

Fact Sheet: Envirofit International Ltd. and clean-burning, efficient engine research at the Engines and Energy Conversion Laboratory, Colorado State University

- The Engines and Energy Conversion Laboratory in the College of Engineering addresses and provides solutions for chronic health and environmental issues affecting billions of people throughout the world.
- From 1999-2003, students at the Engines and Energy Conversion Laboratory competed in the SAE Clean Snowmobile Challenge, ultimately developing a snowmobile that was 300 times cleaner than a stock model.
- The project led to the formation of Envirofit International, a non-profit corporation that develops new solutions for global challenges and disseminates technologies originated at Colorado State University.
- The engines lab, together with Envirofit, developed a bolt-on, direct-injection retrofit kit for carbureted two-stroke engines that are major polluters in many Third World countries.
- This easily installed, direct-injection retrofit technology drastically reduces pollution to within acceptable environmental standards while improving fuel economy more than 35 percent.
- The solution is initially targeted to the tens of millions of tricycle taxis that dominate the roads in many Third World countries. The taxis are critical to the social structure in providing economical transportation for the working class and providing income for millions of tricycle taxi driver families.
- In 2006, Envirofit signed its first major agreement to retrofit 3,000 taxis in the northern province of Ilocos Sur in the Philippines.
- Envirofit has been named in the Stanford Social Innovation Review as one of 10 innovative technology companies that create global social change. Envirofit has also been named one of the top five environmental laureates by Silicon Valley's Tech Museum of Innovation - only one of 25 technological advancements recognized out of a pool of 647 from 80 countries.

Other clean-burning engine research at Colorado State

- The engines lab also explores high-pressure fuel injection technology for large natural-gas engines, such as those used in the natural gas pipeline system, which increases fuel and air mixing, improves fuel efficiency and reduces emissions. The technology has now been commercialized by multiple companies, including Enginuity - a company founded in part by Colorado State engines lab alumni. High-pressure fuel injection technology is responsible for preventing 100 million pounds of nitrogen oxide pollution and has saved more than 2.5 billion cubic feet of natural gas.