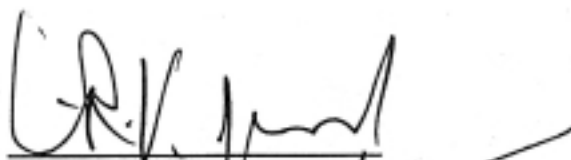


附属資料

MINUTES OF MEETING
FOR
PROJECT FORMULATION STUDY
ON
MASTER PLAN STUDY ON RURAL ELECTRIFICATION
IN
REPUBLIC OF MALAWI

LILONGWE

3rd. November, 2000



Dr. Charles Kafumba
Director of Energy Affairs
Ministry of Natural Resources and
Environmental Affairs



Mr. Yuji Otake
Leader
Project Formulation Study Team
Japan International cooperation Agency

1. Introduction

The Department of Energy, Ministry of Natural Resources and Environmental Affairs (hereinafter referred to as "DOE") through Ministry of Finance and Economic Planning requested officially to implement the Rural Electrification Master Plan Study in Malawi (hereinafter referred to as "the Study") to the Government of Japan in May 2000.

In response to the request, the Project Formulation Study Team (hereinafter referred to as "the Team"), headed by Mr. Y. Otake, was dispatched by the Japan International Cooperation Agency (hereinafter referred to as "JICA") from 24th October through 5th November, 2000 (see the appendix 1&2 on the members of the Team and the schedule). The Team had a series of discussions on the Study in Lilongwe and Blantyre with the officials of DOE, other relevant Government Ministries and Institutions, the private sector and other donor agencies.

Discussions were conducted in a friendly and cordial atmosphere and both sides agreed to record the following points as summarized conclusions of the discussions.

2. Procedures of the Development Study

The Team explained JICA activities, concept of the Development Study and its general procedures. DOE appreciated the explanation.

In general, the JICA Development Study is carried out through the following three stages:

- Project formulation study (this study) :

In this stage, the background and contents of the proposed study is clarified, and the relevant data and information are collected. Between the JICA team and relevant organization of the recipient country (i.e. DOE), mutual understanding for the outline of the actual study may be reinforced. Then, the team will report to the Japanese authority concerned on the outcome of the project formulation study. After the report, JICA and Japanese authority concerned (i.e. Ministry of Foreign Affairs and Ministry of International Trade and Industry) will decide to carry out the actual study.

- Preliminary study :

In this stage, based on the result of the project formulation study, the detailed scope of work is fixed through the discussions of the two parties. The mission of the preliminary study is sometimes called Scope of Work (S/W) mission.

- Actual study :

In this stage, the JICA study team composed of Japanese consultants is organized and carries out the actual study in accordance with the agreed scope of work.

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3. Major Findings of the Project Formulation Study

1) National development policy

The Government of Malawi has established the Vision 2020 as a long term national development policy. Among the policy, rural electrification and sustainable renewable energy development are pointed out as a key to social and economic infrastructure development. Also the Policy Framework for Poverty Alleviation Programme is the main national development programme, since Malawi is one of the poorest countries in the World. This programme also points out the importance of rural electrification and alternative energy development to traditional bio-mass energy.

2) Energy policy

There are five major energy subsectors in Malawi which are petroleum, coal, electricity, bio-mass and renewable energy. Petroleum is expensive in Malawi, because Malawi is a landlocked country and transportation cost of petroleum is very high. Bio-mass energy is the dominant energy in Malawi, especially in rural areas. Over-dependence on bio-mass energy resources contributes to serious deforestation in all over Malawi. Electrification rate in Malawi stays very low at 4 % in the whole country and 0.5 % in rural areas. These 3 issues are some of the major concerns of the energy policy in Malawi. In order to find appropriate solutions for above mentioned problems, the Government of Malawi is drafting the Energy Policy.

3) Restructuring of power subsector

The government of Malawi is promoting reform and restructuring of the power subsector. In 1998, Electricity Act was enacted and the National Electricity Council has been established as the regulatory body of licensing for electricity generation, transmission and distribution services and approval of electricity tariff etc.. ESCOM was also corporatized in 1998. In 1999, ESCOM changed their organizational structure from a vertically integrated company to a limited liability company with divisional cost centres such as electricity generation unit, transmission unit and regional distribution units etc..

In order to promote further reform and restructuring of the power subsector, the government of Malawi is preparing the Power Policy. The Power Policy will include privatization of ESCOM through introduction of competitive concession system to electricity transmission and distribution services etc.. For the new generation power plants a system of tendering will be introduced. Following the approval of the Power Policy by the cabinet in this year, a new Electricity Act and Rural Electrification Act will be expected to be enacted.

4) Progress and evaluation of rural electrification programme

ESCOM had carried out three rural electrification programmes from 1980 to 1995. In 1995, the Government of Malawi took over responsibility of rural electrification from ESCOM, since rural electrification is not commercially viable. The Energy Fund was then established to support rural electrification projects. Until now, 1 trading center and 5 day secondary schools have been electrified by the Energy Fund. In June 2000, the Government of Malawi discontinued the levy on petroleum sales for the Energy Fund. Although there is no financial resource for the Energy Fund, Ministry of Finance and Economic Planning allocated necessary budget equivalent to the Energy Fund. The Ministry of Natural Resources and Environmental Affairs is looking for other ways of financing rural electrification activities.

5) Development of renewable energy

The Government of Malawi has developed the National Sustainable and Renewable Energy Programme to reduce over-consumption of biomass fuels and to promote the use of renewable energy technologies. As a part of this programme, UNDP, GEF and DANIDA will jointly implement SHS dissemination pilot projects. DANIDA will also conduct a study to produce a wind atlas for Malawi.

6) Necessity of rural electrification master plan

In order to eradicate poverty in Malawi, the Government of Malawi gives high priorities to healthcare and education. Ministry of Health and Population has established the National Health Plan. This plan has pointed out that water supply, access to electricity and radio telecommunication are the key issues to implement the National Health Plan. The ministry expressed strong interest in rural electrification master plan study.

The Ministry of Education has just developed the implementation plan on expansion of school facilities from the year 2000 to 2015. The Ministry gives high priorities to cluster leading schools, community day secondary schools and teacher development centers. The Ministry expressed that schools, especially those mentioned above should have access to electricity for computers, lighting, coping equipment etc..

As a conclusion of the fact finding study, it is obviously clear that rural electrification is one of the most important issues in the implementation of the Poverty Alleviation Programme in Malawi. There are many stakeholders on rural electrification and also there are many relevant policies to rural electrification such as the draft Energy Policy, the draft Power

Policy and the Decentralization Policy etc.. Therefore the Government of Malawi needs a rural electrification master plan to show a clear vision on rural electrification and to promote a comprehensive rural development.

4. Outline of the Study discussed

The Team and DOE discussed the outline of the study. The details are shown in appendix 3.

5. Preliminary study on willingness to pay for electricity

The Department of Energy informed that the Rural Electrification Unit is going to carry out the preliminary investigation on willingness to pay for electricity. The comprehensive study is expected to be carried out during the Master Plan Study. The result of the preliminary study will be available for the next mission and be important input for the Master Plan Study.

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Appendix 1

MEMBER LIST

No	Name	Job Title	Occupation	Period Arr.-Dep.
1	Mr. Yuji Otake	Team Leader	Director, Energy and mining development study division, JICA	10/24-11/5
2	Mr. Seiji Obayashi	Technical Cooperation Policy	Economic Cooperation Bureau, Ministry of Foreign Affairs	10/24-10/30
3	Mr. Yoshiki Ehara	Study Supervision	Energy and mining development study division, JICA	10/24-11/5
4	Mr. Noboru Yumoto	Rural Electrification Planning	Proact International Co., Ltd.	10/23-11/4
5	Mr. Hideo Sato	Renewable Energy Utilization	A. S. Engineering Co., Ltd.	10/23-11/4

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Appendix 2

SYUDY SCHEDULE

Date	Time	Activities	Stay	Hotel
10/23 Mon.	12:40 (SA170)	- Johannesburg → Lilongwe (Mr. Yumoto, Mr. Sato) - Courtesy Visit to Embassy of Japan (Mr. Otake, Mr. Obayashi and Mr. Ehara)	Lilongwe Lusaka	Capital Hotel (Tel: 773388) Lusaka
10/24 Tue.	09:00 14:50 (Arr.) (QM014)	- Visit to DOE (Mr. YUMOTO, Mr. SATO) - Lusaka → (Blantyre) → Lilongwe (Mr. Otake, Mr. Obayashi and Mr. Ehara)	Lilongwe	Capital Hotel
10/25 Wed.	08:30 09:30 10:00 11:00 14:00	- Visit to JICA Office - Visit to DOE - Visit to MONREA - Meeting with DOE - Meeting with DOE	Lilongwe	-ditto-
10/26 Thu.	09:00 10:00 14:00 15:30	- Visit to MOHP/PAM (EU/GTZ) - Visit to MOE - Visit to Min. of Local Government (Office of the President and Cabinet) - Visit to Police Head Quarters	Lilongwe	-ditto-
10/27 Fri.	08:00 13:00 14:00 16:00	- Leave for Blantyre - Visit to ESCOM Head office - Visit to ESCOM Power House (Central Dispatching Centre) - Visit Mbayani Peri-Urban Electrification Site	Blantyre	Mt. Soche Hotel (Tel: 620588)
10/28 Sat.		Site survey (Lujeri Tea Estate Mini Hydro Power Plant)	Blantyre	-ditto-
10/29 Sun		Site survey (Matandani Mini Hydro Power Plant)	Blantyre	-ditto-
10/30 Mon	09:00 11:00 13:00	- Meeting with ESCOM - Visit to NEC - Leave for Zomba - Site survey (Chingale Seco School, surrounding T/C) (Mr. Obayashi) Lilongwe → Johannesburg	Zomba	Kuchawe INN (Tel: 522566)
10/31 Tue	08:00	- Leave for Lilongwe via Mangochi Site survey	Lilongwe	Capital Hotel (Tel: 773388)
11/1 Wed.	08:30 09:00 15:30	- Visit to MOF - Meeting with DOE - Meeting with ISU/DANIDA	Lilongwe	-ditto-
11/2 Thu.	09:00 16:00	- Meeting with DOE - Meeting with UNDP	Lilongwe	-ditto-
11/3 Fri.	09:00 11:00	- Signing on M/M - Report to JICA Office	Lilongwe	-ditto-
11/4 Sat.	12:00(L.v.) (QM201) (SQ405)	- Leave Lilongwe for Johannesburg (Mr. Yumoto and Mr. Sato) - to Japan via Singapore	Lilongwe	-ditto-
11/5 Sun.	11:10(L.v.) (QM201)	- Leave Lilongwe for Johannesburg (Mr. Otake and Mr. Ehara)	-	-

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OUTLINE OF THE STUDY

(1) Title

The Master Plan Study on Rural Electrification in Malawi

(2) Objective of the Study

The objective of the study is to formulate a Master Plan on Rural Electrification in Malawi. The Master Plan will provide the clear and comprehensive vision for prioritised areas to be electrified with appropriate electrification methods and financial schemes, etc.. It will also provide an implementation schedule until 2020.

(3) Study area

The Study will cover the whole Malawi concentrating in rural areas.

(4) Responsible agencies

DOE shall take a full responsibility for the implementation of the study. DOE shall also act as counterpart agency to the Japanese study team, and also as a coordinating body in relation with the governmental and international organizations concerned for the smooth implementation of the Study.

(5) Period of the Study

The Study will be conducted for a period of 24 months. The draft of Master Plan will be prepared in approximately 1 year. Then the case study on rural electrification project, which will entail detailed investigations in prioritised potential sites, will be reflected to the Master Plan.

(6) Scope of the Study

The study shall be conducted in two years with 4 stages.

Stage 1

- Data collection of population, household, income, etc.
- Data collection of rural growth centre, schools, clinics, etc.
- Review of current Power Policy, rural electrification policy, etc.
- Review of renewable energy projects
- Review of existing grid and grid expansion plan



- Review of existing criteria for selecting and prioritising projects
- Preparing of data base

Stage 2

- Survey on socio-economic situation, energy consumption, renewable energy potential, etc. in prospective areas
- Study on previous rural electrification projects including community involvement in Malawi and other southern African countries
- Comparison of rural electrification methods
- Establishment of criteria for selecting and prioritising projects

Stage 3

- Estimation of time schedule and priorities of areas to be electrified
- Budget estimation for rural electrification
- Study on low cost rural electrification technology
- Study on incentive system for users
- Study on financial assistance to rural electrification organization
- Study on operation and maintenance system
- Drafting of Master Plan including policy recommendation

Stage 4

- Case study on prioritised rural electrification projects with implementation plan
- Finalization of Master Plan

(7) Undertaking of the government of Malawi

In order to facilitate the smooth and efficient conduct of the Study, the Government of Malawi shall take necessary measures:

- 1) to ensure the safety of the study team;
- 2) to permit the members of the study team to enter, leave and sojourn in Malawi in connection with their assignment therein, and exempt them from alien registration requirements and consular fees;
- 3) to exempt the study team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of the Malawi for the conduct of the study;
- 4) to exempt the study team from income tax and charges of any kind imposed on or in

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connection with any emoluments or allowances paid to the members of the study team for their services in connection with the implementation of the study;

- 5) to provide necessary facilities to the study team for remittance as well as utilization of the funds introduced in Malawi from Japan in connection with the implementation of the study;
- 6) to secure permission for entry into private properties or restricted areas for the conduct of the study;
- 7) to secure permission for the study team to take all data, documents and necessary materials related to the study out of the Malawi to Japan; and
- 8) to provide medical services as needed. Its expenses will be chargeable to members of the study team.

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