



LESOTHO RENEWABLE ENERGY-BASED RURAL ELECTRIFICATION PROJECT

LREBRE 2008 ANNUAL REPORT

Ministry of Natural Resources, Department of Energy

Executive Summary

This report presents the 2008 annual progress of the LREBRE project. It gives background information on the project, achievements as at December 2008 and major constraints and lessons learnt.

The Ministry of Natural Resources under the Department of Energy is implementing a five years Lesotho Renewable Energy Based Rural Electrification Project (LREBRE) in the three districts of Mokhotlong, Thaba Tseka and Qacha's Nek. The project aims at reducing CO₂ emissions by promoting renewable energy technologies as a substitute for fossil fuels. The project will assist the development of a renewable energy market (mostly PV systems) in the remote rural areas of the country and facilitate the use of renewable energy for productive uses. The LREBRE is financed by Global Environment Facility (GEF) through the United Nations Development Programme (UNDP) and the Government of Lesotho.

Since inception in May 2007, the LREBRE project has installed 46 PV systems in Qacha's Nek and Thaba Tseka districts. With an annual target of 1000 systems in the three districts, the LREBRE has a backlog of 1750 systems. To address this backlog the project will pre-qualify more installers to accelerate on the installations and also promote and monitor installations outside the project area.

The LREBRE project embarked on a number of awareness raising campaigns for the general public, decision makers and rural customers in 2008. A number of information dissemination options were used, including reading materials (brochures), branding and promotional materials, weekly radio programmes, exhibitions, sensitization workshops and public gatherings.

The project conducted technical and business development training courses in 2008 to train and equip solar dealers with technical and business skills to enable them to deliver quality products and services to their clients. The two financial mechanisms, Credit Guarantee Scheme (CGS) and Performance Based Grant (PBG) have been implemented, although a number of setbacks were experienced. To date the project has not been able to identify an Independent Auditing Firm (IAF) for inspection of installed systems. However the Department of Energy is currently commissioning installed systems.

The project has also documented experiences and lessons learnt and a consultant was engaged to document activities of the project in video form. As a monitoring body, the Project Steering Committee (PSC) sat three times in 2008 to assess the project progress and give guidance on the challenges faced by the project.

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Section I

1. 0 Background

1.1 Country Profile

Lesotho is situated in the Southern region of Africa and it is completely surrounded by South Africa. It covers land area of about 30,000 sq. km. and has a population of approximately 2.14 million people. Nearly 80% of the population lives in rural areas while 20% resides in the urban areas. Most of the population is engaged in subsistence farming and animal husbandry. Wool and mohair are major sources of income, since most of the mine workers were retrenched from South Africa. Unemployment remains at 45% and is one of the most serious problems facing Lesotho today. (World Food Programme, 2003)

Lesotho has a temperate climate and is characterized by four distinct seasons and most of its rainfall (average rainfall 7,000mm) is received during October to April. Winters can be get cold, reaching temperatures of -7degrees Celsius at the lowlands and down to -18 degrees Celsius in the highlands. Snow is common between May and September while the mountains can experience snow all year round.

Three quarters of the land is made up of highlands which rise to approximately 3,500 metres and the remaining one quarter is in the lowlands with altitudes of between 1,500 to 2,000 metres. The mountainous topography presents difficult terrain, with approximately 10% of arable land under cultivation.

1.2 Project Justification

The majority of households in the rural areas are remote and sparsely scattered on mountain sides. Only 11% of households in Lesotho have access to electricity most of which are in urban areas. Approximately 1% of rural households have access to reliable electricity. The Government of Lesotho has the responsibility to increase the electrification target from 11% to 35% as has been indicated in the Vision 2020. It has been evident that grid extension to remote areas is not economically feasible and alternative means have been sought to electrify rural households. These include the use of renewable energy resources ranging from mini hydropower potential, small-scale wind potential to abundant solar radiation.

The rural market for photovoltaic (PV) system, although relatively small, has developed over the past fifteen years in Lesotho. PV components and systems have been sold and installed by specialized suppliers under difficult conditions of dispersed clients, serious lack of credit, lack of consumer awareness of PV, poor workmanship in the installation and lack of qualified personnel for maintenance

The Government of Lesotho has made efforts to improve the electricity sub-sector by introducing the Electricity Master Plan and Power Sector Policy Statement in 1996. It has involved the private sector, privatized the Lesotho Electricity Corporation (LEC) and established the Lesotho Electricity Authority in 2004. The latter is charged with the regulatory functions of the electricity sub-sector including renewable based forms of electricity. Rural electrification outside the service territory of LEC is being implemented by the Rural Electrification Unit (REU), established within the Department of Energy (DoE) in 2004.

2. 0 Lesotho Renewable Energy-Based Rural Electrification Project (LREBRE)

Lesotho Renewable Energy-Based Rural Electrification (LREBRE) project is a five year initiative aimed at reducing Lesotho's energy-related carbon dioxide emissions by introducing renewable energy sources (PV, wind and hydro) as a substitute for fossil fuels (paraffin and diesel) in the rural areas remote from the national electricity grid. The project will improve people's livelihoods by improving their access to affordable, clean energy services. It will also develop a sustainable PV market in the country starting with the three districts of Mokhotlong, Thaba-Tseka and Qacha's Nek.

Implementation of the project started in May 2007 under the Department of Energy (DoE), Ministry of Natural Resources (MNR), with support from the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF).

The LREBRE project is designed to address the following barriers to the development of solar PV market.

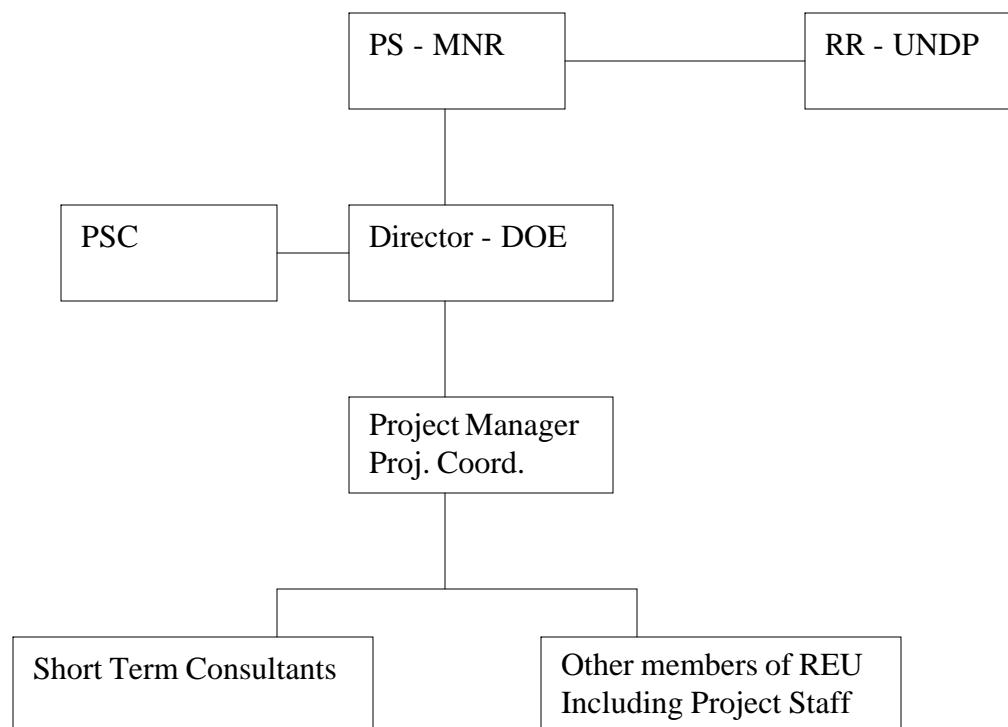
1. Institutional barriers
 - Lack of effective infrastructure for delivery of renewable energy-based services on a sustainable basis.
 - Fragmented institutional responsibilities and lack of integrated planning and implementation by various stakeholders.
2. Economic, financial and market barriers
 - Limited private sector capacity to supply, distribute, install and maintain renewable energy systems.
 - Limited business skills
 - Lack or limited in-country experience with relevant renewable energy systems
 - Lack of suitable financing arrangements for renewable energy companies and end users.
3. Technical barriers
 - Poor workmanship in installation, operation and maintenance of renewable energy technologies, in particular solar PV.
4. Information, education and training barriers
 - Lack of access to information
 - Lack of public awareness of the renewable energy technologies
 - Lack of trained manpower at all levels.

2.1 Project Implementation Structure

The LREBRE project is a support initiative to the national effort to promote rural electrification in Lesotho, hence is housed within the Rural Electrification Unit (REU) of the Department of Energy (DoE). The Project Coordinator reports to the head of the REU who in turn reports to the Director of the DoE. The Project Coordinator is responsible for the day to day implementation of the project components. The Coordinator is assisted by the Communication and Training Specialist who is responsible for awareness raising and training components of the project. The Project Administrator oversees administrative and financial aspects of the project. The international and national consultants may be recruited when ever necessary to carry out specialized components of the project. The technical staff from DoE and REU assist the project on technical issues. The Project Steering Committee is established to monitor and give advice to the Director regarding the implementation of the project.

Project Implementation Structure

Diagram 1



PS- MNR - Principal Secretary of the Ministry of Natural Resources
RR – UNDP - Resident Representative of UNDP
PSC - Project Steering Committee

2.2 Project Objectives and Outcomes

The overall objective of the LREBRE project is to reduce carbon dioxide emissions by promoting the use of renewable energy technologies, in particular solar PV, as a substitute for fossil fuels in rural areas. The project aims at improving peoples' livelihoods by improving their access to affordable, clean energy services. It will assist the development of a renewable energy, in particular solar PV, market in the country.

The specific objectives are as follows:

1. To deliver renewable energy-based rural electrification to different end-use groups using different technology packages.

Outcome1 - delivery of renewable energy-based technology packages

2. To raise awareness among the general public, decision makers and rural customers on the potential of renewable energy in meeting basic energy needs of the rural communities.

Outcome 2 - awareness raising

3. To strengthen and train the public and private sector working in the renewable energy sector to provide better quality of service to the rural communities.

Outcome 3 - private and public sector strengthening and training

4. To assist the development of policy and institutional arrangements in the renewable energy sector.

Outcome 4 - policy support and policy framework

5. To implement performance-based grant and credit guarantee scheme for large scale dissemination of renewable energy technology packages to the rural communities.

Outcome 5 - financial mechanisms

6. To disseminate experience and lessons learned on rural electrification based on renewable energy technologies.

Outcome 6 - learning and replication

2.3 Key Project Activities

The project activities will focus on the following;

- Establishing codes and standards for the renewable energy sector
- Launching awareness campaigns for decision makers, the general public and end-users
- Piloting PV systems at community water-pumping facilities households and business-centres
- Demonstrating the viability of wind/PV mini-grid
- Showing the viability of expanding the use of mini hydro in Lesotho
- Assisting renewable energy technology companies in business planning and training of technicians
- Implementing end-user and supply-chain financing mechanism
- Providing grants to innovative business ideas for productive use

2.4 Implementation Strategy

2.4.1 Delivery of Renewable Energy Technology Packages

Under this outcome the project will:

- Install PV systems in rural households through credit scheme and cash sales in Mokhotlong, Thaba Tseka and Qacha's Nek.
- Install PV systems in nine business centres in the three districts
- Identify 15 income generating activities to demonstrate productive uses of solar PV
- Install hybrid mini-grid using wind and PV at Sani Top for at least 25 customers and two businesses
- Increase the capacity of the mini hydro at Semonkong and introduce the hydro plant at Seforong.
- Provide technical assistance to DRWS to install and operate water pumping systems powered by PV in line with the PV Code of Practice.

2.4.2 Awareness Raising

Awareness raising programmes for the general public, decision makers and rural customers will be developed. These include information packages (reading material, promotional items, radio programmes and advertisements and exhibitions and public gatherings) about the importance of renewable energy in meeting basic energy needs of rural communities. Demonstrations for rural customers and the general public will be done using solar home system and solar energy demonstration board. Identified decision makers will be taken to the project areas to witness the implementation of the project.

2.4.3 Public and Private Sector Strengthening and Training

Business development services in the renewable energy will be strengthened by assisting suppliers to develop business plans, marketing strategies and promotional opportunities, making available up-dated PV market data for key product lines and carrying out training for PV business best practice including service warranties and maintenance contracts.

Various short term courses will be available for various target groups to strengthen technical knowledge of renewable energy technologies.

Association of PV suppliers in Lesotho (LESES) will be involved in the project implementation.

2.4.4 Policy Support and Policy Framework

The LREBRE project will support the establishment of the National Rural Electrification Fund and assist the Government to ensure consistency between the adopted policy and other rural energy activities. It will assist the Government to implement the National Energy Master Plan and ensure that renewable energy technologies are integrated in the plan.

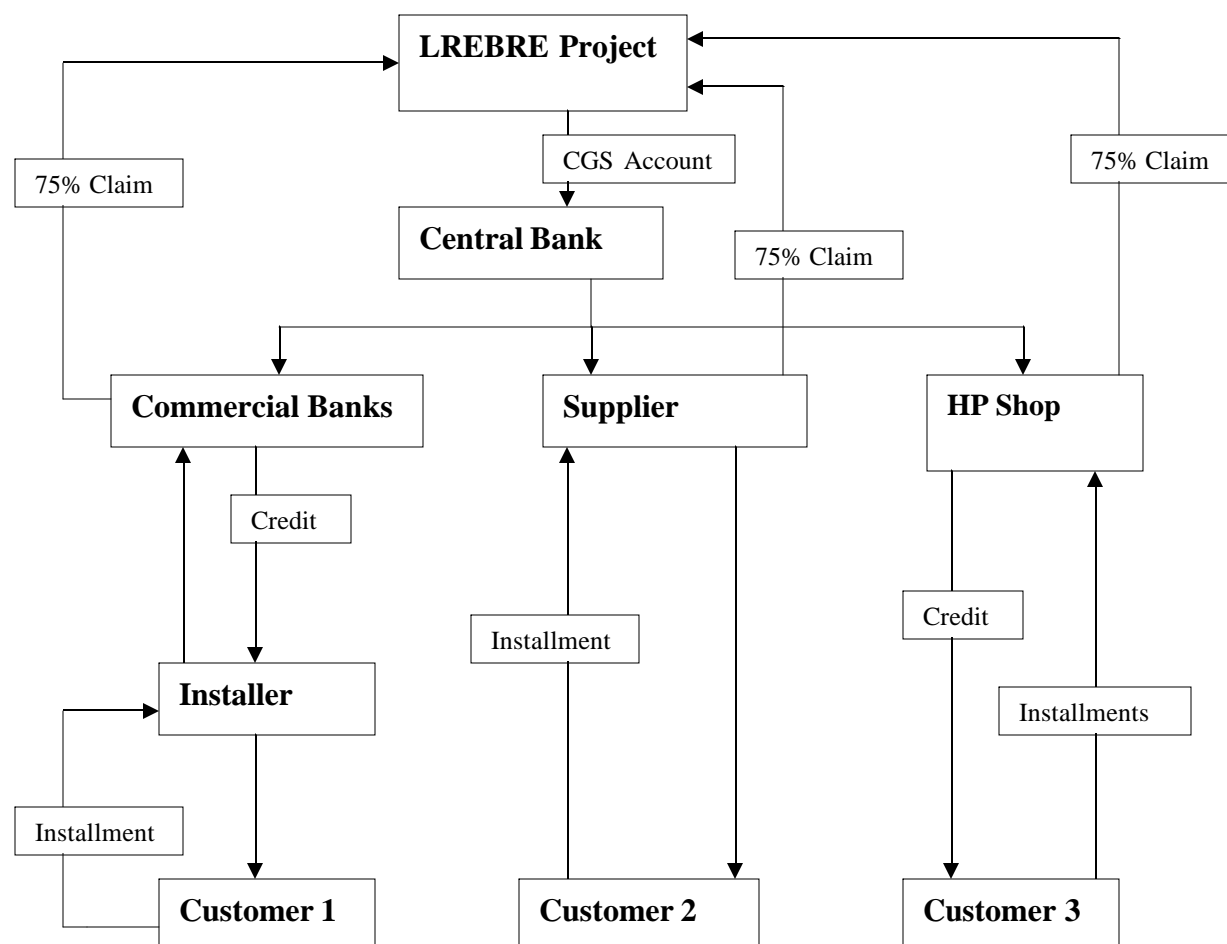
Standards for renewable energy technologies will be updated and enforced and made available to the public.

2.4.5 Financial Mechanisms

The most crucial component of the LREBRE project is the **financial mechanisms** which uses the **performance based grant** on the one hand and **credit guarantee scheme** on the other.

2.4.5.1 Credit Guarantee Scheme (CGS)

Diagram 2



- HP** - Hire Purchase
LREBRE - Lesotho Renewable Energy-Based Rural Electrification
CGS - Credit Guarantee Scheme

The LREBRE project will put in place a CGS which will cover 75% of the credit provided by financiers to consumers or installers operating in one or all the three districts of Mokhotlong, Thaba Tseka and Qacha's Nek.

Key Players in the CSG:

- **The LREBRE project**
- **Financial Institutions**
 - Central Bank of Lesotho
 - Commercial Banks

- Hire Purchase Shops/Companies
- Suppliers
- **Installers**
- **Consumers /End Users/Beneficiaries**

The Roles of the Key Players:

The LREBRE Project

The LREBRE project establishes a CGS account at Central Bank of Lesotho for payment of credit guarantees.

Financial Institutions

a) Central Bank of Lesotho

The CGS account will be opened at Central Bank of Lesotho, and the funds in this account will be used for payment of credit guarantees. The project will ensure that the CGS runs in an effective and efficient manner, and maintains standard reporting procedures for participating companies

b) Commercial Banks

The role of the commercial banks in the scheme is to provide credit for consumers and installers in the three target districts. This would address one of the identified barriers to the growth of the solar industry which is the lack of financing arrangements for renewable energy companies and end users.

The four Banks registered in this country, Ned Bank, FNB, Standard Lesotho Bank and Boliba, will be given an opportunity to participate in the CGS of the LREBRE project, that is, they will not be competitively selected. The banks will provide credit to pre-qualified installers, who will install PV systems in households and small businesses in the three target districts. The banks will obtain credit guarantee for their customers, from the scheme, which will cover 75% of the credit provided.

A Memorandum of Understanding (MOU) will be signed by the project and each bank. The MOU will outline the terms and conditions of operation within the CGS.

c) Hire Purchase Shops/Companies

The hire purchase shops/companies will be competitively selected to participate in the CGS of the LREBRE project. The selected companies or shops will obtain credit guarantee for their customers, which will cover 75% of the credit provided to consumers. They will stalk bulks of the prescribed PV systems components and sell them to customers on credit terms in the three target districts.

d) Suppliers

The suppliers have the financial muscle which enables them to buy solar PV components from manufacturers and install them for the consumers on credit terms in the three target districts. The suppliers will obtain credit guarantee which will cover 75% of the credit extended to customers.

The financial institutions are expected to establish a line of credit specifically for customers/installers finance. This line of credit must be a minimum of M100,000 and a maximum of M1 million. The CGS will guarantee up to 75% of this line of credit. It will provide those financial institutions with limited recourse guarantees on their lines of credit.

Installers

The installers will apply for credit from the banks to finance their projects of installing solar systems on credit terms for customers in the rural areas in the three target districts.

Consumers/End users/Beneficiaries

There are three types of consumers.

- **Consumer 1**, the installer, who obtained credit from a bank, installs a system for customer 1 and the re-payment will be on credit terms over a period of six to twelve months.
- **Consumer 2**, the supplier has financial muscles to purchase PV systems components in bulks for installation for consumers 2 and the re-payment is on credit terms over a period of six to twelve months.
- **Consumer 3** buys the PV systems from the HP shop/company on credit terms, the installation is carried out by one of the project pre-qualified installer.

2.4.5.2 Performance Grant Scheme

The performance-based grant will operate using the Lesotho Government funds to incentivize installers who sell and install systems in the three districts of Mokhotlong, Qacha's Nek and Thaba Tseka.

Key Players in the PGS and their Roles

Department of Energy

The Department of Energy will open a special account at Central Bank of Lesotho for providing performance-based grants for installer who install systems and provide consumers with one year warranties for their systems in the three target districts

Central Bank of Lesotho

The PBS account will be opened at Central Bank of Lesotho, and the funds in this account will be used for payment of grants to installers.

Independent Audit Firm

In order to verify and ensure quality of installed PV systems in households and small businesses, the LREBRE project will hire an Independent Auditing Firms (IAF). The tasks of the IAF will be as follows:

- Physically verify that systems are installed and operating as reported. The IAF will create a standard process (forms, operating procedures) by which field auditors will assess installations.
- Ensure that the LREBRE performance grant disbursement system is used fairly. The IAF will set up a system to monitor PV systems installation and process applications for subsidy payment by participating installers/companies.

- Ensure that installers are complying with the national PV code of practice, standards and guidelines and are responding to consumer maintenance and service requirements. The IAF will randomly monitor each installer/company's performance.

Installers

When installation is complete, the IAF will inspect the systems to ensure proper installation, operation and warranty in the target rural areas. Once the systems are verified, a certificate of verified installation will be issued to the installer to present to the project for payment of relevant subsidy.

2.4.6 Learning and Replication

Publications on lessons learned and results of the PV will be prepared and distributed to other sites in Lesotho. Field visits will be organized to the project area for other donor/investors and private sector entrepreneurs interested in implementing a similar initiative nationally, regionally or internationally. Presentations nationally and internationally on results achieved in the three target districts will be made.

2.4.7 Monitoring and Evaluation

The project will be monitored by the PSC. Quarterly meetings will be held where the project progress will be presented and guidance given by the PSC on the implementation approach. The PSC will also approve project work plans and budgets.

Section II

1.0 Achievements to Date

1.1 Outcome 1:

To implement different delivery models for renewable energy-based rural electrification targeting different end user groups.

The LREBRE project pre-qualified three local companies to install PV systems in rural households in the three districts of Mokhotlong, Thaba Tseka and Qacha's Nek. This led to the signing of contracts in June 2008 for installation of 250 systems for the first phase of household PV installations. The three pre-qualified installers were Tsoelopele Consultants and Contractors, KAYBON Satellite and TV and Power Tek. Each of the installers agreed to provide their expertise to one of the three districts. The three installers were introduced to their respective districts and communities in June and July 2008 and during the visits modalities of the implementation process including re-payment of systems was clarified. It was planned that installations would begin in July 2008, but due to lengthy bank procedures in processing loans for the installers under the CGS, this has not been a reality instead they commenced in October 2008. Table 1 below indicates the number of systems installed in each village in the three districts by 31 December 2008.

Table 1 Households Installation in the Three Districts

District	Village	Number of Systems Installed	Comments
Qacha's Nek	Thamathu	25	There was a concern from the customers at Thamathu that the panels may not be put on the thatched roofs, because of the nature of roofing which needs to be renewed time and again. The alternative for the installer was to opt for steel poles to mount the panels. Since this was not in the original plan it delayed the delivery on ground. Installations also delayed because of the delay in the supply and delivery of components.
	Belebesi	0	
	Mohlanapeng	0	
	Beselateng	0	
Thaba Tseka	Ha Labane	21	The installer was running behind schedule, mainly due to the delays in the supply and delivery of components.
	Linakeng	0	
	Khoitsanyane (Bobete)	0	
	Litsoeneng ((Lesobeng)	0	
Mokhotlong	Linakaneng	0	Activities in the work plan have not moved an inch due to the installer's inability to access loan from the banks. However negotiations are progressing with the Nedbank
	Tlhanyaku	0	
	Pae-la-itolhatsoa	0	

			Lesotho.
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The pre-qualified installers are required as part of their contracts to establish offices in the towns in each of the three districts, where they will be central and accessible to all rural customers. Two of the three installers had already established the offices although they were not operating, mainly because of the delay in the commencement of installations. Customers in each corner of each district would visit the offices and required services. The installers will respond to the requests and demands of the customers.

The installed systems will have defects liability period of one year.

The LREBRE had a mandate to electrify public institutions including 28 clinics, and 4 police posts. This components would be funded by the World Bank which was also funding the Electricity Access Pilot Project (EAPP) under Rural Electrification Unit. Due to the delay in the start up of the LREBRE project the Bank funds could not be accessed because the EAPP was closing down and the bank was leaving. However Millennium Challenge Corporation (MCC) and Partners in Health have programmes of electrifying all clinics in the country. It has therefore been established that the 28 LREBRE clinics are under the MCC programme. However the project has to seek funding for the four police posts.

The LREBRE project has signed a contract with Mafube Consultant to identify entrepreneurs in the three pilot districts in order to provide them with solar energy for productive activities. This will assist the rural communities to generate income to improve their livelihoods and promote the rural economy, as well as demonstrate to the communities the productive uses of renewable energy.

1.2 Outcome 2

To increase awareness among the general public, decision makers and rural customers on the potential role of renewable energy in meeting basic energy needs in rural areas.

Since the beginning of 2008 the LREBRE project embarked on several awareness campaigns targeted at the general public, decision makers and rural customers. The campaigns focused on the potential role of renewable energy, particularly solar PV, in meeting basic energy needs of rural communities. The following information dissemination options were used:

- Reading materials including brochures and articles written in Sesotho and English. Branding and promotional materials (e.g. banners, t-shirts, caps)

The reading and promotional materials were distributed to:

- a. the general public during exhibitions and as people visited our offices;
- b. decision makers during sensitisation workshops and public gatherings and
- c. rural customers during public gatherings.

Table 2. Distribution of Promotional Items

Item	Quantity bought	Numbers Distributed	Balance
Gazebo/tent	2	0	2
Tear drop banners	5	0	5
A frame banners	2	0	2
Roller banners	2	0	2
Umbrellas	100	59	41

Black folders	100	96	4
T shirts (blue & white)	500	443	57
Key rings	500	490	10
Paper folders	2000	1,755	245
Pens	500	483	17
Caps	500	220	280
Squeeze bottles	500	380	120
Brochures	2000	100	1900

- Weekly radio programme and advertorials

Weekly radio programme and advertorials were aired at radio Lesotho from January to May, and stopped in June when a contract between the project and radio Lesotho expired. The contract was never renewed, awaiting evaluation of the project information dissemination options.

- Exhibitions (e.g. Morija Arts and Cultural Festival, Public Service Day, World Food Day, United Nations Day)

The LREBRE project participated in the above mentioned exhibitions where the project reading materials and promotional items were distributed to the general public.

Table 3 Distribution Promotional Items Through Exhibitions

Exhibition	Items	No. of items distributed
Morija Arts and Cultural Festival (03 rd October 2008)	Key rings	20
	T-shirts	20
	Caps	16
	Squeeze bottles	20
World Food Day (16 th October 2008)	Key rings	20
	T-shirts	10
	Brochures	30
United Nations Day (24 th October 2008)	Pens	30
	T- shirts	20
	Paper folders	20
	Key rings	30
	Brochures	100
	Umbrellas	10

- Sensitisation workshops for decision makers in the Mokhotlong, Thaba Tseka and Qacha's Nek districts.

Table 4. Sensitisation Workshop for Decision Makers

District	Date	No. of Attendees	Comments
Thaba Tseka	20/08/08	30 (MPs and DCs)	The workshop achieved its objectives of raising awareness of the project activities among decision

			makers, especially MPs
Qacha's Nek	24/06/08	34 (MPs and DCs)	The workshop failed to achieve its objectives because none of the members of the targeted group, MPs attended.
Mokhotlong	28/08/08	33 (MPs and DCs)	The workshop achieved its objectives of raising awareness of the project activities among MPs, although only 2 out of 5 MPs attended.

- Public gatherings at community council and village levels

The project continued with the awareness raising programme among rural communities during April 2008 by undertaking Community Council meetings in Qacha's Nek and Thaba Tseka districts while Mokhotlong was completed in 2007.

Public gathering meetings were held in the nine identified villages in the three target districts during January - February and June –July 2008 with the purpose of sensitizing the communities on solar PV electricity which was coming to their homes, identify the 250 households and introduce the three installers in their respective districts. The objectives were all achieved.

1.3 Outcome 3

To strengthen and support the private sector working in the renewable energy sector to provide quality services to rural communities.

The LREBRE project conducted technical and business development courses in August 2008 to train and equip solar dealers with technical and business skills to enable them to deliver quality products and services to rural communities.

Table 5. Training Courses for Solar Dealers

Training Course	Date	No. of Attendees	Comments
Technical Skills (Solar PV installation)	04 – 08 August 2008	25	The technical course achieved its objective, although a follow up technical course was highly recommended
Business Management Skills (Tendering Procedures, Project Management and Marketing solar PV businesses).	04 – 08 August 2008	25	The business development course also achieved its purpose as stated. A follow up business course was recommended.

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In its endeavor to support and assist the development of the solar industry in Lesotho, the LREBRE project re-activated the Lesotho Solar Energy Society (LESES). An Annual General Meeting (AGM) was held in October 2007, where LESES renewed its Executive Committee. Approximately 75% of solar dealers in the country are members of the LESES.

LESES secured office space in August 2008, and bought office equipment and furniture on the 6th of November 2008. Applications were invited for the position of Office Assistant from the 15-26 September 2008. Interviews for office assistant were held on the 10th of November, but the preferred candidate has not commence with duties. Other activities in the work plan including workshops and production of promotional items were not achieved.

Re-activations of LESES and implementation of some of its activities has not been a smooth process because the Executive Committee was not entirely committed to LESES activities. Other members of LESES should be involved to assist the Executive Committee to carry out some activities. LESES may need to have sub-committees assigned for specific duties.

1.4 Outcome 4

To refine the policy framework and institutional arrangements necessary for the widespread adoption of renewable energy sources for off-grid electricity services.

There were no activities under this outcome in 2008, basically because activities under output 4.1 have already been implemented. For example the National Electrification Master Plan has been produced and renewable energy technologies are integrated in the plan. The Lesotho Rural Electrification Fund has not been implemented although a proposal was produced and submitted to the office of the Principal Secretary of Natural Resource for further action. The project will encourage and support its implementation.

On the other hand, it remains a challenge for the project to publicize the current Code of Practice for solar PV installation to both public and private sectors. The project will also identify and produce standards for mini-grids.

1.5 Outcome 5

To implement two financial mechanisms, Credit Guarantee Scheme (CGS) and Performance Grant Scheme (PGS), for larger scale dissemination of renewable energy based technologies to rural customers.

Credit Guarantee Scheme

Under the Credit Guarantee Scheme (CGS) an account was opened at Central Bank of Lesotho to provide financial institutions with 75% guarantee on the credit provided to pre-qualified installers. The CGS account was opened with an amount of M1,598,900.

FNB, Ned Bank, Standard Lesotho Bank and Boliba were invited to participate in the CGS of the LREBRE project and a Memorandum of Understanding (MOU) was signed with Standard Lesotho Banks and Boliba Savings & Credit to concretize their involvement. Boliba declined to assist one of the three pre-qualified installer because they could not handle the 25% risk they were exposed to.

All the three installers applied for loans for the purchase of PV systems components at Standard Lesotho Bank. The processing of loan application took long mainly because the bank personnel were not familiar with the CGS. In August when we were expecting that the applications and the loans would be released. Standard Lesotho Bank demanded that the Government signs a “Demand Guarantee Letter” which would be double guarantee for the credit provided to the installers. Through the intervention of the Ministry of Finance and Development Planning the matter was resolved and all parties involved realized that the “Demand Guarantee Letter” was not necessary instead CGS account was blocked to prevent any transaction. Subsequently two of the three installers were given loans by Standard Lesotho Bank to purchase systems components and start the installations.

A decision was made to exclude the Hire Purchase shops in the CGS of LREBRE because they were all invited on several occasions through workshops and on one to one meetings to participate in the CGS but did not show any interest. Therefore there were no activities related to the hire purchase shops in 2008.

Performance Grant Scheme

The PGS operates using the Lesotho Government funds to incentivize installers who sell and install systems in the three districts of Mokhotlong, Qacha’s Nek and Thaba Tseka

In order to verify and ensure quality of installed PV systems in households, the LREBRE project has to hire an Independent Auditing Firms (IAF) for inspection of installed systems. Proposals were invited from potential national and international firms twice, in 2007 and 2008, with no response. The project then went into a head hunting process which also did not bring fruitful results. A recommendation was then made by the Project Steering Committee (PSC) to visit the neighbouring South African country to learn from their experiences the most appropriate way of inspection of systems installed in households which may not necessarily be the use of an IAF and this will take place in January 2009. In the mean time the Department of Energy assumes the responsibility of the inspection process. To date the DoE has inspected systems components on site before installation at Qacha’s Nek and Thaba Tseka districts.

The Department of Energy and the project initially agreed on the level of subsidy (60%) for installation of systems in households, and they communicated this to the communities, but due to the new national policy later had to change the subsidy level and equate it to that of customers under grid electricity. Each system (65watts) costs M12,570, the customer pays M2,000 of this amount over a period of seven years while the Government subsidy is 84% (M10.570). This change contributed to the delay in the commencement of installations, confusion and uncertainty on the part of the project.

1.6 Outcome 6

To disseminate experiences and lessons learnt to promote replication throughout the country.

The project successfully undertook a baseline study in January 2008 to acquire baseline information for the purposes of monitoring the project progress. The LREBRE also engaged a consultant produce annual videos on project events to show case experiences and lessons of the LREBRE project. The project is also documenting experiences and lessons learned on a continuous basis.

1.7 Monitoring and Evaluation

Three PSC meetings were held in 2008, in March, August and November, where the project progress was presented and guidance was provided by the members on the challenges faced by the project. In the last meeting the PSC visited Thamathu in the Qacha's Nek district where installation had just begun. In addition to this the project is constantly monitored by the Monitoring and Evaluation Specialist based at the UNDP.

Section III

Major Constraints, Way Forward and Lessons Learned

- Since inception in May 2007, the LREBRE project has only installed 46 PV systems in Qacha's Nek and Thaba Tseka districts. With an annual target of 1000 systems in the three districts, the LREBRE has a backlog of 1750 systems for the year 2009. To address this backlog the project will pre-qualify more installers to accelerate the installations and the project will also promote and monitor installations outside the project area.
- The confusing relay of information by the project to the customers as a result of the changes in the Government Connection Fee Policy brought about confusion and mistrust on the project by the communities. In future the project has to be consistent with all information communicated to the beneficiaries.
- The repayment period as indicated by the new connection fee policy, extends beyond the project lifespan, in contrast to the stipulated period of six to twelve months by the project document. The commercial utilization of solar energy which is fundamental to the project will also be compromised. A study on the assessment of the impact of the extended repayment period will be conducted to assist decision making by the authorities. Furthermore the project has to raise awareness on project activities and mandate for decisions makers in particular the Members of Parliament who seem to be lagging behind.
- In 2008 nine villages were selected to kick start installations in rural households in the three target districts. This resulted in unsatisfaction expressed by communities of unfairly leaving out some communities who also need electricity. This approach also limits the number of installations that can be achieved in a year. The project will therefore adopt a demand driven approach in which customers from all corners of the districts visit the installer's offices at central points in each district to request for service.
- There is lack of a broader coordinated approach among partners in the renewable energy sector. The project has to collaborate and liaise with all identified partners in the sector.
- The lack of readiness and willingness by the local banks to participate in the CGS of LREBRE hampered the project progress. The banks are also unwilling to assist small solar companies. Further negotiations will continue between the banks and the project and the banks will be encouraged to participate in the CGS. The project will further interact with entities such as IFAD and BEDCO which assist small businesses to attain loans from the local commercial banks.
- The project has to date not been able to identify IFA for inspection of installed systems in rural households, however in the mean-time, the DoE undertakes the inspection process. The project team will visit South African solar projects to learn from their experiences, and subsequently implement the appropriate approach.

- Although LESES was reactivated by injecting some funds for office space, furniture and income generating activities, the M66,000 budget was not exhausted and income generating activities were not achieved because the Executive Committee was not available to roll out the LESES work plan. In the next year the project and LESES will have an MOU which will give a framework within which the two parties will collaborate.
- The study that was undertaken before the inception of the project which analysed the market potential in the target rural areas highlighted that there is a demand for the solar energy and that some buying power existed in those communities considering their spending in substitute goods. Contrary to the above situation the present does not hold as the economic and social drifts have drastically affected the same rural communities with regard to their buying power and cost of the solar energy gadgets. It has therefore been a lesson that the demand level is still and is becoming very high as many people registered to participate and benefit from the project, however the buying power has dropped significantly. The recommended subsidy level will therefore address this problem.
- As a result of the information communication and dissemination options adopted and the introduction of the project to the different stakeholders the project received a welcome by majority of the stakeholders but there was a general feeling that it has long been expected in some areas like Linakaneng in the Mokhotlong district and therefore the expectation is too high and implementation has to be fast tracked.
- The project has made strong ties with the Community Councils within which it operates and has acknowledged the role which they play in assisting the project to disseminate information to the communities. The project continues to learn that the success of the project initiatives are best pursued with the local authorities which will result in a sense of ownership of the project by the communities and the sustainability of the initiatives.
- Since inception the project adopted a heuristic method of disseminating information to all its stakeholders, which included the print and electronic media but with time we learned that there is a need to hold the options adopted and evaluate them to see which ones best assist the project to achieve its objectives hence a decision was made to undertake a study to that effect. However even before the project receives the results of the study it has been noted that not all stakeholders can be targeted with one general means of dissemination. The results of the study will also assist the project to replicate the best options to other districts in the country.
- The loss of the Communication and Training Specialist in August 2008 hampered progress of some activities, in particular activities under outcome 2 and 3. However the recruitment process is on-going to fill position.
- The design of the project is such that the technical support will be tapped from the DoE with assistance from the international and local consultants. The project has learned that the capacity of the DoE needs to be highly supplemented as the manpower resource available does not allow optimal use of the technical expertise by the project.

- During the implementation of the financial mechanisms it became apparent that the Project Coordinator needed to be beefed up with the financial background to execute her mandate as some of the issues therein were technically demanding. A suggestion was that a financially orientated position be established to backstop her.