



DM2006 Project Implementation PROGRESS REPORT

[01/31/2007]

In order to ensure transparency, accountability, as well as to share lessons learned, we will post this Progress Report on the Development Marketplace website at www.developmentmarketplace.org

However, if you would like to share any sensitive information with us, you can do so in section VI. The information provided in this part of the report will be handled as confidential and will not appear on the DM website.

I. Background Information

DM Project Number and Title	02286: Solar Thermal Power
Report Author's Name (if different from Team Leader)	Elizabeth Wayman (Secretary)
Total Award	US\$ 129,530
Amount Disbursed to Date	US\$ 71,242 (55 % of the Total Award)

II. Progress Against Milestones

i) List the milestone objectives in the first column as expressed in the Project Agreement. The second column should indicate the current status of each milestone objective. In the third column, please provide quantitative data and qualitative information describing the status of the project against that particular milestone.

Milestone Objectives (Copy from the Agreement)	Status (Completed/ In Progress)	Descriptive Information on the Status
Machine and workshop tools purchased and installed.	Completed – November 2006	<ul style="list-style-type: none"> Machine tools including a mill, a lathe, bandsaws, an arbor press, various power tools and a full stock of hand tools were purchased and transported to our project location. Workshop space was reorganized to accommodate new equipment. Workshop was rewired to accommodate 3-phase power.
Staff trained in machine tools usage.	Completed – 12/20/2006	<ul style="list-style-type: none"> Theoretical and practical training was conducted on the use of the mill and lathe as well as more basic power tools.

Standard Operating Procedure manual completed	Completed – 1/29/2007	<ul style="list-style-type: none"> • A manual was created outlining the procedure of designing and constructing a system.
Sites for initial deployments chosen; beneficiary meetings held.	Completed – 11/14/2006	<ul style="list-style-type: none"> • Site visits were performed at the Bethel High School, Ha Teboho village, and a clinic in Ketane. • Sites were evaluated for the installation of a system. • Interviews were conducted to determine the user needs and patterns. • Meetings were held with future beneficiaries to explain the concept and gain feedback.
Liaisons with all relevant government ministries initiated.	<p>Initiated – 10/2006</p> <p>Continued – 1/2007</p> <p>Additional follow up planned in the coming months</p>	<ul style="list-style-type: none"> • Meetings were held with several government and non-government groups including the Ministry of Education, the Ministry of Health, the Lesotho Electricity Authority, the Lesotho Electric Corporation, BEDCO, church-based organizations.
Design and blue prints finalized.	Completed – 10/01/2006, 1/26/2007	<ul style="list-style-type: none"> • Redesign activities for a Lesotho-specific design were carried out throughout September and October. • Design review meetings were held regularly to finalize design concepts and approaches. • Drawings were created based on team design decisions (10/1/2006). • Blue prints were created based on drawings and finalized based on the construction process (1/26/2007).
Installation of first system completed.	Ongoing.	<ul style="list-style-type: none"> • Parabolic troughs were constructed and installed at Bethel High School 1/10/2007. • Micro-generator organic Rankine cycle (ORC) unit was completed 1/29/2007, to be installed 02/02/2007.

ii) If you did not achieve some of your stated milestone objectives, please explain the reasons.

All milestones have been achieved, starting with the adaptation of the technology to Lesotho and culminating with the completion of the first system. Installation will be completed according to scheduling with the director at the test site (the Principal of Bethel High School). Testing on the first system is ongoing, however, to evaluate the performance of the new design and to ensure that it is reliable and easy to use.

Milestones were also achieved at a later date than originally stated in the project agreement. Setbacks caused by troubles with our project vehicle caused unexpected delays, and material and component acquisition was a more time-consuming process than anticipated.

iii) Has your project's overall accomplishments to date exceeded the original plan?

Yes No

If Yes, describe your achievements:

In addition to the deliverables outlined above, we have provided theoretical education and practical training on engineering mathematics, solar energy technology, CAD, electrical engineering, electronic systems, thermodynamics, thermo-cycle construction, and plumbing.

III. Overall Project Progress

i) What have been the main challenges of your project to date? What, if any, adjustments have you made to your original business plan in order to overcome the challenges and meet your objectives?

Challenges:	Adjustments:
Serious troubles with the project vehicle (a broken gearbox) caused weeks of delay and a strain on our budget.	The project vehicle was unavailable for several weeks during the time scheduled for major purchasing trips. We rescheduled later activities to make use of the time during which we had no way to transport system supplies.
Communal workshop space means that workshop equipment necessary for system construction is occasionally damaged or missing.	Repairs to workshop equipment, though timely, have been completed. Efforts have been made to improve communication among parties using the workshop so that resources are available when they are needed.
Difficulty in obtaining some system components has cost significant time and energy.	We have reassessed our future schedule to reflect a more realistic time line for the acquisition of materials. Work is ongoing towards finding additional suppliers and more reliable purchasing channels.

ii) Have any of your objectives changed or have you added new objectives since you signed your Project Agreement? If Yes, explain the changes.

Yes No

We have gained an additional objective to develop software to carry out the design and analysis of future systems that may be used by the individuals that we have trained. We will develop our personal design tools into simple programs that will allow our partners to design and analyze new system configurations.

iii) Do you have any concerns about meeting your next milestone objectives?

Yes No

If Yes, what are the concerns and how do you plan on addressing those challenges?

We will not be able to meet our next milestone objective by the date indicated in our original proposal, February 15, 2007. We have reworked our schedule to reflect a more realistic timeline, and we plan to meet the next milestone by April 30, 2007.

iii) Although this is an interim report, are there any development outcomes or results of your activities to date that you would like to call attention to?

--

iv) Reminder: In accordance with Paragraph 3.1.1 of the Project Agreement, each project team is required to submit a statement of account showing the use of the funds within three months after the last disbursement. As a part of periodical expenditure review exercise, please provide an annex with un-audited summary of expenses during this reporting period.

IV. Ancillary Achievements

i) Have you or has your organization received any awards/recognitions or media attention as a result of your DM-funded project during this period?

Yes No

If Yes, please specify the sources and identify the names.

Award /Recognition	Media
<input type="checkbox"/> Local: <input type="checkbox"/> National: <input type="checkbox"/> International:	e.g. <input checked="" type="checkbox"/> International: BBC News on Dec. 3-4, 2003 <input checked="" type="checkbox"/> Local: <input checked="" type="checkbox"/> National: Public Eye (Lesotho National News paper) Science and Technology Column <input type="checkbox"/> International:

Explain the Award/Recognition or the Media content:

We were asked to write a column on science and technology in Lesotho that will appear in the country's newspaper, the Public Eye, in February 2007.

Attach web links/news clips, if available:

--

ii) Has your organization made any new partnerships as a result of this project during this reporting period?

Yes No

If Yes, specify type of the organization from the list below and describe nature of the partnership:

<input type="checkbox"/> Local Government: <input type="checkbox"/> National Government: <input type="checkbox"/> NGO: <input type="checkbox"/> Bilateral Development Agency:	<input type="checkbox"/> Multilateral Development Agency: <input type="checkbox"/> Private Corporations: <input type="checkbox"/> Other: e.g. <input checked="" type="checkbox"/> Multilateral Development Agency: Development Marketplace of the World Bank (financial partnership and technical assistance)
--	--

iii) Sustainability and scalability after completion of the DM fund are top of the DM Team’s priorities. Has your organization leveraged new funding or secured future funding during this reporting period?

Yes No

If Yes, provide the following information.

Funding Sources: Names of the Organizations
 Amounts Funded/Committed: US\$ 000,000

V. Requests to the DM

i) Do you have any comments on the overall process and support provided by the DM Team or Project Liaison?

Ntate Motseki has been very helpful throughout the report term. He has secured us a VAT-exempt status in Lesotho, allowing us to make better use of project funds. He also spent almost an entire week setting up meetings and introductions for our Business team (MIT GLAB students) who visited in January. His help on this front has given us valuable access to the ears of relevant government officials in several Ministries. Finally, his budget for this project has significantly eased the difficulties for visits to our remote site.

ii) If your contact information has changed, please provide us with the new information.

Contact Name:	Amy Mueller / Libby Wayman
Title:	Treasurer / Secretary, respectively
Organization:	Solar Turbine Group
Primary Email Address:	solarturbinegroup@gmail.com
Secondary Email Address:	amym@mit.edu , libbywayman@gmail.com
Organization's Website	www.solarturbinegroup.org
Phone:	Lesotho: +266 5847 0357, RSA: +27 76 794 6590
Fax:	
Address:	P.O. Box 53, Mt. Moorosi
Postal Code:	750 Lesotho

VII. Next Steps

- Send this Progress Report to your Project Liaison via email
cc to the DM team dmwinner@worldbank.org
- The Project Liaison will review the Report and will either
 - a) approve the Report and authorize disbursement via email with cc to dmwinner@worldbank.org ; or
 - b) does not approve (or does not authorize disbursement) but responds with comments, questions, requests for team to address with cc to dmwinner@worldbank.org (in this case, the team would address PLs concern to move to approval)
- In the mean time, team send signed Request for Payment to DM Team
 - a) via fax +1-202-522-2042; or
 - b) scanned document via email to dmwinner@worldbank.org

OR

- ❑ Mail signed Withdrawal Application Form to LOA Department at

The World Bank
LOA Disbursement Management Group 2
1818 H Street, NW, MSN: MC7-714
Washington, DC 20433 USA

- ❑ Upon receipt of the following, the DM Team can process disbursement:
 - a) Progress Report & Expense Addendum in Annex I
 - b) Signed Request for Payment or Withdrawal Application Form
 - c) Project Liaison's approval of report and authorization of payment

Annex I. Project Expenses for this Reporting Period

	Items	Sub-Totals (USD)
1	Personnel	\$16,835.32
2	Materials and Equipment	\$45,121.93
3	Training	\$518.07
4	Travel	\$16,805.07
5	Evaluation/Information Dissemination	\$1,299.28
6	General Administration/Overhead	\$3,806.72
7	Other	\$4,464.95
	Total Expenses	\$88,851.34