

Annual report Pico Sol Cambodia 2008



Empowering Cambodia with solar technology

January 2009

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1 Introduction

1.1 Why Pico Sol Cambodia

The sun is a free, inexhaustible resource of energy. Cambodia has great opportunities for solar energy. Although the country has very limited fossil fuel resources, it receives on daily base over five full solar hours, with a balanced distribution over the year, making it one of the sunniest countries in the world. Pico Sol Cambodia considers Cambodia's solar resources as an opportunity for a sustainable development of the rural areas.

Basic infrastructure like an electricity grid is mainly available in Phnom Penh and provincial towns. The majority of the population lives in the rural areas. Due to this, about 85% of the 13 million Cambodians have no access to a secure electricity infrastructure. Many of them live below the poverty line of less than \$1 per day. Providing these people with modern electric lighting is a small but important step to overcome their impoverished situation. In Pico Sol's vision, the introduction of solar power for Cambodia's rural population starts at the implementation of showcase projects that fulfil a communal purpose.

1.2 Mission and vision

Electricity from sunlight is clean and renewable energy. Our vision is that the introduction of solar power will contribute to the sustainable development of rural areas, where an electricity connection is still beyond the horizon. Our aim is to connect to the sun in an affordable way. For this reason we support small scale solar projects. Important condition for our projects is that there is a local supporting basis, to ensure a sustainable effect. In the long run, we want to achieve that the solar power sector will develop itself in a self-sufficient way. Our dream is that solar power will be used as a logical and credible energy source at a large scale.

Long term objective

Pico Sol Cambodia's long term programme is based on its objective to stimulate the use of solar energy in Cambodia's rural areas. Three sub goals can be distinguished:

- To demonstrate the advantages of solar energy to local communities
 - To increase the level of knowledge of organisations and individuals regarding the installation, operation and maintenance of solar power
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- To stimulate the establishment of small scale businesses in the field of solar energy.

Local ownership

Local ownership is the keyword for our project approach. Pico Sol Cambodia will not give presents, but we want to decrease the investment barrier to enable the realisation of projects. Local initiatives, local interests, a local supporting basis and partial local financing are central themes in our projects.

- **Local initiative:** Pico Sol Cambodia participates preferably in initiatives that are already taken. In many cases, it appears that these plans need to be adjusted due to lack of knowledge of the opportunities or over estimation of the possibilities.
- **Local interests:** Our project aim to satisfy a local interest:
 - projects contribute to a social interest, for instance lighting to enable evening schools, or cooling to enable the storage of vaccines.
 - We make use of the Cambodian solar power infrastructure. Except installation, the systems need to be maintained and serviced. To involve local capacity is good for the local economy and will improve the sustainability of our projects.
- **Local participation:** The partner is able and willing to participate with human power and money. Pico Sol Cambodia contributes partly to the material costs. Our expectation is that a local willingness to pay for the rest implies a local supporting basis to keep the system operationally. This is for instance necessary to be able to replace the batteries after some years.



From demonstration to capacity building

Pico Sol Cambodia focuses to projects with a communal interest. In this way, the Cambodian population will become acquainted with the advantages of solar power, and everybody will profit from it. Our expectation is that in a latter phase people will consider solar power as a solution for their power demand.

To enable the solar power sector to develop, it can not stay with small strategical strikes. A credible solar power sector will only arise if capacity will be built. Pico Sol also wants to contribute to this. We established a solar training institute, where vocational solar trainings are organised.

In this way, our small scale projects will multiply. Projects will be scaled up. The sector will develop.

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2 2008: A starting-up year

2008 was the birth year of Pico Sol Cambodia, after an anticipation time of more than a year. A large step in the right direction has been realized, resulting in a firm base to elaborate on the high ambitions of this new Cambodian NGO.

2.1 Activities

Registration as Cambodian NGO

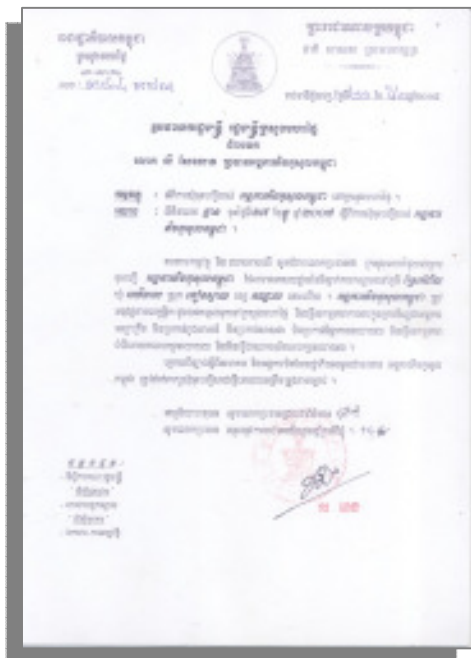
In 2007 the registration procedure was already started up, leading to a formal registration of Pico Sol Cambodia at Ministry of Interior as a Cambodian NGO on 24th of March 2008.

In the statutes, the two main tasks of the organization have been formalized:

1. To support solar demonstration projects
2. To elaborate on the educational objective.

Regarding 1, for the first period Pico Sol Cambodia will act as an implementing agency of Pico Sol Netherlands.

Independency of Pico Sol Cambodia from this Dutch founding organization has been formalized, but to prevent a financial collapse a financial clause has been incorporated to take only decisions that go beyond the cash position after written approval of Pico Sol Netherlands.



Establishment of board

A governing board consisting of volunteers has been established. Most volunteers (all except Lina, who has a financial background) have a professional career in the field of renewable energy.



Leap, chairman; Lina, treasurer; Rogier, secretary; Leakhana, advisor; Tra, housemaster

Elaboration on financial structure

A book-keeping system has been set-up to enable the housemaster and administrator to do the daily work efficiently. The system has been elaborated in the software program OneStep.

Finalizing the Solar Campus

To facilitate the objective to build up a professional solar power sector in Cambodia, a building called Solar Campus has been build. The building is meant to become the main quarter of the Cambodian vocational solar training centre. The Solar Campus is a decent and modern building in a rural environment that provides in all modern luxury of the big city: Electricity, internet, running water and gas for cooking. At the Solar Campus young persons are trained in solar technology and solar micro-entrepreneurship. Because most of them come from other parts of Cambodia, they also stay at the Solar Campus during the trainings.

In 2008 the Solar Campus has been finalized step by step in the course of the year. The building, including the installations and inventory was financially possible by Dutch funding, via Pico Sol Netherlands. It is built on grounds of the Peaceful Children's Home 1, one of the two orphanages of the Khmer Foundation of Justice, Peace and Development.

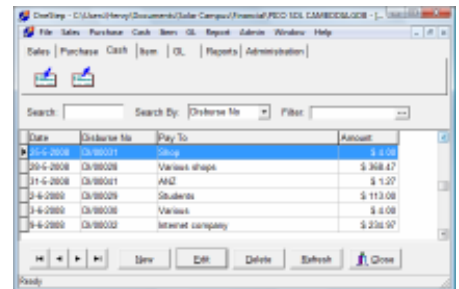
On 5th of July the building has been inaugurated. Many visitors, both international and Cambodian witnessed the formal opening during this day (and night).

Housing international guests for Kamworks

The Guesthouse function of the Solar Campus was useful for housing Dutch students who did a graduation assignment for Kamworks. All over the year, students had their residence in the Solar Campus. In April-May it was primetime, with 12 Dutch persons. During this time also one of the Micro-entrepreneur trainings took place, causing an extra 16 Cambodian trainees living for four weeks in the Solar Campus.

Training of micro-entrepreneurs

The Solar Campus was the main base for trainees for Kamworks. Two trainings took place: A solar basic training of two weeks and an entrepreneurial training, also two weeks. Moreover, several comeback days for these candidate micro-entrepreneurs were organized by Kamworks during the year.



Date	Invoice No	Pay To	Amount
20-4-2008	Ch/880011	Solar	\$ 4.08
20-4-2008	Ch/880028	Various shops	\$ 368.47
11-4-2008	Ch/880011	ANG	\$ 1.27
3-4-2008	Ch/880029	Students	\$ 113.08
3-4-2008	Ch/880036	Various	\$ 4.08
3-4-2008	Ch/880032	Internet company	\$ 238.97



2.2 Financial

The tables below presents the result of the financial year 2008.

Balance Pico Sol Cambodia		As of 31-12-2008
Assets		
Fixed Assets		
Building	\$ 77.130.03	
Depreciation 2008	\$ (7.909.69)	
Total fixed assets		\$ 69.220.34
Current Assets		
Cash	\$ 607.02	
Bank	\$ 6.163.92	
Total Current Assets		\$ 6.770.94
Total Assets		\$ 75.991.28
Equity and Liabilities		
Liabilities		\$ 3.555.90
Equity		
Capital	\$ 46.413.82	
Net Income	\$ 26.021.56	
Total Equity		\$ 72.435.38
Total Liabilities & Equity		\$ 75.991.28

Financial result Pico Sol Cambodia		1-1-2008 to 31-12-2008
Income		
Room rent	\$ 1.985.00	
Pico Sol NL	\$ 36.685.27	
Total Income		\$ 38.670.27
Expenses		
Salaries	\$ 686.83	
Personnel costs	\$ 57.50	
Maintenance	\$ 63.47	
Office costs	\$ 651.84	
Consumables	\$ 19.64	
Events	\$ 751.15	
Depreciation	\$ 7.909.69	
Projects	\$ 2.508.59	
Total Expenses		\$ 12.648.71
Net result		\$ 26.021.56

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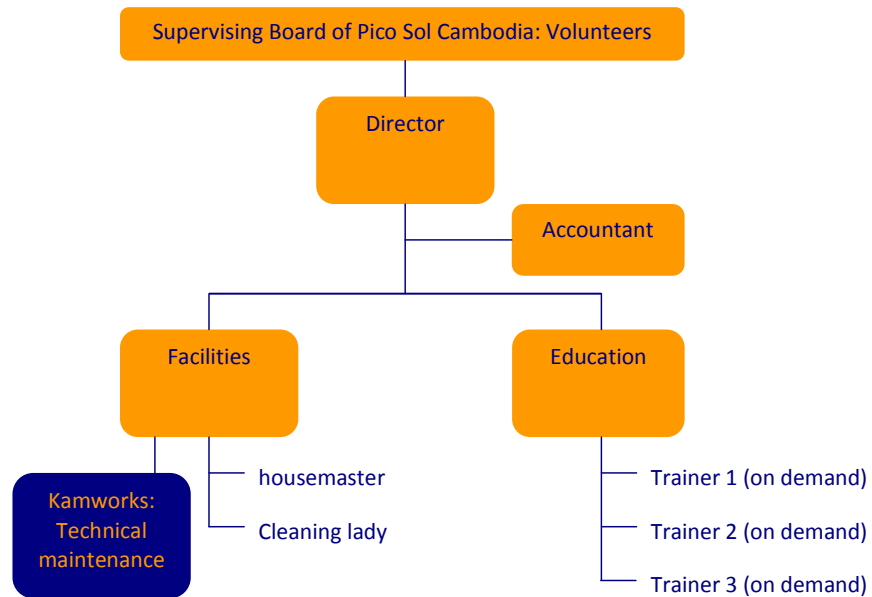
3 Outlook 2009

For 2009 a further development of the Solar Campus as a solar training institute is projected. This will take place by setting up the organization (3.1), further development of training products (3.2) and to participate in a market introduction project with Kamworks (3.3).

3.1 Building up the organization

Staff

A staff will be recruited for setting up and carrying out the daily business at the Solar Campus. First priority is to find a director. Currently discussions with an appropriate candidate for this function take place.



Most relevant positions in this scheme will be:

Position	Responsibility	FTU's
Director	<ul style="list-style-type: none"> • Chairing weekly staff-meetings • Human Resources • Annual planning and budgeting • Acquisition of students • Representation to other organisations • Reception of groups 	0.5
Accountant	<ul style="list-style-type: none"> • Book keeping 	0.2
Facilities officer	<ul style="list-style-type: none"> • Building, internet, installations 	0.2
Education officer	<ul style="list-style-type: none"> • Possibly combination with function of director • Development and maintain quality of the training • Organisation of trainings 	0.5 - 1.0

For 2009 a further development of the Solar Campus as a solar training institute is projected. This will take place by setting up

3.2 Development training product portfolio

Currently the only training product is the Solar Basic training, a two week's course developed in 2007 for Kamworks. The training has been given three times in 2007-2008. Trainers of ITC (Institute de Technolgie du Cambodge) gave the training to candidate micro-entrepreneurs for Kamworks.

A second training that is also given in the Solar Campus by CIEDC for the same target group is a commercial training, to equip candidate entrepreneurs with all basic skills to run an own company.

In June-August educationist Leonie van Eeten will perform a study on the need for solar vocational education in Cambodia, in order to consult Pico Sol Cambodia on the best way to answer this need. Based on her report, Pico Sol Cambodia will plan a development trajectory for 2009-2010. A subsidy request for the development of appropriate trainings will be the first action to follow-up this study.

3.3 Partnership in market introduction project

Pico Sol Cambodia will become a project partner of Kamworks to execute a market introduction project in Kandal Province. The project aims to create awareness among the rural population on the opportunities of solar power, and to disseminate a few thousand of appropriate systems for different target groups. Within the project Pico Sol Cambodia will put into action both primary tasks:

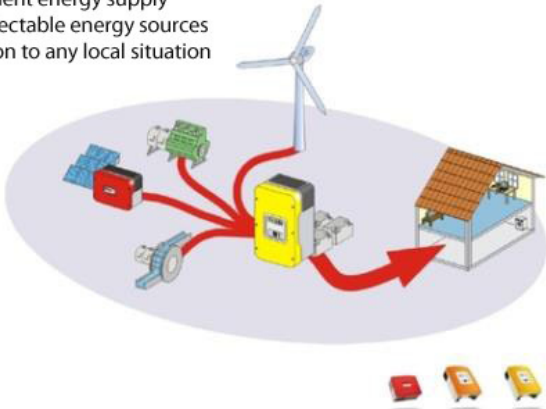
1. Support solar demonstration projects: 20 community based buildings will be selected for a showcase project with solar power
2. Training: Installers and micro-entrepreneurs will be trained. New trainings will be developed.

3.4 Further building up of the Solar Campus

For 2009 several construction activities will be undertaken at the Solar Campus.

1. First of all, a small Cambodian style house will be built for professional short-stays of staff at the Solar Campus and for performing practical parts of the technical courses.
2. Second, a large demonstrative Sunny Island system will be built up, both for practical and demonstrative purposes.
3. Third, some solar powered applications will be built up in and around the Solar Campus.
4. Fourth, a small teahouse will arise at the square in front of the Solar Campus.

- Independent energy supply
- Freely selectable energy sources
- Adaptation to any local situation



Sunny Island concept for a hybrid power supply system



Cambodian style teahouse



Cambodian style house



Solar powered water purifier