

Off-Grid Flow-Of-The-River Micro Hydro Power Plant for Model Sustainable Village at Don Xom Island

Project Objective

The objective of this project is to improve the living standard of the people in Don Xom Village.

Description

Currently 60% of the people in Laos have access to electricity. Many rural areas have limited or no access to electricity. Don Xom Island is isolated and cannot get easy access to the electricity grid. As it is surrounded by the powerful Mekong River, it is an ideal location for hydro power generation, thus necessitating this project.

The project consists of a flow-of-the-river micro hydro electricity generator and an off-grid distribution network with prepaid electricity meters.

The objective of this project will be achieved by implementing clean renewable energy generation from a micro-hydro system which will facilitate growth and create jobs in local enterprises. Integrating new technology, education, a solid financial structure and local involvement will guarantee the long term economic, social and technical durability of the project. The project will incorporate proven, reliable technologies with minimal impact on the environment and will serve as a model for future sustainable village schemes. The electricity can be used to generate income from micro enterprise, improve agricultural production, and improve education infrastructure and safety facilities. Electricity will be distributed using micro grid poles and prepaid electricity meters, an innovative way of educating the villages how to budget for their electricity usage.

Local support is paramount to the success of the project and therefore, villagers will be trained in maintenance, operation and management of the system as well as being actively involved in the construction process. Providing employment,

Project Highlights

Project ID	: 3-L-068
Country	: Laos
Lead Partner	: Grenzone (Thailand) Co., Ltd
Partners	: The Energy and Mine Department of Champasak Province, Thammasat University, Don Xom Village Lao PDR
Total Project Cost	: € 265,000
EEP Financing (% to total project cost)	: € 198,250 (74.80%)
Technical Focus	: Hydro Electricity
Activity	: Infrastructure / Pilot Project
Duration	: 12 months

knowledge and higher standard of living will ensure the continued support and long term operation of the project. It is expected that the village can be promoted as an Eco-Tourism destination which will generate further income.



Site Survey
Photo courtesy: Grenzone Thailand

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Relevance to Country's Energy and Environment Policies

The Government of Laos has prioritized rural electrification with the objective of achieving 90% electrification by 2020 through some grid extensions but mainly off-grid renewable energy projects. In 1997 the Laos government liberalised small scale (100kW and below) power supply developments. This has enabled private companies, individuals and co-operatives to develop small-scale power plants by getting approval from the province/district level governments. This has reduced entry barriers for outside help and has fast-tracked the support and construction of new projects.

As such, this project is relevant to the Laos' energy and environment policies.

Innovation and Knowledge Transfer

The innovative aspect of this project is the production of "green" electricity distributed by prepaid electricity meters. Providing electricity offers multiple opportunities for micro-enterprise and the prepaid meters ensure the users are aware of their consumption and budget for it. Knowledge transfer is achieved through training and education of the people involved and by serving as a model and information base for future projects in the region.



Site Survey
Photo courtesy: Grenzone Thailand

For more information:

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