

SMALL SCALE PROJECT DESIGN DOCUMENT

Photovoltaic kits to light up rural households in Morocco

101,500 PV SOLAR HOME SYSTEMS for rural electrification
in Morocco

SCET-Maroc & GERERE

Rabat, November 24, 2005

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A. General description of project activity

A.1 Title of the project activity:

Photovoltaic kits to light up rural households in Morocco
101,500 PV Solar home systems for rural electrification in Morocco

A.2 Description of the project activity:

Description and purpose of the project

The purpose of the project activity is to provide 101,500 rural households in all regions of Morocco with photovoltaic kits to enable them to meet their basic energy needs.

Therefore, the project involves 101,500 households to be equipped with individual PV kits along with the basic installation for domestic electricity use (bulbs, plugs), during the period 2004 to 2008. Each PV kit will have an average capacity of 75,7 W_p (Watt peak)¹, adding up to a total installed capacity of around 7,7 MW. Each PV kit will have an average energy production of 0.45 kWh per day (assuming a full productivity of the system for 6 hours per day, given that daily solar radiation lasts for far longer and a consumption/production ratio of 80%).

Average daily solar radiation in Morocco is approximately 5.5 kWh/m² and so PV and solar energy devices have clear potential.

Households paying for the SHS make an initial down-payment of 900 MAD² (representing less than 10% of the equipment cost), and then pay monthly contributions of 65 MAD³ for 10 years (representing the running cost: battery renewal, maintenance and other services).

Contribution to sustainable development

Photovoltaic systems use solar energy which presents various environmental benefits. In contrast to the energy sources used to generate electricity in Morocco, solar energy is readily available most of the time and does not result in emissions of pollutants into the atmosphere, nor does it emit residuals that can have an impact on soil and water. The net result is a reduction of fossil fuel consumption. At the same time, solar energy is an infinite source. So it does not endanger the supply of energy for future generations.

Rural electrification offers to provide immense local development benefits in terms of health, education, economic development and also reduce macroeconomic strains on the economy through processes such as rural-urban migration.

Private companies, playing as intermediary organizations, selected through tenders, are in charge of the implementation of the program, to ensure that the systems are reliable and to guarantee the quality of the service delivered. Under a ten-year contract, they are responsible for managing the technical and financial aspects of the program, performing maintenance, replacing equipment and collecting the fees paid by users for this purpose (65 to 150 MAD per month according to system size).

The project generates a minimum of 150 full time jobs during the 5 years implementation period (2004-2008), extended progressively to 300-400 full time jobs over the operation period. Out of these jobs, 85% are for technicians, most of them in rural areas where employment is scarce. Those local technicians are trained for installation and after-sales services, hence increasing their ability to deal with maintenance problems. The project is managed by intermediary organizations under a total quality principle that is maintenance has to be performed within 48 hours after the client's initial call. In the new

¹ Out of 105,000 kits, 83% will have a capacity of 75 W_p, 15% a capacity of 50 W_p and 2% a capacity of 200 W_p.

² The current rate of the Moroccan Dirham (MAD) is US \$ 0.108 (1 US \$=9,25 MAD) as of November 24, 2005

³ This monthly fee is 150 MAD for 2% of the households who choose the 200 W_p system for which the down-payment is 4,000 MAD.

legal framework the project will also generate (from the initial investment and from the service) revenues for the State (20% VAT, income taxes on salaries and benefit taxes from private companies).

Furthermore, the PV modules are and will continue to be imported from South Africa. They are produced by society [confidential, known to validator], which will assuredly induce a technological development in an African country.

A.3 Project participants

Name of party involved	Private and/or public entity(ies) project participants (as applicable)	Kindly indicate if the party involved wishes to be considered as project participant(yes/No)
Morocco	Office National de l'Electricité (public entity)	no

Further details of the project participants can be found in Annex 1.

A.4 Technical description of the project activity

A.4.1 Location of the project activity

- A.4.1.1 Host country Party: **Morocco**
- A.4.1.2 Region/Province: All regions and provinces
- A.4.1.3 Community: All rural communities
- A.4.1.4 physical location of this project activity:

The project will be implemented in all regions of Morocco. In rural areas, households are either scattered or grouped in “douars” (hamlets). A group of several douars constitutes the administrative unit or rural commune. The project activity will take place in scattered “douars” only, where small villages are even divided in hamlets (“hameaux”) of 5 to 20 households. The implementation program is summarized in table 1 table 2. (See map below).

Table1. Decentralized rural electrification in Morocco: Implementation programme.

	2004	2005	2006	2007	2008
Nb PV kits to be installed	7,500	31,000	30,000	23,000	10,000
Total Nb of PV kits to be instld.	7,500	38,500	68,500	91,500	101,500
Intermediary companies in charge of implementation	- Temasol -Sunlight & BP Solar	- Temasol -Sunlight & BP Solar	- Temasol - Sunlight & BP Solar	- Temasol	

Status: 01 10 2005

Table 2. Distribution of PV kits as function of PV module capacity

PV module capacity	2004		2005		2006		2007		2008	
	Kits installed	total	Kits installed	total	Kits installed	total	Kits installed	total	Kits installed	Total
50 W	6,175	6,175	5,700	11,875	0	11,875	0	11,875	0	11,875
75 W	1,165	1,165	24,430	25,595	29,100	54,695	22,310	77,005	9,700	86,705
200 W	160	160	870	1,030	900	1,930	690	2,620	300	2,920
Total	7,500	7,500	31,000	38,500	30,000	68,500	23,000	91,500	10,000	101,500
Average Capacity Watt _p	57.08		73.91		78.75		78.75		78.75	

A.4.2 Type, category and technology of project activity

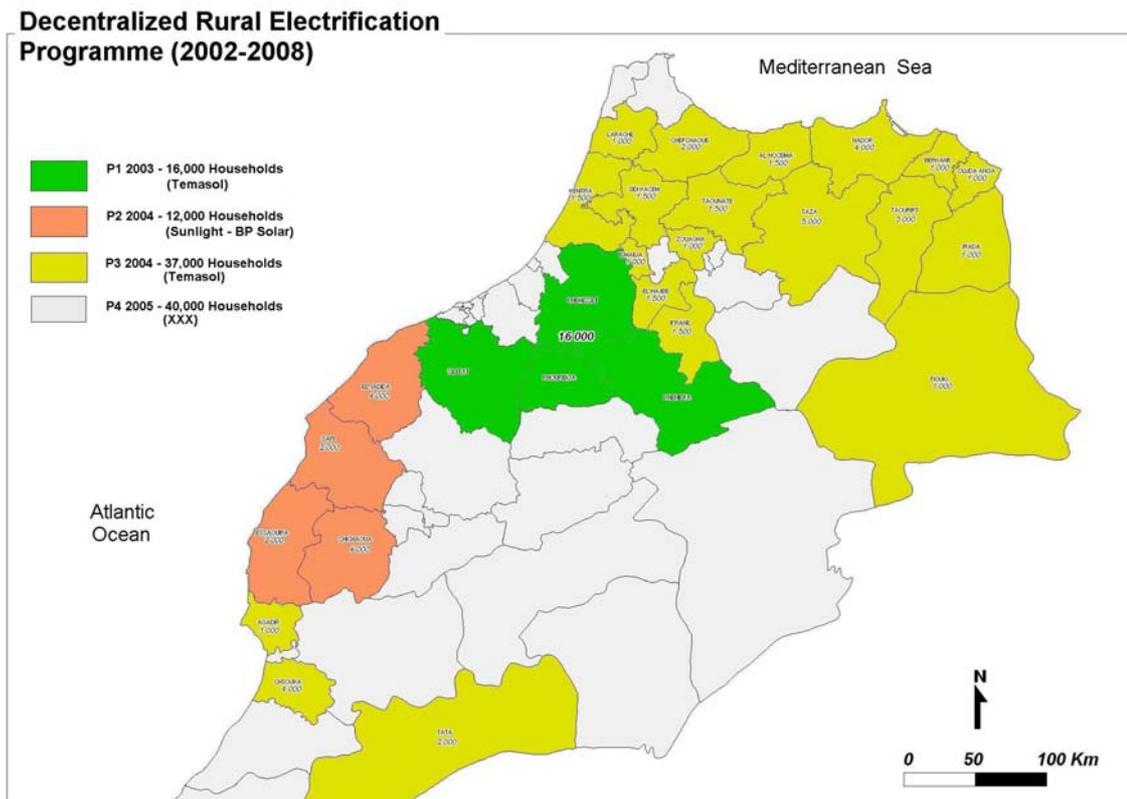
Project category: Renewable Energy Project

Sub category: Renewable electricity generation by the user (**type 1-A**).

Technology : The proposed **project will have a capacity of 7.7 MW** and will use 86,705 kits of 75 Wp each (85.4%), 11,875 of 50 Wp each (11.7%) and 2,920 of 200 Wp each (2.9%), adding up to a total of 101,500 individual kits. The 200 Wp kits are offered as an option for households who can afford to have a refrigerator.

Each PV module of 75 Wp is provided with one battery of 150 Ah, one PWM regulator, one LCB (low consumption bulb) of 11 watts, three LCB of 7 W and two plugs of 12 volts (one for the radio and one for a TV set). One 12 V 150 litres refrigerator is also proposed as an optional choice with 200 Wp PV module instead of 75 Wp, all other components being the same.

The project activity uses solar energy to produce electricity for the benefit of individual users. The



technology selected presents various environmental, social and economic benefits. It improves the technical environment of rural areas by introducing new and modern devices which require a new skills and equipment for maintenance.

A.4.3 Brief explanation of how the anthropogenic emissions of anthropogenic greenhouse gas (GHGs) by sources are to be reduced by the proposed CDM project activity, including why the emissions would not occur in the absence of the proposed project activity, taking into account national and/or sectoral policies and circumstances:

The project activity will avoid the emission of 395,400 tons of CO₂ over the crediting period of 10 years (2007-2016). The photovoltaic project has zero emissions thus avoiding those which would have been emitted in the baseline situation. The emission reduction would not occur in the absence of the project activity. The latter is therefore considered additional. (See sections B and E below)

A.4.3.1 Estimated amount of emission reductions over the chosen crediting period:

Years	Annual estimation emission reductions in tonnes of CO₂e
2007	30 916
2008	37 674
2009	39 722
2010	39 722
2011	39 722
2012	39 722
2013	39 722
2014	39 722
2015	39 722
2016	39 722
Total estimated reductions (Tonnes of CO₂ e)	386 368
Total numbers of crediting years	10
Annual average over the crediting period estimated reductions (tonnes of CO₂ e)	38 637

A.4.4 Public funding of the project activity

The ONE will provide 39% of the equity for the project from its own accruals. Balance will come from long term loans (2.44%), from a free donation (2.44%) not counted towards the financial obligations of the involved Parties (France and Germany) and from the intermediary organizations (3.9%) and the users (52.2%, including running costs over 10 years). Thus, this funding scheme does not result in a diversion of official development assistance. (See details in Annex 2)

A.4.5 No debundling of a larger project activity

The proposed project is not a debundled component of a large project activity. None of the options in paragraph 2 of Appendix C of the Simplified M&P for small scale CDM project activities apply.

B. Baseline methodology

B.1 Title and reference of the project category

Project category: Renewable Energy Project

Sub category: Renewable electricity generation by the user (**type 1-A**).

B.2 Project category applicable to the project activity

The proposed small scale CDM project comprises photovoltaic kits that supply electricity to the users and is thus applicable for project category 1.A. according to Appendix B of the simplified M&P for small scale CDM project activities.

B.3 Description of emission reductions and additionality

The total capacity of the PV kits project is 7.7 MW. Therefore the proposed project qualifies for a small scale project as defined in Appendix B of the M&P of small-scale project activities (UNFCCC, 2004).

Emission reductions

Since the project activity has no direct on-site and off-site emission, the emissions reductions will be the baseline emissions.

Indirect emissions are those that occur during the manufacturing and transport of the equipment. The panels are imported; emissions due to the other components are not considered and assumed to be negligible (or at least similar to indirect emissions from baseline technology).

Additionality

ONE realised a pilot project between 2003 and 2004 which concerned 3.500 photovoltaic kits distributed in the region of Khouribga. This project was a success due to an overwhelming participation of the farming population. Based on that experience ONE considered to put on a big scale a follow-up project concerning the installation of 101500 kits.

However, such a large scale project on national scale requires investments beyond the capability of ONE. On the other side, the income of the farming population is very low and the payments of the farmers can cover only a part of the overall costs. Higher costs for the farmers would drastically reduce the number of participants and therefore endanger the benefits of the project.

The additional income generated by CER-revenues, are therefore very important. From the very beginning of planning the large roll-out of photovoltaic kits, CER-revenues were considered to be an important part of the project financing. Assuming that the entire income of the CERs is used to reduce the cost share which has to be carried by the farmers, a reduction of 22% can be achieved (from 125 \$ to 97\$). This is a considerable contribution and helped to achieve a close to 100% penetration of the photovoltaic kits in all rural areas where the program was applied.

Furthermore, the additionality of the project will be shown, taking into account the various barriers. The final goal of the proposed project will not occur in the baseline situation due to the following barriers:

a. Investment barriers

The economic environment and the availability of newly developed technologies have helped increase the use of renewable energy. The potential for solar-generated electricity in Morocco is estimated to be large enough to allow for substantial and sustainable production. Currently, the main barrier to its large-scale

adoption (in rural areas where it is most appropriate) is the economic factor: the average cost (including equipment, installation, & overalls) of a PV kit for a household is around 10,000 MAD whereas the share for a household (in a hamlet of 10 to 20 households) to be connected to a mini-grid supplied by a diesel/petrol generator system is estimated to lie between 3,500 and 5,500 MAD per household. It is therefore obvious that without an additional subsidy from ONE (of 4,500 to 6,500 MAD per kit), the current project would not occur and the baseline situation would prevail leading to higher emissions.

b. Technological barrier

Apart from the connection to the grid, which is the dream of every rural household, the diesel (or petrol) generator system is the most popular technology for power supply. The performance uncertainty and the low market share of the new technology adopted for the project activity and the low ability of local technicians to deal with maintenance problems and after-sales services contribute to reduce the reliability of the solar PV systems. Therefore, without strong financial incentives, the diesel generator system will remain the common option, leading to higher emissions.

c. Other barriers

Limited information of the end users, lack of organizational capacity and financial resources are also barriers to the adoption of the solar PV systems in such a large scale in rural areas.

B.4 Description of the project boundary for the project activity

a) Regional

The regional project boundary includes all rural areas within the national territory limited north by the Mediterranean Sea, west by the Atlantic Ocean, south by Mauritania and east by Algeria.

b) Technical

The standard system is composed of a solar panel (50Wp or 75 Wp), a regulator joined to a battery to nourish the lamps and the television. ONE doesn't foresee any hybrid system composed of photovoltaic kits and diesel engines.

B.5 Details of the baseline and its development

B.5.1 Specification of the baseline

The general approach for the baseline is based on the baseline formula as included in appendix B of the simplified M&P for small-scale CDM project activities, category 1.A., "electricity generation by the user", paragraph 4 & 6.

The energy baseline is the fuel consumption that would have been used in the absence of the project activity. The baseline formula used here is that of option 2: $E_b = \sum_i O_i / (1-l)$ in kWh

The emission baseline is the energy baseline E_b times the CO₂ emission coefficient (CEF) for the fuel displaced: $E_{mb} = E_b * CEF$ in kg of CO₂.

The emission factors used here to calculate emissions from diesel systems are drawn from table I.D.1 for the following reasons:

A feature of rural areas in Morocco is that most habitats relevant for the project are dispersed: from an isolated household to groups of 20 households (hamlets). Larger villages will be connected to the national grid. To largely reduce the uncertainty, we assume that 50% of beneficiaries are grouped in hamlets of less than 20 households and 50% grouped in hamlets of between 20 and 40 households. The energy demand to be covered corresponds to what the PV kits will produce. According to the following table, the available energy per hamlet is about 8 kWh per day. The energy demand is concentrated on 6 – 8 hours per day. When diesel generators are used, they will run for those 6 – 8 hours. According to the following table this means for a diesel generator system of less than 6 kW a load factor between 20% and 40%. We took a conservative load factor between 25 and 50%. The emission factors for this situation are drawn from table I.D.1. of Appendix B of the simplified modalities and procedures for small-scale CDM project activities. They are 2.4 and 1.4 respectively. We will therefore apply an average value of 1.9 kg CO₂/kWh.

Energy Demand covered by PV-kits		
number of households	15	30
useable PV-production / day and kit [kWh]	0,36	0,36
total useable PV-production [kWh]	5,4	10,8
average [kWh]	8,1	

When covered by Diesel:		
Diesel-Size in kW	3	6
hours of operation	7	7
energy demand [kWh]	8,1	8,1
resulting load factor	39%	19%

B.5.2 Date of completing the final draft of this baseline section

20 November 2004

B.5.3 Name of person/entity determining the baseline:

This baseline has been prepared by SCET Maroc and GERERE, in consultation with ONE and Temasol, two project participants (listed in Annex 1).

GERERE

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C. Duration of the project activity and crediting period

C.1 Duration of the project activity:

C.1.1 Starting date of the project activity: **01/01/2004**

C.1.2 Expected operational lifetime of the project activity: 15 years (2004-2019)

C.2 Choice of the crediting period and related information:

C.2.1 Renewable crediting period

Not applicable

C.2.2 Fixed crediting period

C.2.2.1 Starting date: **01/01/2007**

C.2.2.2 Length: 10 years

D. Monitoring methodology and plan

D.1 Name and reference of approved methodology applied to the project activity:

The monitoring methodology as defined in Appendix B for the category “Electricity generation by the user” is applied in this PDD. This methodology involves an annual check of all systems or a sample thereof to insure that they are still operating.

The monitoring plan and procedures will be as follows:

1. Follow up of the implementation

Information and the data are stored in a data base by the contracted companies. Each company draws up a quarterly report on the progress of the project which is addressed to the rural electrification direction of the National Office of Electricity (see the document in annex: Table of synthesis of the periodic tasks between ONE and Beneficiaries of Services (or PDS) in documents of information magazine and receipt.

In accordance with the contract with ONE, the intermediary company establishes

- a monthly program of implementation which is archived by the “Direction de l’Electrification Rurale” of ONE.
- a quarterly report on the progress of the implementation also archived at the same Direction of ONE.

2. Follow up of the number of operational PV kits

A quarterly report by the intermediary company is also established and sent to the same Direction of ONE. This report states the total number of operational PV kits and their capacity, the status of fee collection, etc.

D.2 Justification of the choice of the methodology and why it is applicable to the project activity:

The proposed project is eligible as a small scale project (cf. section B.2.2), category “Electricity generation by the user” (1.A). The monitoring methodology is consistent with the methodology as required in Appendix B. The proposed methodology thus provides collected data on the number of operational PV kits installed. With this information, a reliable estimate of the amount of emission reduction can be made.

D.3 Data to be monitored:

(The table below specifies the minimum information to be provided for monitored data. Please complete the table for the monitoring methodology chosen for the proposed project activity from the simplified monitoring methodologies for the applicable small-scale CDM project activity category contained in appendix B of the simplified M&P for small-scale CDM project activities.

Please note that for some project categories it may be necessary to monitor the implementation of the project activity and/or activity levels for the calculation of emission reductions achieved.

Please add rows or columns to the table below, as needed)

ID number	Data type	Data variable	Data unit	Measured (m), calculated (c) or estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/paper)	For how long is archived data to be kept?	Comment
A	Quantitative	Number of PV kits installed	Units	m	continuously	100%	Paper Electronic	15 years after installation	Data are recorded continuously
B	Quantitative	Number of running PV kits	units	m	monthly	100%	Paper	15 years after installation	Data are recorded monthly with the fee recovery

D.4 Name of person/entity determining the monitoring methodology:

- The intermediary companies (cf. Annex 1)
- ONE, “Direction de l’Electrification Rurale”, Division Réseaux Décentralisés et Energies Renouvelables (Mr. Baakil or Mr. Essayagh) (cf. Annex 1)

E. Calculation of GHG emission reductions by sources

E.1 Formulae used:

E.1.1 Selected formulae as provided in appendix B:

E.1.2 Description of formulae when not provided in appendix B:

E.1.2.1 Describe the formulae used to estimate anthropogenic emissions by sources of GHGs due to the project activity within the project boundary

Not applicable since the project activity has zero emission.
Emissions due to PV kits transportation are neglected.

E.1.2.2 Describe the formulae used to estimate leakage due to the project activity, where required, for the applicable project category in appendix B of the simplified modalities and procedures for small-scale CDM project activities

Not applicable since no leakage is anticipated in this project.
Leakage emissions, if any, are those that would have occurred during the manufacturing of the PV modules in South Africa and their transportation to Morocco. They are considered to be small and therefore neglected.

E.1.2.3 The sum of E.1.2.1 and E.1.2.2 represents the project activity emissions:

The sum is zero emission. $E_{mp} = 0$

E.1.2.4 Describe the formulae used to estimate the anthropogenic emissions by sources of GHGs in the baseline using the baseline methodology for the applicable project category in appendix B of the simplified modalities and procedures for small-scale CDM project activities:

The installed capacity is calculated by the formula:

$$IC = \sum_i O_i$$

Where: O_i is the estimated annual output of type i of the PV modules in kWh per year.

The energy that would have been consumed in the baseline scenario is given by the baseline formulae, option 2 (§ 4 of Appendix B of simplified M&P for CDM SSP):

$$E_b = \sum_i O_i / (1-l) \text{ in kWh/yr} \quad [\text{or } E_b = IC / (1-l)]$$

where: O is the estimated annual output of the PV modules in kWh per year
 l is the average technical distribution losses in diesel powered mini-grid
($l=20\%$ default value for distribution losses on low voltage rural mini-grid)
 i is the number of PV kits with the same output (capacity)

The emissions baseline is given by the formulae:

$$E_{mb} = E_b * CEF \text{ in kg of CO}_2\text{-equ. per year.}$$

according to § 6 of Appendix B, where:

E_b is the energy baseline calculated as above
CEF is the CO₂ emission coefficient for the fuel displaced

(CEF=1.9 kg CO₂/kWh, as explained in § B.5.1. above)

E.1.2.5 Difference between E.1.2.4 and E.1.2.3 represents the emission reductions due to the project activity during a given period:

$$E_R = E_{mb} - E_{mp} = E_{mb} - 0 = E_b * CEF \quad \text{in kg of CO}_2\text{-equ. per year.}$$

E.2 Table providing values obtained when applying formulae above:

Year	1	2	3	4	5	6	7	8	9	10
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CEF (kg CO₂ / kWh)	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90

Year	1	2	3	4	5	6	7	8	9	10
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Nb PV Kits installed	23 000	10 000	0	0	0	0	0	0	0	0
Average capacity (W)	78,75	78,75	0	0	0	0	0	0	0	0
Total kits at year end	91 500	101 500								

Year	1	2	3	4	5	6	7	8	9	10
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average installed capacity IC (kW)	5944	7243	7637	7637	7637	7637	7637	7637	7637	7637

reduction of systems diesel production (MWh / year)	16271,52	19828,56	20906,45	20906,45	20906,45	20906,45	20906,45	20906,45	20906,45	20906,45
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Baseline Emissions E_{mb} (t CO₂ / year)	30 916	37 674	39 722							
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F. Environmental impacts

F.1 If required by the host Party, documentation on the analysis of the environmental impacts of the project activity: (if applicable, please provide a short summary and attach documentation)

According to Moroccan regulation, the implementation of individual PV kits for rural electrification does not require an environmental impact analysis. Moreover, decentralized rural electrification is one of the main national programs devoted to rural development. The increase of the share of renewables in the energy production is one of the targets of the energy policy of Morocco. This project fits entirely in these two development strategies of the country. No negative environmental impacts have been raised by any institution (government, parliament, NGOs,) during discussion of these development strategies.

Given these elements and given the experience of the national power utility (ONE) and the main intermediary companies in charge of the implementation of the project (Sunlight, BP Solar, Temasol) it is considered by the developers that there is no negative environmental impacts of this project.

G. Stakeholders comments

G.1 Brief description of the process by which comments by local stakeholders have been invited and compiled:

ONE has signed MoUs with all the rural communities involved in the programme of decentralized rural electrification (close to 100). The Board of Rural Communities in Morocco represents the population since the members are elected for five years.

On 31th of March 2005 and on 28th and 29th of April 2005 ONE organized a stakeholder consultation meeting. The objective of the meetings was to inform interested stakeholders on the environmental and socio-economic impacts of the projects for purpose of the CDM. A presentation has been given on the fact that the photovoltaic kits to light up rural households project is being developed as a CDM project under the Kyoto Protocol, including an explanation of the concept of the CDM.

G.2. Summary of the comments received:

After the presentation of the project and the results of the socio economic impact study, the stakeholder has expressed her satisfaction for the solar project with the photovoltaic kits. The comments are all welcoming the project and people express a great interest in getting electricity in their homes. They generally complain only about the delay in implementation. Those who have the installation fixed want more capacity for the same cost!

Moreover, the delegation of ONE visited the Secretary General of the province of Khouribga, of the town of Khemisset and visited the governor of the town of Khenifra in which they presented the results of the study and the stakeholder meeting.

The participants that were present at the stakeholder meeting of 31th of March 2005, and 28th , 29th of April 2005 are

Participants

Organisation

The Khouribga town :

Mohammed Biaz	the provincial department
Mr Touibch	president of Oulad Boughadi commune
Mr Abdelkader El hachimi	president of Maaouana commune
Mr Tbissi Said	president of beni zaratnel commune
Mr Mohammed Oussami	technician
Mme Sanna lakhouaja	ONE
Mr Noureddine el Archi	the provincial department
Mr Abderrahmane El Al alaoui	ONE
Mr Mohemmed Khalki	ONE
Mr Azzeddine Khatami	ONE

The Khmisset town :

Mr Hamid El Harougui	president of the Gzaza commune
Mr Said El bouch	the majmaa talssa commune
Mr Mohammed El Alam	technician
Mr Hmida Aaggadi	the sidi ben abderrazzak commune
Mr Mohammed Mellouk	the Maaziz commune
Mr Lahcen lakhout	the sidi Ghandour commune
Mr Abdellah Daoudi	the marchouch commune
Mr Lahcen Ben hssain	president of the ait mimoun commune
Mr mohammed al Arch	the sirtouk commune
Mr Abdessalam Aachagui	the zhailiga commune
Mr Mohammed Oufitouj	the Boukachmir commune
Mr Larbi Saber	the Ain Jouhara commune
Mr Azzeddine Khatami	ONE
Mr Abderrahmane El Alaoui	ONE
Mr Hamid Asslouj	ONE

The Khenifra town:

Mr Kaddour chahboune	governor of khénifra
Mr Rachid Aloui Ismaili	president of Oued Srou ONG
Mr El houssein Antouj	technician
Said Bousmoum	commune sidi hssain
Mr Arfik Oumar	technician
Mr Ahmed Es Saaidi	ONE
Mr Azzeddine Khatami	ONE
Mr Abderrahmane El Alaoui	ONE
Mr Hamid Asslouj	ONE

G.3. Report on how due account was taken of any comments received:

As stated under G.2 no major concerns have been raised by the stakeholders present at the stakeholder consultation meeting. The answer provided by ONE satisfied the participants.

Annex 1

CONTACT INFORMATION FOR PARTICIPANTS IN THE PROJECT ACTIVITY

(Please repeat table as needed)

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Represented by:	
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Salutation:	Mr.
Last Name:	Nakkouch
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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

The public funding in this project includes:

- A donation of Euros 5 million from Germany (2.4% of the project cost), not counted towards the financial obligations of Germany for phase 1 of the project.
- A long term loan from “Agence Française de Développement” of Euros 5 million (2.4% of the project cost), not counted towards the financial obligations of France for phase 2 of the project.