

## **APPENDIX 4**

### **MINUTES OF DISCUSSION**



**MINUTES OF DISCUSSIONS**  
**BASIC DESIGN STUDY**  
**ON**  
**THE RURAL ELECTRIFICATION PROJECT**  
**IN**  
**THE REPUBLIC OF UGANDA**

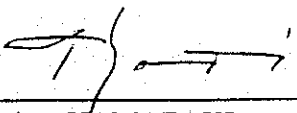
In response to a request from the Government of the Republic of Uganda, the Government of Japan decided to conduct a basic design study on the Rural Electrification Project (hereinafter referred to as "the Project") and entrusted the study to Japan International Cooperation Agency (JICA).

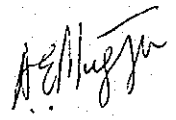
JICA has sent to Uganda a Basic Design Study Team for the Project (hereinafter referred to as "the Team"), headed by Mr. Takao YAMAZAKI, Development Specialist, Institute for International Cooperation, JICA, and scheduled to stay in the country from September 2, to October 6, 1998.

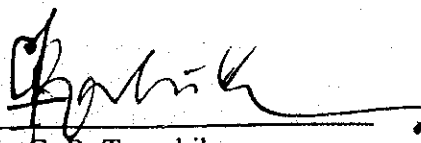
The Team held discussions with the officials concerned of the Government of Uganda and personnel of Uganda Electricity Board, and conducted field surveys in the Project areas and sites.

In the course of the discussions and field surveys, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further works, and prepare the Basic Design Study report.

Kampala, September 8, 1998

  
\_\_\_\_\_  
Mr. Takao YAMAZAKI  
Leader  
Basic Design Study Team  
JICA

  
\_\_\_\_\_  
Mr. A. MUGOYA  
Acting Managing Director  
Uganda Electricity Board  
Republic of Uganda

Witnessed by   
\_\_\_\_\_  
Mr. G. R. Turyahikayo  
Commissioner for Energy  
Ministry of Energy and Mineral  
Development

## ATTACHMENT

### 1. Objective

The objective of the Project is to electrify selected rural areas in the Republic of Uganda in order to ensure regular, reliable and constant supply of electric power to households and public, commercial and industrial facilities.

### 2. Project Areas and Sites

The Project areas for the 33kV power transmission lines are Mukono(A-1), Kamuli(A-2), Nakasongola(B, a half of the former Luwero), Hoima(C) and Iganga(D) districts, and the Project sites for substations are located at Njeru(A-1) and Kayunga(A-1), as shown in Annex-I.

### 3. Responsible and Implementing Agencies

The Uganda Electricity Board (UEB) is responsible for the administration and the implementation of the Project. The organization chart of UEB is shown in Annex-II.

### 4. Items requested by the Government of Uganda

After discussion with the Team, the following items were finally confirmed as requested by the Uganda side.

- (1) Equipment and materials for 33kV power transmission lines
  - 1) Routes for the power transmission lines are as follows;
    - a) A-1: Njeru-Kayunga-Bale route in Central Region (Mukono) with length of approx. 100 km.
    - b) A-2: Jinja-Budondo-Mbulamuti route in Eastren Region (Kamuli) with length of approx. 64 km.
    - c) B: Migera-Wabigalo route in Central Region (Nakasongola) with length of approx. 33km.
    - d) C: Hoima-Munteme route in Western Region (Hoima) with length of approx. 31km.
    - e) D: Lugolole-Mayuge route in Eastern Region (Iganga) with length of approx. 20 km.
  - 2) Supply of equipment and materials necessary to complete the above 33 kV transmission lines, such as conductors, cables, insulators, pole mounted transformers, air break switches, auto reclosers, surge arrestors, etc., and 2 vehicles (truck with crane) for construction work of pole mounted transformers.
  - 3) Supply of spare parts for two (2) years' operation, and maintenance tools for item 2) above.

- 4) Provision of installation, operation and maintenance manuals for items 2) above.
  - (2) Substation facilities for Kayunga and Njeru substations
    - 1) New Installation of Kayunga substation
      - a) Supply and installation of equipment and materials necessary to complete Kayunga substation, such as a main transformer (33/11 kV 2.5 MVA), 33 kV distribution panels, 11 kV distribution panels, etc.
      - b) Construction of equipment foundation(s), an oil/water separator, cable pits, etc., necessary for item a) above.
    - 2) Extension of Njeru substation  
Supply and installation of one (1) 33 kV distribution panel at Njeru substation necessary for feeding the 33 kV transmission line to Kayunga substation.
    - 3) Supply of spare parts for two (2) years' operation, and maintenance tools for items 1) and 2) above.
    - 4) Provision of operation and maintenance manuals for items 1)~3) above.

However, final items to be procured and installed under Japan's Grant Aid will be decided after further studies in Japan, taking account of:

- present and planned conditions of power supply networks related to the Project
- power demand and supply forecast
- operation and maintenance capability of the responsible and implementing agency (UEB)
- technical feasibility of each route
- economical and administrative viability of the Project

#### 5. Japan's Grant Aid System

- (1) The Government of Uganda and its implementing agency have understood the system of Japan's Grant Aid explained by the Team, as described in Annex-III.
- (2) The Government of Uganda and its implementing agency will take necessary measures, as described in Annex-IV, for smooth implementation of the Project, on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.

#### 6. Schedule of the Study

Due to a motor accident involving members of the Team during the field survey, the study schedule stated in the Inception Report is to be changed. A new study schedule will be communicated to the Uganda side through the Consultant for the Project.

#### 7. Other relevant issues

Both parties have confirmed that the following conditions have been involved in items requested by the Uganda side.

- (1) Priority of the Project

Uganda side explained that the alphabetical order of the Project areas and sites designated their priorities from the social, economical and technical points of view.

(2) Installation of equipment & materials for transmission lines

The Uganda side agreed to secure necessary funds to complete all the installation works for the 33kV transmission lines of the Project, within the shortest period from the delivery of equipment and materials to meet the requirement of Japan's grant aid.

(3) Low voltage facilities

Necessary equipment and materials for low voltage system, except those which will be procured under the Project, will be procured and installed by the Uganda side, within the shortest period from the delivery of equipment and materials to meet the requirement of Japan's grant aid.

(4) Operation and Maintenance

Uganda side agreed to secure and allocate necessary funds and personnel for operation and maintenance for the new transmission lines and vehicle(s) provided / constructed under the Project, in order to maintain the proper function of the new transmission networks.

(5) Usage of Equipment and materials

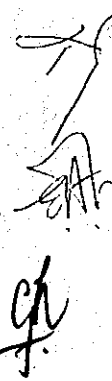
Uganda side agreed to use equipment and materials to be provided under the Project, only for the Project areas and sites.

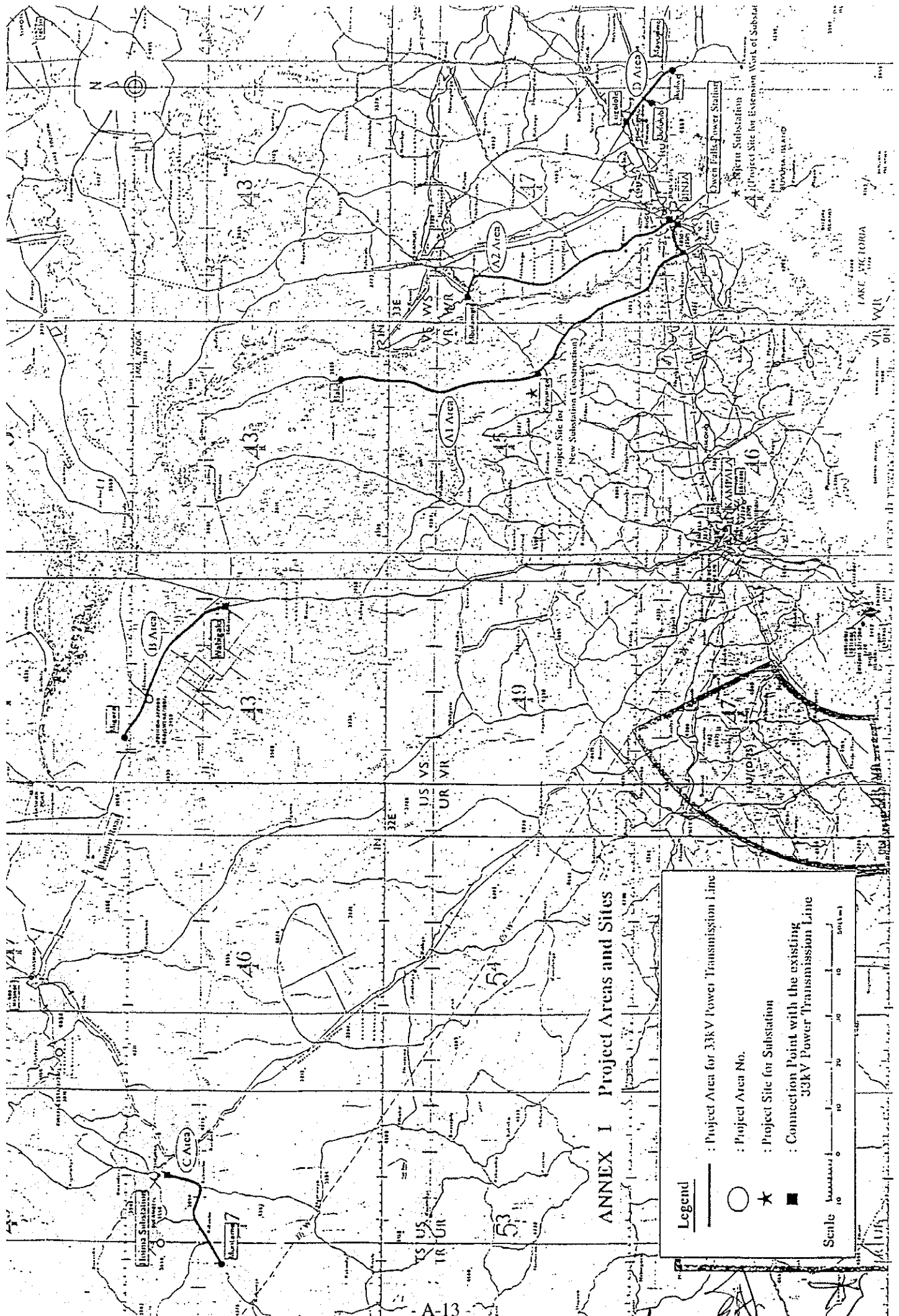
(6) Supervisory and Control system

Uganda side agreed to incorporate the installed substations into the existing supervisory and control system by purchasing and installing necessary equipment and materials, at the earliest opportunity, in order to secure good operation and maintenance work.

(7) Storage of Equipment and Materials

Uganda side agreed to secure the proper storage system for the equipment and materials to be provided under the Project so as not to suffer from missing items, with necessary spaces, fences, lamps, guardsmen, etc., and procedures of store management, if necessary.





### ANNEX I Project Areas and Sites

**Legend**

- : Project Area for 33kV Power Transmission Line
- : Project Area No.
- ★ : Project Site for Substation
- : Connection Point with the existing 33kV Power Transmission Line

Scale 0 10 20 30 40 50 (Kms)

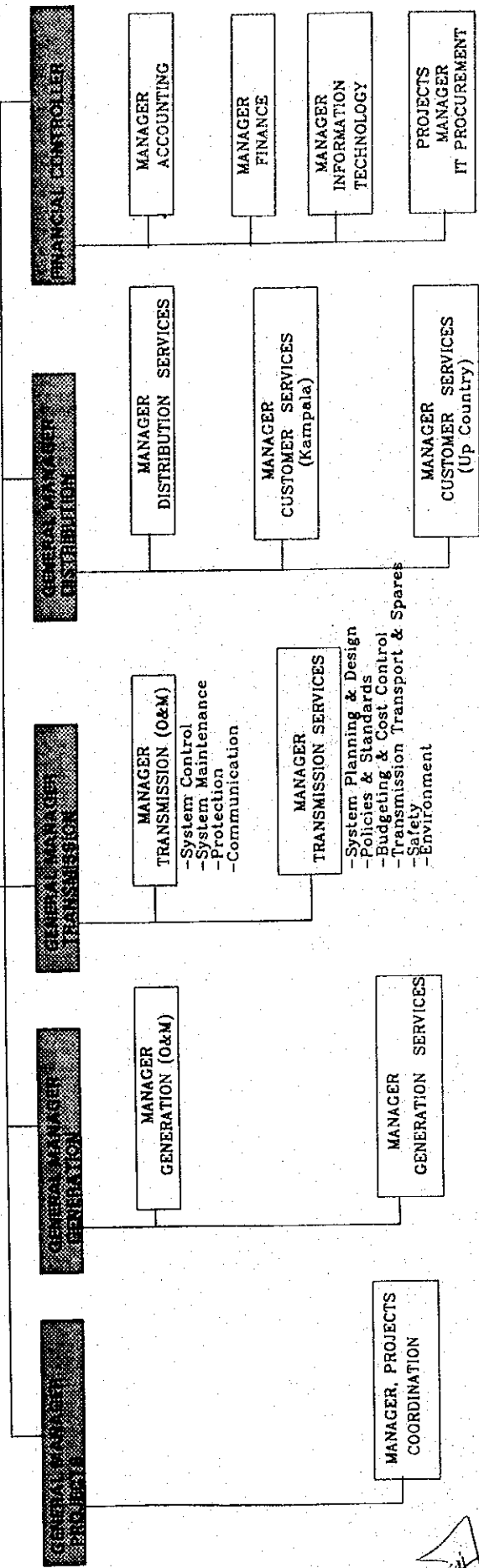
**BOARD OF DIRECTORS**  
**MANAGING DIRECTOR**

**MANAGER, HUMAN RESOURCE & ADMINISTRATION**  
 - Personnel  
 - Administration/Estates Management  
 - Purchasing  
 - Technical Training

**BOARD SECRETARY**  
 - B.O.D. Services  
 - Legal Affairs  
 - Insurance  
 - Land, Rent & Rates

**MANAGER, CORPORATE PLANNING & STRATEGY**  
 - Strategic Planning  
 - Business Planning/Economic Analysis  
 - International & Public Affairs/PR

**MANAGER, AUDIT**  
 - Internal Audit  
 - Financial Security

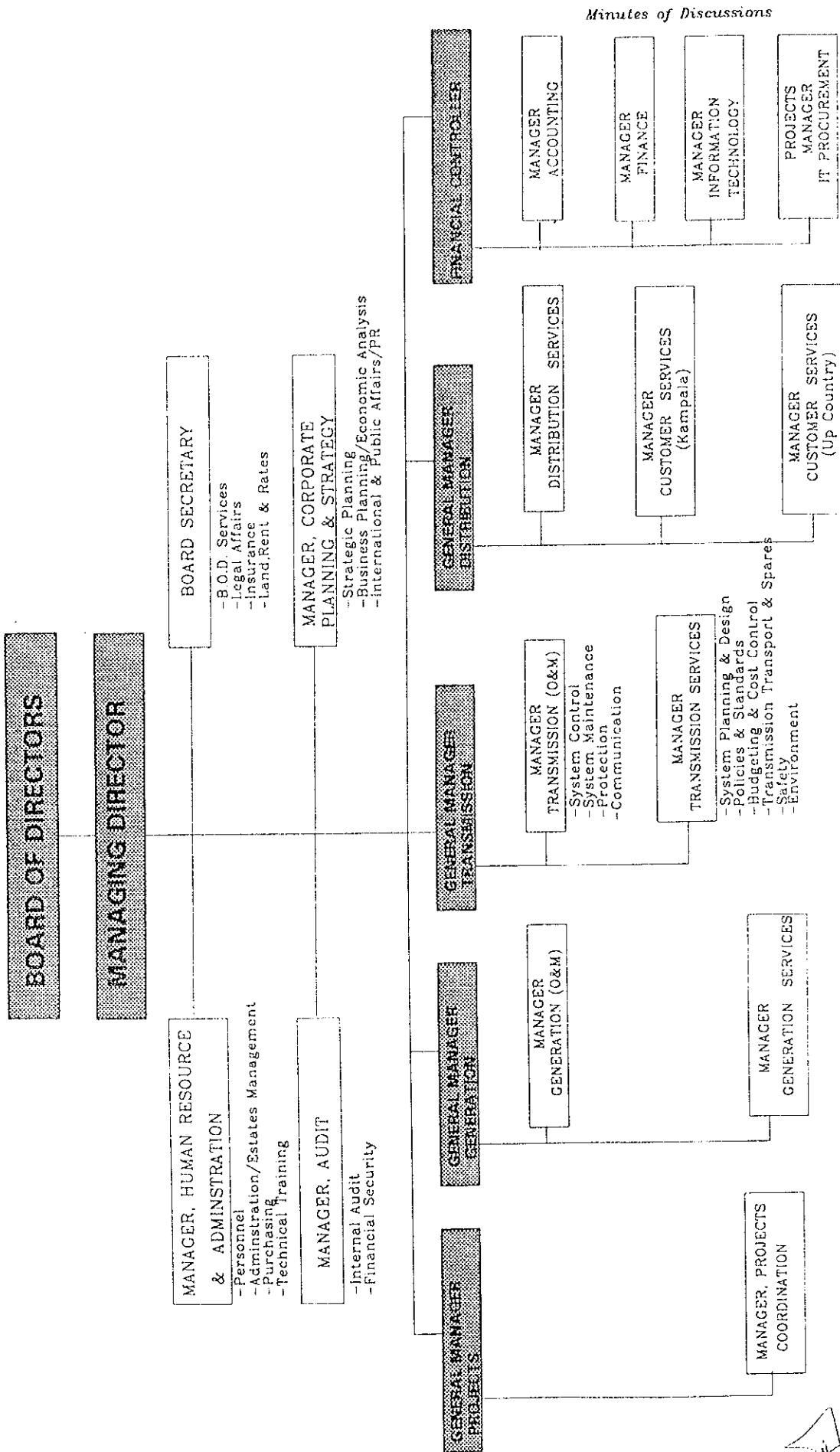


*Minutes of Discussions*

**ANNEX-II ORGANISATION CHART OF UGANDA ELECTRICITY BOARD**

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Minutes of Discussions

ANNEX-II ORGANISATION CHART OF UGANDA ELECTRICITY BOARD

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## ANNEX-III

### Japan's Grant Aid Scheme

#### 1. Grant Aid Procedures

- (1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

- (2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request. Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s). Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval. Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country. Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

#### 2. Basic Design Study

- (1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project
- Estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

- 1) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- 2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- 3) To secure buildings prior to the procurement in case the installation of the equipment.
- 4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

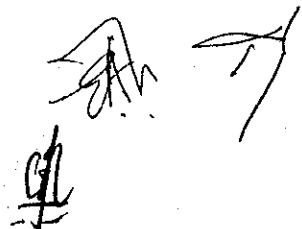
- 5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
  - 6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
- (7) "Proper Use"
- The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.
- (8) "Re-export"
- The products purchased under the Grant Aid should not be re-exported from the recipient country.
- (9) Banking Arrangements (B/A)
- 1) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
  - 2) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

## ANNEX-IV

### **Necessary measures to be taken by the Government of Uganda on condition that Japan's Grant Aid is extended.**

1. To provide necessary data and information for the Project.
2. To secure and provide cleared, embanked and leveled land as well as access road for the new substation, prior to the commencement of the construction for the Project.
3. To ensure speedy unloading, customs clearance and tax exemption of the goods for the Project at port and /or airport of disembarkation, and internal transportation in the Republic of Uganda.
4. To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for their entry into the Republic of Uganda and stay therein for the performance of their work.
5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the Republic of Uganda with respect to the supply of the products and services under the verified contracts.
6. To bear commissions to a Japanese bank for the banking services based upon the banking arrangement.
7. To bear all the expenses other than those to be borne by the Grant Aid necessary for the execution of the Project.
8. To provide proper arrangements for the construction/installation work, such as water supply, electricity, drainage, etc, if necessary
9. To assign exclusive counterpart engineers and technicians to the Project in order to transfer the operation and maintenance technique for the Project and to witness and confirm construction/installation works and qualities of equipment and materials when inspection is carried out.
10. To take necessary measures and responsibility for the stoppage of electricity during construction / installation period, when it is necessary.
11. To construct and to connect the cables supplied by the Japan's grant aid for incoming and outgoing feeders for substations, which will be constructed under the Project.
12. To use and maintain properly and effectively all the equipment and materials provided under the Japan's Grant Aid.
13. To construct incidental outdoor facilities, boundary fence and entrance gate at the new substation by the completion of the Project

14. To install equipment and materials for transmission and distribution lines supplied under the Project in accordance with the proper implementation schedule to meet the requirements of the Japan's Grant Aid.
15. To provide proper disposal places of excavated soil, waste water and oil discharged during the implementation period.

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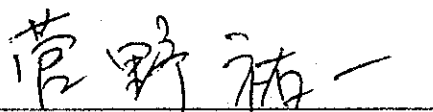
**MINUTES OF DISCUSSIONS**  
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**ON**  
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**IN**  
**THE REPUBLIC OF UGANDA**  
**(CONSULTATION ON DRAFT REPORT)**

In September 1998, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team for the Rural Electrification Project (hereinafter referred to as "the Project") to the Republic of Uganda, and through discussions with Ugandan side, field survey, and technical examination of the results in Japan, has prepared the draft report of the Study.

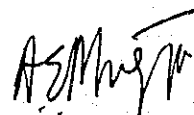
In order to explain and to consult with the Ugandan side on components of the draft report, JICA sent to Uganda a study team (hereinafter referred to as "the team"), which is headed by Mr. Yuichi SUGANO, First Project Study Division, Grant Aid Project Study Department, Japan International Cooperation Agency (JICA), and is scheduled to stay in the country from December 11 to 21, 1998.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Kampala, December 18, 1998

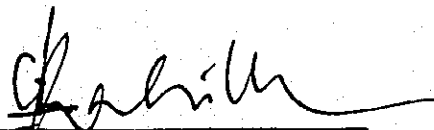


Mr. Yuichi SUGANO  
Leader  
Draft Report Explanation Team  
JICA



Mr. A. MUGOYA  
Acting Managing Director  
Uganda Electricity Board  
Republic of Uganda

Witnessed by



Mr. G.R. Turyahikayo  
Commissioner for Energy  
Ministry of Energy and Mineral  
Development

## ATTACHMENT

### 1. Components of the Draft Report

The Government of Uganda has agreed and accepted the components of the Draft Report and the contents of the Specifications of the Equipment and Materials, proposed by the team, except the selection of the Project Areas and Sites as shown below.

### 2. Project Areas and Sites

- (1) The Project areas for the 33kV power transmission lines are Mukono (A-1), Kamuli/Jinja (A-2), Nakasongola (B) and Hoima (C) districts.
- (2) The Project sites for substations are located at Njeru (A-1) and Kayunga (A-1).
- (3) The Project sites for booster stations are located at Wabigalo (B) and Hoima (C).

### 3. Japan's Grant Aid System

- (1) The Government of Uganda has understood the system of Japan's Grant Aid explained by the team, as described in Annex-I.
- (2) The Government of Uganda will take necessary measures, as described in Annex-II, for smooth implementation of the Project, on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

### 4. Further Schedule

The team will make the final report in accordance with the confirmed items, and send it to the Government of Uganda by the end of April 1999.

### 5. Other Relevant Issues

- (1) Exclusion of Area D  
Ugandan side has requested the team that Area D (Iganga District) should be excluded from the Project areas, because a local NGO has started the electrification work in this area. The team informed the Ugandan side that the final items of the Project as well as the cancellation of Area D would be decided after the consultations with authorities concerned in Japan.
- (2) Installation Works for Transmission Lines  
Ugandan side agreed to allocate the necessary budget and to complete all installation work of the equipment and materials for 33kV transmission lines, which will be provided under the Project, within a certain period to meet the requirement of the Japan's Grant Aid.
- (3) Relocation of the Existing Booster at Hoima Substation  
Ugandan side agreed to relocate the existing booster at Hoima substation, after completion of the installation work of a new booster station by the Japanese side.



## Annex-I Japan's Grant Aid Scheme

### Japan's Grant Aid Scheme

#### 1. Grant Aid Procedures

- (1) Japan's Grant Aid Program is executed through the following procedures.
- |                                 |  |
|---------------------------------|--|
| Application                     | (Request made by a recipient country)  |
| Study                           | (Basic Design Study conducted by JICA)   |
| Appraisal & Approval            | (Appraisal by the Government of Japan and Approval by Cabinet)                   |
| Determination of Implementation | (The Notes exchanged between the Governments of Japan and the recipient country) |
- (2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request. Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s). Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval. Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country. Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

#### 2. Basic Design Study

- (1) Contents of the Study
- The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:
- Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
  - Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
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  - Estimation of costs of the Project

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The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

**3. Japan's Grant Aid Scheme**

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means the one fiscal year (April to March) which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5) Necessity of "Verification"

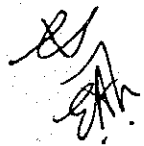
The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

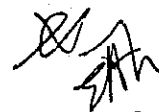
- 1) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- 2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- 3) To secure buildings prior to the procurement in case the installation of the equipment.

- 4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
  - 5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
  - 6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
- (7) "Proper Use"
- The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.
- (8) "Re-export"
- The products purchased under the Grant Aid should not be re-exported from the recipient country.
- (9) Banking Arrangements (B/A)
- 1) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
  - 2) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.



**Annex-II Necessary measures to be taken by the Government of Uganda on condition that Japan's Grant Aid is extended.**

1. To provide necessary data and information for the Project.
2. To secure and provide cleared, embanked and leveled land as well as access road for the new substation and booster stations, prior to the commencement of the construction for the Project.
3. To ensure speedy unloading, customs clearance and tax exemption of the goods for the Project at port and/or airport of disembarkation, and inland transportation in the Republic of Uganda.
4. To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for their entry into the Republic of Uganda and stay therein for the performance of their work.
5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the Republic of Uganda with respect to the supply of the products and services under the verified contracts.
6. To bear commissions to a Japanese bank for the banking services based upon the banking arrangement.
7. To bear all the expenses other than those to be borne by the Grant Aid necessary for the execution of the Project.
8. To provide proper arrangements for the construction/installation work, such as water supply, electricity, drainage, etc., if necessary.
9. To assign exclusive counterpart engineers and technicians to the Project in order to transfer the operation and maintenance technique for the Project and to witness and confirm construction/installation works and qualities of equipment and materials when inspection is carried out.
10. To take necessary measures and responsibility for the stoppage of electricity during construction/installation period, when it is necessary.
11. To construct and to connect the cables supplied by the Japan's grant aid for incoming and outgoing feeders for substations and booster stations, which will be constructed under the Project.
12. To use and maintain properly and effectively all the equipment and materials provided under the Japan's Grant Aid.
13. To construct incidental outdoor facilities, boundary fence, entrance gate and outdoor lighting at the new substation and booster stations by the completion of the Project.

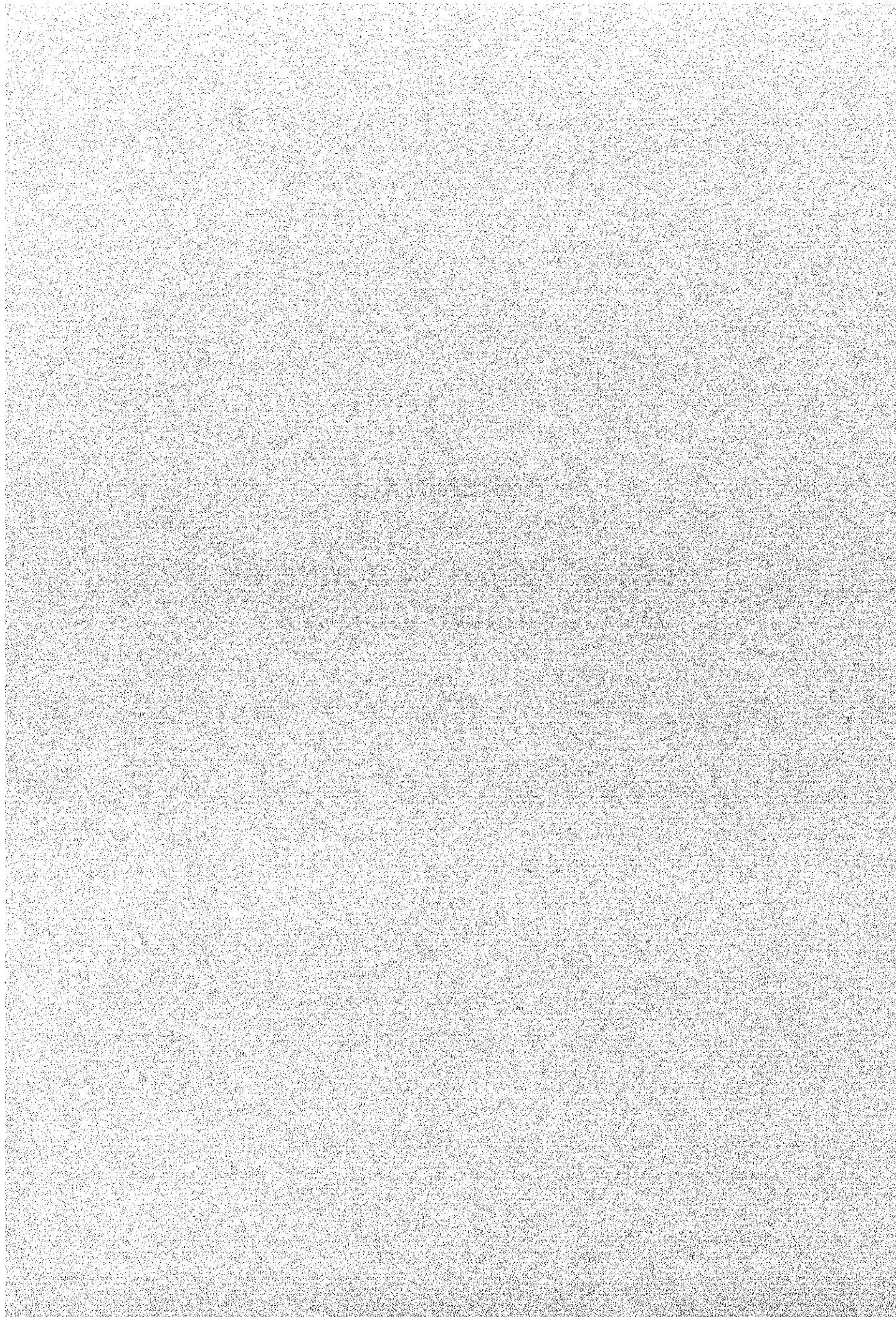


14. To install equipment and materials for transmission lines supplied under the Project in accordance with the proper implementation schedule to meet the requirements of the Japan's Grant Aid.
15. To provide proper disposal places of excavated soil, waste water and oil discharged during the implementation period.
16. To provide temporary yard for the contractor's office, the consultant's office, equipment and materials storage yard, etc., in the new substation and booster stations.
17. To provide load for test operation of the new substation and booster stations during the implementation period.



## **APPENDIX 5**

### **COST ESTIMATION BORNE BY THE RECIPIENT COUNTRY**



## COST ESTIMATION BORNE BY THE RECIPIENT COUNTRY

Main items of the construction costs to be borne by Uganda side are as follows;

1. Site Preparation and Replacement of Existing Electric Poles	:	Some 77,000US\$
2. Civil Work (Replacement of Public Road, Fence and Gate, Drainage Facilities)	:	Some 82,000US\$
3. Procurement of Wooden Poles and Accessories	:	Some 265,000US\$
4. Transportation for Transmission Materials (Lugogo Store to Sites)	:	Some 431,000US\$
5. Construction of 33kV Transmission Lines	:	Some 1,715,000US\$
	<b>TOTAL</b>	<b>:Some 2,570,000US\$</b>





## **APPENDIX 6**

# **POWER DEMAND FORECAST AND NO. OF POLE MOUNTED TRANSFORMERS**



Table 1 Number of Customers and Assumption of Potential Demand

Area A1: Njeru - Kayunga - Bale												
TC Name	Residential	Commercial	Schools		Health		Offices	Small Factory			Total	Demand (KW)
			Primary	Secondary	Centre	Clinic		Malze	Coffee	Milk		
Kanjuki	100	45	4	1		4	1	1	1		157	72.90
Kyerima	300	84	6	3		6		3	1		403	148.40
Wabwogo	50	27			1			2	2		82	43.55
Kitimbwa	300	300	4	1	1	6		1	1		614	291.17
Kayonza	50	36	1	1		6	1	1	1		97	51.18
Nakyesa	20	60	3	1		4		1	1		90	70.90
Kitwe	10	30	1		1	2		1			45	35.45
Bale	50	300	1	1		6	2			1	361	243.57
Bukeeka	100	28	2	1	1	6		1	1		140	58.27
Nyize	5	30	3					1			39	36.86
Wakisi	15	15	2	1	1		1				35	26.94
Kikubamutwe	20	90	2	1		6		2			121	91.14
Naminyia	5	30	2			1			1		39	34.10
Lugasa					1						1	3.50
<b>Total</b>	<b>1,025</b>	<b>1,075</b>	<b>31</b>	<b>11</b>	<b>5</b>	<b>47</b>	<b>5</b>	<b>14</b>	<b>9</b>	<b>1</b>	<b>2,223</b>	<b>1,207.93</b>

Area A2: Buwenda (Jinja Area) - Kiyunga (Mbulamuti Area)												
TC Name	Residential	Commercial	Schools		Health		Offices	Small Factory			Total	Demand (KW)
			Primary	Secondary	Centre	Clinic		Malze	Coffee	Milk		
Buwenda	2	15	1								18	14.87
Bujagali	10	30									40	23.46
Ivunamba	10	60				2	1	1	1		75	54.21
Namize	3	21	1								25	19.44
Budondo S/C			1	1	1		1				4	10.50
Budondo TC	20	60	1			1		1			83	54.67
Buyala	20	150	2		1	6	1	1	1		182	135.66
Kabowa	4	18				1					23	14.58
Nakanyonyi	5	45				1		1			52	38.23
Namagera	10	150	2			2		1			165	124.49
Butagaya		15	1		1		1				18	18.13
Lubani	5	90	2	2		6		1	1		107	92.83
Budima	10	45	1		1			2		1	60	52.09
Nankandulo	15	150	1	1	1	6		2	1		177	138.56
Kisozi	10	150	2		1	2	1	1			167	127.99
Namaganda		30									30	22.26
Kiyunga	10	90	2	1		6		1	1	1	112	93.44
Muwange	2										2	0.24
Namwenda	4	13									17	10.13
<b>Total</b>	<b>140</b>	<b>1,132</b>	<b>17</b>	<b>5</b>	<b>6</b>	<b>33</b>	<b>5</b>	<b>12</b>	<b>5</b>	<b>2</b>	<b>1,357</b>	<b>1,045.79</b>

Area B: Wabigalo - Migera												
TC Name	Residential	Commercial	Schools		Health		Offices	Small Factory			Total	Demand (KW)
			Primary	Secondary	Centre	Clinic		Malze	Coffee	Milk		
Wabigalo	100	150		1						1	252	130.34
Sasira	40	90	1							1	132	78.60
Namasa	50	60								1	111	54.04
Migera	100	210	2	1	1			1	1	2	318	195.86
<b>Total</b>	<b>290</b>	<b>510</b>	<b>3</b>	<b>2</b>	<b>1</b>			<b>1</b>	<b>1</b>	<b>5</b>	<b>613</b>	<b>458.84</b>

Area C: Hoima - Munteme												
TC Name	Residential	Commercial	Schools		Health		Offices	Small Factory			Total	Demand (KW)
			Primary	Secondary	Centre	Clinic		Malze	Tobacco	Milk		
Buawekera	20	60	1	2	1	2		1	1		88	69.41
Buhimba	30	150	2	1	2		1	1	1		188	139.41
Kikube	20	90	1		1		1		1		114	79.69
Munteme	50	150	2	2	2	2	2	1	1	1	213	150.30
<b>Total</b>	<b>120</b>	<b>450</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>603</b>	<b>438.82</b>

Table 2 Load Demand Forecasts

Load Growth		4.00%									
Year	(Target Year)										
	1998	1999	2000	2001	2002	2003	2004	2006	2008	2010	2012
<b>Area A1</b>											
Kanjuki	72.90	75.81	78.85	82.00	85.28	88.69	92.24	99.77	107.91	116.71	126.24
Kyerima	148.40	154.34	160.51	166.93	173.61	180.55	187.77	203.10	219.67	237.59	256.98
Wabwogo	43.55	45.30	47.11	48.99	50.95	52.99	55.11	59.61	64.47	69.73	75.42
Kitimbwa	291.17	302.82	314.93	327.53	340.63	354.26	368.43	398.49	431.01	466.18	504.22
Kayonza	51.18	53.23	55.36	57.58	59.88	62.27	64.76	70.05	75.76	81.95	88.63
Nakyesa	70.90	73.73	76.68	79.75	82.94	86.26	89.71	97.03	104.94	113.51	122.77
Kitwe	35.45	36.87	38.34	39.87	41.47	43.13	44.85	48.51	52.47	56.75	61.38
Bale	243.57	253.31	263.45	273.99	284.94	296.34	308.20	333.35	360.55	389.97	421.79
Bukeeka	58.27	60.60	63.02	65.54	68.17	70.89	73.73	79.74	86.25	93.29	100.90
Nylze	36.86	38.34	39.87	41.46	43.12	44.85	46.64	50.45	54.56	59.02	63.83
Wakisi	26.94	28.01	29.13	30.30	31.51	32.77	34.08	36.86	39.87	43.13	46.64
Kikubamutwe	91.14	94.79	98.58	102.52	106.62	110.89	115.32	124.73	134.91	145.92	157.82
Naminya	34.10	35.47	36.89	38.36	39.90	41.49	43.15	46.67	50.48	54.60	59.06
Lugasa	3.50	3.64	3.79	3.94	4.09	4.26	4.43	4.79	5.18	5.60	6.06
<b>Total</b>	<b>1207.93</b>	<b>1256.25</b>	<b>1306.50</b>	<b>1358.76</b>	<b>1413.11</b>	<b>1469.64</b>	<b>1528.42</b>	<b>1653.14</b>	<b>1788.04</b>	<b>1933.94</b>	<b>2091.75</b>
<b>Area A2</b>											
Buwenda	14.87	15.47	16.08	16.73	17.40	18.09	18.82	20.35	22.01	23.81	25.75
Bujagali	23.46	24.40	25.38	26.39	27.45	28.55	29.69	32.11	34.73	37.57	40.63
Ivunamba	54.21	56.38	58.63	60.98	63.42	65.95	68.59	74.19	80.24	86.79	93.87
Namize	19.44	20.22	21.03	21.87	22.75	23.66	24.60	26.61	28.78	31.13	33.67
Budondo S/C	10.50	10.92	11.36	11.81	12.28	12.77	13.29	14.37	15.54	16.81	18.18
Budondo TC	54.67	56.86	59.13	61.50	63.96	66.51	69.17	74.82	80.92	87.53	94.67
Buyala	135.66	141.09	146.73	152.60	158.70	165.05	171.65	185.66	200.81	217.20	234.92
Kabowa	14.58	15.16	15.77	16.40	17.06	17.74	18.45	19.95	21.58	23.34	25.25
Nakanyonyi	38.23	39.76	41.35	43.01	44.73	46.52	48.38	52.33	56.60	61.21	66.21
Namagera	124.49	129.47	134.65	140.03	145.63	151.46	157.52	170.37	184.27	199.31	215.57
Butagaya	18.13	18.86	19.61	20.39	21.21	22.06	22.94	24.81	26.84	29.03	31.40
Lubani	92.83	96.55	100.41	104.43	108.60	112.95	117.46	127.05	137.42	148.63	160.76
Budima	52.09	54.18	56.34	58.60	60.94	63.38	65.92	71.29	77.11	83.40	90.21
Nankandulo	138.56	144.10	149.86	155.86	162.09	168.58	175.32	189.63	205.10	221.84	239.94
Kisozi	127.99	133.11	138.43	143.97	149.73	155.72	161.95	175.16	189.45	204.91	221.63
Namaganda	22.26	23.15	24.08	25.04	26.04	27.08	28.17	30.46	32.95	35.64	38.55
Kiyunga	93.44	97.17	101.06	105.10	109.31	113.68	118.23	127.87	138.31	149.59	161.80
Muwange	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.33	0.36	0.39	0.42
Namwenda	10.13	10.53	10.95	11.39	11.85	12.32	12.81	13.86	14.99	16.21	17.54
<b>Total</b>	<b>1045.79</b>	<b>1087.62</b>	<b>1131.12</b>	<b>1176.37</b>	<b>1223.42</b>	<b>1272.36</b>	<b>1323.25</b>	<b>1431.23</b>	<b>1548.02</b>	<b>1674.34</b>	<b>1810.96</b>
<b>Area B</b>											
Wabigalo	130.34	135.55	140.98	146.61	152.48	158.58	164.92	178.38	192.94	208.68	225.71
Sasira	78.60	81.74	85.01	88.41	91.95	95.62	99.45	107.56	116.34	125.83	136.10
Namasa	54.04	56.20	58.45	60.79	63.22	65.75	68.38	73.96	79.99	86.52	93.58
Migera	195.86	203.69	211.84	220.32	229.13	238.29	247.83	268.05	289.92	313.58	339.17
<b>Total</b>	<b>458.84</b>	<b>477.19</b>	<b>496.28</b>	<b>516.13</b>	<b>536.77</b>	<b>558.24</b>	<b>580.57</b>	<b>627.95</b>	<b>679.19</b>	<b>734.61</b>	<b>794.56</b>
<b>Area C</b>											
Buawekera	69.41	72.19	75.08	78.08	81.20	84.45	87.83	95.00	102.75	111.13	120.20
Buhimba	139.41	144.99	150.79	156.82	163.09	169.62	176.40	190.79	206.36	223.20	241.42
Kikube	79.69	82.88	86.19	89.64	93.22	96.95	100.83	109.06	117.96	127.58	137.99
Munteme	150.30	156.32	162.57	169.07	175.83	182.87	190.18	205.70	222.49	240.64	260.28
<b>Total</b>	<b>438.82</b>	<b>456.37</b>	<b>474.62</b>	<b>493.61</b>	<b>513.35</b>	<b>533.89</b>	<b>555.24</b>	<b>600.55</b>	<b>649.55</b>	<b>702.56</b>	<b>759.89</b>

*Table 3 Estimated Numbers of 33kV/LV Transformers*

<b>Name</b>	<b>Demand (kW)</b>	<b>Capacity (kVA)</b>	<b>No. of Transf. (Set/Sets)</b>	<b>Capacity of Transf. (KVA)</b>	<b>Remarks</b>
<b>Area A1</b>					
Kanjuki	92.24	97.09	1	100	
Kyerima	187.77	197.66	1	200	
Wabwogo	55.11	58.01	1	100	
Kitimbwa	368.43	387.82	1	200	
			2	100	
Kayonza	64.76	68.17	1	100	
Nakyesa	89.71	94.43	1	100	
Kitwe	44.85	47.21	1	50	
Bale	308.20	324.42	1	200	
			2	100	
Bukeeka	73.73	77.61	1	100	
Nyize	46.64	49.10	1	50	
Wakisi	34.08	35.88	1	50	
Kikubamutwe	115.32	121.39	1	200	
Naminya	43.15	45.42	1	50	
	4.43	4.66	1	25	
<b>Total</b>	<b>1528.42</b>	<b>1608.87</b>	<b>18</b>	<b>1925</b>	
<b>Area A2</b>					
Buwenda	18.82	19.81	1	50	Including(a*)
Bujagali	29.69	31.25			(a*)
Ivunamba	68.59	72.20	1	100	
Namize	24.60	25.90	1	50	
Budondo S/C	13.29	86.10	2	50	
Budondo TC	69.17				
Buyala	171.65	180.69	1	200	
Kabowa	18.45	19.42	1	25	
Nakanyonyi	48.38	50.92	1	50	
Namagera	157.52	165.81	1	200	
Butagaya	22.94	24.15	1	50	
Lubani	117.46	123.65	1	100	
Budima	65.92	69.38	1	100	
Nankandulo	175.32	184.55	1	200	
Kisozi	161.95	170.47	1	200	
Namaganda	28.17	29.65	1	50	
Kiyunga	118.23	124.45	1	200	
Muwange	0.30	0.32			(b*)
Namwenda	12.81	13.49	1	25	Including (b*)
<b>Total</b>	<b>1323.25</b>	<b>1392.90</b>	<b>17</b>	<b>1700</b>	
<b>Area B</b>					
Wabigalo	164.92	173.60	2	100	
Sasira	99.45	104.68	1	100	
Namasa	68.38	71.98	1	100	
Migera	247.83	260.87	1	200	
			1	100	
<b>Total</b>	<b>580.57</b>	<b>611.13</b>	<b>6</b>	<b>700</b>	
<b>Area C</b>					
Buawekera	87.83	92.45	1	100	
Buhimba	176.40	185.68	1	200	
Kikube	100.83	106.14	1	100	
Munteeme	190.18	200.19	2	100	
<b>Total</b>	<b>555.24</b>	<b>584.47</b>	<b>5</b>	<b>600</b>	
<b>Grand Total</b>	<b>3987.49</b>	<b>4197.36</b>	<b>46</b>	<b>4925</b>	

Note) Capacity is calculated with the assumption of power factor 0.95.

