

Fulcrum works to convert trash into biofuel

Annie Conway | aconway@nnbw.biz



Courtesy Fulcrum |

A rendering of Fulcrum BioEnergy's Sierra BioFuels Plant which will be built in Tahoe Reno Industrial Center. The plant is scheduled to be operational in 2018.

Fulcrum BioEnergy, a company based out of Pleasanton, Calif., has developed a process to convert household trash into biofuel.

The company pioneered a technology that transforms municipal solid waste into low-carbon transportation fuels such as jet fuel and diesel. Fulcrum is in the process of building their first commercial plant located in northern

Nevada's Tahoe Reno Industrial Center (TRIC). The facility will have capacity to produce 11 million gallons of fuel per year once operational.

"A lot of people catch wind of what we are doing and they are very excited," Rick Barraza, vice president of administration for Fulcrum, said in a phone interview with NNBW. "This is something that has never been done before."

The company has spent a significant amount of time developing and testing their technology to create low-cost, renewable transportation fuels. Many third parties including the U.S. Department of Defense and the U.S. Department of Agriculture have reviewed Fulcrum's process.

According to Barraza, Fulcrum's process is 80 percent cleaner than a petroleum product.

Fulcrum has a number of supporters and strategic partnerships.

Cathay Pacific, a Hong Kong-based airline, and United Airlines are both equity investors in the company and both have long-term jet fuel supply agreements with Fulcrum. The company also has long-term agreements with Waste Management and Waste Connections, Inc. to provide waste that Fulcrum will be able to use to convert into fuel. These partnerships will allow Fulcrum to provide fuel at costs that will be much lower than traditional fossil fuels.

"We think that is a great opportunity," Barraza said about building their first biorefinery, called Sierra BioFuels Plant, on a 19-acre property in TRIC. "The Tahoe Reno Industrial Center is a great location and the folks out there have been very easy to work with."

In 2014, The USDA awarded Fulcrum a \$105 million Biorefinery Assistance Program loan guaranteed through Bank of America to build the biorefinery. Abengoa was awarded an engineering, procurement and construction (EPC) contract in 2015 to build the Sierra BioFuels Plant. Fulcrum plans to have the biorefinery up and operational by the second half 2018.

However, this is just one of many biorefineries that Fulcrum plans to build across the country.

The company is currently evaluating the best locations for their additional facilities. According to Barraza, they anticipate that their future biorefineries will produce three to six times the amount of fuel that the Sierra BioFuels Plant will produce. They plan to have eight plants, which includes the Sierra BioFuels Plant, operational by 2022. This will allow them to produce an estimated 300 million gallons of jet fuel and diesel.

In addition to the biorefinery, Fulcrum has already built a Feedstock Processing Facility in Nevada. The facility, located in Lockwood, is designed to separate out organic materials from the trash well before it is processed into fuel at the Sierra BioFuels Plant.

Fulcrum strategically built the Feedstock Processing Facility 10 miles away from Lockwood Regional Landfill. Miles Construction, a Carson City-based construction firm, served as the contractor for the feedstock plant.

Fulcrum BioEnergy was founded in 2007 and currently has 22 employees. For more information about Fulcrum Bioenergy, visit www.fulcrum-bioenergy.com.