

# Renewable Energy & Carbon Sequestration

## **How do Carbon Credits work?**

Sustainable and clean renewable energy systems such as hybrid solar/wind electric generators can be used to eliminate or reduce carbon dioxide emissions by replacing old diesel, oil, gas or coal fired electric generators which emit greenhouse gases that produce global warming. Carbon sequestration credits or offsets are calculated by the amount of carbon emissions that would have been emitted if a diesel or other traditional polluting electric generator was used to produce the same amount of electricity.

Companies and electric utilities in countries can buy these emission reduction carbon credits to replace the emissions from their coal burning electric power plants to meet regulatory requirements.

C TRADE generates electric power using waste methane bio-digester gas recovered from manure collected from six large pig and poultry farms in Cebu, Luzon and Manila, Philippines. C TRADE proprietary design technology for the biogas digester, including pretreatment and power generation systems.

C TRADE develops carbon sequestration credits called Certified Emission Reductions (CER), to fund the project and transfers ownership through cost recovery payments for electric power used.

### Benefits of Biogas to Energy System:

- Develops zero-discharge wastewater management system
- Provide innovative financing using CERs
- Reduce or eliminate odor and groundwater pollution
- Provide employment, generate power and reduce fuel oil imports
- Reduces and finally eliminates wastewater lagoons and ponds

### **Benefits of Carbon Credits**

- Provide carbon funds for RE project implementation,
- Reduce poverty and provide off-grid electricity,
- Provide employment for carbon sequestration,
- Boost economic development in rural communities.



Hybrid low maintenance systems use small wind turbines and flexible heavy duty solar panels coupled to a rectifier that controls deep cell storage battery voltage provides reliable, clean electricity.

C TRADE mission is to develop sustainable renewable energy projects, that reduce our dependence on foreign oil, and reduce global warming greenhouse gas emissions.

# C TRADE International Carbon Sequestration & Renewable Energy Experience

C TRADE Project	Funding	Location	Year
		<u> </u>	1001
•Turbocharger installation in Fleet Buses	IUEP	Taiwan/China	2006
• Biogas to Energy from chicken and pig farm	CTRADE	Philippines	2006
Hybrid wind-diesel for Rural electrification	GEF/IUEP	Eritrea	2005
<ul> <li>Hybrid Wind-Solar for Rural Electrification</li> </ul>	USAEP	Philippines	2004
• Small Wind Generator for Rural Electrification	USAEP	Sri Lanka	2003
• 5 MW landfill methane gas to energy	TENAGA	Malaysia	2002
• Carbon Sequestration by Sustainable Forestry	IUEP	Argentina	2002
• Microturbine Technology	ADB	Maldives/India	2001
• Forestry Carbon Sequestration	TEP	Paraguay	2000

# What is CTRADE?

*C TRADE* was established in 1998 as an international developer of renewable energy projects using solar, wind, biogas and other clean technologies to produce electricity and carbon credits.

C TRADE helps fund and develop projects in exchange for GHG emission reductions or carbon sequestration credits.

*C TRADE* provides turn-key development of carbon sequestration credits called Certified Emission Reductions (CER), including the project design document, monitoring, and verification, registration and certification through the Clean Development Mechanism of the Kyoto Protocol.

Carbon credits would have no value for it to be traded or sold unless they are properly registered and certified.

C TRADE has extensive experience with development of carbon sequestration and renewable energy projects in Argentina, China, Eritrea, India, Indonesia, Malaysia, Maldives, Paraguay, Philippines, Sri Lanka, Jordan, Thailand, Taiwan and USA.

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