



Winner of the Transport and Mobility Category 2007 **Envirofit International**

Project **Philippine Two-Stroke Engine Retrofit Project**

Envirofit's car retrofit kit creates a triple-bottom-line benefit in the developing world by reducing dangerous emissions from two-stroke engines and saving fuel.



Project description

A little known fact is that air pollution kills 3–6 million people each year. A major source of air pollution are two-stroke engines, which power around 100 million vehicles across South-east Asia - each producing the pollution of nearly 50 automobiles.

Envirofit has developed a retrofit kit that significantly improves fuel efficiency and reduces emissions in two-stroke vehicles. They engaged in field testing and awareness building in the Philippines and are now selling their retrofit to taxi drivers in Vigan and Puerto Princesa, with the city governments offering micro-loans to spur adoption. Through fuel and oil savings the retrofit pays for itself within a year. Additionally, it significantly reduces carbon monoxide, carbon dioxide, and hydrocarbon emissions. Approximately half a million people are expected to benefit from this project through higher incomes and better health.

Envirofit is now pursuing full-scale market development with the objective of retrofitting Vigan's entire fleet of two-stroke taxis within three years. The project includes working with local partners to establish self-sustaining businesses that will continue to educate drivers and technicians to install and service retrofit kits beyond 2009. Envirofit's model creates a triple-bottom-line benefit in the countries of implementation – it increases incomes, reduces environmental impacts and toxic emissions, and creates jobs.

The Award will be accepted by Dr. Bryan Willson, who is the founder and research director of the Colorado State University Engines and Energy Conversion Laboratory ("EECL"). Envirofit was developed from the research work undertaken at EECL.



Project contact details

Dr. Bryan Willson
Chief Technical Advisor
Envirofit
430 N. College Ave.
Fort Collins
80523 CO, USA
Mobile +1 970 481 6628
Office +1 970 491 4788
Fax +1 970 491 4799
Bryan.Willson@envirofit.org
www.envirofit.org