

Friday, February 6, 2009

The Green Report

The Green Report: Snohomish company cleans up on gas technology

Puget Sound Business Journal (Seattle) - by [Mark Larson](#) Contributing Writer

Unlike many business leaders, Paul Tower is feeling upbeat. The new regime in the nation's capital appears to be friendly to his company's product: energy produced from waste.

His Snohomish-based company, **Applied Filter Technology**, filters low-quality methane gas into a form that's usable for generating power.

"The new administration offers hope that there will be a clearer focus from the Department of Energy on the promotion of alternative fuels," Tower said.

Tower, who founded the company 12 years ago, expects that the Obama administration's energy policies will bring more demand for his technology through tax incentives and grants to those building and using alternative energy systems.

Applied Filter has patented technology that cleans corrosive sulfur from methane gas emanating from green wastes such as lumber byproducts and landscape trimmings. That conditioning makes the gas usable for generating electricity or for natural gas applications in buildings and vehicles.

The company has 56 employees in the United States and Europe — only five are local — and does an estimated \$10 million in annual revenue.

It has installed and runs 167 of its methane-gas cleaning systems around the world — 24 of them in California. Depending on how much gas they clean, he said, systems can cost from a few thousand to millions of dollars.

"The value of the systems," he said, "is based on how much we can save a business producing energy on its own, compared to the energy rates it is paying."

Late last year, Tower expected to formally announce formation of a new green energy company in a joint venture with a major European utility. But since then, the company has shifted its marketing strategy. Tower decided not to work with just one big utility, but with as many independent energy companies as possible.

"That will keep our base broad," he said. "It's going to be all over the world where biogas is being converted to usable energy such as electricity, vehicle fuel and pipeline grade gas."

While the company has prospective clients in Washington, Tower said market conditions in the state have made it tough to break into this state.

First, he said, electrical energy is artificially cheap because of regulated prices, so that alternative energy ventures are unable to compete on price. And, he said, Washington state hasn't offered the same incentives to use green energy as have other states such as California. But he expects that will change as the tide of demand rises for green energy across the country and globally. He sees future business in Washington coming from municipalities, private green-energy entrepreneurs and agriculture.

Over the next year, Tower plans to hire five to 10 chemical, environmental and process engineers locally to help the company's foray into wind and solar energy.

Applied Filter's clients now are 70 percent government entities, such as municipalities running methane-producing landfills, and 30 percent private sector companies looking to generate electricity with methane. But as the market expands nationally and globally, he expects a 50-50 split of government and private clients.

"As fuel gets more expensive and governments provide more incentives," Tower said, "we'll see more private industry producing waste to energy."

Applied Filter Project Manager Alan Alabastro is running a project in Wisconsin that he likes to call "beer to energy." The system cleans up methane from a brewery's green wastes and sends it to a hospital a mile away to enable it to generate its own electricity.

"We can pull energy from different types of waste, including (that from) beer," Alabastro said. The company's technology filters the raw methane produced from green waste, and removes carbon dioxide from it to produce natural gas. Landfill waste and wastewater have siloxanes from lipsticks and shampoos, said Alabastro. If they are not removed from the methane produced by green waste, he said, the siloxanes will gum up corrode machinery such as pistons that is exposed to it.

Another Applied Filter system is in place on a dairy farm in Atwater, Calif. Manure from dairy cattle is used to produce methane that is captured, cleaned and used to fuel methane-powered electricity generators to run the dairy. Beyond that, heat exhaust from the generator is used to heat and cool the plant.

So far, Tower said, the company has no North American competitors in the waste-to-energy methane conditioning market. His company analyzes green waste methane, builds the equipment to clean it, and operates and supports the equipment.

Tower is convinced the days of cheap oil are gone.

“What we’re currently getting is a blip and that’s it,” he said of lower fuel prices. “We’re vulnerable because we import from unstable countries 70 percent of what we need. That puts us at risk.”

SEATTLE@BIZJOURNALS / 206.876.5437