

Methane-to-propane startup wooing investors

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For the better part of six years, research about a process that could convert methane into propane had been gathering dust on a back corner of the desk of Lauren Scott.

With a few words from President Obama in late March, those little-noticed papers became the driving force behind Scott's Alkcon Corp.



Lauren Scott

The administration gave a strong push to Alkcon Corp. when federal officials announced a strategy to dramatically reduce emissions of methane, a greenhouse gas generated by cattle, landfills and oil-and-gas production.

Federal agencies are working to develop standards to reduce methane releases, but farmers and oil company executives worry that increased regulation may lie ahead.

Enter Alkcon.

The management team of the year-old startup are hitting the pavement hard, both in the Reno area and Silicon Valley, to raise the first \$225,000 they need to conduct testing of a gas-plasma process that would

convert methane into propane that can be used to heat homes or power vehicles.

The first round of capital also would help the company file for patent protection on the technology.

"We're talking to everyone we know, plus their friends," says Scott. She notes that it's a struggle to raise the first few dollars from investors who want to see preliminary laboratory results — the very results that depend on the funding of early investors.

So far, the company is relying largely on its story. With the Obama administration's focus on methane control, Alkcon's potential customers are likely to face some sort of expense to reduce emissions. The Sparks company's technology not only captures methane, but allows users to convert it into a commodity that has value — either for their own use or for sale to others.

Along with Scott, the company's chief executive officer and president, the startup's management team includes Chief Technology Officer Carl Nesbitt, a metallurgical engineer who's an associate professor at the University of Nevada, Reno, and Chief Financial Officer Lynne Keller, a former gaming executive.

Phil Martin, previously a client manager with the global energy trading

company Trayport Ltd., recently joined the company as vice president of business development.

The company is looking at development of three product lines — a small unit to create vehicle fuel from a residential connection to a natural gas line, a larger unit to meet the needs of commercial fleets and a large system to convert large amount of methane from, say, the manure at a feedlot, into propane fuel.

All of the units would be fairly small. Even the largest would fit into a 40-foot shipping container.

That, Scott says, would allow use of the technology at thousands of potential locations such as the oil wells in North Dakota that flare off their natural gas production for lack of gas-gathering infrastructure.

"There's a billion dollar opportunity for falling off a log," she says.

Another potential market is found in the rural households that depend on propane for home heating — households that are often are located near agricultural wastes whose methane output could be converted to propane.

Nesbitt, meanwhile, sees potential markets closer to home. The sprawling distribution centers in the Truckee Meadows

rely extensively on forklifts that run on propane. The capability to produce propane from local sources of methane would help control warehousing costs while dealing with an environmental issue.

Already, Martin notes, some 15 million vehicles worldwide use propane fuel, and its use is increasing rapidly in buses, taxis, police and other fleets.

For Scott, the startup company marks another step in her continued fine-tuning of work that began nearly a decade ago.

She joined Biodiesel Solutions in Sparks as a systems engineer in 2007. After the assets of that company were sold to a British firm, she launched Apollo Bioenergy, a company that researched methods of converting the abundant pinyon and juniper biomass of eastern Nevada into liquid fuels.

Scott was stymied in that work by the price tag of developing a big centralized production facility — its capital costs were estimated at \$100 million — and she began looking instead at systems that used gas-conversion technology in smaller-scale plants.

"This is an overnight success that's taken six years," says Nesbitt.