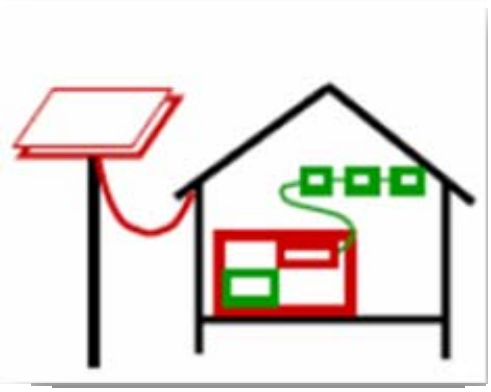
Technology a data sheet : MIH-WB off-grid pilot program

Type of project: (tick off the type)	PV	Solar Thermal	Biomass to Energy	
	✓			
Project name:	**MIH-WB off-grid pilot program (rent to buy solar home system)**			
Location of the plant	**Lao PDR** Ban None Savang village, Keooudom district, Vientiane province			
Year of Implementation:	2003			
Operator (Name and Address)	Mr. Bounthan, Sengsavang ESCO, Thalad town, Keooudom district, Vientiane			
Planner: (Name and address)	Off-grid promotion office, Rural Electrification Division(DoE/MIH) Ban Phai, Vientiane capital, Lao PDR			
Detailed description of the installation: (technology, function, benefit for users, etc. max 150 words)	Since 1999, Ministry of Industry and Handicraft (MIH) has managed the soft-loan from the World Bank to finance solar home systems, village hydro and small gen-set by applying Rent-to-Buy mechanism. Villager buys system by monthly prepayment with repayment period from 5 to 10 years. The system is install and maintenance done by trained village technicians, newly formed or existing Local Electricity Service Company. The village electricity Advisory Committee is formed in each target village and to play advisory role to village electrification strategy and implementation. Small Solar home systems are designed for lighting. system The system consists of 20 Wp PV panel with mounting pole, 3 A Charge controllers, 40 Ah Car Battery and two 7 w energy saving lamps. PV panel inverts sunlight into electricity in daytime, and then produced power is stored in Battery to use with 2 lamps at nigh time.			
Generated Energy service: (tick off the energy type)	Electricity	heat	gas	Light
	✓ (12V DC)			
Power output of installation: (kWel, m³ biogas, kW th, etc.)	• 20 W			
Financing (tick off the financing type)	Private investment	loan	donation	grant
	✓ down payment			
Investment costs in US$	15 US$ for initial payment (installation fees) and monthly payment: 2 US$ for 5 year repayment period or 1 US$ for 10 years			
Maintanance costs in US$	Around 0.4 US$ per month for distilled water for batter this cost is not include replacement of lamps and other damaged components			
Savings:	Around 30 US$ per year saved cost of battery charging (the battery carried by small boat to charge in electrified village, roundtrip takes about 3 hours) or saved kerosene and candles.			

Energy sale income in US$:	no
Comments:	The system provides light and more convenience for doing activity in night time compare to kerosene or candles. It is easy to operate and not much time taking for maintenance just clean panel in some time, refill distiller water to battery.
Pictures and graphics	
 Solar Home System diagram	 PV panel with support pole  Battery and charge controller installed in safty box