



## MAINSTREAMING CONSERVATION & RENEWABLES

Winner of the Construction Category 2007

### **Hammarby Sjöstad**

Project

### **Hammarby Sjöstad Sustainable City project, Sweden**

Due to its sustainable city concept, Hammarby Sjöstad has come to serve as a role model for urban development projects all around the world.



### **Project description**

Hammarby Sjöstad is a new district on the waterfront in the center of Stockholm, Sweden. The district will offer 10,000 apartments for 25,000 residents. From day one, the City of Stockholm has imposed tough environmental requirements on buildings, infrastructural solutions and the traffic environment. Overall goals include reducing Hammarby Sjöstad's total impact on the environment by half when compared to any similar, conventionally developed new city district. Additionally, all waste and waste water coming from the inhabitants will be recycled and returned to the area in the form of renewable energy. To obtain these goals, integrated planning, innovative solutions and new technologies have been necessary.

The project runs until 2016, and today half of the city area is complete. The Project Management Office, which has run the project from the beginning, has been responsible for meeting environmental requirements. GlashusEtt, the environmental information centre of Hammarby Sjöstad, provides lectures on sustainable city planning and encourages inhabitants to live more sustainably.

Due to this sustainable city concept, Hammarby Sjöstad has come to serve as a role model for urban development projects all around the world.



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### 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.



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Winner of the Product Category 2007

**Fredrick Ouko**

Project

### **Simple Solar Assembling Project in Kibera Slum, Kenya**

Simple solar panels assembled in the Kibera Slum provide jobs and clean energy in Kenya.



#### **Project description**

This project involves assembling simple solar photovoltaic (PV) panels in the Kibera Slum in Kenya, one of the largest slums in Sub-Saharan Africa. It is an initiative of Kibera Community Youth Program (KCYP), which provides young people from the informal settlement with employment opportunities. The youth assemble small and affordable solar panels, which are then used by the inhabitants of the slum as tools for tapping clean energy to power radios and to charge mobile phones. To date, about 20 youth in the Kibera Slum, and numerous people around Kenya and surrounding countries, have benefited directly from this program for manufacturing small-scale solar PV panels.

This project offers great potential for enabling communities to reduce their environmentally harmful waste. It allows consumers to utilize renewable energy instead of batteries, which are harmful to the environment when disposed of incorrectly.

Due to being assembled locally, the solar PV panels are affordable for low-income earners, who are heavily dependent on radios to access news in the rural areas of the country. So, even though the project is located in the Kibera Slum, the solar panels made there have been sold to all parts of Kenya. Sales have even been made to neighboring countries, where groups have requested training to undertake similar projects in their local areas.



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## MAINSTREAMING CONSERVATION & RENEWABLES

Winner of the Services, Trade and Marketing Category 2007

**Srinivasan Padmanaban, Office of the Environment, Energy & Enterprise,  
United States Agency for International Development, New Delhi, India**

Project

### **Green Business Center and the Water Energy Nexus Activity**

This Centre promotes “green” concepts, such as coordinated water management programs, leading to higher efficiency, equitable growth and sustainable development in India.



### **Project description**

The Green Business Center (GBC) is a joint initiative from the state government of Andhra Pradesh, the Confederation of Indian Industries, and USAID. It germinated from an idea sown by Srinivasan Padmanaban, Senior Energy and Environment Adviser to USAID. What started as an idea in the year 2000 is today a leading center of excellence for energy, environment and climate change activities in India. The GBC promotes “green” concepts leading to higher efficiency, equitable growth and sustainable development, with a focus on the use of market forces and business solutions to achieve these goals. The services that the GBC provides include conducting green audits of manufacturing processes, showcasing sustainable technologies and promoting energy efficiency and the construction of sustainable buildings meeting the US “Leadership in Energy and Environmental Design” rating.

The Water-Energy Nexus Activity (WENEXA) is a bilateral program that improves the co-management of energy and water in farms, cities and industry through enhanced power distribution, end-use efficiency and sound water management practices. Since its inception in 2003, WENEXA has fostered national and state policy dialogue, developed innovative market based models and designed and implemented energy and water use efficiency pilot programs in the Indian states of Andhra Pradesh, Karnataka and Maharashtra. Millions of people are expected to benefit from the projects, including farmers in drought stricken areas and companies requiring clean and efficient energy.



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## MAINSTREAMING CONSERVATION & RENEWABLES

Winner of the Finance and Investment Category 2007

**Sultan Ahmed Al Jaber,  
CEO Abu Dhabi Future Energy Company**

Project

**Masdar Initiative, United Arab Emirates**

The Masdar Initiative leverages Abu Dhabi's resources and energy expertise to create a global platform for researching energy security, climate change and sustainable development.



### Project description

In April 2006, Abu Dhabi took a bold and historic decision to embrace renewable and sustainable energy technologies. As the first major hydrocarbon-producing nation to take such a step, it has established its leadership position by launching the Masdar Initiative.

This is a multi-billion dollar program designed to leverage Abu Dhabi's considerable financial resources and energy expertise into innovative solutions for cleaner, more sustainable energy production and into resource conservation. Masdar aims to position Abu Dhabi as a world-class research and development hub for clean energy technologies. To achieve this it has partnered with the world's most prominent companies, educational institutions and investment firms to create the knowledge and capabilities required to change the way the world understands energy. Activities include developing a research and education institute, a CleanTech fund and an integrated "green community".

The overriding goal is to create a historic, global shift to new energy sources and sustainable resource utilization. Specific energy targets include sequestering up to 100 million of tons of CO2 through Masdar's carbon unit by 2015 and building approximately 1.5 GW of zero-emission clean power capacity in Abu Dhabi by 2015. By providing a multibillion-dollar annual contribution to Abu-Dhabi's non-oil GDP the project improves income stability and sets an enviable standard for its neighbors.

Engineer Sultan Ahmed Al Jaber is a Senior Project Manager at Mubadala Development Company with overall responsibility for the development of the Abu Dhabi Masdar Initiative.



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Winner of the Policy and Lawmaking Category 2007

**Li Zhaoqian, Mayor of Rizhao**

Project

### **Popularization of Clean Energy in Rizhao, China**

In a city of nearly 3m people the mayor has introduced many measures and policies to support the implementation of clean energy projects.



#### **Project description**

Dr. Li Zhaoqian was elected the mayor of Rizhao City in 2001, a city of 2.8m people in China. Since then measures and policies have been implemented to popularize clean energy. This has had the result that almost all of the 650,000 residents of the city's downtown, and around one third of rural households, use solar water heaters. Additionally most of the traffic, street and park lights that were built or transformed after 2005 are solar powered. Marsh gas generated from sewage is used for cooking and electrical power generation. All in all, the use of clean energy from solar and gas reduces CO2 emissions by 3,340,000 tons and SO2 by 12,500 tons annually.

The promotion and support of local authorities played an important role in the process. Regulations were made and special funds were established to promote technical innovation and popularization of clean energies. Urban development strategy and architecture designs were modified to facilitate the use of clean energies, especially solar energy. Enterprises producing solar facilities and energy-saving buildings enjoy preferential policies. Several residential areas using solar energy have been constructed for demonstration purposes. Various measures have also been taken to enhance public awareness of the importance of using clean energies.



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## MAINSTREAMING CONSERVATION & RENEWABLES

Winner of the NGOs and Initiatives Category 2007

**Dr. Russell deLucia, The Small Scale Sustainable Infrastructure Development Fund, Inc. (S<sup>3</sup>IDF)**

Project

**S<sup>3</sup>IDF's "Social Merchant Bank" Approach to provide efficient lighting services to poor households, communities and SMEs in South India**

S<sup>3</sup>IDF has provided about 5,500 people in South India with light from clean energy sources, thereby increasing income generation opportunities and providing health and safety benefits.

### S<sup>3</sup>IDF Project description

Lighting is a critical service for households and small enterprises, both for improving the quality of life and for income generation activities (hawkers, weavers, beedi rolling etc). S<sup>3</sup>IDF has implemented 35+ small investment lighting projects, including photovoltaic panels for individual systems and for charging battery banks, UPS, efficient mobile emergency lamps, and lights powered by electricity generated from biogas. These projects have been for both the urban and rural poor in South India and have benefited about 5,500 people to date. The projects not only create employment and increase income generation by extending the working hours, they also bring health and safety benefits and are environmentally responsible. Through its lighting Initiative, S<sup>3</sup>IDF aims to implement 50+ additional lighting projects in the next 2-3 years. These investments will directly benefit 1,500-3,000 families. In addition, they are structured to provide sufficient additional transaction experience to allow the detailed design of a larger project that can benefit 5,000-10,000 households.

Dr. Russell deLucia, founder and president of S<sup>3</sup>IDF, has worked in 60+ developing countries on large-scale infrastructure projects for governments, bilateral institutions, the World Bank, and the Asian Development Bank. Dr. deLucia applies this experience in business development, financial and technology linkages to small-scale pro-poor infrastructure/energy projects.



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Winner of the Jury's Special Award 2007

### **Anandi Sharan, Women for Sustainable Development**

Project

#### **Bagepalli CDM Biogas Project, India**

This project quantifies the air pollution from traditional cook stoves, in order to obtain emission-reduction financing under the Kyoto Protocol.

#### **Project description**

Three billion women in the developing world use non-renewable biomass for cooking, thereby adding to greenhouse gas emissions and to the unsustainable use of resources. Under the Clean Development Mechanism (CDM) of the Kyoto Protocol it is possible to obtain financing for projects in the developing world which reduce greenhouse gas emissions. This project quantified the emissions resulting from using wood and kerosene for cooking, by applying the non-renewable biomass methodology. This methodology was subsequently approved by the CDM Executive Board in December 2005, paving the way for the project to obtain financing for poor households to change their cooking methods.

The project entails setting up 5,500 biogas plants for individual households in the Kolar District in India. Each household will use the dung of its cows to feed the biogas plant, which will produce gas for cooking. The project will thus replace the inefficient wood-fired mud stoves, which used up to 2.5kg of wood per person per day. As the Kolar District is semi-arid and has scarce wood resources, the project protects the remainder from deforestation. It saves greenhouse gas emissions from wood and kerosene burning and improves health by reducing kitchen smoke.

The reductions in greenhouse gas emissions generate the finances for the project, as the Certified Emission Reductions (CERs) can be sold on the emissions trading market. This is expected to earn the women as much as they receive from 1 acre of dry land groundnut cultivation in a year.



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## MAINSTREAMING CONSERVATION & RENEWABLES

Winner of the Award for Courage 2007

**Patrick Spears, President of Intertribal COUP, and  
Robert Gough, Secretary of Intertribal COUP**

Project

**Intertribal COUP/Rosebud Sioux Environmental Justice Revitalization  
Project Tribal Wind Power Demonstration Project Plan**

They have committed to the utility-scale development of tribal wind resources on the reservations in the northern Great Plains.



### Project description

The Intertribal Council On Utility Policy (COUP) and the Rosebud Sioux Tribe through its Tribal Utility Commission are the sponsors of this environmental justice wind power development plan. Since 1995, the Rosebud Sioux and other COUP Tribes have committed to the utility-scale development of tribal wind resources on the reservations in the northern Great Plains, which are estimated to have hundreds of gigawatts of potential. This project includes the integration of large-scale distributed tribal wind generation with the federal transmission grids.

The COUP project team developed the COUP Plan that encourages tribally-owned development of wind power on Indian Reservations as a viable strategy for building sustainable tribal economies. Tens of thousands of tribal members on 20 reservations can benefit directly from new, sustainable jobs brought to their high unemployment communities, and from the power and health benefits from local clean energy generation. Then there are the untold numbers who will benefit from the greenhouse gas mitigation derived from displacing CO2 intensive fossil generation with clean wind power.



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