AET SOLAR’S COST-COMPETITIVE SYSTEMS LEAD THE INDUSTRY

AET SOLAR HAS BECOME A PREMIER MANUFACTURER OF SOME OF THE MOST PRICE-COMPETITIVE SOLAR THERMAL FLAT PLATE SYSTEMS IN THE WORLD

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Established in 1975, Alternate Energy Technologies (AET) represents the aggregation of technology and industry insight of the largest manufacturers of solar thermal flat plate technology in the US, including Morning Star Manufacturing, US Solar Corporation, and Thermafin Manufacturing.

Solar Thermal is currently the only solar technology that is viable without government incentives. AET’s solar water heating systems produce energy that is price competitive with electricity at $0.12/kwh and essentially pay for themselves within two to seven years.

In addition to significant demand from international markets, AET is regarded as America’s premier solar thermal equipment manufacturer, accounting for 40 percent of the US’s total market share (according to DOE’s Solar Thermal Manufacturing report). Its largest domestic markets include Hawaii, Florida and North Carolina.
With operations throughout the US and abroad, AET continues to expand with tremendous opportunities in areas like Puerto Rico, Latin America and the Caribbean, Europe, Egypt, Russia, South Africa, the Fiji Islands and, more recently, China.

**TECHNOLOGICAL ADVANTAGES**

In addition to delivering price-competitive, 100% American made products developed using over 35 years of experience in the marketplace, AET has perfected a range of products that give the company a unique advantage in the industry.

AET’s nontoxic Crystal Clear selective coating boasts a higher absorptivity and a lower emissivity compared to other coatings in the solar thermal market. Other advantages include the use of the industry only forge welding process which increases the collectors efficiency by maximizing the heat transfer between fin and tube. This weld is guaranteed for 30 years and AET has many systems that have been operating for 35 years or longer.

While European manufacturers prefer pressurized glycol systems which were developed specifically for their climatic environment; AET has perfected and recommends the use of drain back systems in the US, as this system is more appropriate for the diverse...
climatic conditions found throughout the US. “Our goal is to be able to restore faith in American manufacturing by delivering a durable appliance with a 30 year design life to market at a cost-competitive price point,” says Andrew East, Executive Vice President.

Additionally, AET’s new manufacturing facilities utilize solar thermal panels to add heat during its plating process, and a 35 kw PV system that offsets approximately 20% of the buildings annual electric consumption. The manufacturing process also utilizes a
zero discharge waste treatment line that reclaims 92% of the water used in the production process.

“We’re completely benign to the environment throughout our entire electro-plating processing,” says East.

COST-COMPETITIVENESS

After having extensive conversations with the Department of Energy (DOE) and Secretary of Energy Steven Chu, AET believes that the only way to gain deep penetration in the US market is by delivering a lower cost alternative.

“Copper is a commodity—which is relatively expensive in manufacturing—so we are exploring the possibility of using a high temperature glazed polymer collector, which will still be able to deliver performance in the range of a traditional glazed flat plate collector,” says East. That product should come to market by late 2012/early 2013.
Furthermore, AET’s new Eagle Sun digital control system, one of the first systems on the market that allows for BTU monitoring of residential systems, is offered at a sub $200 price point compared to $800 and over from other competitors.

“We believe that this monitoring device will help bring solar thermal on parity with solar electric, because consumers will be able to accurately quantify the performance of a system and see how it actually helps to generate energy that displaces either electricity or natural gas,” East explains.

**RAISING AWARENESS**

Through a “Lunch and Learn” program aimed at educating construction industry professionals, AET is one of the few for-profit companies that offers continuing education credits for training seminars.

“There’s not a tremendous amount of knowledge on the differentiation and integration of solar thermal versus solar electric within that community,” explains East. “When they hear solar, they think of electricity and not necessarily heating water.”

After meeting with Cliff Stearn (R-FL), one of the key investigators of Solyndra in Congress, AET was able to convince the representative that not all solar companies are created equal. In fact, there are solar companies in his state thriving without any form of help from the government, with AET leading the way.
“We are dedicated to providing industry leadership for policy development, so that solar thermal can become more prevalent in the US,” says Norbert Richter, Vice President of Manufacturing.

While the Solyndra collapse generated a tremendous amount of bad press for the industry, AET has “established a good customer base that realizes the difference—through our own diligence and education—that solar electric and solar thermal are two separate and distinct technologies,” says East. “We are a proven technology that offers efficiencies ranging from 70 to 90 percent as opposed to the 10 to 20 percent that you’re able to get out of solar electric products, and we’re able to do so at a price that is a third of cost of solar electric.”

“Our goal is to restore faith in American manufacturing and deliver a durable appliance with a 30 year design life to market at a cost-competitive price.”

Andrew East, Executive Vice President
BEST IN THE MARKET
AET offers unmatched customer service compared to competitors. “We are one of the few manufacturers that offers full commercial and residential engineering and technical support to all of our distributors and dealers,” says East.

An established reputation of quality and price-competitiveness is central to AET’s market reach. “When people do research independent of our marketing, they frequently come to the conclusion that we’re the people that they need to talk to,” says Richter.
LARGE SCALE PROJECTS
AET has also developed a mobile hot water unit that can be deployed for disaster or emergency management or at remote locations lacking grid connectivity or utility infrastructure. The free-standing, free-operating, completely independent water heating unit can deliver enough thermal energy to provide for 50 showers a day (about 1000 gallons of water), depending on location.

AET collectors are responsible for a number of large installations, including what will soon become the Western Hemisphere’s largest, if not the world’s largest, solar thermal energy installation at Prestige Farms in North Carolina with an installation of 2,100 collectors.