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GREEN COAST

HOW THE REGION IS LEADING THE WAY IN ENERGY EFFICIENCY



Craig Breese, CEO at Clean Diesel Technologies, a Ventura-based auto emissions technology firm that has in recent years signed big deals with Honda Motor Co. and Pirelli.

Taking some of the 'dirt' out of diesel emissions

By Tom Bronzini
Special to the Business Times

Craig Breese, CEO of Clean Diesel Technologies, says doing something good for the environment and society is part of the reason he and others were attracted to the company.

"We're directly contributing to people's health," he told the Business Times by phone while visiting a subsidiary in Toronto.

The Ventura-based company is in the business of keeping some noxious pollutants out of the air we breathe.

The World Health Organization has identified diesel engine particulates as a cause of lung cancer. Clean Diesel, based in Ventura, makes filters and oxidization catalysts that trap and burn up soot from diesel engines before the exhaust is released into the air.

The company also makes coatings that go into the catalytic converters of gas-fueled autos, SUVs and light duty trucks. The converters reduce emissions of poisonous carbon monoxide, unburned hydrocarbons

and oxides of nitrogen, a cause of acid rain and lung-irritating smog. The Environmental Protection Agency, the California Air Resources Board and authorities overseas have been writing increasingly tough standards for pollutants from autos, heavy duty trucks and buses. The state Air Resources Board is requiring that all heavy duty trucks built before 2007 be retrofitted with current compliant emission control systems.

"We enjoy a very, very strong position in that retrofit business, and in fact I would say that in certain parts of it we're actually No. 1 in North America," Breese said.

The company has a smaller presence in emission control for original equipment diesel truck manufacturers, he said, but it plans to grow that segment.

In catalytic converter coatings, Clean Diesel is a small player overall but a big player with Honda Motor Co. in North America. The company coats just about all of the catalytic converters in four-cylinder Honda

Accords built in North America, and a lot in six-cylinder Accords and other Honda vehicles, Breese said.

Clean Diesel uses a proprietary formula for the catalyst coatings, which are applied to a honeycombed ceramic base that fits inside the converters. The catalyst uses very small amounts of precious metals such as platinum, a significant cost advantage.

"That's one of the reasons that Honda decided to work with us and in fact they were an early investor in the company," Breese said.

Clean Diesel has its roots in a startup formed by researchers doing materials science postgraduate work at UC Santa Barbara. They won some patents for their catalyst formula and in 1996 started a private company called Catalytic Solutions, with a research lab and manufacturing space in Oxnard.

In 2007, Catalytic Solutions acquired Toronto-based Engine Control Systems, which was making diesel emission control components

for manufacturers such as John Deere.

In 2010, publicly traded Clean Diesel Technologies, based in Connecticut, bought Catalytic Solutions. The headquarters of the merged entity moved to Ventura. Clean Diesel employs about 75 people in Ventura County and makes catalytic coatings at its plant in Oxnard. It has manufacturing facilities in Canada, Sweden and the United Kingdom, and Reno, Nev.

The company reported a disappointing \$9.7 million net loss for 2012 despite a 40 percent increase in catalytic coating revenues.

The diesel retrofit market was slower than expected because the California Air Resource Board did not push enforcement most of the year, Breese said, and companies held back from purchases.

"They weren't feeling the stick very much last year," Breese said. "Frankly, that really hurt us." He is guardedly optimistic that enforcement will step up this year.

Clean Diesel recently announced a joint venture with Pirelli to bring the Ventura company's catalytic coatings to car makers in Europe.

Breese said Clean Diesel has been taking a closer look at its patent and intellectual property portfolio to make sure its technology is protected.

"I'm looking for us to really start to carve out some specific areas where our technology will be very, very proprietary and protected," he said, "which may give us opportunities to play not just in automotive applications but perhaps in other applications like fuel cells, the petrochemical industry, even further down the road down into thermoelectric applications.

CLEAN DIESEL TECHNOLOGIES

Based: Ventura
Employees: 75