller said, "We don't have to be cheaper than First Solar -- we have to be cheaper than the other manufacturers."

Chevron is testing 190 kilowatts of Abound panels and the firm is also working on a 2.4-megawatt project in Germany, according to the CEO. Their first facility has a capacity of about 200 megawatts.

[First Solar's FS Series 2 Modules](#) put out between 70 and 77 watts of nominal power. Tiller says that Abound is commercially selling panels in the mid 60-watt range, with 70-watt panels in reach.

The CEO revealed that the firm is intent on garnering DOE loan guarantees for factory buildout. There is a toxicity risk to cadmium telluride that First Solar has confronted with a 100-percent take back program bonded by Swiss Re in the event that First Solar is not around in 20 to 30 years. Abound also has a recycling program and Tiller is appreciative of First Solar's efforts in spearheading the toxicity issues of cad tel.

There is also an availability risk in the tellurium market so firms may need to buy old lead or gold mines and set up recovery systems. There are some reliable and not-so-reliable voices on the web that speculate that First Solar and other CdTe PV firms will see price increases and material shortages in their raw material feedstocks.

DCM led Abound's August 2008 \$104 million funding round along with Technology Partners, GLG Partners, Bohemian Companies, and Invus. That round was reportedly at a \$750 million pre-money valuation. The company raised a previous round from Invus and a seed round, but it declined to disclose the amounts of those rounds.

In the CEO's estimation, "This company has the potential to be the next great solar company."