



- Brian Duggan / Nevada Appeal

Langson unveils system to put wasted pressure to use

MARCH, 18 2011

BY [BRIAN DUGGAN](#)

BDUGGAN@NEVADAAPPEAL.COM

Inside Richard Langson's Carson City workshop is one of the dragsters he used to race.

He refers to it as the "not so green machine," one designed to burn gallons of fuel in a matter of seconds in a thunderous demonstration of controlled energy. It's pretty, but not environmentally friendly, he says.

It's also a relic of Langson's past, especially compared to the other machine in his workshop that sits about 20 feet away. It's called a gas letdown generator, and if Langson's track record in the green energy market is any indicator, it could be the next big thing when it comes to producing clean electricity and jobs in Carson City.

"I used to drive those top-fuel dragsters, pollute the environment with nitromethane," Langson said. "Now we're giving it back a little bit."

The generator uses the same twin-screw turbine technology he started to develop about a decade ago that led to the formation of ElectraTherm, a company now based in Reno that manufactures electrical generators powered by the waste heat produced by industrial processes. Langson sold his interest in the company a year ago.

Langson has spent the last year self-financing and developing his new machine, which uses the pressure from natural gas lines to turn a turbine and generate electricity, up to 50 megawatts.

"That could power 40,000 homes if we have enough pressure and flow and there are stations that have that kind of flow," he said.

If his gas letdown generator takes off, Langson said within two years he wants to build a 30,000 square foot production facility on the four-acre lot next to his workshop off of Hot Springs Road and employ more than 100 people.

Langson and his colleagues at Langson Energy, his Carson City-based company, flew to Amsterdam Saturday to attend Gastech, a major trade show for the oil and gas industry. While there they're hoping to generate some interest in the new product.

Their market are the 3 million natural gas letdown stations his company has identified around the world.

A natural gas letdown station is one point along the natural gas grid that reduces the pressure carrying the fuel, which is as high as 1,000 pounds per square inch in the largest pipelines to a fraction of that once it's used by a homeowner.

The idea is to hookup the machine at a letdown station where the pressure of the natural gas is 600 psi or less. From there the gas can then flow through the machine, spin a turbine and produce anywhere from 1 megawatt to 50

megawatts of power, depending on the size of the machine.

From there the electricity can travel to nearby power lines and population centers. His company is in the process of installing a generator at a letdown station in Stead.

“This machine is really designed for any kind of gas or even fluids like geothermal,” Langson said. Other applications could be nitrogen that spews out of oil wells, which could provide power on site.

“It’s pretty flexible,” Langson said.

Langson said the electricity generated by the machine would cost between 1.5 cents to 2.5 cents per kilowatt compared to about 10 cents for solar power and 5 cents to 7 cents for geothermal, for example.

“I think the key is we’ve come up with a low-cost solution that nobody else has,” he said.

<http://www.nevadaappeal.com/apps/pbcs.dll/article?AID=/20110320/BUSINESS/110319505&template=printart>