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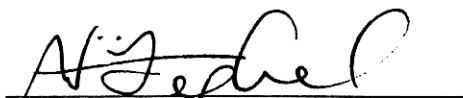
2 - 4 - 1 署名したM / M

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MINUTES OF MEETING
FOR
THE MASTER PLAN STUDY
ON
PHOTOVOLTAIC RURAL ELECTRIFICATION
IN
THE REPUBLIC OF BOTSWANA

AGREED UPON BETWEEN
ENERGY AFFAIRS DIVISION,
MINISTRY OF MINERALS, ENERGY AND WATER AFFAIRS IN
THE REPUBLIC OF BOTSWANA
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Gaborone, December 16, 1999


Prof. R. O. Fagbenle

Director,
Energy Affairs Division,
Ministry of Minerals, Energy
and Water Affairs


Mr. Yasuo Suzuki

Leader,
The Preparatory Study
Team,
JICA

The Preparatory Study Team for the Study on Photovoltaic (hereinafter referred to as "PV") Rural Electrification Master Plan in the Republic of Botswana (hereinafter referred to as "the Study") dispatched by the Japan International Cooperation Agency (hereinafter referred to as "JICA") had a series of discussions on the above-mentioned Study in Gaborone with the officials of Energy Affairs Division, Ministry of Minerals, Energy and Water Affairs (hereinafter referred to as "MMEWA-EAD") and other relevant officials in Botswana from December 8 to 16, 1999.

1. Prospect of signing the Scope of Work Agreement

During the discussions MMEWA-EAD requested the article "VIII. UNDERTAKING OF THE GOVERNMENT OF BOTSWANA" in the Scope of Work, which was expected to be signed and exchanged by both parties in order to implement the above-mentioned Study, to be investigated and approved by its legal advisor and the relevant organizations.

The Preparatory Study Team commented that the article shall be accepted by the recipient countries for smooth conduct of the development studies by JICA.

The followings are mutually confirmed by both parties ;

(1) Procedures to be taken for signing the Scope of Work

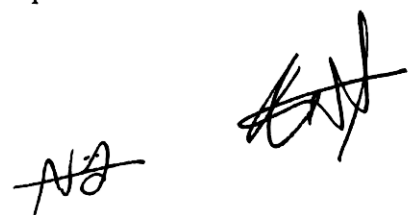
MMEWA-EAD will take the necessary course in order that the Scope of Work including the article "VIII. UNDERTAKING OF THE GOVERNMENT OF BOTSWANA" be approved by relevant officials in Botswana to be signed by the end of January, 2000. After the approval, MMEWA-EAD will submit the signed Scope of Work to JICA/JOCV Botswana Office.

JICA will consult with the authorities concerned in Japan to empower the resident representative of JICA/JOCV Botswana Office to sign on behalf of JICA in respect of the Scope of Work.

(2) Draft of the Scope of Work

MMEWA-EAD and the Preparatory Study Team had a series of discussions and reached agreement on the draft of the Scope of Work except the article "VIII.

1

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UNDERTAKING OF GOVERNMENT OF BOTSWANA”.

The agreed draft of the Scope of Work for conducting the Study are shown in the attached paper.

2. Request from Botswana about the Study

During the discussions the Botswana side requested that the following points be reflected in case of implementation of the Study ;

(1) Policy for Rural Electrification

Promotion of rural electrification in Botswana will be carried out generally based on the policy of securing social equity.

(2) Dissemination

Since Botswana has rich experience in pilot projects about PV technology, this Study needs to focus on its dissemination. In terms of dissemination of PV technology, PV systems are expected preferably to be installed to 450 households in four (4) villages and public institutions in two (2) other villages during the Study.

(3) Sustainability

Capacity building for sustainable operation and maintenance is a key factor of the Study. A more appropriate administrative set-up for sustainable PV rural electrification will also be taken into account.

(4) Applications of PV technology

Solar home systems only for lighting bring about limited benefits to users. From the standpoint of enhancement of living standards in rural areas, viability of utilizing PV technology for various applications, such as water pumping, will desirably be investigated in the Study.

(5) Information of budget amount of the Study

The Government of Botswana requested ~~strongly~~ JICA to inform ^{them} of expected total amount of project finance, which will be assigned to the Study by JICA, before implementing the Study, *for which a separate financing agreement will be signed.*

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3. Supplement to the Scope of Work

The following points were agreed as supplementary to the Scope of Work ;

(1) Steering Committee

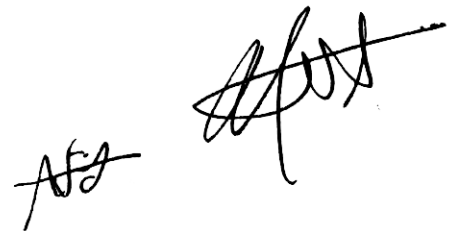
MMEWA-EAD will organize a Steering Committee responsible for coordination among the concerned organizations and for the successful implementation of the Study. The Steering Committee will be composed of representatives from the Ministry of Finance and Development Planning (hereinafter referred to as "MFDP"), MMEWA-EAD, Botswana Power Corporation (hereinafter referred to as "BPC"), Rural Industries Innovation Center (hereinafter referred to as "RIIC"), Botswana Technology Center (hereinafter referred to as "BoTeC"), Department of Electrical and Mechanical Services (hereinafter referred to as "DEMS"), the Ministry of Local Government (hereinafter referred to as "MLG") and JICA Study Team (hereinafter referred to as "the Study Team").

(2) Working Group

MMEWA-EAD will organize a Working Group, which is responsible for the execution of the project in cooperation with the Study Team throughout the Study. The Working Group will be composed of members from MMEWA-EAD, BPC, RIIC, BoTeC, and DEMS. Technical and institutional capacity building to the Working Group shall be conducted by the Study Team.

(3) Establishment of institutional and management framework

The outcome of Phase1 will be determined by mutual agreement between MMEWA-EAD and the Study Team, under supervision of the Steering Committee. After completion of Phase1, proposed institutional and management framework for PV rural electrification shall be established under the leadership of the Steering Committee in order not only to carry out the Dissemination Project effectively and smoothly but also to keep continuous implementation of PV dissemination after the Study. JICA will consult with MMEWA-EAD about necessary conditions for implementing the Dissemination Project.

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(4) Dissemination Project

(a) Site selection

Although it was noted that Botswana would prefer six (6) villages, JICA proposed that at least two rural communities will be selected as the target sites of the Dissemination Project by mutual agreement of both sides. Final decision will be made in Phase 1.

(b) Establishment of Management Unit

At the beginning of the Phase 2, the Management Unit for the Dissemination Project will be established based on the suitable institutional and management framework identified in Phase 1. The Management Unit is responsible for the operation and maintenance of installed PV systems such as electricity fee collection, monitoring and maintenance work.

(c) Ownership

JICA has ownership of installed PV systems and measurement equipment until the Study is completed. After completion of the Study, the ownership will be transferred to MMEWA-EAD.

(d) Installation

The cost of equipment, its transport and installation will be borne by JICA.

(e) Operation, Maintenance, Monitoring and Data Collection

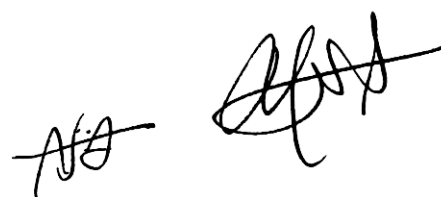
Operation, maintenance, monitoring and data collection for the Dissemination Project shall be implemented by the Management Unit under the supervision of the Study Team during the Study. After completion of the Study, appropriate operation shall be continued by the Management Unit.

(f) Electricity Fee Collection

Electricity Fee will be collected by the Management Unit in accordance with the electricity tariff and the fee collection system which will be prepared by the Study Team in cooperation with MMEWA-EAD prior to the implementation of the Dissemination Project.

(5) Counterparts and Technology Transfer

MMEWA-EAD will provide adequate counterpart personnel in the areas of electrification policy, socio-economic survey, PV application, and so on. All counterpart personnel shall be members of the Working Group. During the Study, especially through the Dissemination Project, technology transfer to the Working Group shall be done in order to enhance the technical capability for planning,

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managing and operating the PV rural electrification.

(6) Seminars and Workshops

MMEWA-EAD and the Study Team will organize seminars and workshops. The seminar held in the Dissemination Project sites in Phase2 will cover the PV management systems and the impacts of PV electrification on villagers' lifestyle. The seminar will also be held in Gaborone in Phase3 in order to present the results of the Study to both public and private sectors in Botswana. The purpose of the workshops is to exchange information among the concerned organizations. The observation tour to the Project sites which consists of officials and technical staffs from the concerned organizations will also be organized in order to present the progress and results of the Project. The schedules and details of the seminars, workshops and observation tour will be determined based on the mutual agreement between MMEWA-EAD and the Study Team. The Study Team will be responsible for the program and expense, while MMEWA-EAD will be responsible for coordination among relevant authorities and rural communities.

(7) Training in Japan

MMEWA-EAD requested for relevant technical training which will be done in Japan and funded by JICA.

(8) Office Space with necessary equipment

MMEWA-EAD undertook that they would provide for the Study Team an adequate office space with an international telephone line and adequate number of desks and chairs.

(9) Information for security

To facilitate smooth conduct of the Study, the Government of Botswana shall provide the Study Team with necessary information for securing their safety in reference to the article of the Scope of Work "VIII. UNDERTAKING OF THE GOVERNMENT OF BOTSWANA 1. (1)"

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2-4-2 署名したS/W

2000年2月18日付で署名・交換したS/Wを次に示す。