

# The Life of Lyle

## Lyle Estill: from tech-savvy metal artist to biofuels pioneer

by Marek Derewicz

*It was the end of the nineteenth century and the Western world was in the midst of a massive industrial revolution. Rudolph Diesel, the German inventor of the engine that bears his name, was tinkering in his shop around the same time countryman Karl Benz invented the gasoline-powered automobile. Diesel's engine, though, looked strange and even his friends poked fun at it. Besides that, he was trying to power the thing with all sorts of funky fuel, from hemp oil to coal dust. He found success with whale oil, which was common at the time, but it was rather expensive. Diesel, like many visionaries on the verge, was running low on cash. His fortune changed when a farmer friend offered him a batch of rancid peanuts that even livestock wouldn't eat. Diesel took several loads back to his shop and used an olive press to make peanut oil. He shipped the yellowish liquid, along with his prototype, to the 1900 World Exposition in Paris, where his working engine, smelling of roasted peanuts, astounded the masses. Across the Atlantic, oil prospectors struck a gusher at Spindletop, Texas. Black gold hit the big time, and oil industrialists began using cheap and abundant petroleum to fuel Diesel's engine. This fuel also bears his name.*



*In 1911, the German innovator made a pronouncement: “The use of vegetable oils for engine fuels may seem insignificant today. But such oils may become, in the course of time, as important as petroleum and the coal tar products of the present day.” Call him the prophet of the biodiesel movement.*

*Biodiesel, essentially, is made by reacting new or used vegetable oil with other ingredients, such as lye and methanol. The concoction lets vehicles maintain the same gas mileage and, if made properly, doesn’t harm a standard diesel engine. The car’s exhaust will actually smell like French fries.*

“And it can be made right here in America,” says Lyle Estill, one of today’s godfathers of the grassroots biodiesel movement. He’s been at the forefront of biodiesel since 2002, when he embarked on a simple quest to fuel his tractor.

Today, he’s “Vice President of Stuff” at Piedmont Biofuels Cooperative, located in the tiny central North Carolina town of Moncure. Mostly by accident, the co-op grew by word of mouth in three years from three members to two hundred. Now, Estill and fellow co-op founders Rachel Burton, whose

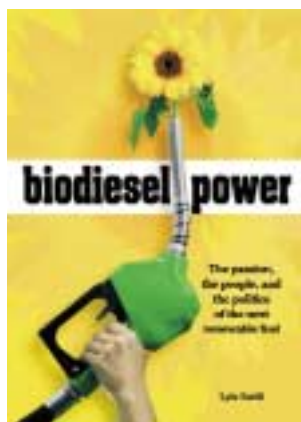
business card simply reads “In Charge,” and Leif Forer, the co-op “Decomplexifryer,” are preparing to open Piedmont Biofuels Industrial, a larger facility than the co-op, which will produce a million gallons a year—a monumental leap for a backyard biofuel community. And out front is Estill, his quirky entrepreneurial spirit driving the project just as it has driven his circuitous life that has only recently landed in the hip world of alternative-energy production.

The global biodiesel movement is full of youthful enthusiasts who are attracted to veggie-based fuel for various reasons. “Some come to it because it’s renewable,” Estill says. “Some like it for its emissions. Some like it because it can be made in America. Some are drawn to it so they can avoid taxes. Some so they can be off grid. Some even come to biodiesel for profit. And some really do come in the name of world peace, because they feel that there is no war required to get the stuff.”

Estill comes for the independently made fuel in the name of sustainability. Other things also set him apart from many biodiesel proponents. He’s been around awhile—forty-four

years. “They call me the old man of biodiesel,” he says. He’s also a man of various histories and many talents. He was a computer and software entrepreneur, and now he’s part owner of a Canadian alternative-energy producer and a North Carolina restaurant. He teaches an energy class, goofily titled Energy Class, at the local community college, and when a few students missed a session, he started a weblog, aptly titled Energy Blog. Upon reading it, an alternative-fuel activist in California dubbed it the best description of the backyard fuel-maker’s dilemma. Then she syndicated it. “I used to have eleven readers, including my mother,” Estill says. Today, his blog gets over three thousand unique hits a day. He’s gone from tech-savvy frontman to eclectic metal artist to biofuel guru without rhyme or reason or anything resembling a plan. He’s now an alternative celebrity flying under the mainstream radar, but he’s on the front line of alt-energy’s war against the machine of complacency and against even, perhaps, the monolith of corporate energy.

**“I used to have eleven readers, including my mother,” Estill says. Today, his energy blog gets over three thousand unique hits a day.**



The class and blog became popular for their honest and informative assessments, and they led to Estill’s book *Biodiesel Power: The Passion, the People, and the Politics of the Next Renewable Fuel*. It’s a short, easy-to-read, and often humorous paperback published by New Society Publishers, and it was recently named nonfiction runner-up in the first

Blooker Prize, dedicated to blogs that transition into books. The book chronicles Estill’s biodiesel journey, including Burton’s and Forer’s significant roles, and it covers the many issues, concerns, frustrations, hilarities, and exhilarating experiences that have shaped Estill’s thoughts and desires about independent fuel-making.

“The book,” he says, “is part journalism, part storytelling, and part speculation on an industry that is not yet fully birthed.”

But biodiesel’s time is coming, and there’s logic to why the time is now.

## Why biodiesel?

Grassroots fuel-makers know the warning signs all too well. Nearly all scientists, not merely alarmists, say that atmospheric carbon dioxide levels are reaching apocalyptic proportions. The polar icecaps, as well as 98 percent of the world’s mountain glaciers, are melting. Oceans are warming, creating a breeding ground for intense hurricanes and coral bleaching, which is imperiling fish nurseries in crucial areas. Drastic climate change—a frozen northern Europe and a dust-bowl American breadbasket—could easily transform a civilization high on fossil fuels that have led us down the garden path far from Eden, far from oil’s innocent Middle Eastern birthplace. Twenty-five hundred years ago, Babylonians cemented their famous walls with the blackish syruplike liquid. The Greeks later used it for medicine and boat sealant. Oil bubbled from natural springs in western Pennsylvania, where Seneca Indians used it for liniments. In 1859, Colonel Edwin Drake was pumping fifteen barrels a day from a Pennsylvania well sixty feet deep. Prospectors then tapped Oklahoma and Texas, and the rest is history.

Coal—fossil fuel number two—was decarbonized in 1712 by British inventor Abraham Darby. The result was coke, which was used for making steel and energy. Coal and oil powered industrial society. Cities got dirty, crowded, and unhealthy. After World War II, the U.S. government subsidized cars, oil exploration, highways, and loan programs for building houses on the outskirts of towns. The American dream—suburbia—turned into a modernist nightmare of a vast transportation system that has now trapped society between a rock and a hard place: the rare geological rock formations under which sit vast reservoirs of oil, and the hard places of America, its proud coal-mining towns. Coal and oil, along with natural gas, have powered the West’s rise. But population growth plus the burning of fossil fuels equal wacky atmospheric CO<sub>2</sub> levels that will likely change the climate in ways no one can fully predict. But scientists fear the worst—rising ocean levels flooding the East Coast some thirty to forty miles inland, for instance.

Then there’s *peak oil*—the catch phrase for the complex issue of oil depletion. At some point—maybe within five years—the rate at which oil can be extracted from the ground will reach a tipping point. Less and less oil will be available on the market. Prices will shoot way up, not just for gasoline, but for food, shelter, plastics, and many other things, because oil is integral to the production or distribution of most products. The writing has been on the wall since American oil production peaked in 1971. Back then, American wells were pumping out nearly ten million barrels daily. Today, Texas oil fields produce just a few barrels a day. The wells didn’t run dry. Rather, their extraction rates declined rapidly since peaking. It’s a fact—oil fields eventually lose pressure. It’s not like a car running out of gasoline. There are technologies that can help stabilize a field’s pressure, and this makes predicting the actual peak date difficult. But oil geologists know the peak is coming, because there are limited supplies of oil, natural gas, and coal. That’s why they are unsustainable energy sources. People hear this and clamor, “Conserve, conserve!” *End of excerpt*