

## DEMT - DISTRIBUTED ENERGY MANAGEMENT TOOLS IN CAMBODIA AND LAOS



**PowerDev**



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### Project context and its implementation

Rural Electrification is a key element of the development and poverty reduction strategies planned by the Governments of both Cambodia and Laos PDR. These two countries have very different electrification contexts; however one similarity is the crucial role being played by small private entrepreneurs. In both countries the Governments are encouraging these private interests to provide services in areas that will not be reached by government programs for some time, if at all.

Since the first two newsletters published in January 2006 and June 2006, the project has been actively implemented following the established time schedule. This third and last newsletter informs the readers about the final activity: dissemination workshop and final meeting in Vientiane, project's global achievements and its impact indicators.

### Dissemination workshop and final meeting – Vientiane, Laos PDR

#### Preparation - June 2006

Despite some difficulties in the software development and project implementation, particularly in training activities, project's partners have been very active in preparation for dissemination workshop. This dissemination workshop was considered very important for diffusion to large public the results and achievements of the project as these activities have proposed innovative approach to improve energy services in rural area for sustainable development.

MIH was responsible for organisation and invitation for participants. The number of

participants was agreed between partners and which includes:

EU Delegation	: 1 person
MIH	: 2 persons
EDL	: 1 person
PESCO	: 2 person
IED France	: 2 persons
IED Laos	: 3 persons
EDC	: 1 person
MIME	: 1 person
NGOs	: 2 persons
Others	: 5 persons

#### Final consortium meeting – 19 June 2006

The final consortium meeting was organized for project's partners to finalise and review all activities and its compliances. Mr. Tuan Nguyen, project Manager, presented the activities of the project which have been completed compared to the original proposed activities. It was clear from the meeting that all partners have try hard in order to deliver expected output and results.

#### Dissemination workshop – 20 June 2006



The dissemination workshop was organised in Vientiane on 19<sup>th</sup> June 2006. All partners involved in the project implementation attended it. The main purpose is to present and sum up results of the project implemented within its framework.

The workshop was honorably attended by Mr. Hasadi Sisoulat, Deputy Director of Department of Energy, Ministry of Energy and Mines of Laos (former MIH), and Mr. Peter Jorgensen, EAEF representative. Each of them gave their speech on interest of having DEMA project implementation in Laos and in Cambodia because such a kind project will help rural energy service providers in both countries improve their business in terms of managing it. This project lasted from March 2005 to June 2006.

According to Mr Peter from EAEF, DEMA project was one of the main significant projects which were funded by EU through EAEF based in Jakarta, and addressed to support the private energy service providers – REEs in Cambodia and PESCOs in Laos.

Introduction of DEMA by project manager, Mr Tuan Nguyen



**Figure 1: Dissemination WS**

Mr. Tuan Nguyen, Project manager, introduced to the project – objective and activities, which have been so far implemented, as well as results and recommendations concluded at the end of the project. As project manager, he thanked to the project partners who were every active in implementing all activities during the project framework, which were IED (French consultant firm being in charge of providing technical assistance), Power Development (NGO based in Belgium, being in charge of providing assistance on adaptation of the developed software), MIME

and EDC (local Cambodian partners being in charge of implementing the project in Cambodia), and MoEM (local Lao partner being in charge of implementing the project in Laos PDR).

Presentation of DEMA activities implemented by MIME

The presentation was given by Mr Heng Kunleang, deputy director of Energy planning department of Cambodia. His presentation was mainly focused on DEMA activities which were implemented in Cambodia which was under responsibility of MIME, the interests of having MG Software for REEs and DEMA benefits for future REF program (Rural Electrification Fund). He said that the DEMA was started in May 2005. During the project framework, MIME was actively involved in implementing some activities such as the survey to better understand REE's context, organizing training sessions for Trainers and REEs as well as selection of 30 REEs to get subsidized for a set of computer purchase for using the MG Software.

He added that the DEMA project would also provide a very good benefit for the future governmental program which would be sooner implemented in Cambodia with financial support from the WB. This program would be carried out to support REEs to improve their business including technical and management aspects. MG Software might typically help REEs to improve their management modality which is currently very poor.

Presentation of DEMA activities implemented by EDC



The presentation was given by Mr Chan Sodavath, deputy director of Planning of EDC (Electricité du Cambodge). From his point of view, MG software would not only help a lot

REEs to improve their business management, but also the Provincial town electricity supply units which belonged to EDC. He said that this software would help them to computerize, allow management monitoring efficiently because less paper works and less time consuming, and some accurate information could be obtained from the software.

However, the MG software was not totally adapted to needs of big electricity providers such as their units, particularly for the customer and billing software due to the fact that it was mainly designed for REEs (small and medium electricity providers). He suggested therefore that the MG software should be modifiable leaving possibility for updating some parts of the software, especially the customer billing system that needs to be updated to comply with the needs of their units.

#### Presentation of DEMA activities implemented by MoEM, Laos

Mr. Anousak Phonsavath from Rural Electrification Department, MIH as Laos's team leader presented the project's implementation in Laos, particularly on translation, testing and training activities.

#### Introduction of DEMA software development by IED

The presentation was made by Mr. Cyril Perret (IT expert of IED). It was focused on the general overview of the DEMA software design and its specification, particularly for MG manager and PV manager.

In MG manager software was designed for genset and network managements as well as Customer registration and billing of the mini-grid. As for the PV manager, it was designed for sales and stocks managements as well as Customer equipment and maintenance follow-up.

#### Introduction of MG Manager software by Ky Chanthan

Mr. Ky Chanthan, IED representative in Cambodia, presented the functionality of the MG Manager software. From one button to another, he inputted real data collected from some REEs in Cambodia. The main objective of his presentation was to show "how the MG manager software operates?" and "What purposes it is design for?"

#### Introduction of PV Manager software by Nong (Laos)

Same with Ky Chanthan's presentation, Mr Nong presented the functionality of the PV Manager software. From one button to another, he inputted real data collected from some PESCOs in Cambodia. The main objective of his presentation was to show "how the PV Manager software operates?" and "What purposes it is design for?"

### **Lessons learned and recommendations**

#### *Measurable impacts on the target groups and European value added*

One particularly important outcome was the decision to produce two different software tools, each customised to the actual situations in each country. Thus in Cambodia: a tool to help REEs manage their mini-grids, typically based on small diesel generations; and in Laos: a tool to help small rural sellers of Solar Home Systems such as those involve in the World Bank's "SPRE1" project. All project partners agreed this would provide the greatest net benefit, but insisted that each country would participate in development and training of both tools because they would both be relevant for both countries in the longer term.

The proposed project does benefit the target groups at institutional, sectoral utilities and end-use levels by providing:

- A set of operational performance indicators and report formats for monitoring and reporting the performance of ESCO in rural areas. EAC, MIME, MIH now are endowed with a powerful management tool to monitor the performance.
- Institutional and utility staffs have been trained to use and analyse the results. They have the capacity to maintain and adapt the tools
- For provincial towns, their capacity to use simple management tools were enhanced, their managerial and technical performance were improved

- Two simple tools for ESCO (REE in Cambodia and PESCO in Laos) which improve considerably their profitability and efficiency : reducing the time for billing and report making, more follow-up on check and maintenance

Actually as project is just finished, it is difficult to measure quantitatively the impacts on the target groups in near terms. But it is estimated that the managerial tools, once run smoothly, will provide policy makers and ESCOs a clear advantage with regards to rural electrification and the role of the modern management tools. Table 1 summarizes the impacts on target groups such as policy makers, regulators, ESCOs.

### ***Summary of the project's achievements and impacts***

#### *1. Satisfied needs for:*

- *A large proportion of REE and PESCO who have been equipped with computers and managerial tools to improve their efficiency*
- *Increased welfare levels and economic activities amongst ESCO*
- *Improved local competence on regular maintenance of generation, network that supply power in rural areas*
- *Promote the use of modern management method and tools*
- *Improvement for rural electricity services delivery to the rural population, and reporting quality to authority*
- *Capacity building for public institutions and their staff in management and reporting skill*

#### *2. Other verifiable indicators :*

- *30 REE in Cambodia and 6 PESCO in Laos have been subsidized to purchase computers to use management tools. These ESCO also have got free training on MG- manager and PV-manager*
- *In total 104 persons have been trained in Cambodia for MG-manager tool, including 14 trainers from MIME, EDC*

*& EAC & SME, 20 from EDC provincial towns, 66 REE and 4 from MIH.*

- *19 persons have been trained in Laos for PV-manager tool, including 5 trainers from MIH, 3 trainer from EAC & MIME, 11 PESCO*
- *Software “MG-manager” in English and Khmer; “PV-manager” in English and Lao. Theirs user-manuals in English, Lao and Khmer respectively.*

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