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GREASE RECYCLING GEEKS OUT



Analysis by Alyssa Danigelis
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Usually biodiesel from cooking oil makes me think of hippie-hearted kids in a painted van hitting up the local greasy spoon for discards so they can keep rolling along. Now computer geeks out West are using mobile technology and a predictive software program to get grease collection for biodiesel production out of the clouds and down to a science.

I strongly suspect that the biodiesel production company [Rocky Mountain Sustainable Enterprises](#) based in Boulder, CO, could easily put a municipal recycling operation to shame. RMSE's recycOil service sends trucks around to more than 1,700 locations throughout the state and into Wyoming to pick up unwanted grease from family-owned restaurants, large corporations and Invesco Field in Denver.

RMSE's grease containers are transported to a central processing plant in Berthoud, CO, where it's purified into biodiesel grade feedstock. A new facility being developed in Fort Morgan will be able to turn it into biodiesel that meets national fuel standards. Currently the feedstock is sold to agricultural customers and out-of-state biodiesel producers. That's great and all but the real dorky magic is how it gets there.

Every pick-up location is geo-coded and put into a data management system. All of their trucks have mobile units that provide navigational support and allow drivers to punch in a ton of data at each pickup site. The company tracks a range of variables including product yield, quality and proximity to all other customers. That data goes into a relational database and the system calculates optimal routes for the drivers. RMSE can then predict the next optimal time to visit a customer, maximizing time and fuel.

"This is really one of the key competitive advantages we have in the industry," CEO and CFO Aaron Perry told me.

RMSE's logistics allow the recycling process to go from being a niche service to a sustainable business. They were able to improve efficiency so well that they survived the economic meltdown in 2008 when agricultural commodities market collapsed. Perry can't divulge all the details of their proprietary system, but he does flash me some tantalizing spreadsheets and graphs loaded with data.

Until now, I didn't realize that competition for grease "waste" was so fierce. It's such a valuable commodity that there's even a FAQ section on RMSE's site about oil theft -- the company offers a \$500 reward if a tip leads to conviction.

Currently the company is in talks with capital partners about replicating the collection system in seven major metropolitan areas across the nation. And, once completed, the new plant in Fort Morgan will initially be able to produce 4.5 million gallons of fuel annually. Perry says it's only a half a percentage of the state's annual diesel consumption. He recognizes that biodiesel won't be a silver bullet for renewable energy. "We talk instead about silver buckshot," he says. "It's a bridge fuel with high economic and environmental performance that's viable today."

RMSE might be a lean, mean, grease machine but they aren't so corporate that they've lost touch. Everyone on the management team still has to do at least one monthly grease run. Nothing like picking up nasty discarded cooking oil to keep you grounded in reality.

Photo: Grease collection, backed up by a gloriously geeky information system. Credit: Rocky Mountain Sustainable Enterprises.

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