Appendix 14 Request & Approval letter for Substation land

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

No.1

TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

FROM: Regional Manager Kinondoni North	**TO:** Deputy Managing Director (D & CS)
Our Ref: KN/RPE/PROJECTS/41	**DATE:** 30th August, 2012

RE: PURCHASE OF TWO DEVELOPED PLOTS FOR CONSTRUCTION OF 33/11KV , 15MVA SUBSTATION AT MWANANYAMALA FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA

Please refer to the above topic.

We write in reference to our request to you with Reference No. KN/RPE/PROJECTS/41 dated 17th May, 2012 in which we sought for your advice if we can acquire the land parcels at a cost after failure to acquire the same from land Authorities in Kinondoni Municipality.

Having a go ahead from your office, we now send to you correspondences between us and owners of two adjacent plots, Plot No.77 and 76 both in block 2 Mwananyamala area who are ready to let their plots to TANESCO. Owners of Plots Nos. 77 and 76 are Mr. Fikirini Bashiri Shabani Farihallah and the late Safia Thomas respectively. Size of plot 76 is 26.83 x 13.42 m and plot 77 is 26.83 x 13.42 m which when combined become 26.83 x 26.83 m. Both plots owners have declared interest to sell their plots to TANESCO and hence we request for the acquisition process to proceed.

We submit photocopies of certificates and Right of Occupancy, survey plan and form no. IV from Kinondoni Primary Court for plot No. 76 which has approved Mr. Thomas Said Nkwera as the official caretaker for plot 76.

We submit waiting for your further guidance.

Regards,

Eng. Christopher J. Masasi
REGIONAL MANAGER
KINONDONI NORTH
CJMmck.

TANESCO LTD. RECEIVED 31 AUG 2012 Initial A ZONAL MANAGER-DSM & COAST OFFICE

DEPUTY MANAGING DIRECTOR (DISTRIBUTION & CUSTOMER SERVICES) TANESCO - DSM RECEIVED 31 AUG 2012

CHIEF LEGAL COUNSEL & COMPANY SECRETARY TANESCO RECEIVED 31 AUG 2012

30 AUG 2012

DEPUTY MANAGING DIRECTOR (INVESTMENT) RECEIVED 31 AUG 2012 TANESCO - DSM

cc: Chief Legal Counsel and Company Secretary
cc: Senior Manager - Distribution
cc: Senior Zonal Manager - DSM & Coast
cc. Mgr - DMD (Investment)

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

No.2

TANZANIA ELECTRIC SUPPLY COMPANY LTD
RECEIVED
22 AUG 2012
K/NORTH

SHIRIKA LA UMEME TANZANIA
S. L. P. 9024,
DAR ES SLAAM

22/08/2012

FIKIRINI BASHIRI SHABANI FARIHALLAH
C/D FAHAMU PEMBE
S.L.P. 16541
DAR ES SALAAM

Ndugu,

YAH: KUONDOA BARUA YA TAREHE 09/07/2012 KAMA ILIVYOSOMEKA IKUBALIKE BARUA YA 18/06/2012 INAYOHUSU KIWANJA NO.77 KITALU "2" MWANANYAMALA

Somo hapo juu la husika.

Kutokana na maelezo hayo nalijulisha Shirika lako kuwa mazungumzo yetu yaendelee kama tulivyo kubaliana kwenye barua ya tarehe 18/06/2012 na (vyongeza).

Tufanye biashara mapema iwezekanavyo kutokana na mambo yanayonikabili.

Kwa hayo machache nakutakia utendaji mwema.

Wako,

.....

FIKIRINI BASHIRI SHABANI FARIHALLAH

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

To RE Mwakambonya

19/6

No.3

FIKIRINI BASHIRI SHABANI FARIJALLAH,
C/O FAHAMU PEMBE,
P.O. BOX 16541,
DAR ES SALAAM.

18/06/2012

TANZANIA ELECTRIC SUPPLY COMPANY LTD
RECEIVED
19 JUN 2012
K/NORTH

SHIRIKA LA UMEME,
TANZANIA LTD.
DAR ES SALAAM.

YAH: MAJIBU YA OMBI LA KIWANJA No. 77 KITALU No. 2 MWANANYAMALA (KUUZA)

Kichwa cha habari hapo juu cha husika.

Nimepokea barua yako kumbu kumbu No. KN/RPE/PROJECTS/41 ya tarehe 7/6/2012 ikinikumbusha maongezi yetu ya mwezi wa 4. Mimi na shirika lako. Bado maamuzi yangu ni yale yale ya kuliuzia shirika nyumba yangu pamoja na taratibu zote za kisheria zifuatwe.

Asante,
Wako katika ujenzi wa Taifa.

.....
FIKIRINI BASHIRI SHABANI FARIHALLAH

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

"Tunayaangaza Maisha Yako" TANESCO "We Light Up Your Life" No.4

SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Ubungo Head Office, "Umeme Park", P.O. Box 9024 Dar Es Salaam, Tanzania, Tel: +255 22 2451130/9, Fax: +255 22 2452026

Our Ref: KN/RPE/PROJECTS/41

Date: 07.06.20i

BW. FIKIRINI BASHIRI SHABANI FARIJALA,
C/o FAHAMU PEMBE,
S.L.P. 16541,
DAR ES SALAAM.

YAH: OMBI LA KUUZIWA KIWANJA NA. 77, KITALU NA.2 MWANANYAMALA KWA AJILI YA KUJENGA KITUO CHA KUPOOZEA UMEME WA MSONGO WA 33/11KV.

Somo la hapo juu lahusika.

Tafadhali rejea mazungumzo yetu ya mwezi Aprili 2012 kuhusu TANESCO kuomba kuuziwa kiwanja kwa ajili ya ujenzi wa kituo cha kupoozea umeme (Substation).

Kimsingi ulikubali kuliuzia Shirika letu kiwanja chako kilichoendelezwa kama kinavyoonekana. Kwa barua hii tunakuomba utupe barua ya kuthibitisha kuwa uko tayari kuliuzia Shirika letu eneo hilo na kwamba utakuwa tayari kutumia taratibu za uthamini wa mali yako zilizopo nchini badala ya bei uliyotaja.

Tunategemea ushirikiano wako katika kufanikisha zoezi hili.

Kwa niaba ya Shirika la Umeme Tanzania.

Eng. Christopher J. Masasi
MENEJA WA MKOA – KINONDONI KASKAZINI

Nakala: Meneja Mwandamizi Usambazaji TANESCO Makao Makuu

Nakala: Meneja Mwandamizi wa Kanda Dar es Salaam & Pwani

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

UNITED REPUBLIC OF TANZANIA
MINISTRY OF LANDS AND HUMAN SETTLEMENTS DEVELOPMENT
(OFFICIAL SEARCH)

Telegrams: "LANDS"

Telephone: 121241-9
In reply please quote:

LAND REGISTRY
P.O. Box 1191,
DAR ES SALAAM.

Search No.....

TO FIKIRINI BASHIRI SHABANI FARIJALA
P.O. BOX
DAR ES SALAAM

Search fee paid...4000/= Receipt No. 40746217 2. 3. 2010

PLOT NO 77 BLOCK 2 MWANANYAMALA AREA
DSM CITY.

Please refer to your application for an official search over the above mentioned plot. Diligent search has been done and no record revealed in our land Register and you can check further with the Land Officer KINONDONI This letter doesn't guarantee allocation of this plot/land if the same is allocated.

3rd MARCH , 2010

.....
SEN o ASSISTANT REGISTRAR OF TITLES

Copy to: Commissioner for Lands
P.O. Box 9230,
Dar es Salaam.

Authorized Land Officer (KINONDONI Municipality)
P.O. Box,
Dar es Salaam.

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

/ TRUE COPY /

THE UNITED REPUBLIC OF TANZANIA

Land Form No. 43

Land Office Nos...41314...

OFFER OF A RIGHT OF OCCUPANCY
The Land Ordinance (Cap. 113 OF THE Laws)
MINISTRY OF LANDS, HOUSING & URBAN DEVELOP,
P.O. Box ..3093.....
DAR ES SALAAM

DISTRICT LAND OFFICER
21/10/92

Ref. No...D/KN/A/507..... Date: ..6th April, 1965...

TO: ...Fikirini s/o Machiri Shabani Parijala,

.....

.....

Description of Land...Plot No. 771 Block 2 House No -
...Mwananyamala Area, Kinondoni Ward,.....
.....Dar es Salaam.....

You are hereby offered a Right of Occupancy over the Land described above the conditions set out herein.

If you accept this offer please sign all three copies and return them to reach me not later than the...15th April...1965.....
together with Shs...63.00.....made up as follows:

Premium tendered : : :	Shs:	NIL
Premium for improvements/disturbance :	Shs:	NIL
First payment of rent under condition 2 below: :	Shs:	34.00
Stamp duty on original document of offer : :	Shs:	2.00
Stamp duty on duplicate document of offer : :	Shs:	2.00
Fee for preparation of offer : : :	Shs:	25,00
Total payable on acceptance		63.00

Acceptance out of time of time or unacompanied by payment of this money will not be avalid.

A copy of the accepted offer will be returned to you

You are reminded that under Regulations, 1948, you cannot transfer, mortgage or charge the Right of Occupancy without the President's consent. Such consent must be sought from the Regional Land Officer.

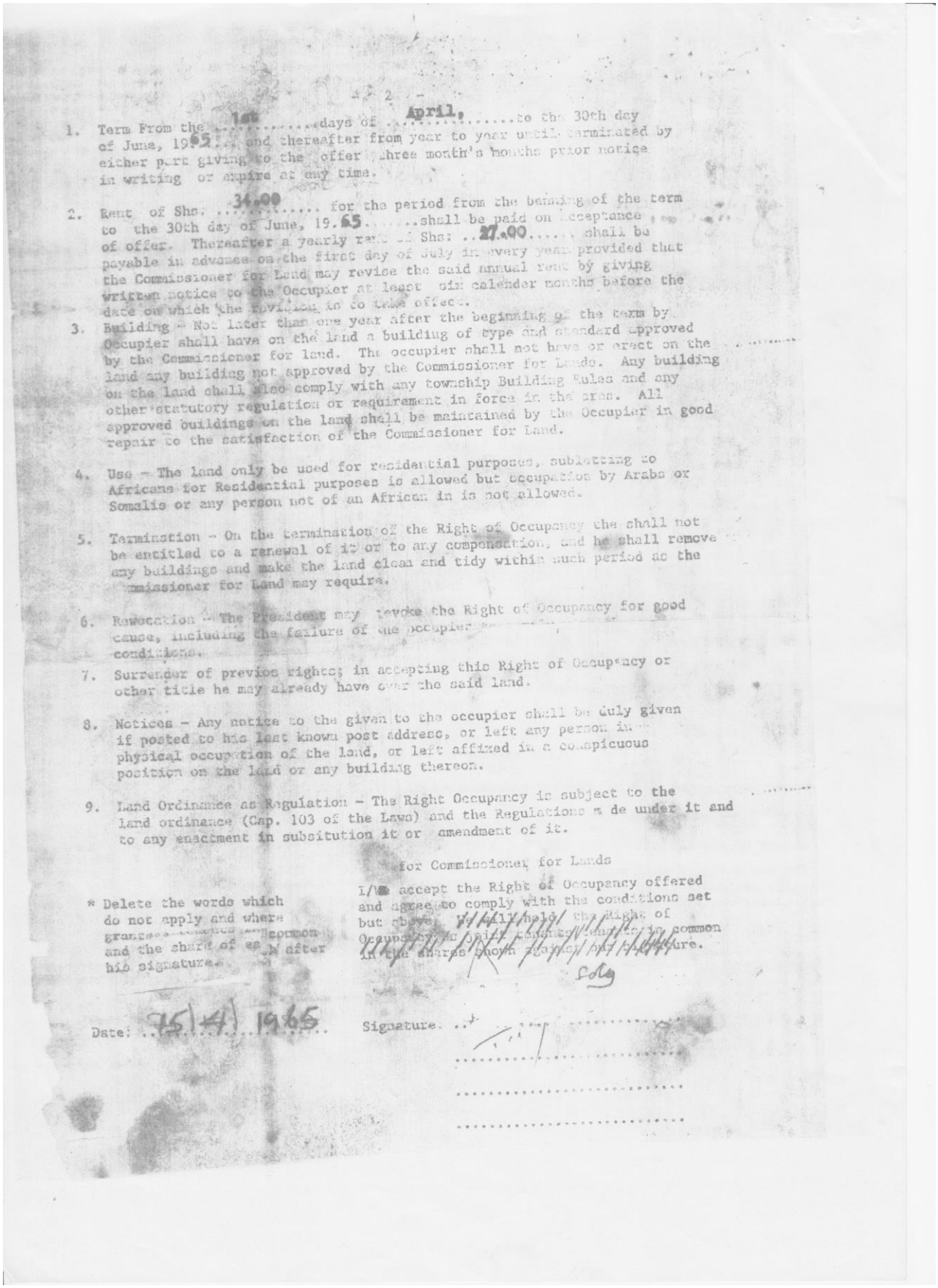
CONDITIONS OF THE RIGHT OF OCCUPANCY

In these condition "Occupier" means the original grantee of the Right of Occupancy and his successors on title and "Commissioner" ... and ... any includes any person authorised by the Commissioner for Lands to act on his behalf; the person so authorised ... he Regional Land Officer: Ilala, Dar es Sal.

..../2

14. Request & Approval letter for Substation land

(1) Mwananyamala substation



- 2 -

1. Term From the 1st days of April, to the 30th day of June, 1965 and thereafter from year to year until terminated by either part giving to the offer three month's months prior notice in writing or expire at any time.

2. Rent of Shs. 34.00 for the period from the beining of the term to the 30th day of June, 19.65 shall be paid on acceptance of offer. Thereafter a yearly rent of Shs: 27.00 shall be payable in advance on the first day of July in every year provided that the Commissioner for Land may revise the said annual rent by giving written notice to the Occupier at least six calender months before the date on which the revision is to take effect.

3. Building - Not later than one year after the beginning of the term by Occupier shall have on the land a building of type and standard approved by the Commissioner for land. The occupier shall not have or erect on the land any building not approved by the Commissioner for Lands. Any building on the land shall also comply with any township Building Rules and any other statutory regulation or requirement in force in the area. All approved buildings on the land shall be maintained by the Occupier in good repair to the satisfaction of the Commissioner for Land.

4. Use - The land only be used for residential purposes, subletting to Africans for Residential purposes is allowed but occupation by Arabs or Somalis or any person not of an African in is not allowed.

5. Termination - On the termination of the Right of Occupancy the shall not be entitled to a renewal of it or to any compensation, and he shall remove any buildings and make the land clean and tidy within such period as the Commissioner for Land may require.

6. Revocation - The President may revoke the Right of Occupancy for good cause, including the failure of the occupier [illegible] conditions.

7. Surrender of previos rights; in accepting this Right of Occupancy or other title he may already have over the said land.

8. Notices - Any notice to the given to the occupier shall be duly given if posted to his last known post address, or left any person in physical occupation of the land, or left affixed in a conspicuous position on the land or any building thereon.

9. Land Ordinance as Regulation - The Right Occupancy is subject to the land ordinance (Cap. 103 of the Laws) and the Regulations made under it and to any enactment in subsitution it or amendment of it.

for Commissioner for Lands

I/We accept the Right of Occupancy offered and agree to comply with the conditions set but above. I/We will hold the Right of Occupancy as joint tenants/tenants in common in the shares shown against my/our signature.

* Delete the words which do not apply and where grantees [illegible] common and the share of each after his signature.

Date: 15/4/1965

Signature. ..

.....

.....

.....

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

No.9

SHIRIKA LA UMEME TANZANIA
L.T.D P.O.BOX 9024 DSM
22/8/2012.

TANZANIA ELECTRIC SUPPLY COMPANY LTD
RECEIVED
22 AUG 2012
K/NORTH

B11 SAFIA THOMAS
C/D FAHAMU PEMBE
S.L.P 16541
DSM

YAH: KUONDOA BARUA YA TAR 06/7/2012 KAMA INAVYOSOMEKA : IKUBALIKE BARUA YA 15/6/2012 INAYOHUSU KIWANJA NO.76 KITALU "2" MWANANYAMALA.

Ndugu,

Somo hapo juu la husika.

Kutokana na maelezo hayo nalijulisha Shirika lako kuwa mazungumzo yetu yaendelee kama tulivyo kubaliana kwenye barua ya Tarehe 15/6/2012 na { vyongeza }.

Tufanye biashara mapema iwezekanavyo kutokana na mambo yanayotukabili.

Kwa hayo machache tunakutakia utendaji mwema.

Wako,

THOAM
.....
BII SAFIA THOMAS.

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

/0

No.10

SAFIA THOMAS,
C/o FAMU PEMBE,
P.O. BOX 16541,
DAR ES SALAAM.
15/06/2012

TANZANIA ELECTRIC SUPPLY COMPANY LTD
RECEIVED
19 JUN 2012
K/NORTH

SHIRIKA LA UMEME (T)
S.L.P. 9024
DAR ES SALAAM.
TANZANIA

YAH: KIWANJA No. 76 KITALU 2 MWANANYAMALA

Somo la hapo juu lahusika.

Mimi kama mmiliki wa eneo tajwa nimekubali yote yaliyo andikwa kwenye barua yako ya tarehe 7/06/2012 pamoja na maongezi ya awali. Hivyo sina pingamizi endelea na taratibu zako za manunuzi zingatia barua hivyo yenye Kumb- KN/RPE/PROJECT 5/41.

Asante,
Wako katika ujenzi wa Taifa.

Safia Thomas
.....
SAFIA THOMAS

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

"Tunayaangaza Maisha Yako" TANESCO "We Light Up Your Life"

No.11

SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Ubungo Head Office, "Umeme Park", P.O. Box 9024 Dar Es Salaam, Tanzania, Tel: +255 22 2451130/9. Fax: +255 22 2452026

Our Ref: KN/RPE/PROJECTS/41

Date: 07.06.2012

BI. SAFIA THOMAS, ✓
C/o FAHAMU PEMBE,
S.L.P. 16541,
DAR ES SALAAM.

YAH: OMBI LA KUUZIWA KIWANJA NA. 76, KITALU NA.2 MWANANYAMALA KWA AJILI YA KUJENGA KITUO CHA KUPOOZEA UMEME WA MSONGO WA 33/1KV.

Somo la hapo juu lahusika.

Tafadhali rejea mazungumzo yetu ya mwezi Aprili 2012 kuhusu TANESCO kuomba kuuziwa kiwanja kwa ajili ya ujenzi wa kituo cha kupoozea umeme (Substation).

Kimsingi ulikubali kuliuzia Shirika letu kiwanja chako kilichoendelezwa kama kinavyoonekana. Kwa barua hii tunakuomba utupe barua ya kuthibitisha kuwa uko tayari kuliuzia Shirika letu eneo hilo na kwamba utakuwa tayari kutumia taratibu za uthamini wa mali yako zilizopo nchini badala ya bei uliyotaja.

Tunategemea ushirikiano wako katika kufanikisha zoezi hili.

Kwa niaba ya Shirika la Umeme Tanzania.

Eng. Christopher J. Masasi
MENEJA WA MKOA – KINONDONI KASKAZINI

Nakala: Meneja Mwandamizi Usambazaji – TANESCO Makao Makuu

Nakala: Meneja Mwandamizi wa Kanda – Dar es Salaam & Pwani

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

12. No.12

Form No. IV

JAMHURI YA MUUNGANO WA TANZANIA
USIMAMIZI WA MIRATHI (S. S. M. 1963 NYONGEZA YA 5 FUNGU 2)

Mbele ya Mahakama ya Mwanzo ..... KINONDONI

Usimamizi wa Mirathi Namba 138/2012

Mnamo tarehe ..... 06 — 07 — 2012

Bw/bibi/bi ..... THOMAS SAID NJOWOKA

Ameteuliwa kuwa msimamizi wa mirathi ya Marehemu ..... SOPHIA

..... THOMAS PHILIMON

Aliyefariki tarehe ..... 24 — 05 — 1999

Ikiwa ameahidi kusimamia mirathi kwa wema na uaminifu kama alivyoeleza hapa chini.

Mirathi [illegible] kwa kufuatana na nakala ya wosia wa Marehemu ilivyoambatanishwa.

PRIMARY COURT KINONDONI DAR ES SALAAM TANZANIA

HAKIMU
MAHAKAMA YA MWANZO

HAKIMU MAHAKAMA YA MWANZO KINONDONI WILAYA YA KINONDONI

Mimi ninathibitisha kwa dhati nitasimamia kwa wema na uaminifu mirathi ya marehemu aliyetajwa hapo juu, nikilipa madeni yake na hazina kugawa haki ya mirathi kwa mujibu wa sheria, nami nitaonyesha hesabu kamili na za kweli za mali ya marehemu pamoja na itakavyofanywa, nami nitaonyesha hesabu hizo mbele ya Mahakama hii siku nitakayotakiwa.

IMETIWA SAHIHI LEO TAREHE ..... 06 — 07 — 2012

SAHIHI .....
MSIMAMIZI

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

13 No 13

TANGANYIKA

D.11660

ORIGINAL

Land Form No. 43

Land Office No. S 41319

OFFER OF A RIGHT OF OCCUPANCY

The Land Ordinance (Cap. 113 of the Laws)

SETTLEMENT & WATER DEVELOPMENT
MINISTRY OF LANDS, ~~FORESTS AND WILDLIFE~~
OFFICE OF THE REGIONAL LAND OFFICE AGENT,
P.O. Box 3008
Dar es Salaam.
5th April, 1965

To: Bi. Safia d/o Thomas,

Description of land Plot No. 76, Block 2
Mwananyamara Area, Kinondoni Ward.
Dar es Salaam.

You are hereby offered a Right of Occupancy over the land ... the conditions set out herein.

If you accept this offer sign all three copies and return them to reach me not later than the 15th April, 1965 (or such later date as I may permit) together with Shs. 63.00 made up as follows:—

	Shs.
Premium tendered ...	Nil
Premium for improvements/site clearance ...	Nil
First payment of rent under condition 2 below ...	34.00
Stamp duty on original ...	2.00
Stamp duty on duplicate ...	2.00
Fee, preparation of offer ...	25.00
Total payable on acceptance: Shs.	63.00

G.R.R. No. 51455
DATED 16-4-65
Regional Land Office Coast Region

Acceptance out of time or unaccompanied by payment of this amount will not be valid.

A copy of the accepted offer will be returned to you.

You are reminded that under Regulation 3 of the Land Regulations, 1948, you cannot transfer, mortgage or change the Right of Occupancy without the President's consent. Such consent must be sought from the Regional Land Office Agent/~~Area Commissioner~~.

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

No.14

TANGANYIKA

Nakala ya kwanza
" pili
" " tatu

Land Form No. 43
Land Office No. S. 41 319

HATI YA HAKI YA KIWANJA

Sheria za Ardhi (Sura 113)

Hii ni tafsiri tu ya Kiswahili ya Hati hii, kama kutatokea ubishi juu ya maana yake, Hati ya Kiingereza ndiyo itakayotoa uamuzi wa mwisho

SETTLEMENT & WATER DEVELOPMENT
MINISTRY OF LANDS, ~~FORESTS AND WILDLIFE~~,
OFFICE OF THE REGIONAL LAND OFFICE AGENT,
P.O. Box 3093,
Dar es Salaam.

5th April, 19 65

Kwa: Bi. Safia d/o Thomas,

Maelezo ya kitalu Plot No. 76, Block 2,
Mwananyamara Area, Kinondoni Ward.
Dar es Salaam.

Unapewa haki ya kupanga kiwanja kama kilivyoelezwa hapo juu kwa kufuata masharti kama yalivyoandikwa hapa ndani.

Ikiwa unaipokea hati hii tia sahihi nakala zote tatu na uzirudishe ili zimfikie mimi walao 15th April, 19 65 (au tarehe ambayo nitakuruhusu) pamoja na Sh. 65.00 ambazo zimeonyeshwa kama ifuatavyo:—

	Sh.
Malipo ya mjiele	Nil
Malipo ya matengenezo/usafishaji wa kiwanja	Nil
Malipo ya kwanza ya kodi ya kiwanja kuhusu sharti la pili hapo chini	34.00
Kodi ya Serikali juu ya nakala ya kwanza	2.00
Ushuru wa Serkali juu ya nakala ya pili	
Gharama za kutayarisha Hati	2.00
Jumla ya malipo yanayotakiwa wakati wa kupokea hati hii: Sh.	63.00

Muda wa kupokea hati ukipitishwa au kama itarudishwa bila malipo haya hati haitakuwa thabiti.

Utarudishiwa nakala moja ya toleo lililopokelewa.

Unakumbushwa kuwa chini ya sheria ya 3 ya Masharti ya Ardhi, 1928, huna mamlaka kutoa, kuweka rehani au kubadili haki ya kupanga bila idhini ya Bwana President. Idhini hiyo shorti iombwe kwa wakili wa Bwana Ardhi wa Mkoa/bwana A.C.

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

/ 6.

No. 16

MASHARTI YA HAKI YA KUPANGA KIWANJA

Katika masharti haya "mpangaji" maana yake mtu wa kwanza aliyepewa haki ya upangaji na warithi wake wa haki na "Bwana Kamishna wa Ardhi" ina maana mtu ye yote aliyepewa idhini na Bwana Kamishna wa Ardhi kuwa makamu wake: mtu aliyepewa idhini hiyo ni wakili wa Bwana Ardhi.

1. *Muda:*—Toka 1st April 1965 mpaka tarehe 30 mwezi Juni, 1966 na baadaye toka mwaka mpaka mwaka hadi utakapokatishwa na upande wo wote ukitoa taarifa ya miezi sita iliyoandikwa kuishi kwenye mwaka wa kodi.

2. *Kodi:*—Kodi ya Sh. 54.00 kwa wakati toka mwanzo wa muda mpaka tarehe 30 Juni, 1966 italipwa wakati wa kupokea toleo hili. Baadaye kodi ya mwaka ya Sh. 27.00 italipwa mbele kila tarehe ya kwanza ya Julai, kila mwaka, Mradi Bwana Ardhi awezo kubadili kodi hiyo ya mwaka kwa kumpa mpangaji taarifa iliyoandikwa miezi sita mbele ya tarehe ambayo mabadiliko hayo yataanza kuwa na nguvu.

3. *Majengo:*—Kwa muda usiozidi mwaka mmoja toka tarehe ya hati hii, mpangaji atajenga katika kiwanja hiki nyumba ya aina na hali itakayokubaliwa na Bwana Kamishna wa Ardhi/A.C. Kwa wakati wo wote mpangaji hatakuwa na wala hatajenga katika kiwanja hicho jengo lo lote lisilokubaliwa na Bwana Kamishna wa Ardhi/A.C. Ujenzi wo wote katika kiwanja hicho utakubaliana na sheria za kujenga Mjini na sheria nyingine zo zote zinazohusikana au masharti yanayotiliwa mkazo katika eneo hilo. Majengo yote yaliyokubaliwa kujengwa katika kiwanja hiki mpangaji atayaweka katika hali nzuri na atayatengeneza iwapo yameharibika kwa kadiri ya kumridhi Bwana Kamishna wa Ardhi/A.C.

*Kata isiyotakiwa

~~*4. *Matumizi:*—Ardhi hiyo itatumika kwa biashara na makazi tu.~~

~~*4. *Matumizi:*—Ardhi hiyo itatumika kwa biashara na makazi tu.—Upangishaji kwa Waafrika unaruhusiwa lakini upangishaji kwa Waarabu au Wasomali au mtu mwingine ye yote ambaye asili yake si Mwafrika haukubaliwi.~~

~~*4. *Matumizi:*—Ardhi hiyo itatumika kwa makazi tu.~~

*4. *Matumizi:*—Ardhi hiyo itatumika kwa makazi tu. Upangishaji kwa Waafrika kwa makazi unakubaliwa lakini upangishaji kwa Waarabu au Wasomali au mtu mwingine ye yote ambaye asili yake si Mwafrika haukubaliwi.

5. *Kikomo:*—Haki hiyo ikiisha, mpangaji hatakuwa na haki ya kuomba muda mpya au kupewa fidia yo yote na atatakiwa kubomoa nyumba, asafishe kiwanja na akiweke katika hali safi na ya utaratibu kwa muda atakaopewa na Bwana Kamishna wa Ardhi/A.C.

6. *Utanguo:*—Bwana Rais wa Jamhuri uwezo wa kutangua haki ya upangaji kwa sababu nzuri kama vile kushindwa kwa mpangaji kufuata masharti ya hati hii.

7. *Kutoa Haki zilizotangulia:*—Katika kupokea hati hii ya haki ya upangaji, mpangaji anatoa haki yo yote ya upangaji au haki nyingine ya kuthibitisha uenyeji ambayo aliweza kuwa nayo juu ya kiwanja hiki.

8. *Tangazo:*—Taarifa yo yote ya kumpa mpangaji itajulikana kuwa imetolewa kama itapelekwa kwa anwani yake aliyoitoa mwisho, au kama taarifa hiyo itatundikwa mahali pa wazi au juu ya jengo lo lote katika kiwanja hicho.

9. *Sheria na Masharti ya Ardhi:*—Haki hii ya upangaji ipo chini ya kanuni za Sheria za Ardhi (Sura 113) na masharti yake na amri zinazoweza kutolewa badala ya hizi au kusahihishwa.

....

Kamishna wa Ardhi

*Kata maneno yasiyotakiwa, iwapo wapangaji wanashika haki kwa ushirika onyesha hisa ya kila mmoja mbele ya sahihi yake.

*Mimi/~~Sisi~~ ninapokea/~~tunapokea~~ haki ya upangaji iliyotolewa na ninakubali/~~tunakubali~~ kutimiza masharti yaliyotolewa hapo juu. ~~*Tutashika haki ya upangaji kwa umoja/ushirika katika hisa zilizo onyeshwa kwenye sahihi zetu.~~

Sahihi: ....

....

Tarehe ....

....

G P Dsm 4046/12-6/40m

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

12

No.17

CONDITIONS OF THE RIGHT OF OCCUPANCY

In these conditions "Occupier" means the original grantee of the Right of Occupancy and his successors in title and "Commissioner for Lands" includes any person authorized by the Commissioner for Lands to act on his behalf: the person so authorized is the Regional Land Office Agent Ilala, Dar es Salaam.

1. *Term:*—From the 1st day of April, 1965 to the 30th day of June, 1966 and thereafter from year to year until terminated at the end of a rental year by either party giving to the other six months' prior notice in writing.

2. *Rent:*—Rent of Shs. 54.00 for the period from the commencement of the term to the 30th day of June, 1966 shall be paid on acceptance of the offer. Thereafter an annual rent of Shs. 27.00 shall be payable in advance on the first day of July in every year provided that the Commissioner for Lands may revise the said annual rent by giving written notice to the Occupier at least six calendar months before the date on which the revision is to take effect.

3. *Buildings:*—Not later than one year after the commencement of the term the Occupier shall have on the land a building of a type and standard approved by the Commissioner for Lands/~~Area Commissioner~~. The Occupier shall at no time have or erect on the land any building not approved by the Commissioner for Lands/~~Area Commissioner~~. Any building on the land shall also comply with any Township Building Rules and any other statutory regulations or requirements in force in the area. All approved buildings on the land shall be maintained by the Occupier in good repair to the satisfaction of the Commissioner for Lands/~~Area Commissioner~~.

~~*4. User:—The land shall be used for trading and residential purposes only.~~

*Delete whichever are inapplicable.

~~*4. User:—The land shall be used for trading and residential purposes only.—Sub-letting to Africans is allowed but occupation by Arabs or Somalis or any person not of an African race is not allowed.~~

~~*4. User:—The land shall only be used for residential purposes.~~

*4. *User:*—The land shall only be used for residential purposes. Sub-letting to Africans for residential purposes is allowed but occupation by Arabs or Somalis or any person not of an African race is not allowed.

5. *Termination:*—On the termination of the Right of Occupancy the Occupier shall not be entitled to a renewal thereof or to any compensation, and he shall remove any buildings and make the land clean and tidy within such period as the Commissioner for Lands/Area Commissioner may require.

6. *Revocation:*—The President may revoke the Right of Occupancy for good cause, including the failure of the Occupier to comply with these conditions.

7. *Surrender of previous rights:*—In accepting this Right of Occupancy the Occupier surrenders any Right of Occupancy or other title he may already have over the said land.

8. *Notices:*—Any notice to be given to the Occupier shall be duly given if posted to his last known postal address, or left with any person in physical occupation of the land, or left affixed in a conspicuous position on the land or on any building thereon.

9. *Land Ordinance and Regulations:*—The Right of Occupancy is subject to the provisions of the Land Ordinance (Cap. 113 of the Laws) and the regulations thereunder and to any enactment in substitution therefor or amendment thereof.

B. Swetu

for Commissioner for Lands

Delete the words which do not apply, and where grantees take as tenants in common add the share of each after his signature.

I/~~We~~ accept the Right of Occupancy offered and agree to comply with the conditions set out above. ~~We will hold the Right of Occupancy as joint tenants/tenants in common in the shares shown against our signatures.~~

Signatures: Sofia Thomas

Date 15/4/65

14. Request & Approval letter for Substation land

(1) Mwananyamala substation

No.18

Valuation Report 18.

HATI YA FIDIA:

MLIPAJI FIDIA: SHIRIKA LA UMEME TANZANIA- TANESCO

MAHALI: MWANANYAMALA B

MRADI: UJENZI WA KITUO KIODOGO CHA KUSAMBAZA UMEME (33/11kV, MWANANYAMALA SUBSTATION)

JUMLA KUU TSHS. 417,890,494.90

S/NA	KUMB:NA KND/VAL	JINA LA MWENYE MALI	MAHALI	THAMANI YA JENGO	THAMANI YA ARDHI	POSHO YA MAKAZI	POSHO YA USUMBUFU	POSHO YA USAFIRI	JUMLA TSHS	SAHIHI/DOLE GUMBA
1	MWNB/001	THOMAS SAIDI MKWELA	MWANANYAMALA B	94,538,317.50	71,208,000.00	25,920,000.00	13,259,705.40	500,000.00	205,426,022.90	
2	MWNB/002	FIKIRINI BASHIRI SHABANI FARIJALA	MWANANYAMALA B	99,498,600.00	74,764,800.00	23,760,000.00	13,941,072.00	500,000.00	212,464,472.00	
		JUMLA KUU		194,036,917.50	145,972,800.00	49,680,000.00	27,200,777.40	1,000,000.00	417,890,494.90	

Valuer
Sahihi ya Mthamini aliyefanya Uthamini ....

Municipal Valuer
Sahihi ya Mthamini wa Manispaa ....

Chief Government Valuer
Sahihi ya Mthamini Mkuu wa Serikali ....

UNITED REPUBLIC OF TANZANIA
FROM THE DESK
GOVT. CHIEF VALUER
VALUATION APPROVED
17/01/2013 | OFFICER INCHARGE | CHIEF VALUER
P. O. BOX

HALMASHAURI YA MANISPAA YA KINONDONI
AFISA MTENDAJI KATA YA MAKUMBUSHO
SAHIHI
TAREHE 22/01/2013
DAR-ES-SALAAM

Ward executive officer
Sahihi ya Afisa Mtendaji Kata ....

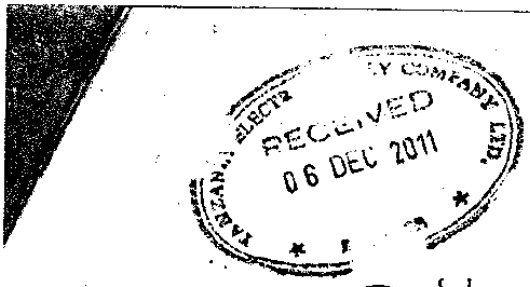
Land officer
Sahihi ya Afisa Ardhi 21/01/13

District Commissioner
Sahihi ya Mkuu wa Wilaya 24/1/2013
MKUU WA WILAYA KINONDONI

Sahihi ya Mkuu wa Mkoa ....
Regional Commissioner of Dar es Salaam

14. Request & Approval letter for Substation land

(2) Jangwani Beach substation



Katika Kujibu Tafadhali
Nakili:MMJ/2153-1 (CPD)

JESHI LA ULINZI LA WANANCHI WA TANZANIA

Simu ya Upepo: "N G O M E"
Simu ya Mdomo: DSM 2150556/62
Telefax: 2153429

Makao Makuu ya Jeshi,
Sanduku la Posta 9203,
DAR ES SALAAM 02 Desemba, 20:

Mkurugenzi Mtendaji,
Shirika la Umeme Tanzania,
Sanduku la Posta 9024,
DAR ES SALAAM, Tanzania.

Kupatiwa Kiwanja Kujenga Kituo cha Kupozea Umeme

Rejea barua DMD (D&CS/SMD/MAJESHI ya tarehe 28 Septemba, 2011.

Makao Makuu ya Jeshi (MMJ) yanakiri kupokea barua iliyorejewa hapo juu. MMJ yanapongeza hatua zinazochukuliwa na shirika katika kutoa huduma kwa jamii.

MMJ yanatoa kibali kutumia kiwanja A2 kama kilivyoainishwa kwenye mchoro mlioambatisha. MMJ yametoa eneo hilo litumike kwa kazi hiyo bila kubadilisha umiliki wa ardhi ambao utaendelea kuwa wa Jeshi. MMJ yanawatakia kazi njema katika kutoa huduma hii muhimu kwa jamii.

Copy to: PRE
Land Surveyor
DM - Mbezi
Retain original

6/12/11

(L. E. Mndeme, ndc)
Meja Jenerali
Kny:Mkuu wa Majeshi ya Ulinzi

14. Request & Approval letter for Substation land

(2) Jangwani Beach substation

Jangwani Beach SS 用地取得

TANZANIA PEOPLE'S DEFENCE FORCE

REF: MMJ/2153-1(CPD)

Telex: "NGOME"

Telephone:DSM 2150556/62

Telefax 2153429.

TPDF HEAD QUARTER

P.O.Box 9203,

DAR ES SALAAM.

02.December,2011.

Managing Director,

Tanzania Electric Supply Company Limited,

P.O.Box 9024.

DAR ES SALAAM, Tanzania.

Re: RELEASE OF PLOT TO BUILD A SUBSTATION.

Refer your later ref: DMD (D&CS/SMD/MAJESHI dated 28th September,2011.

Tanzania People's Defence Force head quarters acknowledge to receive the letter with the above heading. Tanzania People's Defence Force head quarters has been encouraged by TANESCO on the measure taken to provide good service to Community.

Tanzania People's Defence Force head quarters here by authorize to use land parcel No A2 as shown in the attached sketch with an area of 1,325 m^2. Tanzania People's Defence Force head quarters had authorized to use that area without changing the title deed. The plot will remain to be the property of Tanzania People's Defence Force head quarters.

Tanzania People's Defence Force wishes you all the best in providing service good to Community

Yours Faithfully

Signed by

(L. E.Mndeme,ndc)

Major General

For: **CHIEF DEFENCE OFFICER.**

14. Request & Approval letter for Substation land

(2) Jangwani Beach substation

"Tunayaangaza Maisha Yako" TANESCO "We Light Up Your Life"

SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Ubungo Head Office, "Umeme Park", P.O.Box 9024 Dar Es Salaam, Tanzania. Tel: +255 22 2451130/9. Fax: +255 22 2452026

Our Ref: DMD(D&CS/SMD/MAJESHI

Date: 28 Septemba, 2011

Mkuu wa Majeshi,
Makao Makuu ya Jeshi la Wananchi (JWTZ),
S. L. P. 9203,
DAR ES SALAAM.

Ndugu,

YAH: OMBI LA KUPATIWA SEHEMU YA KIWANJA CHA JESHI KILICHOPO ENEO LA JANGWANI BEACH ILI KUJENGA KITUO CHA KUPOOZEA UMEME; 33/11KV KWA MSAADA WA SERIKALI YA JAPAN KUPITIA JICA.

Tafadhali rejea somo la hapo juu.

Tumepata msaada kutoka serikali ya Japan kwa ajili ya kujenga vituo vinne vya kupoozea umeme wa msongo wa 33/11kV katika manispaa ya Kinondoni. Maeneo yaliyopendekezwa kwa ajili ya vituo hivyo ni Kawe, Jangwani Beach, Msasani/Masaki na Mwananyamala.

engo la kujenga kituo cha kupoozea umeme (substation) eneo la Jangwani Beach ni kuvipunguzia mzigo vituo vya jirani ambavyo tayari vimeshazidiwa. Pia ili kupunguza mzigo mkubwa uliopo kwenye njia ndefu za mifumo ya umeme maeneo ya Mbezi Beach, Mbezi Kilongawima, Jangwani Beach na sehemu ya Salasala tunahitaji kuwa na kituo hicho ili kuboresha mifumo yetu na kupata umeme mzuri ulio katika kiwango bora katika maeneo hayo.

14. Request & Approval letter for Substation land

(2) Jangwani Beach substation

Hivyo basi, tunaomba kipande cha ardhi chenye eneo la karibu mita za mraba 1,325 (1325m²) kama tulivyoonyesha kwenye mchoro (sketch) ulioambatanishwa kikiwa ni asilimia 16.5 ya eneo lote lililowekwa wigo wa waya (chain link fence).

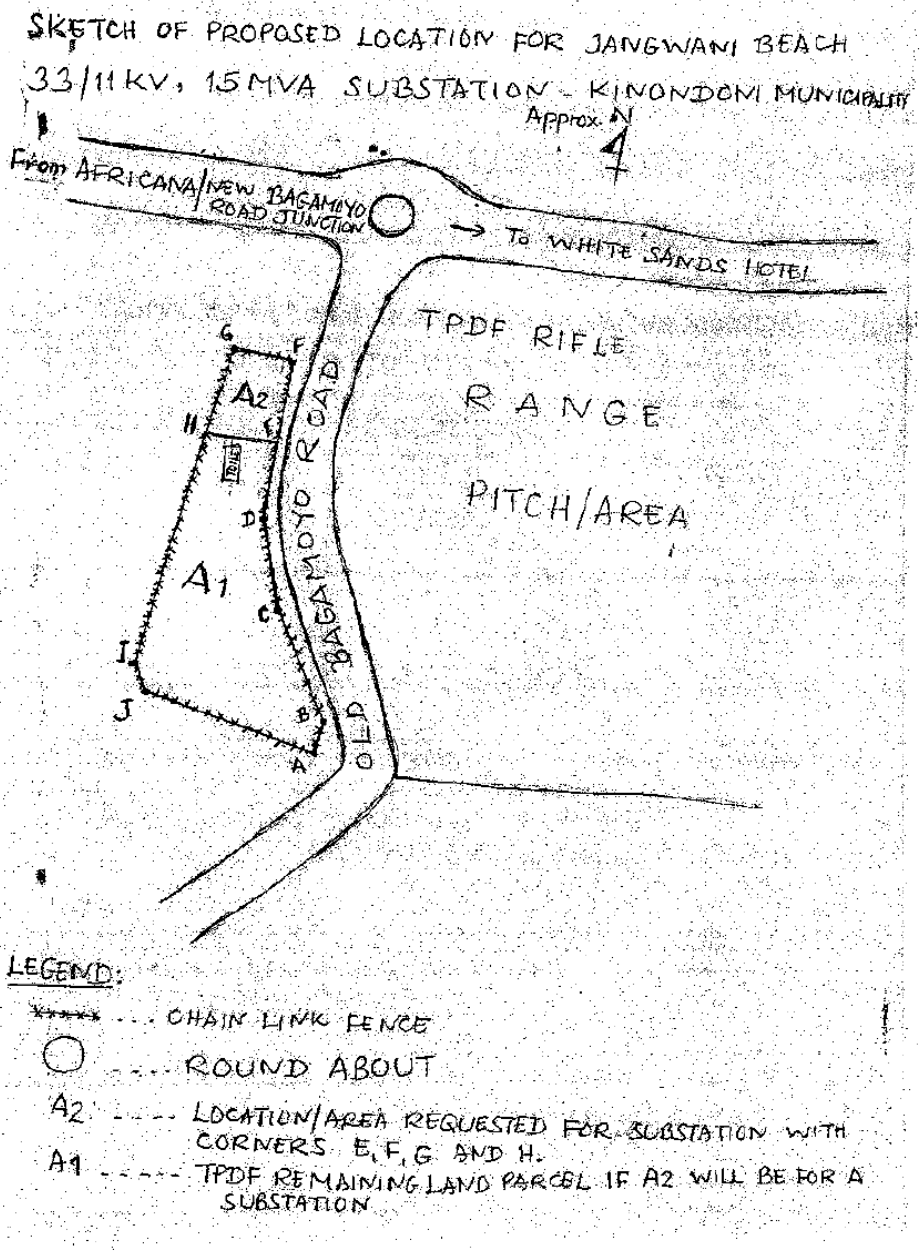
Msaada wa ofisi yako unahitajika sana ili kufanikisha mradi huu.

Wako Amini,
KNY: SHIRIKA LA UMEME TANZANIA,

WILLIAM G. MHANDO
MKURUGENZI MTENDAJI
WGM/FJM/ssm

14. Request & Approval letter for Substation land

(2) Jangwani Beach substation



14. Request & Approval letter for Substation land

(2) Jangwani Beach substation

PROPOSED 33/11KV, 15MVA SUBSTATION AT JANGWANI BEACH NEAR RIFLE RANGE AREA

COORDINATE LIST EXTRACTED BY HAND HELD GPS-Garmin Map 60Cx. TO ALL CORNER POINTS AS INDICATED IN THE SKETCH

	N	E
A	9258951	524686
B	9258955	524683
C	9258956	524629
D	9258962	524688
E	9258988	524553
F	9259036	524518
G	9259027	524503
H	9258976	524527
I	9258891	524571
J	9258893	524584

NOTE: 1. COORDINATES ARE IN METRES (m)
2. COORDINATES WERE OBSERVED ON ACCURACY OF ±3M.

AREA COMPUTED FROM COORDINATES:

- TOTAL AREA (A1 + A2) = 8043 m^2
- AREA FOR PROPOSED SUBSTATION = 1325 m^2 (A2)
- REMAINING PORTION (A1) = 6718 m^2
- A2 IS ABOUT 16.5 % OF THE TOTAL AREA.

14. Request & Approval letter for Substation land

(3) Muhimbili substation

RM/IL/GEN/38

24th September, 2012

Managing Director
Muhimbili National Hospital
P.O. Box
Dar essalaam

Dear Sir/Madam,

RE: REQUEST FOR A SPACE/PLOT AT YOUR COMPOUND TO ESTABLISH A 15MVA, 33/11KV SUBSTATION

The above heading refers.

In one of our effort to improve power reliability, TANESCO has a plan to establish a 33/11kV substation at Muhimbili compound. This substation is very important for reliable power supply to the hospital and the nearby residents.

Currently we have been experiencing a lot of power breakdowns at Muhimbili hospital due to the fact that, the current power is coming far away from the hospital and hence facing a lot of challenges and obstacles along the way. These challenges include cable theft, vandalism, line overload and other the like. To overcome these challenges/problems we are looking for a space where we can establish a substation which will be close to our hospital.

Please avail us with a space of about 182M² as per attached map plan to enable us to establish the above named substation and hence be able to introduce a power line, which shall be dedicated to Muhimbili Hospital only.

Yours faithfully,
For: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

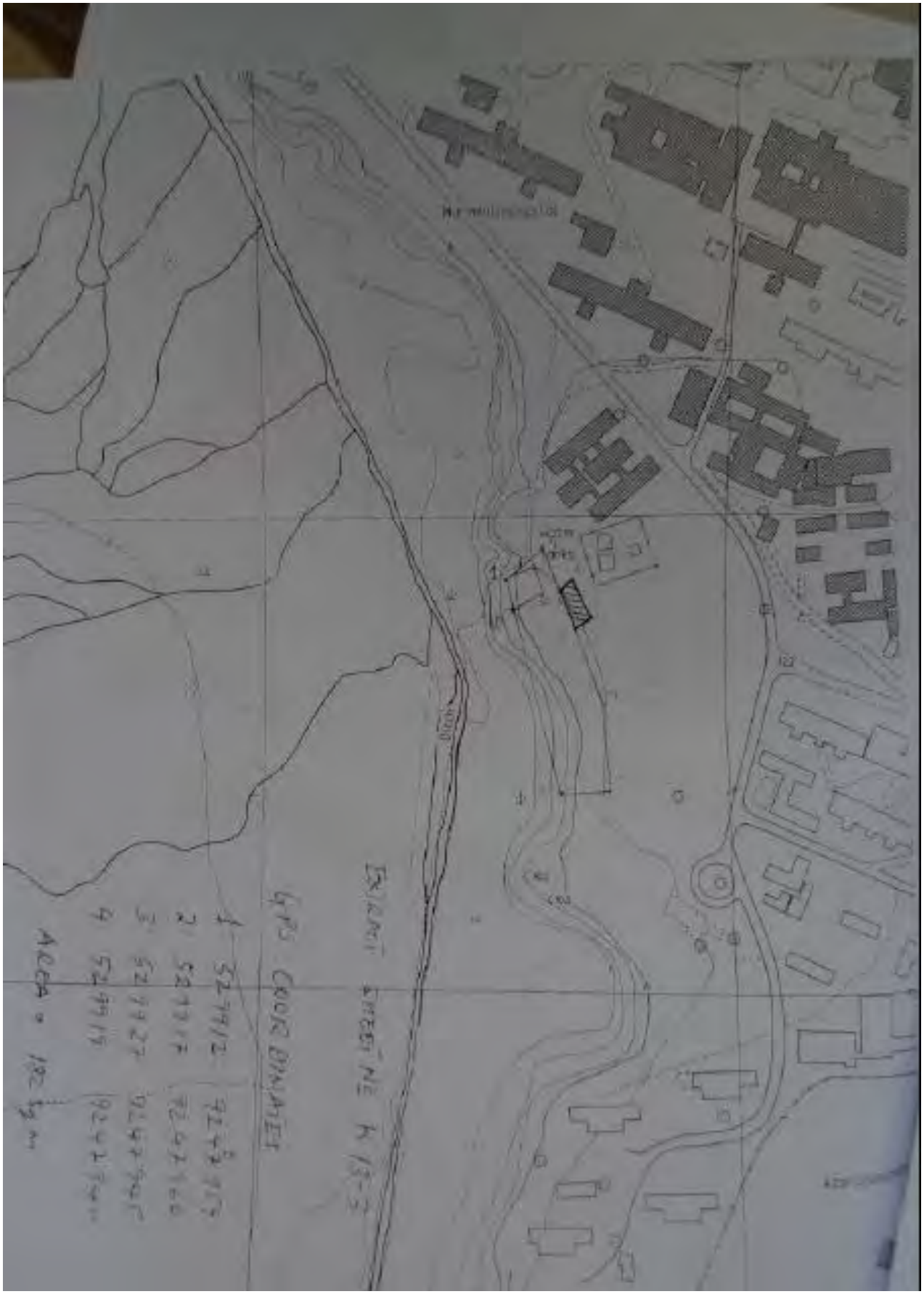
Original Signed By
AMOS W. MAGANGA

ENG. AMOS W. MAGANGA
AG.REGIONAL MANAGER – ILALA
AWM/ga

cc: Senior Zonal Manager – (DSM & Coast)
cc: Manager Design and Planning

14. Request & Approval letter for Substation land

(3) Muhimbili substation



14. Request & Approval letter for Substation land

(3) Muhimbili substation

RM/IL/GEN/36

24th September, 2012

Managing Director
Ilala Municipal Council
P.O. Box
Dar essalaam

Dear Sir/Madam,

RE: REQUEST FOR A SPACE/PLOT AT JANGWANI NEAR MUHIMBILI COMPOUND TO ESTABLISH A 15MVA, 33/11KV SUBSTATION

The above heading refers.

In one of our effort to improve power reliability, TANESCO has a plan to establish a 33/11kV substation near to Muhimbili National Hospital. This substation is very important for reliable power supply to the hospital and the nearby residents.

Currently we have been experiencing a lot of power breakdowns at Muhimbili hospital due to the fact that, the current power is coming far away from the hospital and hence facing a lot of challenges and obstacles along the way. These challenges include cable theft, vandalism, line overload and other the like. To overcome these challenges/problems we are looking for a space where we can establish a substation which will be close to our hospital.

Please avail us with a space of about 3735M² as per attached map plan to enable us to establish the above named substation and hence be able to introduce a power line, which shall be dedicated to Muhimbili Hospital only.

We hope our request will be considered in a positive way.

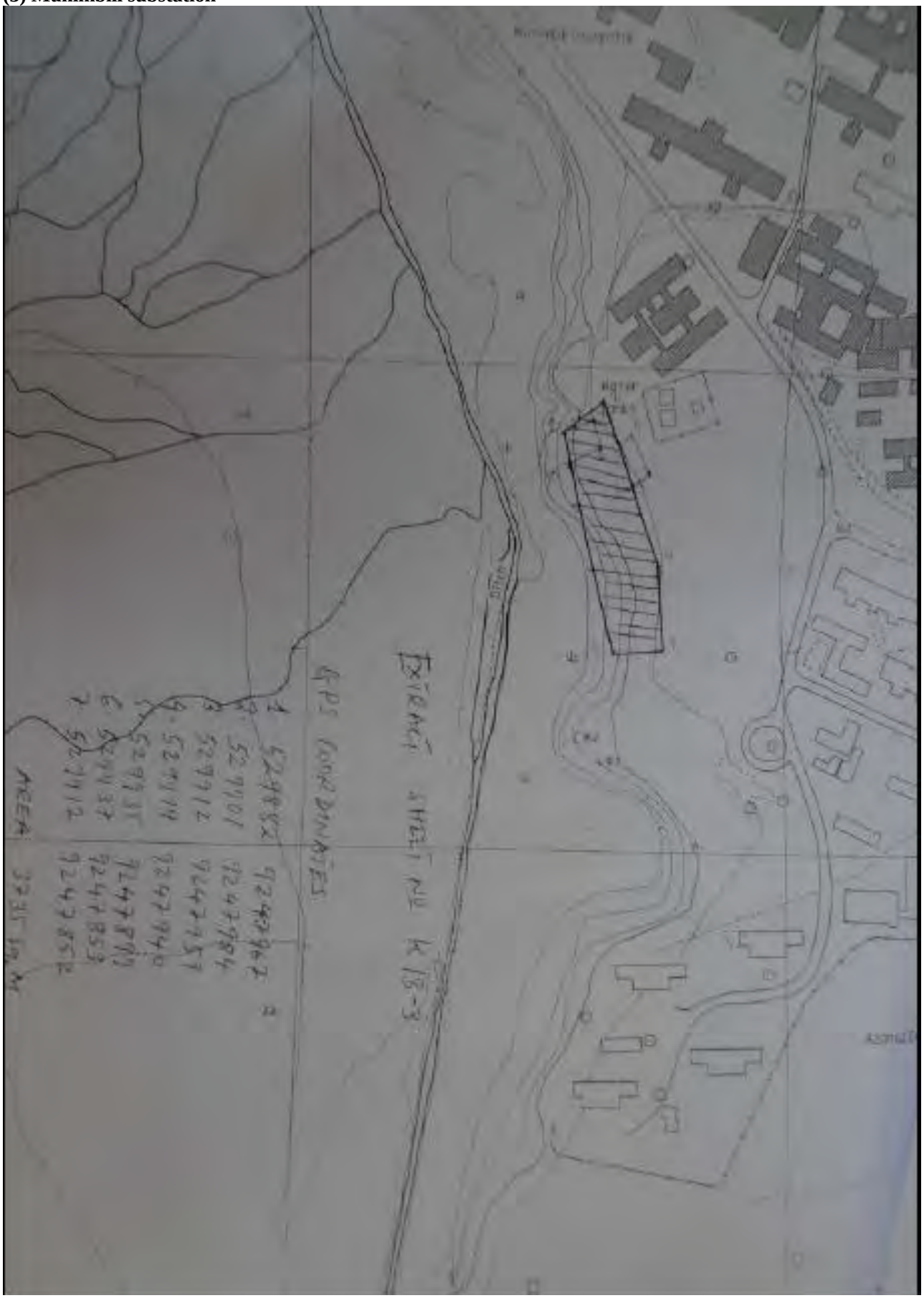
Yours faithfully,
For: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

ENG. AMOS W. MAGANGA
AG.REGIONAL MANAGER – ILALA
AWM/gn

cc: Senior Zonal Manager – (DSM & Coast)
cc: Manager Design and Planning

14. Request & Approval letter for Substation land

(3) Muhimbili substation



14. Request & Approval letter for Substation land

(3) Muhimbili substation

MUHIMBILI NATIONAL HOSPITAL

Cables: "MUHIMBILI"
Telephones: 255-22-2151367-9
FAX: 255-22-2150534
Website: www.mnh.or.tz
Email: info@mnh.or.tz
In reply please quote:
Ref: MNH/E2/II/II/69

Postal Address:
P.O. Box 65000
DAR ES SALAAM
Tanzania

TANZANIA ELECTRIC SUPPLY CO. LTD. REGIONAL OFFICE 07 OCT 2012 ILALA DAR ES SALAAM

1st October 2012

Regional Manager,
Tanzania Electrical Supply Company Ltd.,
Ilala,
P.O. Box 9024,
DAR ES SALAAM

Re: REQUEST FOR A SPACE/PLOT TO ESTABLISH A 15MVA, 33/11KV SUB-STATION

Reference is made to your letter No. RM/IL/GEN/38 of 24th September 2012 regarding the above captioned subject matter.

I wish to inform you that we have noted your effort to ensure reliability of the power supply to the Hospital. The Hospital has in principal accepted your request and will provide the space as per your request so that to enable you to establish the above named sub-station and hence to introduce a power line which will be dedicated to Muhimbili National Hospital only.

Thank you for your continued cooperation.

Yours,

Dr. M. A. Njelekela
EXECUTIVE DIRECTOR

/ajh.

All correspondence to be addressed to the Executive Director

14. Request & Approval letter for Substation land

(3) Muhimbili substation

"Tunayaangaza Maisha Yako" TANESCO "We Light Up Your Life"

SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Ubungo Head Office, "Umeme Park", P.O. Box 9024 Dar Es Salaam, Tanzania, Tel: +255 22 2451130/9. Fax: +255 22 2451 026

Our Ref: Date:

Our ref: RM/IL/GEN/38 15th October, 2013

Executive Director,
Muhimbili National Hospital,
DAR ES SALAAM

RE: **REHABILITATION OF SUBSTATIONS AND CONSTRUCTION OF NEW 33KV LINES AND SUBSTATIONS IN DAR ES SALAAM CITY FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA.**

Subject: **Request for a temporary stock yard space and an access to the proposed 15MVA, 33/11kV Substation at Muhimbili compound (playground area)**

Please refer to the captioned subject.

In order to improve power reliability at Muhimbili Hospital and its neighborhood, TANESCO, is intending to establish a 33/11kV substation at your compound next year. By so doing we are going to improve our services to customers including Muhimbili National Hospital.

We once again thank you for accepting our request for a space to construct the above mentioned substation. However we still need a space of land for storage of construction materials and an access road to the substation plot.

The Google map is attached herewith for your easy reference.

Please kindly avail us with the requested space to cater the purpose.

Yours faithfully,
For: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Eng. Athanasius H.J. Nangali
REGIONAL MANAGER ILALA
AHJN/dem

14. Request & Approval letter for Substation land

(3) Muhimbili substation

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE VICE CHANCELLOR

P.O. BOX 65001 • DAR ES SALAAM • TANZANIA
Telephone:+255 022 2150302-6 Ext. 209 * Direct Line: +255 022 2151596 * Telefax: +255 022 2150465
E-mail: vc@muhas.ac.tz
E-mail: vc@muhas.ac.tz
E-mail: vc@muhas.ac.tz

MU/01/0007/017/100 24th December, 2013

Managing Director,
Tanzania Electric Supply Company Limited,
P.O.Box 9024,
DAR ES SALAAM

RE: REHABILITATION OF SUBSTATION AND CONSTRUCTION OF NEW 33KV DISTRIBUTION LINES IN DSM CITY FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA

SUB: Request for an access road to the proposed 15MVA, 3311kV substation at Muhimbili Campus (on the edge of playground area)

Reference is made to your letter SMD/MPD/JICA dated 19th December, 2013 regarding the above subject.

This is to acknowledge that the office of Vice Chancellor received your letter mentioned above on 23rd December, 2013 worked on it.

Please be informed that your request for an access road to the proposed 15MVA, 33/11kV substation at Muhimbili campus (on the edge of MUHAS playground) has been approved as requested.

Take note that the vehicles should not pass within the play ground. Also in order to avoid unnecessary delays at the gate on security issues, you should introduce your staff who will be involved in the activity to MUHAS security Department and will be given ID for the whole period of implementation.

Hamis Kamandwa
For: VICE CHANCELLOR

cc: Deputy Vice Chancellor- **ARC, MUHAS**
cc: Deputy Vice Chancellor – **PFA, MUHAS**
cc: Director of Planning and Development- **Muhimbili Campus**
cc:: Head, Security Department ,**MUHAS** – prepare the ID for them
cc: Manager, SSB, **MUHAS**
cc: Estates Manager, **MUHAS**

MANAGING DIRECTOR'S OFFICE RECEIVED 27 DEC 2013 TANESCO DSM

TANZANIA ELECTRIC SUPPLY COMPANY LIMITED RECEIVED BY: 27 DEC 2013 MAIL ROOM HEAD OFFICE

30 DEC 2013

Appendix 15 Request and Approval for 33 kV Distribution Line Construction

TANZANIA NATIONAL ROADS AGENCY

Tanzania National Roads Agency
TANROADS
Good roads for national development

Date: 4th July 2013
Our Ref: RM/TNR/DSM/R.80.415/VoL.V/57

P.O Box 4833
Mobile Exchange
Mandela Road
Dar es Salaam

Managing Director,
Tanzania Electric Supply Company Limited
P.O. Box 9024,
DAR ES SALAAM - Fax 2452026

RE: **REHABILITATION OF SUBSTATIONS AND CONSTRUCTION OF NEW DISTRIBUTION LINES AND SUB STATIONS IN DAR ES SALAAM FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA**

Sub: **Request for Construction of 33kV line along New and Old Bagamoyo Road Reserve**

PERMIT No. TRD/DSM/2013/2014/T/P/01

Reference is made to your letter dated 1st July 2013 with reference SMD/MPD/JICA regarding the above captioned subject.

After going through your submssion, we have accepted your request to construct 33Kv Power Line along New and Old Bagamoyo road basing on the following conditions:-

1. The work shall be executed in a accordance with submitted DWG No DL-R-01 showing the Route Map from Tegeta S/S to Jangwani Beach S/S.
2. The 33kV power line shall be constructed within 1.5m from the Road Reserve Marker Posts along New Bagamoyo road and 1.5m from the plot boundaries of Old Bagamoyo road (Africana to TPDF Riffle Range Ground section).
3. Where the power line will cross the road, you are strictly required to maintain the minimum allowable clearance height of 7m from the ground.
4. The Agency reserves the right to carry out any appropriate changes to the part of the developments within the road reserve without any compensation.
5. Carrying the works contrary to this permit shall be considered as an encroachment to the road resrve and the Agency shall take legal actions as per Highway Ordinance Cap. 167.

Tel. + 255 22 2450185/2450046 Fax. + 255 22 2450626, E-Mail: rmo@dsm.tanroads.org

6. A normal supervision fee of **Tshs 2,900,000.00** shall be charged and paid before the commencement of the works as detailed in the attached sheet.

7. When you are ready to to start the works, please inform this office so that arrangements can be made for supervision and close monitoring of your work with regard to compliance to the above conditions.

8. Acknowledge recept of this letter.

Ndyamukama J
Regional Manager
DAR ES SALAAM

Tel: + 255 22 2450185/2450046 **Fax:** + 255 22 2450626, **E-Mail:** rmo@dsm.tanroads.org

TANZANIA NATIONAL ROADS AGENCY

Good roads for national development

P.O Box 4838
Mabibo External
Mandela Road
Dar es Salaam

Date: 5th July 2013
Our Ref: RM/TNR/DSM/R.80.415/VoL.V/58

Managing Director,
Tanzania Electric Supply Company Limited
P.O. Box 9024,
DAR ES SALAAM - Fax 2452026

RE: REHABILITATION OF SUBSTATIONS AND CONSTRUCTION OF NEW DISTRIBUTION LINES AND SUB STATIONS IN DAR ES SALAAM FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA

Sub: Request for Construction of 33kV line along New and Old Bagamoyo Road Reserve

Reference is made to your letter dated 1st July 2013 with reference SMD/MPD/JICA regarding the above captioned subject.

After going through your submssion, we have accepted your request to construct 33Kv Power Line along New and Old Bagamoyo road.

The permit will be issued after payment of **Tshs 2,900,000.00** exclusive of VAT being the estimated supervision cost during implementation of your project.

The breakdown of estimated supervision cost is attached to this letter.

Ndyamukama, J.
Regional Manager
DAR ES SALAAM

Tel: + 255 22 2450185/2450046 Fax: + 255 22 2450626, E-Mail: rmo@dsm.tanroads.org

CONSTRUCTION OF 33kV POWER LINE ALONG NEW & OLD BAGAMOYO RD

ESTIMATION OF SUPERVISION COST

Item	Description	Unit	Qty	Rate (Tshs)	Amount (Tshs)
1	Supervision Vehicle per day including fuel	Days	20	80,000.00	1,600,000.00
2	Allowance of the Supervisor, TANROADS Engineer	Days	20	40,000.00	800,000.00
3	Allowance of driver	Days	20	25,000.00	500,000.00
	Total estimated supervision Costs				**2,900,000.00**

HALMASHAURI YA MANISPAA YA ILALA

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA MANISPAA

S.L.P. Na. 20950
Simu Na. 2128800
2128805
Fax Na. 2121486

Kumb. IMC/HT.9/

Ofisi ya Mkurugenzi
Manispaa ya Ilala

Tarehe: 04/07/2013

Mkurugenzi wa TANNESCO,
UBUNGO HEAD OFFICE,
S.L.P. 9024,
DAR ES SALAAM.

YAH: **KIBALI CHA KUPITISHA MIUNDOMBINU YA UMEME BARABARA YA MAGORE HADI HOSPITALI YA MUHIMBILI**

Tafadhali husika na kichwa cha habari hapo juu na pia rejea barua yako ya tarehe 24/04/2013 yenye Kumb. Na.SMD/MPD/983/JICA.

Ofisi ya Mkurugenzi wa Manispaa ya Ilala imepokea barua kutoka ofisi yako ya kuomba kibali cha kupitisha miundombinu ya umeme na kukarabati kituo kidogo cha umeme.

Baada ya kupitia barua yako, napenda kukufahamisha kwamba kibali kimetolewa cha kuwaruhusu kazi hiyo kufanyika, Pamoja na kibali hiki tafadhali zingatia masharti yafuatayo:

i. Unatakiwa kuwasiliana na Kitengo cha Maliasili na Idara ya Ujenzi Manispaa ya Ilala kabla ya kuanza utekelezaji.
ii. Kuzingatia sheria za usalama barabarani na kutunza utulivu katika maeneo yatakayotumiwa kwa shughuli hiyo.
iii. Mnatakiwa kulipia gharama za posho ya usimamizi kwa watumishi wa Halmashauri watakaoshiriki katika zoezi hilo.
iv. Unatakiwa kurudishia miundombinu itakayoathirika wakati wa utekelezaji wa kazi hiyo kwenye hali yake ya kawaida mara ukamilishapo kazi zako.

Nakutakia kazi njema.

Arch. A.J. Mcha
Kny: **Mkurugenzi wa Manispaa,**
Halmashauri ya Manispaa ya Ilala.

Nakala: Mkurugenzi wa Manispaa ya Ilala – aione kwenye jalada

15. Request and Approval for 33 kV Distribution Line Construction

KINONDONI MUNICIPAL COUNCIL

ALL CORRESPONDENCES TO BE ADDRESSED TO THE MUNICIPAL DIRECTOR

Tel: 2170173
Fax: 2172951

In reply please quote:

Ref: KMC/MEK /T20/26

MUNICIPAL DIRECTOR
KINONDONI MUNICIPAL COUNCIL
P. O. BOX 31902
DAR ES SALAAM

Date: 03/07/2013

MANAGING DIRECTOR,
TANZANIA ELECTRIC SUPPLY CO. LTD,
P.O. BOX 9024,
DAR ES SALAAM

RE: PERMIT FOR CONSTRUCTION OF 33 KV LINES FROM MAKUMBUSHO SUB STATION TO MASAKI, MAKUMBUSHO SUB STATION TO MWANANYAMALA AND TEGETA SUB STATION TO JANGWANI BEACH ALONG THE ROAD RESERVE AND TREE CUTTING ALONG THE LINES CORRIDOR.

Kindly refer to your letter with reference number SMD/PMD/JICA dated 24th April, 2013 on the above subject matter.

I would like to thank you for upgrading the electric power supply in the Kinondoni Municipaiity and that this project will enhance the development of our people.

The permit is hereby granted with the following conditions;-

1. You must contact the Municipal surveyor at your own cost for the roads demarcation.

2. TANROADS must be involved for the power transmission in the trunk roads such as Bagamoyo road and Old Bagamoyo road etc.

3. The removal of the road reserve encroachers will be financed by your firm through our assistance. Tree cutting is inevitable in the transmission corridor so as to avoid electric accidents/shocks.

Thank you for your good co-operation with our Municipality.

Eng. Uriyo G. A
For: **MUNICIPAL DIRECTOR**
KINONDONI MUNICIPAL COUNCIL

CC.

- **Municipal Surveyor** – assist them according to the By Laws.

15. Request and Approval for 33 kV Distribution Line Construction

KINONDONI MUNICIPAL COUNCIL

ALL CORRESPONDENCES TO BE ADDRESSED TO THE MUNICIPAL DIRECTOR

Tel: 2170173
Fax: 2172951

In reply please quote:

Ref: KMC/MEK /T20/26

MUNICIPAL DIRECTOR
KINONDONI MUNICIPAL COUNCIL
P. O. BOX 31902
DAR ES SALAAM

Date: 03/07/2013

MANAGING DIRECTOR,
TANZANIA ELECTRIC SUPPLY CO. LTD,
P.O. BOX 9024,
DAR ES SALAAM

RE: PERMIT FOR CONSTRUCTION OF 33 KV LINES FROM MAKUMBUSHO SUB STATION TO MASAKI, MAKUMBUSHO SUB STATION TO MWANANYAMALA AND TEGETA SUB STATION TO JANGWANI BEACH ALONG THE ROAD RESERVE AND TREE CUTTING ALONG THE LINES CORRIDOR.

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Thank you for your good co-operation with our Municipality.

Eng. Uriyo G. A
For: **MUNICIPAL DIRECTOR**
KINONDONI MUNICIPAL COUNCIL

CC.

- **Municipal Surveyor** – assist them according to the By Laws.

Appendix 16 Draft Monitoring Form

16. Draft Monitoring Form

Based on the monitoring plan, the draft monitoring forms are shown as below.

<Construction Phase>

1. Permission

Item	Result of monitoring
Status of obtaining environmental permits (date / name of permit / status)	
Status of compliance with covenants of environmental permits	

2. Stakeholder consultation

No.	Date	Participants (number of participants, organization)	Agenda / Comments from participants	Measures taken against the comments
1				
2				
3				

3. Waste

No.	Substation name	Type of waste	Hazardous / Non-hazardous	Amount per month	Disposal method	Contractor
1						
2						
3						

4. Resettlement

Payment of compensation

Lot	Number of total affected household (HHs) (A)	Number of household received compensation (B)	Completion rate% （B/A x 100）
Lot1			
Lot2			
Lot3			

Implementation of relocation

Lot	Number of total affected household (HHs) (A)	Number of household relocated (B)	Completion rate% （B/A x 100）
Lot1			
Lot2			
Lot3			

Grave removal for Ubungo-Ilala 132kV Transmission line

Number of total affected graves(A)	Number of graves compensated	Number of graves relocated (B)	Completion rate % （B/A x 100）
250			

5. Existing Social Infrastructure and Institution

Item	Result of monitoring
Damage on the existing water tank adjacent to Muhimbili substation site during construction	

6. Accident

Item	Monitoring period	Result of monitoring
Implementation status of Occupational health and safety management plan		
Accidents occurred (number of accident / place / type of accident / measures taken)		

<Operation Phase>

1. Waste

No.	Substation name	Type of waste	Hazardous / Non-hazardous	Amount per month	Disposal method	Contractor
1						
2						
3						

2. Groundwater and Soil contamination

Substation name	Date	Observation on oil leakage from transformers (result of inspection)	Measures taken
Ilala			
Msasani			
Muhimbili			
Jangwani Beach			
Mwananyamala			

3. Noise level (Equivalent continuous A-weighted sound pressure Level)

Substation name	Time	Unit	Location	Noise level	Standard	
					Tanzania	IFC
Mwananyamala	6:00-22:00	dBA (L_{Aeq})			50 dBA	55 dBA
	22:00-6:00	dBA (L_{Aeq})			35 dBA	45 dBA
Muhimbili	6:00-22:00	dBA (L_{Aeq})			55 dBA	55 dBA
	22:00-6:00	dBA (L_{Aeq})			45 dBA	45 dBA
Jangwani Beach	6:00-22:00	dBA (L_{Aeq})			55 dBA	55 dBA
	22:00-6:00	dBA (L_{Aeq})			45 dBA	45 dBA

Appendix 17 Factual Geotechnical Report

FACTUAL GEOTECHNICAL REPORT FOR THE FIVE ELECTRIC POWER SUBSTATIONS LOCATED IN DAR ES SALAAM, TANZANIA

Factual Geotechnical Report

YACHIYO ENGINEERING CO., LTD.
LOMO Consult LTD

May 2013

7. ESTIMATION OF BEARING CAPACITY OF THE SOILS

7.1 General

Relatively fair homogeneity properties for each site was demonstrated by the apparently cohesion-less (silt SANDS, SM), moderately plastic (clayey SANDS, SC) and clayey calcareous GRAVEL (GC) soils up to a depth of 10m at different site. It is therefore logical to conclude based on observations made for distinct site, for design purposes, to enable a conservative estimate of bearing capacity values for each site.

7.2 Selection and evaluation of soil parameters

The soil test results, which shall be obtained from the laboratory investigation will be analyzed and interpreted in order to derive satisfactory design parameters. Initially, values for the representative soil parameters will be conservatively chosen from the measured laboratory results. Care will be taken to ensure that the representative values for each of the 5 sites are properly applicable to the part of the design for which it is intended.

Consistency indices, derived from moisture content and liquid and plastic limit tests, shall provide a useful correlation with soil strength and stiffness indices. Isolated low or high values will be scrutinized to determine, or at least predict, their reliability and application for design purposes.

For soil parameters, such as density, for which field values can be determined with confidence from test results; the representative value was taken as 1500 kg/m^3 assuming loose SAND state of compaction.

7.3 Estimation of Bearing Capacity by Analytical Method

Use of shear strength parameters obtained from the shear box test (for cohesion-less soils) or triaxial tests (cohesive soils) are traditionally used to estimate bearing capacity of the soils by analytical approach. In addition, assumption is made on using equation for the design of vertical bearing capacity derived from plasticity theory and experimental (empirical) results under drained condition by taking into account:

- The strength of the ground, generally represented by design values (internal angle of friction and apparent cohesion).
- Load eccentricity, shape, ground inclination, groundwater pressures, hydraulic gradients and ground variability.

The equation used for bearing capacity is thus:

$$Q_{ult(net)} = CN_c + 0{,}5\gamma BN_\gamma + p_o (N_q - 1)$$

Where: $Q_{ult(net)}$ = net ultimate bearing capacity
C = cohesion
γ = bulk unit weigh (kN/m^3)
B = Width of foundation (m)
p_o = effective overburden stress to foundation level
N_c, N_y, N_q = bearing capacity factors according to AASHTO, 2004

ϕ	N_c	N_q	N_γ	ϕ	N_c	N_q	N_γ
0	5.14	1.0	0.0	23	18.1	8.7	8.2
1	5.4	1.1	0.1	24	19.3	9.6	9.4
2	5.6	1.2	0.2	25	20.7	10.7	10.9
3	5.9	1.3	0.2	26	22.3	11.9	12.5
4	6.2	1.4	0.3	27	23.9	13.2	14.5
5	6.5	1.6	0.5	28	25.8	14.7	16.7
6	6.8	1.7	0.6	29	27.9	16.4	19.3
7	7.2	1.9	0.7	30	30.1	18.4	22.4
8	7.5	2.1	0.9	31	32.7	20.6	26.0
9	7.9	2.3	1.0	32	35.5	23.2	30.2
10	8.4	2.5	1.2	33	38.6	26.1	35.2
11	8.8	2.7	1.4	34	42.2	29.4	41.1
12	9.3	3.0	1.7	35	46.1	33.3	48.0
13	9.8	3.3	2.0	36	50.6	37.8	56.3
14	10.4	3.6	2.3	37	55.6	42.9	66.2
15	11.0	3.9	2.7	38	61.4	48.9	78.0
16	11.6	4.3	3.1	39	67.9	56.0	92.3
17	12.3	4.8	3.5	40	75.3	64.2	109.4
18	13.1	5.3	4.1	41	83.9	73.9	130.2
19	13.9	5.8	4.7	42	93.7	85.4	155.6
20	14.8	6.4	5.4	43	105.1	99.0	186.5
21	15.8	7.1	6.2	44	118.4	115.3	224.6
22	16.9	7.8	7.1	45	133.9	134.9	271.8

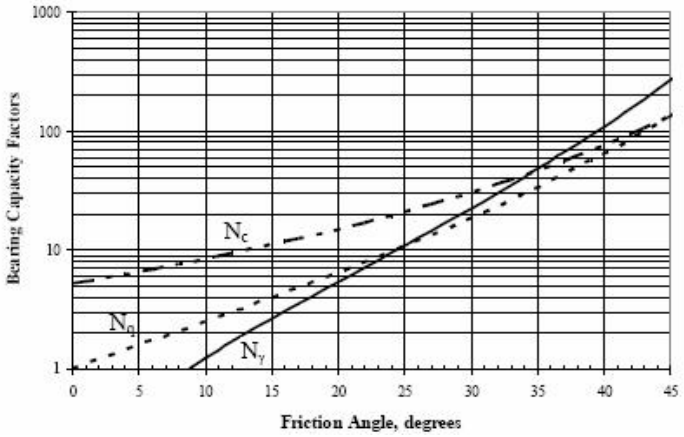

Figure 7.1: Bearing capacity factors (AASHTO 2004, with 2006 interims)

The Table 7.1 below shows the assumed cohesion, internal angle of friction, bearing capacity factors and estimated bearing capacity for each site and strata.

Site Name	Depth (m)	Apparent Cohesion (kN/m^2)	Friction angle (degrees)	Bearing Capacity Factors (N_c, N_q, $N\mu$)	Net Bearing value (kN/m^2) *FOS =2
Ilala	1.5	6.7	18	13.1, 5.3, 4.1	130
	2.5	6.5	18	13.1, 5.3, 4.1	147
	3.5	2.7	20	14.8, 6.4, 5.4	251
Muhimbili	1.5	3.7	19	13.9, 5.8, 4.7	143
	3.5	2.3	20	14.8, 6.4, 5.4	236
	5.5	30.4	25	20.7, 10.7, 10.9	580
Mwananyamala	1.5	2.1	20	14.8, 6.4, 5.4	137
	2.5	3.1	19	13.9, 5.8, 4.7	172
Jangwani Beach	1.5	36.9	21	15.8, 7.1, 6.2	287
	2.5	12.4	20	14.8, 6.4, 5.4	224
	3.5	34.3	21	15.8, 7.1, 6.2	334

Table 7.1: Estimated bearing capacity by Analytical Method

Calculations of bearing capacity using analytical have provided comparatively higher values than using empirical (SPT) method. In geotechnical analyses, conservative selection is made by taking into consideration of all other physical, mechanical properties and field observations of underlying soils.

7.4 Estimation of Bearing Capacity by Empirical Method

In this case attempt has been made to evaluate bearing capacity by using lowest SPT values at a depth of 1, 2, 3 m below ground level for each of the 5 sites. Use of SPT modelling results is considered appropriate taking cognizance of dominant underlying SAND buffs or gravelly soils at the sites. A conservative corrected SPT N value selected for design is selected as the lowest between corresponding N_{60} values as shown in Table 7.3 below.

APPENDIX 1 – BOREHOLE LOGS

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	ILALA
Drill Hole ID	BH 1
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	14.428
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 49.281'
Longitude	E 039^0 16.072'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
14.078			*Imported compacted clayey GRAVEL FILL*							
			Brownish silty SAND							LOOSE
13.478	1.00				2	2	3	6	10	
			Light greyish silty SAND collapsible	•						
13.228										
	2.00		*Pale yellow silty SAND collapsible*		2	4	6	10	14	MEDIUM DENSE
	3.00			•	4	5	7	12	15	MEDIUM DENSE
	4.00				5	8	8	16	19	MEDIUM DENSE
	5.00			•	6	8	10	18	20	MEDIUM DENSE
	6.00				5	6	9	15	15	MEDIUM DENSE
8.428										
	7.00		*Light greyish silty SAND collapsible*	•	5	7	8	15	15	MEDIUM DENSE
	8.00				5	5	6	11	10	MEDIUM DENSE
	9.00				2	4	7	11	10	MEDIUM DENSE
4.428	10.00		*END OF BORING*							

LEGEND

- ■ U4 SAMPLE
- ▲ BULK SAMPLE
- ◊ SPT SAMPLE
- ● DISTURBED SAMPLE
- GWT

Note

Stable ground water level at 9m below GL
The drilling was conducted during heavy rain season
Collapsibility emerged at a depth of 1.5 metres

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	ILALA
Drill Hole ID	BH 2
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	15.065
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 49.281'
Longitude	E 039^0 16.072'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
14.815		*Imported compacted clayey GRAVEL FILL*							
		Light to darkish grey silty SAND							
14.065	1.00			2	3	2	6	10	LOOSE
		Mottled silty SAND partilaly collapsible							
	2.00			6	6	6	12	17	MEDIUM DENSE
	3.00			3	5	6	11	14	MEDIUM DENSE
	4.00			3	5	6	11	13	MEDIUM DENSE
	5.00			4	4	5	9	10	MEDIUM DENSE
9.065	6.00			5	6	7	13	13	MEDIUM DENSE
		Light greyish coarse silty SAND							
8.365	7.00								
		Homogeneous lightish grey silty clayey SAND							
	8.00			4	8	6	14	10	MEDIUM DENSE
	9.00			9	17	17	34	30	DENSE
5.065	10.00	*END OF BORING*							

LEGEND

- U4 SAMPLE
- BULK SAMPLE
- SPT SAMPLE
- DISTURBED SAMPLE
- GWT

Note

Stable ground water level at 9m below GL
The drilling was conducted during heavy rain season
Collapsibility emerged at a depth of 1.5 metres

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	ILALA
Drill Hole ID	BH 3
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	15.706
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 49.281'
Longitude	E 039^0 16.072'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
15.356			*Imported compacted clayey GRAVEL FILL*							
14.506	1.00		*Darkish grey silty SAND*	■ ● ◊	5	6	5	11	18	MEDIUM DENSE
	2.00		*Mottled silty SAND*	■ ● ◊	6	7	7	14	19	MEDIUM DENSE
	3.00			● ◊	5	8	7	15	19	MEDIUM DENSE
	4.00				6	8	9	17	20	MEDIUM DENSE
	5.00			● ◊	6	8	9	17	18	MEDIUM DENSE
9.506	6.00			◊	10	11	13	24	25	MEDIUM DENSE
	7.00		*Yellowish grey silty SAND collapsible*	● ◊	9	10	12	22	21	MEDIUM DENSE
	8.00		*Homogeneous lightish grey silty clayey SAND*		4	9	7	16	15	
	9.00			◊	2	6	12	18	16	MEDIUM DENSE
5.706	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE
GWT

Note

Stable ground water level at 9m below GL
The drilling was conducted during heavy rain season
Collapsibility emerged at a depth of 1.5 andmetres

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MUHIMBILI
Drill Hole ID	BH 1
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	11.579
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 48.224'
Longitude	E 039^0 16.183'
Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
11.379			*Top vegetable topsoils with roots and debris*							
			Dull brown silty SAND							
	1.00			■ ◊	6	9	10	19	31	MEDIUM DENSE
	2.00			■ ◊	7	7	8	15	21	MEDIUM DENSE
	3.00			● ◊	6	8	10	18	23	MEDIUM DENSE
	4.00				7	11	13	24	28	MEDIUM DENSE
7.129										
	5.00		*Brownish grey silty SAND*	● ◊	17	15	14	29	31	MEDIUM DENSE
6.179										
5.879			*Light greyish silty clayey gravelly SAND*							
	6.00			◊	16	18	19	37	38	DENSE
			Pale yellow silty clayey SAND mixed with gravels							
4.679										
	7.00		*Mottled silty SAND mixed with whitish calacreous SAND*	● ◊	6	10	11	22	21	MEDIUM DENSE
3.979										
	8.00		*Whitish coral gravels damp*		7	10	11	22	20	MEDIUM DENSE
	9.00			◊	8	10	9	19	17	MEDIUM DENSE
1.579	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

GWT

Note
Stable GWT at 7.0 metres below GL
Whitish calcareous silts and gravels underlie

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MUHIMBILI
Drill Hole ID	BH 2
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	11.148
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 48.224'
Longitude	E 039^0 16.183'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
	1.00		*Brownrey grey silty SAND*	■ ◊	3	4	4	8	13	MEDIUM DENSE
	2.00			■ ◊	3	4	5	9	13	MEDIUM DENSE
7.848	3.00			● ◊	3	4	5	9	11	MEDIUM DENSE
7.148	4.00		*Greyish silty clayey coarse SAND mixed with GRAVELS*		2	4	6	10	12	MEDIUM DENSE
6.148	5.00		*Greyish silty clayey coarse SAND*	● ◊	5	4	5	9	10	MEDIUM DENSE
	6.00		*Whitish calcareous decomposed gravels, slighly plastic*	◊	5	5	4	9	9	MEDIUM DENSE
	7.00		GWT	● ◊	7	5	6	11	11	MEDIUM DENSE
	8.00				6	4	7	11	10	MEDIUM DENSE
	9.00			◊	8	12	13	25	22	MEDIUM DENSE
1.148	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

Note
The overbudden damp SAND up to 3m depth
Stable GWT at 7.0 metres below GL

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MUHIMBILI
Drill Hole ID	BH 3
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	6.319
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 48.224'
Longitude	E 039^0 16.183'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
			Whitish coral fragmentary gravels							
	1.00			■ ● ◊	4	12	10	22	36	MEDIUM DENSE
4.219	2.00			■ ● ◊	5	7	10	17	24	MEDIUM DENSE
			Light greyish silty clayey coarse SAND mixed with soft calcareous gravels							
3.319	3.00			● ◊	5	6	9	11	14	MEDIUM DENSE
			Whitish calcareous silts and gravels of marine origin damp to fully saturated							
	4.00				6	8	10	18	21	MEDIUM DENSE
	5.00			● ◊	35	>50		>50	>50	VERY DENSE
	6.00			◊				>50	>50	VERY DENSE
	7.00							>50	>50	VERY DENSE
			Whitish calcareous silts and gravels of marine origin damp to fully saturated	● ◊						
	8.00							>50	>50	VERY DENSE
				▼ GWT						
	9.00			◊	5	7	9	16		MEDIUM DENSE
-3.681	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE
▼ GWT

Note
Stable GWT at 8.5 metres below GL
Whitish calcareous silts and gravels underlie

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MUHIMBILI
Drill Hole ID	BH 4
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	11.892
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 48.224'
Longitude	E 039^0 16.183'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
11.392			*Vegetable top soil*							
	1.00		*Brownish grey silty SAND*	■ ◊ ●	2	8	15	23	37	MEDIUM DENSE
	2.00			■ ◊ ●	6	8	10	18	25	MEDIUM DENSE
	3.00			◊ ●	4	5	7	12	15	MEDIUM DENSE
7.892	4.00				10	8	9	17	20	MEDIUM DENSE
7.392			*Brownish grey silty coarse SAND*							
6.892	5.00		*Brownish silty clayey coarse SAND*	◊ ●	11	17	15	32	35	MEDIUM DENSE
6.592			*Yellowish silty gravelly SAND*							
5.992	6.00		*Mottled silty coarse SAND*	◊	5	6	7	13	13	MEDIUM DENSE
5.092	7.00		*Light greyish silty coarse SAND*	▼ ◊ ●	7	9	14	23	22	MEDIUM DENSE
4.592	8.00		*Whitish sometimes reddish calcareous silts and gravel*		8	9	10	19	18	MEDIUM DENSE
	9.00			◊	7	10	12	22	20	MEDIUM DENSE
1.892	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE
▼ GWT

Note
Stable GWT at 8.5 metres below GL
Whitish calcareous silts and gravels underlie

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MWANANYAMALA
Drill Hole ID	BH 1
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	20.027
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 47.724'
Longitude	E 039^0 15.639'

Date	Mar-13

Stratum Elevation (m) AMSL	Legend	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
				Vegetable top soil							
19.527											
		1.00		*Brownish grey silty SAND*	■ ● ◊	2	3	3	6	10	LOOSE
		2.00			■ ● ◊	1	2	3	5	7	LOOSE
		3.00			● ◊	4	4	5	9	11	MEDIUM DENSE
16.527											
		4.00		*Pale grey to yellowish silty SAND (mottled SAND)*		3	3	4	7	8	LOOSE
		5.00			● ◊	3	6	6	12	13	MEDIUM DENSE
		6.00			◊	3	4	5	9	9	MEDIUM DENSE
		7.00			● ◊	3	5	6	11	11	MEDIUM DENSE
12.527											
		8.00		*Greyish silty SAND*		4	5	6	11	10	MEDIUM DENSE
		9.00			◊	3	4	5	9	8	MEDIUM DENSE
10.027		10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

GWT

Note
GWTin this BH encountered at a depth of 4.5 metres
Apparently cohesionless SAND dominates

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MWANANYAMALA
Drill Hole ID	BH 2
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	20.521
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 47.724'
Longitude	E 039^0 15.639'

Date	Mar-13

Stratum Elevation (m) AMSL	Legend	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
20.221				*Loose vegetable top soil*							
		1.00		*Dark greyish silty SAND homogeneous*	■ ● ◊	2	5	4	9	15	MEDIUM DENSE
		2.00			■ ● ◊	2	5	4	9	13	MEDIUM DENSE
17.321		3.00			● ◊	4	7	7	14	18	MEDIUM DENSE
		4.00		*Light greyish silty SAND homogeneous* ⇩		6	7	7	14	16	MEDIUM DENSE
		5.00			● ◊	5	5	7	12	13	MEDIUM DENSE
13.771		6.00			◊	4	6	7	13	13	MEDIUM DENSE
		7.00		*Brownish greyish silty SAND*	● ◊	5	5	7	12	12	MEDIUM DENSE
		8.00				5	7	7	14	13	MEDIUM DENSE
		9.00			◊	4	6	7	13	12	MEDIUM DENSE
10.521		10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

⇩ GWT

Note
GWTin this BH encountered at a depth of 4.5 metres
Apparently cohesionless SAND dominates

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MWANANYAMALA
Drill Hole ID	BH 3
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	20.472
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 47.724'
Longitude	E 039^0 15.639'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
20.172			*imported reddish gravelly fill*							
19.722			*Darkish grey silty SAND*							
	1.00		*Dull brown silty SAND*	● ◊	2	3	3	6	10	LOOSE
	2.00			● ◊	3	5	6	11	15	MEDIUM DENSE
	3.00			● ◊	4	6	6	12	15	MEDIUM DENSE
	4.00				5	5	4	9	10	MEDIUM DENSE
15.672										
	5.00			● ◊	2	2	2	4	4	VERY LOOSE
	6.00		*Light grey silty SAND*	◊	2	2	3	5	5	VERY LOOSE
	7.00			● ◊	2	2	4	6	6	LOOSE
	8.00				2	3	4	7	6	LOOSE
	9.00			◊	2	3	3	6	5	LOOSE
10.472	10.00		*END OF BORING*							

LEGEND

- ■ U4 SAMPLE
- ▲ BULK SAMPLE
- ◊ SPT SAMPLE
- ● DISTURBED SAMPLE
- GWT

Note

GWTin this BH encountered at a depth of 4.5 metres
Apparently cohesionless SAND dominates

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	JANGWANI
Drill Hole ID	BH 1
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	9.66
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 42.226'
Longitude	E 039^0 13.326'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
	1.00		*Darkish silty SAND with vegetable soil*	■ ● ◊	2	4	4	8	13	MEDIUM DENSE
7.360	2.00			■ ● ◊	3	5	7	12	17	MEDIUM DENSE
	3.00		*Light greyish silty clayey SAND very wet*	● ◊	3	5	6	11	14	MEDIUM DENSE
	4.00		GWT		5	7	9	16	19	MEDIUM DENSE
	5.00			● ◊	5	7	9	16	17	MEDIUM DENSE
	6.00			◊	4	4	5	9	9	MEDIUM DENSE
-7.200	7.00			● ◊	4	5	6	11	11	MEDIUM DENSE
-7.900	8.00		*Blackish silty CLAY very wet*		5	5	6	11	10	MEDIUM STIFF
	9.00		*Light greyish silty SAND very wet*	◊	5	6	7	13	12	MEDIUM STIFF
-10.000	10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

GWT

Note
Depth of GWT measured at 4.5 metres
Site located on marshy area

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	JANGWANI
Drill Hole ID	BH 2
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	9.657
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 42.226'
Longitude	E 039^0 13.326'

Date	Mar-13

Stratum Elevation (m) AMSL	Legend	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
				Brownish grey silty SAND							
		1.00			■ ● ◊	5	9	11	20	32	MEDIUM DENSE
7.937											
		2.00			■ ● ◊	2	8	12	20	28	MEDIUM DENSE
				Greyish silty clayey SAND							
		3.00			● ◊	4	8	12	20	25	MEDIUM DENSE
		4.00				6	8	9	17	20	MEDIUM DENSE
				GWT							
		5.00			● ◊	7	8	10	18	20	MEDIUM DENSE
		6.00			◊	4	8	10	18	18	MEDIUM DENSE
		7.00			● ◊	5	7	10	17	17	MEDIUM DENSE
2.557											
		8.00		***Blackish silty CLAY very wet***		4	9	10	19	18	MEDIUM STIFF
0.857											
		9.00		***Mottled silty clayey SAND***	◊	5	10	12	22	20	MEDIUM STIFF
-0.343		10.00		*END OF BORING*							

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
● DISTURBED SAMPLE

GWT

Note
Depth of GWT measured at 4.5 metres
Site located on marshy area

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	JANGWANI
Drill Hole ID	BH 3
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	9.76
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 42.226'
Longitude	E 039^0 13.326'

Date	Mar-13

Stratum Elevation (m) AMSL	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
			Dark grey silty SAND							
	1.00			■ ◊	2	3	3	6	10	MEDIUM DENSE
7.560	2.00			■ ◊	3	4	5	9	13	MEDIUM DENSE
			Greyish silty clayey SAND							
	3.00			• ◊	3	5	5	10	13	MEDIUM DENSE
	4.00									MEDIUM DENSE
			GWT							
	5.00			• ◊	3	6	7	13	14	MEDIUM DENSE
	6.00			◊	3	5	7	12	12	MEDIUM DENSE
2.760	7.00			• ◊	4	5	7	12	12	MEDIUM DENSE
			Blackish sandy silty CLAY very wet							
	8.00				4	6	7	13	12	MEDIUM DENSE
			END OF BORING							
	9.00			◊						MEDIUM DENSE
	10.00									

LEGEND

■ U4 SAMPLE
▲ BULK SAMPLE
◊ SPT SAMPLE
• DISTURBED SAMPLE

GWT

Note
Depth of GWT measured at 4.5 metres
Site located on marshy area
SPT not conducted at 4.5 due to softness

BOREHOLE RECORD

PROJECT: GEOTECHNICAL INVESTIGATIONS FOR THE 5 PROPOSED POWER STATIONS IN DAR ES SALAAM

SITE	MSASANI
Drill Hole ID	BH 1
Drilling method	Rotary
Core dia. (mm)	None

Borehole Elevation (m) AMSL	
Casings dia (mm)	150
Ground Water Table (m)	
Logged by	Besta

Latitude	S 06^0 45.544'
Longitude	E 039^0 16.810'

Date	Mar-13

Stratum Elevation (m) AMSL	Legend	Depth (m)	Thickness (m)	Description of strata	Sample type	SPT N Value 1	2	3		$(N_1)_{60}$	Relative Density
-0.400				***Imported gravel fill and loose gneiss aggregate bedding***							
		1.00		***Fragmented carbonatite or calcareous gravels/rock***		7	13	15	28	43	**DENSE TO VERY DENSE**
-1.500				*END OF DRILLING*							
		2.00									
		3.00									
		4.00									
		5.00									
		6.00									
		7.00									
		8.00									
		9.00									
		10.00									

LEGEND

- ■ U4 SAMPLE
- ▲ BULK SAMPLE
- ◊ SPT SAMPLE
- ● DISTURBED SAMPLE
- GWT

Note

Very dense calcareous rock/gravels underlies
Drilling halted at 1.5m depth due to impenetrability
No ground water encountered

APPENDIX 2 – LABORATORY TEST RESULTS

MINISTRY OF WATER
DRILLING AND DAM CONSTRUCTION AGENCY
SOIL MECHANICS LABORATORY UBUNGO-MAJI
SOIL TEST RESULTS SUMMARY
PROJECT: GEOTECHNICAL INVESTIGATION FOR FIVE PROPOSED ELECTRIC POWER SUBSTATION AT DAR ES SALAAM

							SIEVE ANALYSIS			ATTERBERG LIMIT			LINEAR	SHEAR		SG	CONSOLIDATION	
LAB. NO	BH NO	S No	DEPTH (m)	SOIL DESCRIPTION	NMC %	BULK DENSITY	FINES %	SAND %	GRAVEL %	L.L %	P.L %	P.I %	SHRINKAGE %	C Kg/cm^2	Ø O^0		MV cm^2/kg	CC
				ILALA														
7871	1	1	1.50- 2.00		5.25	1.947	11.00	89.00	0.00	NP	NP	NP		0.067	18	2.594		
7872	1	2	2.50 -3.00		2.55	1.944	10.60	89.35	0.05	NP	NP	NP		0.065	18	2.656		
7873	2	1	2.50-3.00		7.07	2.170	11.450	88.550	0.000	NP	NP	NP		0.028	20	2.638		
	2	2	5.50-6.00		6.41													
	3	1	3.50 -4.00		1.75		24.70	75.30	0.00	NP	NP	NP		0.027	20			
	3	2	7.50-8.00		4.64													
				JANGWANI														
7874	1	1	3.50 -4.00		15.50	1.926	43.80	56.2	0.00	55.56	12.66	42.9	4.25	0.343	21	2.514	0.0220	0.1513
7875	2	1	2.50 -3.00		14.70	1.998	26.60	72.50	0.90	34.35	10.26	24.09	0.71	0.124	20	2.587	0.0217	0.1162
7876	3	1	1.50 -2.00		18.38	1.999	40.05	59.9	0.05	45.83	12.5	33.33	3.54	0.369	21	2.628	0.0153	0.0837
				MUHIMBILI														
7877	1	1	1.50-2.0		3.03	1.977	14.05	85.95	0.00					0.037	19	2.626	0.0159	0.1178
	1	2	5.50 - 6.00		8.35													
7878	2	1	3.50 - 4.00		11.43	2.110	18.80	81.20	0.00	25.73	12.35	13.38	5.680	0.0227	20	2.619	0.0076	0.0526
	3	1	5.50 -6.00		13.08	2.135	60.70	20.00	19.60					0.304	25			
7879	4	1	3.50- 4.00		3.83	2.117	15.20	84.80	0.00					0.064	18	2.627	0.0300	0.1551
	4	2	7.50 -8.00		5.46	2.023	16.50	81.40	2.10					0.179	20			
				MSASANI														
7880	1		1.00 -1.45		8.21		56.60	21.50	21.90	34.40	10.00	24.40	5.00					
				MWANANYAMALA		g/cm3												
7881	1		1.50- 2.00		7.530	1.998	10.20	89.80	0.00	NP	NP	NP		0.021	20	2.568		
7882	2		2.50 -3.01		3.980	1.999	7.20	92.80	0.00	NP	NP	NP		0.031	19	2.645		
	3		6.50 -7.00		17.48													

KEY

LAB-laboratory, BH-borehole, S/No-sample number, NMC- natural moisture content, L.L- liquid limit, P.L - plastic limit,
SG = Specific gravity
C - cohesion, Θ - angle of internal friction,
NOTE THAT KG/CM2 x 100 EQUAL TO KN/M2

Appendix 18 Outline Table of Sectional Power Flow

The result of Power flow with 0.86 load Power factor in 2025 without 11kV capacitor banks at Ilala substation

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E SUN, SEP 15 2013 11:46

DAR
DAR-1

%MVA FOR TRANSFORMERS
% I FOR NON-TRANSFORMER BRANCHES

FROM BUS BUS#	NAME	BASKV	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS BUS#	NAME	BASKV	AREA	CKT	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING AMPS	%	SET A
1105	ILALA	11.000	1 1	0.9531	-11.4	0.0	39.1	0.0												
			1 1	10.484		0.0	23.2	0.0	3305	ILALA	33.000	1	1	-13.0	-7.7	1.000LK		836	101	15M
									3305	ILALA	33.000	1	2	-13.0	-7.7	1.000LK		836	101	15M
									3305	ILALA	33.000	1	3	-13.0	-7.7	1.000LK		836	101	15M
1121	MUHIBILI11	11.000	1 1	1.0024	-10.7	0.0	13.0	0.0												
			1 1	11.026		0.0	7.7	0.0	3321	MUHIBILI33	33.000	1	1	-13.0	-7.7	1.000LK		794	101	15M
1122	MWANANYA11	11.000	1 1	1.0048	-14.2	0.0	13.0	0.0												
			1 1	11.052		0.0	7.7	0.0	3322	MWANANYA33	33.000	1	1	-13.0	-7.7	1.000LK		793	101	15M
1123	JAGWANI11	11.000	1 1	0.9698	-13.2	0.0	13.0	0.0												
			1 1	10.667		0.0	7.7	0.0	3323	JAGWANI33	33.000	1	1	-13.0	-7.7	1.000LK		821	101	15M
1124	MSASANI11	11.000	1 1	1.0010	-14.4	0.0	26.1	0.0												
			1 1	11.011		0.0	15.5	0.0	3324	MSASANI33	33.000	1	1	-13.0	-7.7	1.000LK		796	101	15M
									3324	MSASANI33	33.000	1	2	-13.0	-7.7	1.000LK		796	101	15M
3301	UBUNGO	33.000	1 1	1.0030	-6.4	0.0	256.0	0.0												
			1 1	33.100		0.0	151.9	0.0	13201	UBUNGO	132.00	1	1	-256.0	-151.9	1.000LK		5192	99	300M
3303	F-ZONE3	33.000	1 1	0.9839	-8.0	0.0	77.2	0.0												
			1 1	32.470		0.0	45.8	0.0	13203	F-ZONE3	132.00	1	1	-38.6	-22.9	1.000LK		799	100	45M
									13203	F-ZONE3	132.00	1	2	-38.6	-22.9	1.000LK		799	100	45M
3304	KURASHINI	33.000	1 1	0.9503	-10.6	0.0	78.3	0.0												
			1 1	31.358		0.0	46.5	0.0	13204	KURASINI	132.00	1	1	-78.3	-46.5	1.000LK		1676	182	50M
3305	ILALA	33.000	1 1	0.9898	-8.3	0.0	182.7	0.0												
			1 1	32.663		0.0	108.4	-36.2	1105	ILALA	11.000	1	1	13.1	8.8	1.000UN		279	105	15M
									1105	ILALA	11.000	1	2	13.1	8.8	1.000UN		279	105	15M
									1105	ILALA	11.000	1	3	13.1	8.8	1.000UN		279	105	15M
									13205	ILALA	132.00	1	1	-55.5	-24.6	1.000LK		1073	101	60M
									13205	ILALA	132.00	1	2	-55.5	-24.6	1.000LK		1073	101	60M
									13205	ILALA	132.00	1	3	-55.5	-24.6	1.000LK		1073	101	60M
									13205	ILALA	132.00	1	4	-55.5	-24.6	1.000LK		1073	101	60M
3306	MAKUMBUSHO3333.000		1 1	0.9880	-11.4	0.0	134.4	0.0												
			1 1	32.604		0.0	79.7	0.0	3322	MWANANYA33	33.000	1	1	13.1	8.7			278	69	405A
									3324	MSASANI33	33.000	1	1	14.1	8.8			294	73	405A
									3324	MSASANI33	33.000	1	2	12.1	8.7			264	65	404A
									13206	MAKUMBUSHO	132.00	1	1	-86.9	-53.0	1.000LK		1801	226	45M
									13206	MAKUMBUSHO	132.00	1	2	-86.9	-53.0	1.000LK		1801	226	45M
3307	MILINDIZE	33.000	1 1	0.9672	-9.2	0.0	22.8	0.0												
			1 1	31.918		0.0	13.5	0.0	13207	MILINDIZI	132.00	1	1	-11.4	-6.8	1.000LK		240	133	10M
									13207	MILINDIZI	132.00	1	2	-11.4	-6.8	1.000LK		240	133	10M
3308	TEGETA33	33.000	1 1	0.9592	-10.0	0.0	127.2	0.0												
			1 1	31.653		0.0	75.5	0.0	3323	JAGWANI33	33.000	1	1	13.1	8.8			288	71	405A
									13208	TEGETA	132.00	1	1	-70.2	-42.1	1.000LK		1493	164	50M
									13208	TEGETA	132.00	1	2	-70.2	-42.1	1.000LK		1493	164	50M
3309	F-ZONE2	33.000	1 1	1.0144	-4.1	0.0	39.1	0.0												
			1 1	33.475		0.0	23.2	0.0	13209	F-ZONE2	132.00	1	1	-39.1	-23.2	1.000LK		785	91	50M
3310	MBAGALA	33.000	1 1	0.9644	-7.8	0.0	90.7	0.0												
			1 1	31.825		0.0	53.8	0.0	13210	MBAGALA	132.00	1	1	-90.7	-53.8	1.000LK		1913	211	50M
3311	N-C-CENTER3333.000		1 1	0.9862	-7.8	0.0	65.2	0.0												
			1 1	32.546		0.0	38.7	0.0	3321	MUHIBILI33	33.000	1	1	13.1	8.7			279	69	405A

									13211	N-C-CENTER	132.00	1	1	-39.2	-23.7	1.000LK	812	92	50M
									13211	N-C-CENTER	132.00	1	2	-39.2	-23.7	1.000LK	812	92	50M
3313	MTONI	33.000	1	0.9722	-8.8	0.0	87.4	0.0											
			1	32.081		0.0	51.9	0.0	13213	MTONI	132.00	1	1	-30.9	-18.3	1.000LK	646	120	30M
									13213	MTONI	132.00	1	2	-30.9	-18.3	1.000LK	646	120	30M
									13213	MTONI	132.00	1	3	-25.7	-15.3	1.000LK	538	120	25M
3314	CHALINZE	33.000	1	0.9782	-8.2	0.0	13.0	0.0											
			1	32.281		0.0	7.7	0.0	13214	CHALINZE	132.00	1	1	-13.0	-7.7	1.000LK	271	101	15M
3320	F-ZONE1	33.000	1	1.0167	-5.3	0.0	26.1	0.0											
			1	33.551		0.0	15.5	0.0	13203	F-ZONE3	132.00	1	1	-8.7	-5.2	1.000LK	174	67	15M
									13203	F-ZONE3	132.00	1	2	-8.7	-5.2	1.000LK	174	67	15M
									13203	F-ZONE3	132.00	1	3	-8.7	-5.2	1.000LK	174	67	15M
3321	MUHIBILI33	33.000	1	0.9853	-7.8	0.0	0.0	0.0											
			1	32.515		0.0	0.0	0.0	1121	MUHIBILI11	11.000	1	1	13.1	8.7	0.950UN	279	105	15M
									3311	N-C-CENTER33	33.000	1	1	-13.1	-8.7		279	69	405A
3322	MWANANYA33	33.000	1	0.9875	-11.4	0.0	0.0	0.0											
			1	32.586		0.0	0.0	0.0	1122	MWANANYA11	11.000	1	1	13.1	8.7	0.950UN	278	105	15M
									3306	MAKUMBUSHO33	33.000	1	1	-13.1	-8.7		278	69	405A
3323	JAGWANI33	33.000	1	0.9555	-10.2	0.0	0.0	0.0											
			1	31.531		0.0	0.0	0.0	1123	JAGWANI11	11.000	1	1	13.1	8.7	0.950UN	288	105	15M
									3308	TEGETA33	33.000	1	1	-13.1	-8.7		288	71	405A
3324	MSASANI33	33.000	1	0.9840	-11.5	0.0	0.0	0.0											
			1	32.472		0.0	0.0	0.0	1124	MSASANI11	11.000	1	1	13.1	8.7	0.950UN	279	105	15M
									1124	MSASANI11	11.000	1	2	13.1	8.7	0.950UN	279	105	15M
									3306	MAKUMBUSHO33	33.000	1	1	-14.0	-8.8		294	73	405A
									3306	MAKUMBUSHO33	33.000	1	2	-12.1	-8.6		264	65	404A
13201	UBUNGO	132.00	1	1.0210	-5.0	312.5	0.0	0.0											
			1	134.77		544.7R	0.0	0.0	3301	UBUNGO	33.000	1	1	256.6	161.1	1.000UN	1298	101	300M
									13203	F-ZONE3	132.00	1	1	103.6	67.4		530	90	589A
									13204	KURASINI	132.00	1	1	78.8	58.0		419	71	589A
									13205	ILALA	132.00	1	1	150.6	83.8		738	77	960A
									13205	ILALA	132.00	1	2	150.6	83.8		738	77	960A
									13206	MAKUMBUSHO	132.00	1	1	174.9	135.6		948	161	589A
									13207	MILINDIZI	132.00	1	1	36.1	24.9		188	46	405A
									13208	TEGETA	132.00	1	1	49.8	1.5		213	53	405A
									13208	TEGETA	132.00	1	2	64.9	2.0		278		
									22001	UBUNGO220	220.00	1	1	-376.8	-36.6	1.000LK	1622	252	150M
									22001	UBUNGO220	220.00	1	2	-376.8	-36.6	1.000LK	1622	252	150M
13202	KINYEREZI	132.00	1	1.0460	-1.5	312.0	0.0	0.0											
			1	138.07		267.1R	0.0	0.0	13209	F-ZONE2	132.00	1	1	130.6	94.6		674	114	589A
									22002	KINYEREZI220	220.00	1	1	90.7	86.3	1.000LK	523	83	150M
									22002	KINYEREZI220	220.00	1	2	90.7	86.3	1.000LK	523	83	150M
13203	F-ZONE3	132.00	1	1.0189	-5.1	0.0	0.0	0.0											
			1	134.50		0.0	0.0	0.0	3303	F-ZONE3	33.000	1	1	38.7	25.8	1.000UN	200	103	45M
									3303	F-ZONE3	33.000	1	2	38.7	25.8	1.000UN	200	103	45M
									3320	F-ZONE1	33.000	1	1	8.7	5.2	1.000UN	44	68	15M
									3320	F-ZONE1	33.000	1	2	8.7	5.2	1.000UN	44	68	15M
									3320	F-ZONE1	33.000	1	3	8.7	5.2	1.000UN	44	68	15M
									13201	UBUNGO	132.00	1	1	-103.5	-67.1		530	90	589A
13204	KURASINI	132.00	1	1.0186	-5.1	0.0	0.0	0.0											
			1	134.45		0.0	0.0	0.0	3304	KURASHINI	33.000	1	1	78.7	57.7	1.000UN	419	195	50M
									13201	UBUNGO	132.00	1	1	-78.7	-57.7		419	71	589A
13205	ILALA	132.00	1	1.0188	-5.1	0.0	0.0	0.0											
			1	134.48		0.0	0.0	0.0	3305	ILALA	33.000	1	1	55.6	28.5	1.000UN	268	104	60M
									3305	ILALA	33.000	1	2	55.6	28.5	1.000UN	268	104	60M
									3305	ILALA	33.000	1	3	55.6	28.5	1.000UN	268	104	60M
									3305	ILALA	33.000	1	4	55.6	28.5	1.000UN	268	104	60M
									13201	UBUNGO	132.00	1	1	-150.5	-83.3		738	77	960A
									13201	UBUNGO	132.00	1	2	-150.5	-83.3		738	77	960A
									13211	N-C-CENTER	132.00	1	1	78.5	52.7		406	100	405A
13206	MAKUMBUSHO	132.00	1	1.0181	-5.1	0.0	0.0	0.0											

		1	134.39		0.0	0.0	0.0	3306	MAKUMBUSHO3	33.000	1	1	87.4	67.4	0.950	UN	474	245	45M
								3306	MAKUMBUSHO3	33.000	1	2	87.4	67.4	0.950	UN	474	245	45M
								13201	UBUNGO	132.00	1	1	-174.7	-134.8			948	161	589A
13207	MILINDIZI	132.00	1	1.0152	-5.2	0.0	0.0	0.0														
		1	134.00		0.0	0.0	0.0	3307	MILINDIZE	33.000	1	1	11.5	7.9	1.000	UN	60	139	10M
								3307	MILINDIZE	33.000	1	2	11.5	7.9	1.000	UN	60	139	10M
								13201	UBUNGO	132.00	1	1	-36.0	-24.6			188	46	405A
								13214	CHALINZE	132.00	1	1	13.1	8.7			68	17	405A
13208	TEGETA	132.00	1	1.0200	-5.1	114.4	0.0	0.0														
		1	134.64		159.2R	0.0	0.0	3308	TEGETA33	33.000	1	1	70.5	51.1	1.000	UN	373	174	50M
								3308	TEGETA33	33.000	1	2	70.5	51.1	1.000	UN	373	174	50M
								13201	UBUNGO	132.00	1	1	-49.7	-1.4			213	53	405A
								13201	UBUNGO	132.00	1	2	-64.8	-1.8			278		
								13213	MTONI	132.00	1	1	55.5	25.5			262	65	405A
								13213	MTONI	132.00	1	2	32.5	34.8			204	50	405A
13209	F-ZONE2	132.00	1	1.0452	-1.5	0.0	0.0	0.0														
		1	137.96		0.0	0.0	0.0	3309	F-ZONE2	33.000	1	1	39.2	25.7	1.000	UN	196	94	50M
								13202	KINYEREZI	132.00	1	1	-130.5	-94.4			674	114	589A
								13210	MBAGALA	132.00	1	1	91.3	68.8			478	118	405A
13210	MBAGALA	132.00	1	1.0430	-1.6	0.0	0.0	0.0														
		1	137.68		0.0	0.0	0.0	3310	MBAGALA	33.000	1	1	91.2	68.5	1.000	UN	478	228	50M
								13209	F-ZONE2	132.00	1	1	-91.2	-68.5			478	118	405A
13211	N-C-CENTER	132.00	1	1.0185	-5.1	0.0	0.0	0.0														
		1	134.45		0.0	0.0	0.0	3311	N-C-CENTER3	33.000	1	1	39.3	26.3	1.000	UN	203	95	50M
								3311	N-C-CENTER3	33.000	1	2	39.3	26.3	1.000	UN	203	95	50M
								13205	ILALA	132.00	1	1	-78.5	-52.7			406	100	405A
13213	MTONI	132.00	1	1.0149	-5.2	0.0	0.0	0.0														
		1	133.97		0.0	0.0	0.0	3313	MTONI	33.000	1	1	31.0	21.1	1.000	UN	161	125	30M
								3313	MTONI	33.000	1	2	31.0	21.1	1.000	UN	161	125	30M
								3313	MTONI	33.000	1	3	25.8	17.6	1.000	UN	135	125	25M
								13208	TEGETA	132.00	1	1	-55.3	-25.2			262	65	405A
								13208	TEGETA	132.00	1	2	-32.4	-34.5			204	50	405A
13214	CHALINZE	132.00	1	1.0139	-5.2	0.0	0.0	0.0														
		1	133.84		0.0	0.0	0.0	3314	CHALINZE	33.000	1	1	13.1	8.7	1.000	UN	68	105	15M
								13207	MILINDIZI	132.00	1	1	-13.1	-8.7			68	17	405A
22001	UBUNGO220	220.00	1	1.0323	-2.3	0.0	0.0	0.0														
		1	227.10		0.0	0.0	0.0	13201	UBUNGO	132.00	1	1	378.8	55.0	1.000	UN	973	255	150M
								13201	UBUNGO	132.00	1	2	378.8	55.0	1.000	UN	973	255	150M
								22002	KINYEREZI220	220.00	1	1	-468.9	-133.7			1240	106	1165A
								22099	MOROGORO	220.00	1	1	-288.7	23.7			736	63	1165A
22002	KINYEREZI220	220.00	1	1.0338	-2.1	0.0	0.0	0.0														
		1	227.44		0.0	0.0	0.0	13202	KINYEREZI	132.00	1	1	-90.5	-84.4	1.000	UN	314	82	150M
								13202	KINYEREZI	132.00	1	2	-90.5	-84.4	1.000	UN	314	82	150M
								22001	UBUNGO220	220.00	1	1	469.1	135.5			1240	106	1165A
								22099	MOROGORO	220.00	1	1	-288.1	33.2			736	63	1165A
22099	MOROGORO	220.00	1	1.0350	0.0	579.6	0.0	0.0														
		1	227.70		-35.2R	0.0	0.0	22001	UBUNGO220	220.00	1	1	290.2	-12.3			736	63	1165A
								22002	KINYEREZI220	220.00	1	1	289.4	-22.8			736	63	1165A

The result of Power flow with 0.86 load power factor in 2025 with 11kV capacitor banks at Ilala substation

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E SUN, SEP 15 2013 11:59

DAR
DAR-1

%MVA FOR TRANSFORMERS
% I FOR NON-TRANSFORMER BRANCHES

FROM BUS			AREA	VOLT		GEN	LOAD	SHUNT	TO BUS					TRANSFORMER				RATING		
BUS#	NAME	BASKV	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS#	NAME	BASKV	AREA	CKT	MW	MVAR	RATIO	ANGLE	AMPS	%	SET A
1105	ILALA	11.000	1	0.9783	-11.4	0.0	39.1	0.0												
			1	10.761		0.0	23.2	-14.4	3305	ILALA	33.000	1	1	-13.0	-3.0	1.000	LK	718	89	15M
									3305	ILALA	33.000	1	2	-13.0	-3.0	1.000	LK	718	89	15M
									3305	ILALA	33.000	1	3	-13.0	-3.0	1.000	LK	718	89	15M
1121	MUHIBILI11	11.000	1	1.0026	-10.7	0.0	13.0	0.0												
			1	11.028		0.0	7.7	0.0	3321	MUHIBILI33	33.000	1	1	-13.0	-7.7	1.000	LK	794	101	15M
1122	MWANANYA11	11.000	1	1.0048	-14.2	0.0	13.0	0.0												
			1	11.052		0.0	7.7	0.0	3322	MWANANYA33	33.000	1	1	-13.0	-7.7	1.000	LK	793	101	15M
1123	JAGWANI11	11.000	1	0.9698	-13.2	0.0	13.0	0.0												
			1	10.667		0.0	7.7	0.0	3323	JAGWANI33	33.000	1	1	-13.0	-7.7	1.000	LK	821	101	15M
1124	MSASANI11	11.000	1	1.0010	-14.4	0.0	26.1	0.0												
			1	11.011		0.0	15.5	0.0	3324	MSASANI33	33.000	1	1	-13.0	-7.7	1.000	LK	796	101	15M
									3324	MSASANI33	33.000	1	2	-13.0	-7.7	1.000	LK	796	101	15M
3301	UBUNGO	33.000	1	1.0030	-6.4	0.0	256.0	0.0												
			1	33.100		0.0	151.9	0.0	13201	UBUNGO	132.00	1	1	-256.0	-151.9	1.000	LK	5192	99	300M
3303	F-ZONE3	33.000	1	0.9839	-8.0	0.0	77.2	0.0												
			1	32.470		0.0	45.8	0.0	13203	F-ZONE3	132.00	1	1	-38.6	-22.9	1.000	LK	799	100	45M
									13203	F-ZONE3	132.00	1	2	-38.6	-22.9	1.000	LK	799	100	45M
3304	KURASHINI	33.000	1	0.9503	-10.6	0.0	78.3	0.0												
			1	31.358		0.0	46.5	0.0	13204	KURASINI	132.00	1	1	-78.3	-46.5	1.000	LK	1676	182	50M
3305	ILALA	33.000	1	0.9940	-8.3	0.0	182.7	0.0												
			1	32.803		0.0	108.4	-36.6	1105	ILALA	11.000	1	1	13.1	3.7	1.000	UN	239	91	15M
									1105	ILALA	11.000	1	2	13.1	3.7	1.000	UN	239	91	15M
									1105	ILALA	11.000	1	3	13.1	3.7	1.000	UN	239	91	15M
									13205	ILALA	132.00	1	1	-55.5	-20.7	1.000	LK	1042	99	60M
									13205	ILALA	132.00	1	2	-55.5	-20.7	1.000	LK	1042	99	60M
									13205	ILALA	132.00	1	3	-55.5	-20.7	1.000	LK	1042	99	60M
									13205	ILALA	132.00	1	4	-55.5	-20.7	1.000	LK	1042	99	60M
3306	MAKUMBUSHO3333	33.000	1	0.9880	-11.4	0.0	134.4	0.0												
			1	32.604		0.0	79.7	0.0	3322	MWANANYA33	33.000	1	1	13.1	8.7			278	69	405A
									3324	MSASANI33	33.000	1	1	14.1	8.8			294	73	405A
									3324	MSASANI33	33.000	1	2	12.1	8.7			264	65	404A
									13206	MAKUMBUSHO	132.00	1	1	-86.9	-53.0	1.000	LK	1801	226	45M
									13206	MAKUMBUSHO	132.00	1	2	-86.9	-53.0	1.000	LK	1801	226	45M
3307	MILINDIZE	33.000	1	0.9672	-9.2	0.0	22.8	0.0												
			1	31.918		0.0	13.5	0.0	13207	MILINDIZI	132.00	1	1	-11.4	-6.8	1.000	LK	240	133	10M
									13207	MILINDIZI	132.00	1	2	-11.4	-6.8	1.000	LK	240	133	10M
3308	TEGETA33	33.000	1	0.9592	-10.0	0.0	127.2	0.0												
			1	31.653		0.0	75.5	0.0	3323	JAGWANI33	33.000	1	1	13.1	8.8			288	71	405A
									13208	TEGETA	132.00	1	1	-70.2	-42.1	1.000	LK	1493	164	50M
									13208	TEGETA	132.00	1	2	-70.2	-42.1	1.000	LK	1493	164	50M
3309	F-ZONE2	33.000	1	1.0144	-4.1	0.0	39.1	0.0												
			1	33.475		0.0	23.2	0.0	13209	F-ZONE2	132.00	1	1	-39.1	-23.2	1.000	LK	785	91	50M
3310	MBAGALA	33.000	1	0.9644	-7.8	0.0	90.7	0.0												
			1	31.825		0.0	53.8	0.0	13210	MBAGALA	132.00	1	1	-90.7	-53.8	1.000	LK	1913	211	50M
3311	N-C-CENTER3333	33.000	1	0.9864	-7.8	0.0	65.2	0.0												
			1	32.551		0.0	38.7	0.0	3321	MUHIBILI33	33.000	1	1	13.1	8.7			279	69	405A

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                                                                 13211 N-C-CENTER  132.00    1  1   -39.2  -23.7 1.000LK          812  92    50M
                                                                 13211 N-C-CENTER  132.00    1  2   -39.2  -23.7 1.000LK          812  92    50M
 3313 MTONI       33.000   1 0.9722  -8.8     0.0     87.4     0.0 -------------------------------------------------------------------------------
                           1 32.081           0.0     51.9     0.0 13213 MTONI       132.00    1  1   -30.9  -18.3 1.000LK          646 120    30M
                                                                 13213 MTONI       132.00    1  2   -30.9  -18.3 1.000LK          646 120    30M
                                                                 13213 MTONI       132.00    1  3   -25.7  -15.3 1.000LK          538 120    25M
 3314 CHALINZE    33.000   1 0.9782  -8.2     0.0     13.0     0.0 -------------------------------------------------------------------------------
                           1 32.281           0.0      7.7     0.0 13214 CHALINZE    132.00    1  1   -13.0   -7.7 1.000LK          271 101    15M

 3320 F-ZONE1     33.000   1 1.0167  -5.3     0.0     26.1     0.0 -------------------------------------------------------------------------------
                           1 33.551           0.0     15.5     0.0 13203 F-ZONE3     132.00    1  1    -8.7   -5.2 1.000LK          174  67    15M
                                                                 13203 F-ZONE3     132.00    1  2    -8.7   -5.2 1.000LK          174  67    15M
                                                                 13203 F-ZONE3     132.00    1  3    -8.7   -5.2 1.000LK          174  67    15M
 3321 MUHIBILI33  33.000   1 0.9854  -7.8     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 32.520           0.0      0.0     0.0  1121 MUHIBILI11  11.000    1  1    13.1    8.7 0.950UN          279 105    15M
                                                                  3311 N-C-CENTER3333.000    1  1   -13.1   -8.7                  279  69   405A
 3322 MWANANYA33  33.000   1 0.9875 -11.4     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 32.586           0.0      0.0     0.0  1122 MWANANYA11  11.000    1  1    13.1    8.7 0.950UN          278 105    15M
                                                                  3306 MAKUMBUSHO3333.000    1  1   -13.1   -8.7                  278  69   405A
 3323 JAGWANI33   33.000   1 0.9555 -10.2     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 31.531           0.0      0.0     0.0  1123 JAGWANI11   11.000    1  1    13.1    8.7 0.950UN          288 105    15M
                                                                  3308 TEGETA33    33.000    1  1   -13.1   -8.7                  288  71   405A
 3324 MSASANI33   33.000   1 0.9840 -11.5     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 32.472           0.0      0.0     0.0  1124 MSASANI11   11.000    1  1    13.1    8.7 0.950UN          279 105    15M
                                                                  1124 MSASANI11   11.000    1  2    13.1    8.7 0.950UN          279 105    15M
                                                                  3306 MAKUMBUSHO3333.000    1  1   -14.0   -8.8                  294  73   405A
                                                                  3306 MAKUMBUSHO3333.000    1  2   -12.1   -8.6                  264  65   404A
13201 UBUNGO      132.00   1 1.0210  -5.0   312.5      0.0     0.0 -------------------------------------------------------------------------------
                           1 134.77         528.3R     0.0     0.0  3301 UBUNGO      33.000    1  1   256.6  161.1 1.000UN         1298 101   300M
                                                                 13203 F-ZONE3     132.00    1  1   103.6   67.4                  530  90   589A
                                                                 13204 KURASINI    132.00    1  1    78.8   58.0                  419  71   589A
                                                                 13205 ILALA       132.00    1  1   150.6   75.6                  722  75   960A
                                                                 13205 ILALA       132.00    1  2   150.6   75.6                  722  75   960A
                                                                 13206 MAKUMBUSHO  132.00    1  1   174.9  135.6                  948 161   589A
                                                                 13207 MILINDIZI   132.00    1  1    36.1   24.9                  188  46   405A
                                                                 13208 TEGETA      132.00    1  1    49.8    1.5                  213  53   405A
                                                                 13208 TEGETA      132.00    1  2    64.9    2.0                  278
                                                                 22001 UBUNGO220   220.00    1  1  -376.8  -36.7 1.000LK         1622 252   150M
                                                                 22001 UBUNGO220   220.00    1  2  -376.8  -36.7 1.000LK         1622 252   150M
13202 KINYEREZI   132.00   1 1.0460  -1.5   312.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 138.07         267.1R     0.0     0.0 13209 F-ZONE2     132.00    1  1   130.6   94.6                  674 114   589A
                                                                 22002 KINYEREZI220220.00    1  1    90.7   86.3 1.000LK          523  83   150M
                                                                 22002 KINYEREZI220220.00    1  2    90.7   86.3 1.000LK          523  83   150M
13203 F-ZONE3     132.00   1 1.0189  -5.1     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 134.50           0.0      0.0     0.0  3303 F-ZONE3     33.000    1  1    38.7   25.8 1.000UN          200 103    45M
                                                                  3303 F-ZONE3     33.000    1  2    38.7   25.8 1.000UN          200 103    45M
                                                                  3320 F-ZONE1     33.000    1  1     8.7    5.2 1.000UN           44  68    15M
                                                                  3320 F-ZONE1     33.000    1  2     8.7    5.2 1.000UN           44  68    15M
                                                                  3320 F-ZONE1     33.000    1  3     8.7    5.2 1.000UN           44  68    15M
                                                                 13201 UBUNGO      132.00    1  1  -103.5  -67.1                  530  90   589A
13204 KURASINI    132.00   1 1.0186  -5.1     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 134.45           0.0      0.0     0.0  3304 KURASHINI   33.000    1  1    78.7   57.7 1.000UN          419 195    50M
                                                                 13201 UBUNGO      132.00    1  1   -78.7  -57.7                  419  71   589A
13205 ILALA       132.00   1 1.0189  -5.1     0.0      0.0     0.0 -------------------------------------------------------------------------------
                           1 134.50           0.0      0.0     0.0  3305 ILALA       33.000    1  1    55.6   24.4 1.000UN          261 101    60M
                                                                  3305 ILALA       33.000    1  2    55.6   24.4 1.000UN          261 101    60M
                                                                  3305 ILALA       33.000    1  3    55.6   24.4 1.000UN          261 101    60M
                                                                  3305 ILALA       33.000    1  4    55.6   24.4 1.000UN          261 101    60M
                                                                 13201 UBUNGO      132.00    1  1  -150.5  -75.1                  722  75   960A
                                                                 13201 UBUNGO      132.00    1  2  -150.5  -75.1                  722  75   960A
                                                                 13211 N-C-CENTER  132.00    1  1    78.5   52.7                  406 100   405A
13206 MAKUMBUSHO  132.00   1 1.0181  -5.1     0.0      0.0     0.0 -------------------------------------------------------------------------------
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		1	134.39		0.0	0.0	0.0	3306	MAKUMBUSHO3	33.000	1	1	87.4	67.4	0.950	UN	474	245	45	M
								3306	MAKUMBUSHO3	33.000	1	2	87.4	67.4	0.950	UN	474	245	45	M
								13201	UBUNGO	132.00	1	1	-174.7	-134.8			948	161	589	A
13207	MILINDIZI	132.00	1	1.0152	-5.2	0.0	0.0	0.0														
		1	134.00		0.0	0.0	0.0	3307	MILINDIZE	33.000	1	1	11.5	7.9	1.000	UN	60	139	10	M
								3307	MILINDIZE	33.000	1	2	11.5	7.9	1.000	UN	60	139	10	M
								13201	UBUNGO	132.00	1	1	-36.0	-24.6			188	46	405	A
								13214	CHALINZE	132.00	1	1	13.1	8.7			68	17	405	A
13208	TEGETA	132.00	1	1.0200	-5.1	114.4	0.0	0.0														
		1	134.64		159.2	R 0.0	0.0	3308	TEGETA33	33.000	1	1	70.5	51.1	1.000	UN	373	174	50	M
								3308	TEGETA33	33.000	1	2	70.5	51.1	1.000	UN	373	174	50	M
								13201	UBUNGO	132.00	1	1	-49.7	-1.4			213	53	405	A
								13201	UBUNGO	132.00	1	2	-64.8	-1.8			278			
								13213	MTONI	132.00	1	1	55.5	25.5			262	65	405	A
								13213	MTONI	132.00	1	2	32.5	34.8			204	50	405	A
13209	F-ZONE2	132.00	1	1.0452	-1.5	0.0	0.0	0.0														
		1	137.96		0.0	0.0	0.0	3309	F-ZONE2	33.000	1	1	39.2	25.7	1.000	UN	196	94	50	M
								13202	KINYEREZI	132.00	1	1	-130.5	-94.4			674	114	589	A
								13210	MBAGALA	132.00	1	1	91.3	68.8			478	118	405	A
13210	MBAGALA	132.00	1	1.0430	-1.6	0.0	0.0	0.0														
		1	137.68		0.0	0.0	0.0	3310	MBAGALA	33.000	1	1	91.2	68.5	1.000	UN	478	228	50	M
								13209	F-ZONE2	132.00	1	1	-91.2	-68.5			478	118	405	A
13211	N-C-CENTER	132.00	1	1.0187	-5.1	0.0	0.0	0.0														
		1	134.47		0.0	0.0	0.0	3311	N-C-CENTER	33.000	1	1	39.3	26.3	1.000	UN	203	95	50	M
								3311	N-C-CENTER	33.000	1	2	39.3	26.3	1.000	UN	203	95	50	M
								13205	ILALA	132.00	1	1	-78.5	-52.7			406	100	405	A
13213	MTONI	132.00	1	1.0149	-5.2	0.0	0.0	0.0														
		1	133.97		0.0	0.0	0.0	3313	MTONI	33.000	1	1	31.0	21.1	1.000	UN	161	125	30	M
								3313	MTONI	33.000	1	2	31.0	21.1	1.000	UN	161	125	30	M
								3313	MTONI	33.000	1	3	25.8	17.6	1.000	UN	135	125	25	M
								13208	TEGETA	132.00	1	1	-55.3	-25.2			262	65	405	A
								13208	TEGETA	132.00	1	2	-32.4	-34.5			204	50	405	A
13214	CHALINZE	132.00	1	1.0139	-5.2	0.0	0.0	0.0														
		1	133.84		0.0	0.0	0.0	3314	CHALINZE	33.000	1	1	13.1	8.7	1.000	UN	68	105	15	M
								13207	MILINDIZI	132.00	1	1	-13.1	-8.7			68	17	405	A
22001	UBUNGO220	220.00	1	1.0323	-2.3	0.0	0.0	0.0														
		1	227.10		0.0	0.0	0.0	13201	UBUNGO	132.00	1	1	378.7	55.0	1.000	UN	973	255	150	M
								13201	UBUNGO	132.00	1	2	378.7	55.0	1.000	UN	973	255	150	M
								22002	KINYEREZI220	220.00	1	1	-468.8	-133.7			1239	106	1165	A
								22099	MOROGORO	220.00	1	1	-288.6	23.7			736	63	1165	A
22002	KINYEREZI220	220.00	1	1.0338	-2.1	0.0	0.0	0.0														
		1	227.44		0.0	0.0	0.0	13202	KINYEREZI	132.00	1	1	-90.5	-84.4	1.000	UN	314	82	150	M
								13202	KINYEREZI	132.00	1	2	-90.5	-84.4	1.000	UN	314	82	150	M
								22001	UBUNGO220	220.00	1	1	469.1	135.5			1239	106	1165	A
								22099	MOROGORO	220.00	1	1	-288.0	33.2			736	63	1165	A
22099	MOROGORO	220.00	1	1.0350	0.0	579.5	0.0	0.0														
		1	227.70		-35.2	R 0.0	0.0	22001	UBUNGO220	220.00	1	1	290.1	-12.3			736	63	1165	A
								22002	KINYEREZI220	220.00	1	1	289.4	-22.8			736	63	1165	A

The result of Power flow with 0.90 load power factor in 2015 with 11kV capacitor banks at Ilala substation

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E SUN, SEP 15 2013 12:28

DAR
DAR-1

%MVA FOR TRANSFORMERS
% I FOR NON-TRANSFORMER BRANCHES

FROM BUS			AREA	VOLT		GEN	LOAD	SHUNT	TO BUS					TRANSFORMER				RATING		
BUS#	NAME	BASKV	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS#	NAME	BASKV	AREA	CKT	MW	MVAR	RATIO	ANGLE	AMPS	%	SET A
1105	ILALA	11.000	1	1.0196	-4.9	0.0	23.5	0.0												
			1	11.215		0.0	11.4	-15.6	3305	ILALA	33.000	1	1	-7.8	1.4	1.000LK		410	53	15M
									3305	ILALA	33.000	1	2	-7.8	1.4	1.000LK		410	53	15M
									3305	ILALA	33.000	1	3	-7.8	1.4	1.000LK		410	53	15M
1121	MUHIBILI11	11.000	1	0.9867	-4.7	0.0	7.8	0.0												
			1	10.854		0.0	3.8	0.0	3321	MUHIBILI33	33.000	1	1	-7.8	-3.8	1.000LK		463	58	15M
1122	MWANANYA11	11.000	1	0.9605	-7.2	0.0	7.8	0.0												
			1	10.565		0.0	3.8	0.0	3322	MWANANYA33	33.000	1	1	-7.8	-3.8	1.000LK		476	58	15M
1123	JAGWANI11	11.000	1	0.9719	-6.0	0.0	7.8	0.0												
			1	10.691		0.0	3.8	0.0	3323	JAGWANI33	33.000	1	1	-7.8	-3.8	1.000LK		470	58	15M
1124	MSASANI11	11.000	1	0.9586	-7.3	0.0	15.7	0.0												
			1	10.545		0.0	7.6	0.0	3324	MSASANI33	33.000	1	1	-7.8	-3.8	1.000LK		477	58	15M
									3324	MSASANI33	33.000	1	2	-7.8	-3.8	1.000LK		477	58	15M
3301	UBUNGO	33.000	1	1.0121	-2.0	0.0	153.8	0.0												
			1	33.400		0.0	74.5	0.0	13201	UBUNGO	132.00	1	1	-153.8	-74.5	1.000LK		2953	57	300M
3303	F-ZONE3	33.000	1	1.0031	-3.0	0.0	46.4	0.0												
			1	33.102		0.0	22.5	0.0	13203	F-ZONE3	132.00	1	1	-23.2	-11.2	1.000LK		450	57	45M
									13203	F-ZONE3	132.00	1	2	-23.2	-11.2	1.000LK		450	57	45M
3304	KURASHINI	33.000	1	0.9879	-4.5	0.0	47.0	0.0												
			1	32.599		0.0	22.8	0.0	13204	KURASINI	132.00	1	1	-47.0	-22.8	1.000LK		925	104	50M
3305	ILALA	33.000	1	1.0156	-3.1	0.0	109.7	0.0												
			1	33.513		0.0	53.1	-38.2	1105	ILALA	11.000	1	1	7.8	-1.2	1.000UN		137	53	15M
									1105	ILALA	11.000	1	2	7.8	-1.2	1.000UN		137	53	15M
									1105	ILALA	11.000	1	3	7.8	-1.2	1.000UN		137	53	15M
									13205	ILALA	132.00	1	1	-33.3	-2.9	1.000LK		576	56	60M
									13205	ILALA	132.00	1	2	-33.3	-2.9	1.000LK		576	56	60M
									13205	ILALA	132.00	1	3	-33.3	-2.9	1.000LK		576	56	60M
									13205	ILALA	132.00	1	4	-33.3	-2.9	1.000LK		576	56	60M
3306	MAKUMBUSHO33	33.000	1	0.9786	-5.3	0.0	80.7	0.0												
			1	32.295		0.0	39.1	0.0	3322	MWANANYA33	33.000	1	1	7.9	4.1			159	39	405A
									3324	MSASANI33	33.000	1	1	8.4	4.1			168	41	405A
									3324	MSASANI33	33.000	1	2	7.3	4.2			150	37	404A
									13206	MAKUMBUSHO	132.00	1	1	-52.1	-25.8	1.000LK		1040	129	45M
									13206	MAKUMBUSHO	132.00	1	2	-52.1	-25.8	1.000LK		1040	129	45M
3307	MILINDIZE	33.000	1	0.9952	-3.7	0.0	13.7	0.0												
			1	32.842		0.0	6.6	0.0	13207	MILINDIZI	132.00	1	1	-6.9	-3.3	1.000LK		134	76	10M
									13207	MILINDIZI	132.00	1	2	-6.9	-3.3	1.000LK		134	76	10M
3308	TEGETA33	33.000	1	0.9914	-4.1	0.0	76.4	0.0												
			1	32.717		0.0	37.0	0.0	3323	JAGWANI33	33.000	1	1	7.9	4.1			157	39	405A
									13208	TEGETA	132.00	1	1	-42.1	-20.6	1.000LK		827	94	50M
									13208	TEGETA	132.00	1	2	-42.1	-20.6	1.000LK		827	94	50M
3309	F-ZONE2	33.000	1	1.0297	-0.9	0.0	23.5	0.0												
			1	33.979		0.0	11.4	0.0	13209	F-ZONE2	132.00	1	1	-23.5	-11.4	1.000LK		444	52	50M
3310	MBAGALA	33.000	1	1.0070	-3.0	0.0	54.5	0.0												
			1	33.232		0.0	26.4	0.0	13210	MBAGALA	132.00	1	1	-54.5	-26.4	1.000LK		1051	121	50M
3311	N-C-CENTER33	33.000	1	1.0046	-2.9	0.0	39.2	0.0												
			1	33.151		0.0	19.0	0.0	3321	MUHIBILI33	33.000	1	1	7.9	4.1			154	38	405A

									13211	N-C-CENTER	132.00	1	1	-23.5	-11.5	1.000LK	456	52	50M
									13211	N-C-CENTER	132.00	1	2	-23.5	-11.5	1.000LK	456	52	50M
3313	MTONI	33.000	1	0.9969	-3.4	0.0	52.5	0.0											
			1	32.897		0.0	25.4	0.0	13213	MTONI	132.00	1	1	-18.5	-9.0	1.000LK	361	69	30M
									13213	MTONI	132.00	1	2	-18.5	-9.0	1.000LK	361	69	30M
									13213	MTONI	132.00	1	3	-15.4	-7.5	1.000LK	301	69	25M
3314	CHALINZE	33.000	1	1.0002	-3.1	0.0	7.8	0.0											
			1	33.007		0.0	3.8	0.0	13214	CHALINZE	132.00	1	1	-7.8	-3.8	1.000LK	152	58	15M
3320	F-ZONE1	33.000	1	1.0188	-1.4	0.0	15.7	0.0											
			1	33.622		0.0	7.6	0.0	13203	F-ZONE3	132.00	1	1	-5.2	-2.5	1.000LK	100	39	15M
									13203	F-ZONE3	132.00	1	2	-5.2	-2.5	1.000LK	100	39	15M
									13203	F-ZONE3	132.00	1	3	-5.2	-2.5	1.000LK	100	39	15M
3321	MUHIBILI33	33.000	1	1.0041	-2.9	0.0	0.0	0.0											
			1	33.135		0.0	0.0	0.0	1121	MUHIBILI11	11.000	1	1	7.8	4.1	1.000UN	154	59	15M
									3311	N-C-CENTER33	33.000	1	1	-7.8	-4.1		154	38	405A
3322	MWANANYA33	33.000	1	0.9784	-5.3	0.0	0.0	0.0											
			1	32.286		0.0	0.0	0.0	1122	MWANANYA11	11.000	1	1	7.8	4.1	1.000UN	159	59	15M
									3306	MAKUMBUSHO33	33.000	1	1	-7.8	-4.1		159	39	405A
3323	JAGWANI33	33.000	1	0.9896	-4.1	0.0	0.0	0.0											
			1	32.656		0.0	0.0	0.0	1123	JAGWANI11	11.000	1	1	7.8	4.1	1.000UN	157	59	15M
									3308	TEGETA33	33.000	1	1	-7.8	-4.1		157	39	405A
3324	MSASANI33	33.000	1	0.9765	-5.4	0.0	0.0	0.0											
			1	32.225		0.0	0.0	0.0	1124	MSASANI11	11.000	1	1	7.8	4.1	1.000UN	159	59	15M
									1124	MSASANI11	11.000	1	2	7.8	4.1	1.000UN	159	59	15M
									3306	MAKUMBUSHO33	33.000	1	1	-8.4	-4.1		168	41	405A
									3306	MAKUMBUSHO33	33.000	1	2	-7.3	-4.1		150	37	404A
13201	UBUNGO	132.00	1	1.0210	-1.2	312.5	0.0	0.0											
			1	134.77		142.5R	0.0	0.0	3301	UBUNGO	33.000	1	1	154.0	77.4	1.000UN	738	57	300M
									13203	F-ZONE3	132.00	1	1	62.2	32.0		300	51	589A
									13204	KURASINI	132.00	1	1	47.2	26.3		231	39	589A
									13205	ILALA	132.00	1	1	90.3	20.5		397	41	960A
									13205	ILALA	132.00	1	2	90.3	20.5		397	41	960A
									13206	MAKUMBUSHO	132.00	1	1	104.7	61.4		520	88	589A
									13207	MILINDIZI	132.00	1	1	21.6	11.6		105	26	405A
									13208	TEGETA	132.00	1	1	9.9	18.0		88	22	405A
									13208	TEGETA	132.00	1	2	12.9	23.5		115		
									22001	UBUNGO220	220.00	1	1	-140.2	-74.3	1.000LK	680	106	150M
									22001	UBUNGO220	220.00	1	2	-140.2	-74.3	1.000LK	680	106	150M
13202	KINYEREZI	132.00	1	1.0450	0.6	312.0	0.0	0.0											
			1	137.94		188.2R	0.0	0.0	13209	F-ZONE2	132.00	1	1	78.2	43.1		374	63	589A
									22002	KINYEREZI220	220.00	1	1	116.9	72.5	1.000LK	576	92	150M
									22002	KINYEREZI220	220.00	1	2	116.9	72.5	1.000LK	576	92	150M
13203	F-ZONE3	132.00	1	1.0199	-1.2	0.0	0.0	0.0											
			1	134.63		0.0	0.0	0.0	3303	F-ZONE3	33.000	1	1	23.2	12.1	1.000UN	112	58	45M
									3303	F-ZONE3	33.000	1	2	23.2	12.1	1.000UN	112	58	45M
									3320	F-ZONE1	33.000	1	1	5.2	2.5	1.000UN	25	39	15M
									3320	F-ZONE1	33.000	1	2	5.2	2.5	1.000UN	25	39	15M
									3320	F-ZONE1	33.000	1	3	5.2	2.5	1.000UN	25	39	15M
									13201	UBUNGO	132.00	1	1	-62.1	-31.9		300	51	589A
13204	KURASINI	132.00	1	1.0198	-1.2	0.0	0.0	0.0											
			1	134.61		0.0	0.0	0.0	3304	KURASHINI	33.000	1	1	47.1	26.2	1.000UN	231	108	50M
									13201	UBUNGO	132.00	1	1	-47.1	-26.2		231	39	589A
13205	ILALA	132.00	1	1.0202	-1.3	0.0	0.0	0.0											
			1	134.66		0.0	0.0	0.0	3305	ILALA	33.000	1	1	33.4	4.0	1.000UN	144	56	60M
									3305	ILALA	33.000	1	2	33.4	4.0	1.000UN	144	56	60M
									3305	ILALA	33.000	1	3	33.4	4.0	1.000UN	144	56	60M
									3305	ILALA	33.000	1	4	33.4	4.0	1.000UN	144	56	60M
									13201	UBUNGO	132.00	1	1	-90.2	-20.4		397	41	960A
									13201	UBUNGO	132.00	1	2	-90.2	-20.4		397	41	960A
									13211	N-C-CENTER	132.00	1	1	47.1	24.8		228	56	405A
13206	MAKUMBUSHO	132.00	1	1.0196	-1.3	0.0	0.0	0.0											

		1 134.58		0.0	0.0	0.0	3306 MAKUMBUSHO3333.000	1	1	52.3	30.6	1.000UN	260	135	45M
							3306 MAKUMBUSHO3333.000	1	2	52.3	30.6	1.000UN	260	135	45M
							13201 UBUNGO 132.00	1	1	-104.6	-61.2		520	88	589A
13207 MILINDIZI	132.00	1 1.0180	-1.3	0.0	0.0	0.0									
		1 134.38		0.0	0.0	0.0	3307 MILINDIZE 33.000	1	1	6.9	3.7	1.000UN	33	78	10M
							3307 MILINDIZE 33.000	1	2	6.9	3.7	1.000UN	33	78	10M
							13201 UBUNGO 132.00	1	1	-21.6	-11.5		105	26	405A
							13214 CHALINZE 132.00	1	1	7.9	4.1		38	9	405A
13208 TEGETA	132.00	1 1.0200	-1.2	114.4	0.0	0.0									
		1 134.64		33.3R	0.0	0.0	3308 TEGETA33 33.000	1	1	42.2	23.3	1.000UN	207	96	50M
							3308 TEGETA33 33.000	1	2	42.2	23.3	1.000UN	207	96	50M
							13201 UBUNGO 132.00	1	1	-9.9	-18.0		88	22	405A
							13201 UBUNGO 132.00	1	2	-12.9	-23.4		115		
							13213 MTONI 132.00	1	1	32.5	10.7		147	36	405A
							13213 MTONI 132.00	1	2	20.2	17.3		114	28	405A
13209 F-ZONE2	132.00	1 1.0446	0.6	0.0	0.0	0.0									
		1 137.89		0.0	0.0	0.0	3309 F-ZONE2 33.000	1	1	23.5	12.2	1.000UN	111	53	50M
							13202 KINYEREZI 132.00	1	1	-78.2	-43.1		374	63	589A
							13210 MBAGALA 132.00	1	1	54.6	30.9		263	65	405A
13210 MBAGALA	132.00	1 1.0435	0.6	0.0	0.0	0.0									
		1 137.75		0.0	0.0	0.0	3310 MBAGALA 33.000	1	1	54.6	30.8	1.000UN	263	125	50M
							13209 F-ZONE2 132.00	1	1	-54.6	-30.8		263	65	405A
13211 N-C-CENTER	132.00	1 1.0201	-1.3	0.0	0.0	0.0									
		1 134.65		0.0	0.0	0.0	3311 N-C-CENTER3333.000	1	1	23.5	12.4	1.000UN	114	53	50M
							3311 N-C-CENTER3333.000	1	2	23.5	12.4	1.000UN	114	53	50M
							13205 ILALA 132.00	1	1	-47.1	-24.8		228	56	405A
13213 MTONI	132.00	1 1.0173	-1.3	0.0	0.0	0.0									
		1 134.29		0.0	0.0	0.0	3313 MTONI 33.000	1	1	18.6	9.8	1.000UN	90	70	30M
							3313 MTONI 33.000	1	2	18.6	9.8	1.000UN	90	70	30M
							3313 MTONI 33.000	1	3	15.5	8.2	1.000UN	75	70	25M
							13208 TEGETA 132.00	1	1	-32.4	-10.6		147	36	405A
							13208 TEGETA 132.00	1	2	-20.2	-17.2		114	28	405A
13214 CHALINZE	132.00	1 1.0173	-1.3	0.0	0.0	0.0									
		1 134.29		0.0	0.0	0.0	3314 CHALINZE 33.000	1	1	7.8	4.1	1.000UN	38	59	15M
							13207 MILINDIZI 132.00	1	1	-7.8	-4.1		38	9	405A
22001 UBUNGO220	220.00	1 1.0328	-0.2	0.0	0.0	0.0									
		1 227.22		0.0	0.0	0.0	13201 UBUNGO 132.00	1	1	140.6	77.6	1.000UN	408	107	150M
							13201 UBUNGO 132.00	1	2	140.6	77.6	1.000UN	408	107	150M
							22002 KINYEREZI220220.00	1	1	-251.0	-143.6		735	63	1165A
							22099 MOROGORO 220.00	1	1	-30.2	-11.5		82	7	1165A
22002 KINYEREZI220220.00		1 1.0342	-0.1	0.0	0.0	0.0									
		1 227.53		0.0	0.0	0.0	13202 KINYEREZI 132.00	1	1	-116.7	-70.2	1.000UN	346	91	150M
							13202 KINYEREZI 132.00	1	2	-116.7	-70.2	1.000UN	346	91	150M
							22001 UBUNGO220 220.00	1	1	251.0	144.3		735	63	1165A
							22099 MOROGORO 220.00	1	1	-17.7	-3.8		46	4	1165A
22099 MOROGORO	220.00	1 1.0350	0.0	48.0	0.0	0.0									
		1 227.70		15.4R	0.0	0.0	22001 UBUNGO220 220.00	1	1	30.2	11.6		82	7	1165A
							22002 KINYEREZI220220.00	1	1	17.7	3.8		46	4	1165A

The result of Power flow with 0.90 load power factor in 2020 with 11kV capacitor banks at Ilala substation

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E SUN, SEP 15 2013 12:36

DAR
DAR-1

%MVA FOR TRANSFORMERS
% I FOR NON-TRANSFORMER BRANCHES

FROM BUS				VOLT		GEN	LOAD	SHUNT	TO BUS					TRANSFORMER				RATING		
BUS#	NAME	BASKV	AREA ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS#	NAME	BASKV	AREA	CKT	MW	MVAR	RATIO	ANGLE	AMPS	%	SET A
1105	ILALA	11.000	1 1	0.9904	-8.2	0.0	33.6	0.0												
			1 1	10.895		0.0	16.3	-14.7	3305	ILALA	33.000	1	1	-11.2	-0.5	1.000LK		594	75	15M
									3305	ILALA	33.000	1	2	-11.2	-0.5	1.000LK		594	75	15M
									3305	ILALA	33.000	1	3	-11.2	-0.5	1.000LK		594	75	15M
1121	MUHIBILI11	11.000	1 1	0.9593	-7.9	0.0	11.2	0.0												
			1 1	10.552		0.0	5.4	0.0	3321	MUHIBILI33	33.000	1	1	-11.2	-5.4	1.000LK		681	83	15M
1122	MWANANYA11	11.000	1 1	1.0313	-10.5	0.0	11.2	0.0												
			1 1	11.345		0.0	5.4	0.0	3322	MWANANYA33	33.000	1	1	-11.2	-5.4	1.000LK		633	83	15M
1123	JAGWANI11	11.000	1 1	0.9889	-9.7	0.0	11.2	0.0												
			1 1	10.878		0.0	5.4	0.0	3323	JAGWANI33	33.000	1	1	-11.2	-5.4	1.000LK		660	83	15M
1124	MSASANI11	11.000	1 1	1.0285	-10.7	0.0	22.4	0.0												
			1 1	11.314		0.0	10.8	0.0	3324	MSASANI33	33.000	1	1	-11.2	-5.4	1.000LK		635	83	15M
									3324	MSASANI33	33.000	1	2	-11.2	-5.4	1.000LK		635	83	15M
3301	UBUNGO	33.000	1 1	0.9975	-3.9	0.0	219.7	0.0												
			1 1	32.919		0.0	106.4	0.0	13201	UBUNGO	132.00	1	1	-219.7	-106.4	1.000LK		4280	81	300M
3303	F-ZONE3	33.000	1 1	0.9841	-5.3	0.0	66.3	0.0												
			1 1	32.474		0.0	32.1	0.0	13203	F-ZONE3	132.00	1	1	-33.1	-16.0	1.000LK		655	82	45M
									13203	F-ZONE3	132.00	1	2	-33.1	-16.0	1.000LK		655	82	45M
3304	KURASHINI	33.000	1 1	0.9606	-7.6	0.0	67.2	0.0												
			1 1	31.700		0.0	32.5	0.0	13204	KURASINI	132.00	1	1	-67.2	-32.5	1.000LK		1359	149	50M
3305	ILALA	33.000	1 1	0.9953	-5.5	0.0	156.7	0.0												
			1 1	32.844		0.0	75.9	-36.7	1105	ILALA	11.000	1	1	11.2	1.0	1.000UN		198	75	15M
									1105	ILALA	11.000	1	2	11.2	1.0	1.000UN		198	75	15M
									1105	ILALA	11.000	1	3	11.2	1.0	1.000UN		198	75	15M
									13205	ILALA	132.00	1	1	-47.6	-10.6	1.000LK		857	81	60M
									13205	ILALA	132.00	1	2	-47.6	-10.6	1.000LK		857	81	60M
									13205	ILALA	132.00	1	3	-47.6	-10.6	1.000LK		857	81	60M
									13205	ILALA	132.00	1	4	-47.6	-10.6	1.000LK		857	81	60M
3306	MAKUMBUSHO3333	33.000	1 1	1.0029	-8.1	0.0	115.3	0.0												
			1 1	33.096		0.0	55.8	0.0	3322	MWANANYA33	33.000	1	1	11.2	6.0			222	55	405A
									3324	MSASANI33	33.000	1	1	12.0	6.1			235	58	405A
									3324	MSASANI33	33.000	1	2	10.4	6.1			211	52	404A
									13206	MAKUMBUSHO	132.00	1	1	-74.5	-37.0	1.000LK		1451	185	45M
									13206	MAKUMBUSHO	132.00	1	2	-74.5	-37.0	1.000LK		1451	185	45M
3307	MILINDIZE	33.000	1 1	0.9721	-6.3	0.0	19.6	0.0												
			1 1	32.080		0.0	9.5	0.0	13207	MILINDIZI	132.00	1	1	-9.8	-4.7	1.000LK		196	109	10M
									13207	MILINDIZI	132.00	1	2	-9.8	-4.7	1.000LK		196	109	10M
3308	TEGETA33	33.000	1 1	0.9661	-7.0	0.0	109.2	0.0												
			1 1	31.881		0.0	52.9	0.0	3323	JAGWANI33	33.000	1	1	11.2	6.1			232	57	405A
									13208	TEGETA	132.00	1	1	-60.2	-29.5	1.000LK		1214	134	50M
									13208	TEGETA	132.00	1	2	-60.2	-29.5	1.000LK		1214	134	50M
3309	F-ZONE2	33.000	1 1	1.0227	-1.1	0.0	33.6	0.0												
			1 1	33.749		0.0	16.3	0.0	13209	F-ZONE2	132.00	1	1	-33.6	-16.3	1.000LK		638	75	50M
3310	MBAGALA	33.000	1 1	0.9883	-4.2	0.0	77.8	0.0												
			1 1	32.615		0.0	37.7	0.0	13210	MBAGALA	132.00	1	1	-77.8	-37.7	1.000LK		1530	173	50M
3311	N-C-CENTER3333	33.000	1 1	0.9859	-5.1	0.0	56.0	0.0												
			1 1	32.535		0.0	27.1	0.0	3321	MUHIBILI33	33.000	1	1	11.2	6.1			227	56	405A

18. Outline Table of Sectional Power Flow

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                                                                            13211 N-C-CENTER  132.00    1  1   -33.6  -16.6 1.000LK          665  75     50M
                                                                            13211 N-C-CENTER  132.00    1  2   -33.6  -16.6 1.000LK          665  75     50M
  3313 MTONI       33.000     1 0.9747   -6.0     0.0      75.0       0.0 ---------------------------------------------------------------------------------
                              1 32.165            0.0      36.3       0.0  13213 MTONI        132.00    1  1   -26.5  -12.8 1.000LK          528  98     30M
                                                                            13213 MTONI        132.00    1  2   -26.5  -12.8 1.000LK          528  98     30M
                                                                            13213 MTONI        132.00    1  3   -22.1  -10.7 1.000LK          440  98     25M
  3314 CHALINZE    33.000     1 0.9798   -5.5     0.0      11.2       0.0 ---------------------------------------------------------------------------------
                              1 32.332            0.0       5.4       0.0  13214 CHALINZE     132.00    1  1   -11.2   -5.4 1.000LK          222  83     15M

  3320 F-ZONE1     33.000     1 1.0073   -2.9     0.0      22.4       0.0 ---------------------------------------------------------------------------------
                              1 33.242            0.0      10.8       0.0  13203 F-ZONE3      132.00    1  1    -7.5   -3.6 1.000LK          144  55     15M
                                                                            13203 F-ZONE3      132.00    1  2    -7.5   -3.6 1.000LK          144  55     15M
                                                                            13203 F-ZONE3      132.00    1  3    -7.5   -3.6 1.000LK          144  55     15M
  3321 MUHIBILI33  33.000     1 0.9852   -5.2     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 32.511            0.0       0.0       0.0   1121 MUHIBILI11  11.000    1  1    11.2    6.1 1.000UN          227  85     15M
                                                                             3311 N-C-CENTER3333.000    1  1   -11.2   -6.1                  227  56    405A
  3322 MWANANYA33  33.000     1 1.0025   -8.2     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 33.083            0.0       0.0       0.0   1122 MWANANYA11  11.000    1  1    11.2    6.0 0.950UN          222  85     15M
                                                                             3306 MAKUMBUSHO3333.000    1  1   -11.2   -6.0                  222  55    405A
  3323 JAGWANI33   33.000     1 0.9633   -7.1     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 31.789            0.0       0.0       0.0   1123 JAGWANI11   11.000    1  1    11.2    6.1 0.950UN          232  85     15M
                                                                             3308 TEGETA33    33.000    1  1   -11.2   -6.1                  232  57    405A
  3324 MSASANI33   33.000     1 0.9999   -8.3     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 32.998            0.0       0.0       0.0   1124 MSASANI11   11.000    1  1    11.2    6.0 0.950UN          223  85     15M
                                                                             1124 MSASANI11   11.000    1  2    11.2    6.0 0.950UN          223  85     15M
                                                                             3306 MAKUMBUSHO3333.000    1  1   -12.0   -6.0                  235  58    405A
                                                                             3306 MAKUMBUSHO3333.000    1  2   -10.4   -6.0                  211  52    404A
 13201 UBUNGO      132.00     1 1.0105   -2.7   312.5       0.0       0.0 ---------------------------------------------------------------------------------
                              1 133.39          215.8R      0.0       0.0   3301 UBUNGO      33.000    1  1   220.1  112.6 1.000UN         1070  82    300M
                                                                            13203 F-ZONE3      132.00    1  1    88.9   47.1                  435  74    589A
                                                                            13204 KURASINI     132.00    1  1    67.5   40.1                  340  58    589A
                                                                            13205 ILALA        132.00    1  1   129.1   44.8                  592  62    960A
                                                                            13205 ILALA        132.00    1  2   129.1   44.8                  592  62    960A
                                                                            13206 MAKUMBUSHO  132.00    1  1   149.8   93.2                  764 130    589A
                                                                            13207 MILINDIZI   132.00    1  1    30.9   17.3                  153  38    405A
                                                                            13208 TEGETA       132.00    1  1    35.5   18.1                  173  43    405A
                                                                            13208 TEGETA       132.00    1  2    46.3   23.6                  225
                                                                            22001 UBUNGO220   220.00    1  1  -292.4 -112.9 1.000LK         1357 209    150M
                                                                            22001 UBUNGO220   220.00    1  2  -292.4 -112.9 1.000LK         1357 209    150M
 13202 KINYEREZI   132.00     1 1.0450    1.1   552.1       0.0       0.0 ---------------------------------------------------------------------------------
                              1 137.94          222.4R      0.0       0.0  13209 F-ZONE2      132.00    1  1   111.9   65.2                  542  92    589A
                                                                            22002 KINYEREZI220220.00    1  1   220.1   78.6 1.000LK          978 156    150M
                                                                            22002 KINYEREZI220220.00    1  2   220.1   78.6 1.000LK          978 156    150M
 13203 F-ZONE3     132.00     1 1.0089   -2.8     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 133.18            0.0       0.0       0.0   3303 F-ZONE3     33.000    1  1    33.2   18.0 1.000UN          164  84     45M
                                                                             3303 F-ZONE3     33.000    1  2    33.2   18.0 1.000UN          164  84     45M
                                                                             3320 F-ZONE1     33.000    1  1     7.5    3.6 1.000UN           36  55     15M
                                                                             3320 F-ZONE1     33.000    1  2     7.5    3.6 1.000UN           36  55     15M
                                                                             3320 F-ZONE1     33.000    1  3     7.5    3.6 1.000UN           36  55     15M
                                                                            13201 UBUNGO       132.00    1  1   -88.8  -46.8                  435  74    589A
 13204 KURASINI    132.00     1 1.0087   -2.8     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 133.15            0.0       0.0       0.0   3304 KURASHINI   33.000    1  1    67.4   39.9 1.000UN          340 157     50M
                                                                            13201 UBUNGO       132.00    1  1   -67.4  -39.9                  340  58    589A
 13205 ILALA       132.00     1 1.0091   -2.8     0.0       0.0       0.0 ---------------------------------------------------------------------------------
                              1 133.20            0.0       0.0       0.0   3305 ILALA       33.000    1  1    47.7   13.0 1.000UN          214  82     60M
                                                                             3305 ILALA       33.000    1  2    47.7   13.0 1.000UN          214  82     60M
                                                                             3305 ILALA       33.000    1  3    47.7   13.0 1.000UN          214  82     60M
                                                                             3305 ILALA       33.000    1  4    47.7   13.0 1.000UN          214  82     60M
                                                                            13201 UBUNGO       132.00    1  1  -129.0  -44.5                  592  62    960A
                                                                            13201 UBUNGO       132.00    1  2  -129.0  -44.5                  592  62    960A
                                                                            13211 N-C-CENTER  132.00    1  1    67.3   36.8                  333  82    405A
 13206 MAKUMBUSHO  132.00     1 1.0083   -2.8     0.0       0.0       0.0 ---------------------------------------------------------------------------------
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                          1 133.10          0.0      0.0      0.0   3306 MAKUMBUSHO3333.000    1  1    74.8   46.4 0.950UN          382 196    45M
                                                                   3306 MAKUMBUSHO3333.000    1  2    74.8   46.4 0.950UN          382 196    45M
                                                                  13201 UBUNGO      132.00    1  1  -149.7  -92.7                  764 130   589A
13207 MILINDIZI   132.00  1 1.0061   -2.9      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 132.80          0.0      0.0      0.0   3307 MILINDIZE   33.000    1  1     9.8    5.5 1.000UN           49 113    10M
                                                                   3307 MILINDIZE   33.000    1  2     9.8    5.5 1.000UN           49 113    10M
                                                                  13201 UBUNGO      132.00    1  1   -30.9  -17.1                  153  38   405A
                                                                  13214 CHALINZE    132.00    1  1    11.2    6.1                   56  14   405A
13208 TEGETA      132.00  1 1.0090   -2.7   114.4      0.0      0.0 ------------------------------------------------------------------------------
                          1 133.19           71.3R     0.0      0.0   3308 TEGETA33    33.000    1  1    60.4   35.4 1.000UN          303 140    50M
                                                                   3308 TEGETA33    33.000    1  2    60.4   35.4 1.000UN          303 140    50M
                                                                  13201 UBUNGO      132.00    1  1   -35.5  -18.0                  173  43   405A
                                                                  13201 UBUNGO      132.00    1  2   -46.3  -23.5                  225
                                                                  13213 MTONI       132.00    1  1    46.6   16.4                  214  53   405A
                                                                  13213 MTONI       132.00    1  2    28.8   25.6                  167  41   405A
13209 F-ZONE2     132.00  1 1.0444    1.1      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 137.86          0.0      0.0      0.0   3309 F-ZONE2     33.000    1  1    33.6   17.9 1.000UN          160  76    50M
                                                                  13202 KINYEREZI   132.00    1  1  -111.8  -65.1                  542  92   589A
                                                                  13210 MBAGALA     132.00    1  1    78.2   47.2                  383  94   405A
13210 MBAGALA     132.00  1 1.0428    1.0      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 137.65          0.0      0.0      0.0   3310 MBAGALA     33.000    1  1    78.1   47.1 1.000UN          383 182    50M
                                                                  13209 F-ZONE2     132.00    1  1   -78.1  -47.1                  383  94   405A
13211 N-C-CENTER  132.00  1 1.0089   -2.8      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 133.17          0.0      0.0      0.0   3311 N-C-CENTER3333.000    1  1    33.7   18.4 1.000UN          166  77    50M
                                                                   3311 N-C-CENTER3333.000    1  2    33.7   18.4 1.000UN          166  77    50M
                                                                  13205 ILALA       132.00    1  1   -67.3  -36.8                  333  82   405A
13213 MTONI       132.00  1 1.0050   -2.9      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 132.66          0.0      0.0      0.0   3313 MTONI       33.000    1  1    26.5   14.7 1.000UN          132 101    30M
                                                                   3313 MTONI       33.000    1  2    26.5   14.7 1.000UN          132 101    30M
                                                                   3313 MTONI       33.000    1  3    22.1   12.2 1.000UN          110 101    25M
                                                                  13208 TEGETA      132.00    1  1   -46.5  -16.2                  214  53   405A
                                                                  13208 TEGETA      132.00    1  2   -28.7  -25.4                  167  41   405A
13214 CHALINZE    132.00  1 1.0051   -2.9      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 132.67          0.0      0.0      0.0   3314 CHALINZE    33.000    1  1    11.2    6.1 1.000UN           56  85    15M
                                                                  13207 MILINDIZI   132.00    1  1   -11.2   -6.1                   56  14   405A
22001 UBUNGO220   220.00  1 1.0302   -0.6      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 226.65          0.0      0.0      0.0  13201 UBUNGO      132.00    1  1   293.8  125.7 1.000UN          814 213   150M
                                                                  13201 UBUNGO      132.00    1  2   293.8  125.7 1.000UN          814 213   150M
                                                                  22002 KINYEREZI220220.00    1  1  -501.8 -193.5                 1370 118  1165A
                                                                  22099 MOROGORO    220.00    1  1   -85.8  -57.9                  264  23  1165A
22002 KINYEREZI220220.00  1 1.0323   -0.4      0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 227.10          0.0      0.0      0.0  13202 KINYEREZI   132.00    1  1  -219.4  -71.9 1.000UN          587 154   150M
                                                                  13202 KINYEREZI   132.00    1  2  -219.4  -71.9 1.000UN          587 154   150M
                                                                  22001 UBUNGO220   220.00    1  1   502.1  195.7                 1370 118  1165A
                                                                  22099 MOROGORO    220.00    1  1   -63.3  -51.9                  208  18  1165A
22099 MOROGORO    220.00  1 1.0400    0.0   149.4      0.0      0.0 ------------------------------------------------------------------------------
                          1 228.80         112.2R     0.0      0.0  22001 UBUNGO220   220.00    1  1    86.0   59.4                  264  23  1165A
                                                                  22002 KINYEREZI220220.00    1  1    63.4   52.8                  208  18  1165A
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The result of Power flow with 0.90 load power factor in 2025 with 11kV capacitor banks at Ilala substation

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E SUN, SEP 15 2013 12:45

DAR
DAR-1

%MVA FOR TRANSFORMERS
% I FOR NON-TRANSFORMER BRANCHES

FROM BUS BUS#	NAME	BASKV	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS BUS#	NAME	BASKV	AREA	CKT	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING AMPS	%	SET A
1105	ILALA	11.000	1 1	0.9706	-10.5	0.0	39.1	0.0												
			1 1	10.677		0.0	19.0	-14.1	3305	ILALA	33.000	1	1	-13.0	-1.6	1.000LK		711	88	15M
									3305	ILALA	33.000	1	2	-13.0	-1.6	1.000LK		711	88	15M
									3305	ILALA	33.000	1	3	-13.0	-1.6	1.000LK		711	88	15M
1121	MUHIBILI11	11.000	1 1	0.9936	-9.8	0.0	13.0	0.0												
			1 1	10.930		0.0	6.3	0.0	3321	MUHIBILI33	33.000	1	1	-13.0	-6.3	1.000LK		766	97	15M
1122	MWANANYA11	11.000	1 1	1.0029	-13.4	0.0	13.0	0.0												
			1 1	11.032		0.0	6.3	0.0	3322	MWANANYA33	33.000	1	1	-13.0	-6.3	1.000LK		759	97	15M
1123	JAGWANI11	11.000	1 1	1.0859	-11.2	0.0	13.0	0.0												
			1 1	11.944		0.0	6.3	0.0	3323	JAGWANI33	33.000	1	1	-13.0	-6.3	1.000LK		701	97	15M
1124	MSASANI11	11.000	1 1	0.9995	-13.6	0.0	26.1	0.0												
			1 1	10.995		0.0	12.6	0.0	3324	MSASANI33	33.000	1	1	-13.0	-6.3	1.000LK		761	97	15M
									3324	MSASANI33	33.000	1	2	-13.0	-6.3	1.000LK		761	97	15M
3301	UBUNGO	33.000	1 1	0.9867	-5.4	0.0	256.0	0.0												
			1 1	32.560		0.0	124.0	0.0	13201	UBUNGO	132.00	1	1	-256.0	-124.0	1.000LK		5044	95	300M
3303	F-ZONE3	33.000	1 1	0.9705	-7.1	0.0	77.2	0.0												
			1 1	32.028		0.0	37.4	0.0	13203	F-ZONE3	132.00	1	1	-38.6	-18.7	1.000LK		774	95	45M
									13203	F-ZONE3	132.00	1	2	-38.6	-18.7	1.000LK		774	95	45M
3304	KURASHINI	33.000	1 1	0.9983	-9.2	0.0	78.3	0.0												
			1 1	32.942		0.0	37.9	0.0	13204	KURASINI	132.00	1	1	-78.3	-37.9	1.000LK		1525	174	50M
3305	ILALA	33.000	1 1	0.9809	-7.3	0.0	182.7	0.0												
			1 1	32.369		0.0	88.5	-35.6	1105	ILALA	11.000	1	1	13.1	2.4	1.000UN		237	89	15M
									1105	ILALA	11.000	1	2	13.1	2.4	1.000UN		237	89	15M
									1105	ILALA	11.000	1	3	13.1	2.4	1.000UN		237	89	15M
									13205	ILALA	132.00	1	1	-55.5	-15.0	1.000LK		1025	96	60M
									13205	ILALA	132.00	1	2	-55.5	-15.0	1.000LK		1025	96	60M
									13205	ILALA	132.00	1	3	-55.5	-15.0	1.000LK		1025	96	60M
									13205	ILALA	132.00	1	4	-55.5	-15.0	1.000LK		1025	96	60M
3306	MAKUMBUSHO3333.000		1 1	0.9808	-10.5	0.0	134.4	0.0												
			1 1	32.365		0.0	65.1	0.0	3322	MWANANYA33	33.000	1	1	13.1	7.2			266	66	405A
									3324	MSASANI33	33.000	1	1	14.0	7.2			282	70	405A
									3324	MSASANI33	33.000	1	2	12.2	7.2			253	63	404A
									13206	MAKUMBUSHO	132.00	1	1	-86.8	-43.4	1.000LK		1732	216	45M
									13206	MAKUMBUSHO	132.00	1	2	-86.8	-43.4	1.000LK		1732	216	45M
3307	MILINDIZE	33.000	1 1	0.9560	-8.3	0.0	22.8	0.0												
			1 1	31.550		0.0	11.1	0.0	13207	MILINDIZI	132.00	1	1	-11.4	-5.5	1.000LK		232	127	10M
									13207	MILINDIZI	132.00	1	2	-11.4	-5.5	1.000LK		232	127	10M
3308	TEGETA33	33.000	1 1	1.0043	-8.6	0.0	127.2	0.0												
			1 1	33.141		0.0	61.6	0.0	3323	JAGWANI33	33.000	1	1	13.1	7.1			260	64	405A
									13208	TEGETA	132.00	1	1	-70.2	-34.4	1.000LK		1361	156	50M
									13208	TEGETA	132.00	1	2	-70.2	-34.4	1.000LK		1361	156	50M
3309	F-ZONE2	33.000	1 1	1.0239	-2.2	0.0	39.1	0.0												
			1 1	33.789		0.0	19.0	0.0	13209	F-ZONE2	132.00	1	1	-39.1	-19.0	1.000LK		743	87	50M
3310	MBAGALA	33.000	1 1	0.9827	-5.8	0.0	90.7	0.0												
			1 1	32.428		0.0	43.9	0.0	13210	MBAGALA	132.00	1	1	-90.7	-43.9	1.000LK		1794	202	50M
3311	N-C-CENTER3333.000		1 1	0.9726	-6.8	0.0	65.2	0.0												
			1 1	32.096		0.0	31.6	0.0	3321	MUHIBILI33	33.000	1	1	13.1	7.2			269	66	405A

									13211	N-C-CENTER	132.00	1	1	-39.2	-19.4	1.000LK	786	87	50M
									13211	N-C-CENTER	132.00	1	2	-39.2	-19.4	1.000LK	786	87	50M
3313	MTONI	33.000	1	0.9590	-7.9	0.0	87.4	0.0											
			1	31.647		0.0	42.3	0.0	13213	MTONI	132.00	1	1	-30.9	-14.9	1.000LK	625	114	30M
									13213	MTONI	132.00	1	2	-30.9	-14.9	1.000LK	625	114	30M
									13213	MTONI	132.00	1	3	-25.7	-12.5	1.000LK	521	114	25M
3314	CHALINZE	33.000	1	0.9653	-7.3	0.0	13.0	0.0											
			1	31.856		0.0	6.3	0.0	13214	CHALINZE	132.00	1	1	-13.0	-6.3	1.000LK	263	97	15M
3320	F-ZONE1	33.000	1	0.9983	-4.2	0.0	26.1	0.0											
			1	32.943		0.0	12.6	0.0	13203	F-ZONE3	132.00	1	1	-8.7	-4.2	1.000LK	169	64	15M
									13203	F-ZONE3	132.00	1	2	-8.7	-4.2	1.000LK	169	64	15M
									13203	F-ZONE3	132.00	1	3	-8.7	-4.2	1.000LK	169	64	15M
3321	MUHIBILI33	33.000	1	0.9717	-6.9	0.0	0.0	0.0											
			1	32.067		0.0	0.0	0.0	1121	MUHIBILI11	11.000	1	1	13.1	7.2	0.950UN	269	99	15M
									3311	N-C-CENTER33	33.000	1	1	-13.1	-7.2		269	66	405A
3322	MWANANYA33	33.000	1	0.9803	-10.5	0.0	0.0	0.0											
			1	32.350		0.0	0.0	0.0	1122	MWANANYA11	11.000	1	1	13.1	7.2	0.950UN	266	99	15M
									3306	MAKUMBUSHO33	33.000	1	1	-13.1	-7.2		266	66	405A
3323	JAGWANI33	33.000	1	1.0012	-8.7	0.0	0.0	0.0											
			1	33.039		0.0	0.0	0.0	1123	JAGWANI11	11.000	1	1	13.1	7.0	0.900UN	260	99	15M
									3308	TEGETA33	33.000	1	1	-13.1	-7.0		260	64	405A
3324	MSASANI33	33.000	1	0.9772	-10.7	0.0	0.0	0.0											
			1	32.246		0.0	0.0	0.0	1124	MSASANI11	11.000	1	1	13.1	7.2	0.950UN	267	99	15M
									1124	MSASANI11	11.000	1	2	13.1	7.2	0.950UN	267	99	15M
									3306	MAKUMBUSHO33	33.000	1	1	-14.0	-7.2		282	70	405A
									3306	MAKUMBUSHO33	33.000	1	2	-12.2	-7.2		253	63	404A
13201	UBUNGO	132.00	1	1.0020	-3.9	312.5	0.0	0.0											
			1	132.26		194.8R	0.0	0.0	3301	UBUNGO	33.000	1	1	256.6	132.7	1.000UN	1261	96	300M
									13203	F-ZONE3	132.00	1	1	103.6	55.8		514	87	589A
									13204	KURASINI	132.00	1	1	78.7	47.5		401	68	589A
									13205	ILALA	132.00	1	1	150.6	59.3		707	74	960A
									13205	ILALA	132.00	1	2	150.6	59.3		707	74	960A
									13206	MAKUMBUSHO	132.00	1	1	174.8	114.1		911	155	589A
									13207	MILINDIZI	132.00	1	1	36.1	20.7		182	45	405A
									13208	TEGETA	132.00	1	1	49.7	22.7		239	59	405A
									13208	TEGETA	132.00	1	2	64.8	29.7		311		
									22001	UBUNGO220	220.00	1	1	-376.5	-173.6	1.000LK	1810	276	150M
									22001	UBUNGO220	220.00	1	2	-376.5	-173.6	1.000LK	1810	276	150M
13202	KINYEREZI	132.00	1	1.0500	0.4	552.1	0.0	0.0											
			1	138.60		282.0R	0.0	0.0	13209	F-ZONE2	132.00	1	1	130.5	78.4		634	108	589A
									22002	KINYEREZI220	220.00	1	1	210.8	101.8	1.000LK	975	156	150M
									22002	KINYEREZI220	220.00	1	2	210.8	101.8	1.000LK	975	156	150M
13203	F-ZONE3	132.00	1	1.0001	-4.0	0.0	0.0	0.0											
			1	132.02		0.0	0.0	0.0	3303	F-ZONE3	33.000	1	1	38.7	21.4	1.000UN	193	98	45M
									3303	F-ZONE3	33.000	1	2	38.7	21.4	1.000UN	193	98	45M
									3320	F-ZONE1	33.000	1	1	8.7	4.3	1.000UN	42	65	15M
									3320	F-ZONE1	33.000	1	2	8.7	4.3	1.000UN	42	65	15M
									3320	F-ZONE1	33.000	1	3	8.7	4.3	1.000UN	42	65	15M
									13201	UBUNGO	132.00	1	1	-103.5	-55.5		514	87	589A
13204	KURASINI	132.00	1	0.9999	-4.0	0.0	0.0	0.0											
			1	131.98		0.0	0.0	0.0	3304	KURASHINI	33.000	1	1	78.6	47.2	0.950UN	401	183	50M
									13201	UBUNGO	132.00	1	1	-78.6	-47.2		401	68	589A
13205	ILALA	132.00	1	1.0002	-4.0	0.0	0.0	0.0											
			1	132.02		0.0	0.0	0.0	3305	ILALA	33.000	1	1	55.6	18.5	1.000UN	256	98	60M
									3305	ILALA	33.000	1	2	55.6	18.5	1.000UN	256	98	60M
									3305	ILALA	33.000	1	3	55.6	18.5	1.000UN	256	98	60M
									3305	ILALA	33.000	1	4	55.6	18.5	1.000UN	256	98	60M
									13201	UBUNGO	132.00	1	1	-150.4	-58.9		707	74	960A
									13201	UBUNGO	132.00	1	2	-150.4	-58.9		707	74	960A
									13211	N-C-CENTER	132.00	1	1	78.5	43.8		393	97	405A
13206	MAKUMBUSHO	132.00	1	0.9994	-4.0	0.0	0.0	0.0											

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                          1 131.92          0.0      0.0      0.0   3306 MAKUMBUSHO3333.000    1  1    87.3   56.7 0.950UN          456 231    45M
                                                                   3306 MAKUMBUSHO3333.000    1  2    87.3   56.7 0.950UN          456 231    45M
                                                                  13201 UBUNGO      132.00    1  1  -174.6 -113.4                  911 155   589A
13207 MILINDIZI   132.00  1 0.9967   -4.1     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 131.56          0.0      0.0      0.0   3307 MILINDIZE   33.000    1  1    11.5    6.6 1.000UN           58 132    10M
                                                                   3307 MILINDIZE   33.000    1  2    11.5    6.6 1.000UN           58 132    10M
                                                                  13201 UBUNGO      132.00    1  1   -36.0  -20.5                  182  45   405A
                                                                  13214 CHALINZE    132.00    1  1    13.1    7.3                    66  16   405A
13208 TEGETA      132.00  1 1.0000   -4.0   114.4      0.0      0.0 ------------------------------------------------------------------------------
                          1 132.00         81.6R      0.0      0.0   3308 TEGETA33    33.000    1  1    70.4   41.8 0.950UN          358 164    50M
                                                                   3308 TEGETA33    33.000    1  2    70.4   41.8 0.950UN          358 164    50M
                                                                  13201 UBUNGO      132.00    1  1   -49.7  -22.6                  239  59   405A
                                                                  13201 UBUNGO      132.00    1  2   -64.7  -29.5                  311
                                                                  13213 MTONI       132.00    1  1    54.5   19.8                  254  63   405A
                                                                  13213 MTONI       132.00    1  2    33.5   30.4                  198  49   405A
13209 F-ZONE2     132.00  1 1.0493    0.3     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 138.50          0.0      0.0      0.0   3309 F-ZONE2     33.000    1  1    39.2   21.2 1.000UN          186  89    50M
                                                                  13202 KINYEREZI   132.00    1  1  -130.4  -78.2                  634 108   589A
                                                                  13210 MBAGALA     132.00    1  1    91.2   57.1                  448 111   405A
13210 MBAGALA     132.00  1 1.0474    0.2     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 138.26          0.0      0.0      0.0   3310 MBAGALA     33.000    1  1    91.1   56.8 1.000UN          448 215    50M
                                                                  13209 F-ZONE2     132.00    1  1   -91.1  -56.8                  448 111   405A
13211 N-C-CENTER  132.00  1 1.0000   -4.1     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 132.00          0.0      0.0      0.0   3311 N-C-CENTER3333.000    1  1    39.3   21.9 1.000UN          197  90    50M
                                                                   3311 N-C-CENTER3333.000    1  2    39.3   21.9 1.000UN          197  90    50M
                                                                  13205 ILALA       132.00    1  1   -78.5  -43.8                  393  97   405A
13213 MTONI       132.00  1 0.9953   -4.2     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 131.38          0.0      0.0      0.0   3313 MTONI       33.000    1  1    30.9   17.6 1.000UN          156 119    30M
                                                                   3313 MTONI       33.000    1  2    30.9   17.6 1.000UN          156 119    30M
                                                                   3313 MTONI       33.000    1  3    25.8   14.6 1.000UN          130 119    25M
                                                                  13208 TEGETA      132.00    1  1   -54.3  -19.6                  254  63   405A
                                                                  13208 TEGETA      132.00    1  2   -33.4  -30.2                  198  49   405A
13214 CHALINZE    132.00  1 0.9955   -4.2     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 131.41          0.0      0.0      0.0   3314 CHALINZE    33.000    1  1    13.1    7.2 1.000UN           66 100    15M
                                                                  13207 MILINDIZI   132.00    1  1   -13.1   -7.2                   66  16   405A
22001 UBUNGO220   220.00  1 1.0316   -1.3     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 226.96          0.0      0.0      0.0  13201 UBUNGO      132.00    1  1   379.0  196.4 1.000UN         1086 285   150M
                                                                  13201 UBUNGO      132.00    1  2   379.0  196.4 1.000UN         1086 285   150M
                                                                  22002 KINYEREZI220220.00    1  1  -579.7 -286.8                 1645 141  1165A
                                                                  22099 MOROGORO    220.00    1  1  -178.3 -106.1                  528  45  1165A
22002 KINYEREZI220220.00  1 1.0345   -1.0     0.0      0.0      0.0 ------------------------------------------------------------------------------
                          1 227.58          0.0      0.0      0.0  13202 KINYEREZI   132.00    1  1  -210.1  -95.2 1.000UN          585 154   150M
                                                                  13202 KINYEREZI   132.00    1  2  -210.1  -95.2 1.000UN          585 154   150M
                                                                  22001 UBUNGO220   220.00    1  1   580.1  289.9                 1645 141  1165A
                                                                  22099 MOROGORO    220.00    1  1  -159.9  -99.6                  478  41  1165A
22099 MOROGORO    220.00  1 1.0500    0.0   339.6      0.0      0.0 ------------------------------------------------------------------------------
                          1 231.00        215.9R     0.0      0.0  22001 UBUNGO220   220.00    1  1   179.1  111.9                  528  45  1165A
                                                                  22002 KINYEREZI220220.00    1  1   160.5  103.9                  478  41  1165A
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Appendix 19 Resettlement Policy Framework

THE PROPOSED CONSTRUCTION OF SUBSTATIONS, REHABILITATION OF TRANSMISSION AND CONSTRUCTION OF DISTRIBUTION LINES

IN DAR ES SALAAM, TANZANIA

FINAL REPORT
RESETTLEMENT POLICY FRAMEWORK
(RPF)

PREPARED BY
INSTITUTE OF RESOURCE ASSESSMENT, UNIVERSITY OF DAR ES SALAAM

FEBRUARY 2014

ABBREVIATION/ACRONYMS

ARAP - Abbreviated Resettlement Action Plan
DC - District Commissioner
DED - District Executive Director
ESIA - Environmental and Social Impact Assessment
GoT - Government of Tanzania
GWs - Glossary Gigawatt hours
JICA - Japan International Cooperation Agency
kV - Kilovolt
MEM - Ministry of Energy and Minerals
MW - Megawatt
PAP - Project Affected Persons
RAP - Resettlement Action Plan
RPF - Resettlement Policy Framework
TANESCO - Tanzania Electrical Supply Company
TANROAD - Tanzania National Roads Agency

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GLOSSARY OF KEY TERMS

- **"ARAP**" Abbreviated Resettlement Action Plan, is a plan to address the impact of resettlement for not more than 200 affected persons.

- **"Census"** means a field survey carried out to identify and determine the number of Project Affected Persons (PAP) or Displaced Persons (DPs). The meaning of the word shall also embrace the criteria for eligibility for compensation, resettlement and other measures emanating from consultations with affected communities.

- **Project Affected Person(s) (PAPs)** are persons affected by land use or acquisition needs of the proposed projects. These person(s) are affected because they may lose, be denied, or be restricted access to economic assets; lose shelter, income sources, or means of livelihood. These persons are affected whether or not they must move to another location.

- **"Compensation"** means the payment in kind, cash or other assistances given in exchange for the acquisition of land including fixed assets thereon as well as other impacts resulting from subproject activities.

- **"Cutoff date"** is the date of commencement of the census of PAPs or DPs within the Project area boundaries. This is the date on and beyond which any person whose land is occupied project use will not be eligible for compensation.

- **"Displaced Persons"** mean persons who, for reasons due to involuntary acquisition or voluntary contribution of their land and other assets under the project will suffer direct economic and or social adverse impacts, regardless of whether or not the said Displaced Persons are physically relocated. These people will have their: standard of living adversely affected, whether or not the Displaced Person must move to another location, lose right, title, interest in any house, land (including premises, agricultural and grazing land) or any other fixed or movable assets acquired or possessed, lose access to productive assets or any means of livelihood.

- **"Involuntary Displacement"** means the involuntary acquisition of land resulting in direct or indirect economic and social impacts caused by: loss of benefits from use of such land; relocation or loss of shelter; loss of assets or access to assets; or loss of income sources or means of livelihood, whether or not the Displaced Persons have moved to another location; or not.

- **"Involuntary Land Acquisition"** is the repossession of land by government or other government agencies with or without compensation, for the purposes of a public project

against the will of the landowner. The landowner may be left with the right to negotiate the amount of compensation proposed. This includes land or assets for which the owner enjoys uncontested customary rights.

- **"Land"** refers to agricultural and/or non-agricultural land and any structures thereon whether temporary or permanent and which may be required for the project

- **"Land acquisition"** means the repossession of or alienation of land, buildings or other assets thereon for purposes of the Project.

- **"Rehabilitation Assistance"** means the provision of development assistance in addition to Compensation such as land preparation, credit facilities, training or job opportunities needed to enable Project Affected Persons and Displaced Persons to improve their living standards, income earning capacity and production levels; or at least maintain them at pre project levels.

- **"Resettlement Action Plan (RAP)"** is a resettlement document to be prepared when projects locations are identified. In such cases, land acquisition leads to physical displacement of persons, and/or loss of shelter, and /or loss of livelihoods and/or loss, denial or restriction of access to economic resources. RAPs contain specific and legal binding requirements to resettle and compensate the affected party before implementation of the project activities.

- **"Replacement cost"** means replacement of assets with an amount sufficient to cover full cost of lost assets and related transaction costs. The cost is to be based on Market rate (commercial rate) according to Tanzanian law for sale of land or property.

- **"Replacement cost for houses and other structures"** means the prevailing cost of replacing affected structures, in an area and of the quality similar to or better than that of the affected structures.

- **"Resettlement Assistance"** means the measures to ensure that Displaced Persons who may require to be physically relocated are provided with assistance during relocation, such as moving allowances, residential housing or rentals whichever is feasible and as required, for ease of resettlement.

1.0 INTRODUCTION

1.1 Background of the Project

Currently in Tanzania, only about 17% of the population are connected to the national grid. The available electricity is largely based on hydro resources and thermal power derived from small scale diesel generators. Current installed generation capacity on the transmission grid amounts to 863 MW, with non-grid (diesel) generating capacity amounting to 28 MW. Of the total grid connected capacity of 863 MW, approximately 65 per cent is supplied by hydropower and 35 per cent by thermal stations. Tanzania's existing hydropower capacity (561 MW) has an energy limitation of between 40 and 50 per cent capacity factor.

The Tanzania Electric Supply Company (TANESCO) is responsible for the generation, transmission, and distribution of electricity in mainland Tanzania. Over the past several years, TANESCO's operations have suffered from poor system performance in the East and Northeast regions at times of peak demand (Silke, 2012 et al). Despite use of all available thermal generation and curtailment of supply to certain major consumers, network voltages remain excessively low, and the system suffers from frequent outages that may affect the entire network. The lack of reliable power is a major constraint to economic growth in Tanzania.

Tanzania's electricity sector has been heavily dependent on hydropower energy whose energy cannot be ascertained in times of drought. Effects of droughts faced during 1992/1993, 2005/2006, 2009/2010, 2010/2011 and 2011/2012 explain these situation. In addition to drought problem, power supply in the country have been facing with several challenges such as low energy security, unreliable energy supplies, poor quality of supply and high electricity loses (21-23%) reduced reserve capacity, curtailed loads (in 2012 unsaved energy 66.3GWh), high frequency of power outages, high generation costs and undistributed generation; old and overloaded Transmission and Distribution Systems cause high technical losses (Msyani, 2013). Furthermore, it is expensive to extend the national grid and expand the distribution system due to scarcity of financial resources from the government; in particular foreign currency is always a major barrier responsible for low electricity penetration rate. It has also been reported that less than one in five households are connected to the electrical grid, which experiences frequent blackouts and power surges.

Having facing these challenges, the Government of Tanzania through the Ministry of Energy and Minerals (MEM) and the Tanzania Electric Supply Company Limited (TANESCO), (the implementer) under technical and financial support from JICA (Japan International Cooperation Agency) is implementing the project for rehabilitation of substations and construction of new lines and substations in Dar es Salaam.

1.2 Objectives of the Project

The Project aims to reinforce and extend the transmission line and distribution network in Dar es Salaam region in order to improve the quality and reliability of power supply to the customers.

1.3 Project site and Component

The project site is located in Dar es Salaam, particularly, in Kinondoni and Ilala Districts. In Kinondoni district the project activities covers five wards, namely, Ubungo, Manzese, Mburahati Muzimuni and Makurumla (transmission line) and Makumbusho, Mwananyamala, Kawe, Kunduchi, Salasala and Msasani (distribution lines). In Ilala district, the project covers wards of Mchikichini (transmission line) as well as Upanga and Jangwani ward (distribution lines and substation).

Although preliminary survey have identified potential areas for the project within the two districts, the actual locations are likely to change, when the feasibility assessment for the whole route is completed. Figure 1 and Table 1 below provides the preliminary plans of the project and its components respectively.

Figure 1: Location Map of the Requested Components

Table 1: Project Components and Location

	Components	Ward (s)
Ilala substation (132/33/11kV) (Reinforcement)	• Reinforcement of Ilala substation • Reinforcement of existing 132kV transmission line (7.5km: from Ilala substation to Ubungo substation)	• Ubungo • Manzese • Mzimuni • Mchikichini
Jangwani Beach substation (33/11kV) (New construction)	• Construction of Jangwani Beach substation • Construction of 33kV distribution line (approximately 6.5km: from Jangwani Beach substation to Tegeta substation)	• Salasala • Kunduchi
Muhimbili substation (33/11kV) (New construction)	• Construction of Muhimbili substation • Construction of 33kV distribution line (Approximately 2km: from Muhimbili substation to New city centre substation	• Upanga
Mwananyamala substation (33/11kV) (New construction)	• Construction of Mwananyamala substation • Construction of 33kV distribution line (approximately 1.1km: from Mwananyamala substation to Makumbusho substation)	• Mwananyamala • Makumbusho
Msasani substation (33/11kV) (Expansion)	• Expansion of Msasani substation • Expansion of 33kV distribution line (approximately 7.6km: from Msasani substation to Makumbusho substation)	• Makumbusho • Msasani

The 132 kV Transmission line route from Ilala substation to Ubungo substation (Tower No.1 to No.25) is presented in the following satellite image.

Figure 2: A section of the proposed power transmission line earmarked for improvement in Kinondoni District

1.4 Geographical Location of the Project Area

Kinondoni municipal is located in the Northern part of Dar es Salaam city. Administratively, Kinondoni District is broken into 4 divisions, 27 different wards, and 113 sub-wards. This project will cover seven wards of the district, mainly for distribution lines and sub-stations rehabilitations.

Ilala district is the mid of Kinondoni and Temeke district bordering the Indian Ocean to the East, the Coastal Region to the West, Kinondoni municipality to the North, and Temeke municipality to the South. Aadministratively, district is sub divided into 3 divisions and 22 wards. Two wards will be touched by the project, especially with transmission line.

Figure 3 shows the location of Kinondoni and Ilala Municipal within the City of Dar es Salaam.

Figure 3: The Location of Kinondoni and Ilala Municipalities and Affected Wards

1.5 Population of the Project Area

Based on the 2012 Population and Housing Census Kinondoni Municipal had a total population of 1,775,049 inhabitants, of whom 860,802 were males and 914,247 were females. The average household size was 4.0 and a sex ratio of 94. On the other hand, Ilala Municipal has a total population of 1,220,611 of whom, 595, 928 are males and 624,683 were females. The Municipal has an average household of 4.0 and a sex ratio of 95. The 2002, Population and Housing Census shows that the population inter-censual growth rate of the two Municipalities was very high (4.1) compared to National inter-censual population growth rate which was 2.9.

1.6 The Need for Resettlement Policy Framework

The Government of the United Republic of Tanzania through the Ministry of Energy and Minerals and the Tanzania Electricity Supply Company Limited is required by JICA to prepare a Resettlement Policy Framework (RPF) during project preparation to be publicly disclosed in Tanzania and at the JICA offices, before appraisal of the proposed project. The RPF establishes the resettlement and compensation principles, organizational arrangements and design criteria to be applied to meet the needs of the people who may be affected by the implementation of the project. The RPF is prepared to the standards of the GoT's own policy on resettlement and resettlement rules and regulation as stipulated by JICA.

When the land/sites are identified during the preparation of the projects, for the sites that will require land take, resettlement/compensation plans will be closely coordinated with the planning and implementation of project activities and then subsequently prepared consistent with this policy framework by TANESCO and will be submitted to the Ministry of Land and Human Settlement Development as well as JICA for approval prior to any land acquisition or resettlement.

This RPF governs all activities funded under this project by JICA and covers the following sections:

A. Principles and objectives governing resettlement preparation and implementation
B. Description of the process for preparing and approving resettlement plans
   (a) Land acquisition and likely categories of impact
C. Eligibility criteria for defining various categories of project affected persons
D. A legal Framework reviewing the fit between the laws of Tanzania and regulations and JICA requirements
E. Methods of valuing affected assets
F. Organizational procedures for the delivery of entitlements
G. A description of the grievance redresses mechanisms
H. A description of the arrangements for funding resettlement
I. A description of mechanisms for consultations with, and participation of, displaced persons in planning, implementation, and monitoring
J. Arrangements for monitoring by the implementation agency and, if required, by independent monitors

2.0 METHODOLOGY FOR PREPARATION OF THE RESETTLEMENT POLICY FRAMEWORK

The preparation of the RPF document was based on various approaches that include a review of the relevant literature, process of consultations as well as site visit in areas that the proposed project is likely to be implemented as elaborated below:

2.1 Literature review

The preparation of the document entailed a comprehensive review of the literature including that from the following sources:

Project documents such as project appraisal document and project background briefs. The aim was to obtain background information on project justification and its objectives; nature and extent of the proposed project activities as well as coverage /locations that the project will impact.

Tanzania land policies, guidelines, regulatory and administrative frameworks. These include the Land Policy, 1996; Land Acquisition Act, 1967; Land Acts No.4 and No. 5 of 1999 and associated Regulations; Unit Titles Act, No 16 of 2008; and Local Government Acts of 1982 as well as the Environmental Management Act, 2004); The aim was to determine the legal requirements relevant to the land acquisition and the incorporation of the same into the RPF as appropriate. Key among these includes land ownership, tenure rights, user rights; taking of land and other assets i.e. valuing assets, compensation procedures, and grievance mechanism.

2.2 Stakeholders consultations

This RPF team consulted various stakeholders at various levels that include Government offices (TANROADs) as well as Municipal Officials of Kinondoni and Ilala. At the Municipals the team discussed mainly with District Executive Officers, Land officers, District Health officers (for grave allocation issues) and Community Development officers. Comprehensive consultations were also done with Ward executive officials in some of the wards likely to be affected by the project as well as Street/Mtaa leaders and PAPs that are likely to be affected during the project implementation.

Various tools were used during stakeholder's consultation; these include focus group discussions, open-ended questionnaires, checklists as well as questionnaires mainly with individual PAPs. The table below summarizes various meetings, issues discussed and major issues from stakeholders while preparing this RPF:

Table 2: Stakeholders views and issues

Date	Meeting Participants	Issues Discussed	Major comments from Participants
23/03/2013	-IRA team -TANESCO officials	- Discuss TANESCO way leaves - To understand agreements that TANESCO has reached with other stakeholders that TANESCO intends to utilize their way leave such as TANROADs - To discuss the JICA guidelines and agree on what should be part of this RPF	- TANESCO indicated that in urban areas and in particular Dar es salaam, one cannot have way leaves as per TANESCO standard as land is very expensive. - Similarly compensation under JICA guidelines can also be very expensive considering the magnitude of encroachers on all way leaves as well as the type of structures
15/04/2013	-IRA team -Ilala Municipal Officials – Health Office	- Introduce the project to the Municipal - Inform the Municipal about JICA Principals - Inform the Municipal about the type and magnitude of impact - Inform the Municipal that most PAPs are encroachers - Obtain information about the process of relocating the graves	• Developer (TANESCO) should incur cost for removing/ shifting grave that will be prepared by Municipal Health Department • Graves should be shifted to the proper designated Municipal Grave Yards such as Buyuni, Mwanagali and Segerea. Moving graves out of Dar es Salaam is not recommended as its cost implication and is not Healthier. The normal distance that has been estimated is 15kilometres, however if the owner wants to go beyond the estimated distance they can but with his or her own cost and they should get permit from the responsible municipal. The appropriate owner of some graves is a big challenge.
-	Ilala Municipal Council Officials-Land Office	- Introduce the project to the Municipal - Inform the Municipal about JICA Principals - Inform the Municipal about the type and magnitude of impact - Inform the Municipal that most PAPs are encroachers - Obtain information about	• TANESCO is advised to maintain utilization of their existing areas/way most of them are encroached so as to minimize compensation cost. • The Department normally does not do the valuation of graves; instead the Health department is responsible under the graves

Date	Meeting Participants	Issues Discussed	Major comments from Participants
		the process of relocating the graves	removal Act, 1969. • Open spaces and hazard lands are usually owned by Municipals • Billboards are usually owned by individuals, companies and institutions with the permit from Municipal. • Currently there are no specific laws in place that governed the compensation of billboards.
15/04/2013	-IRA team -Kinondoni Municipal Council Officials-Land Office	- Introduce the project to the Municipal - Inform the Municipal about JICA Principals - Inform the Municipal about the type and magnitude of impact - Inform the Municipal that most PAPs are encroachers - Obtain information about the process of relocating the graves	• The project is accepted but laws, regulations and policies should be abided. • In case of graves there is grave removal Act of 1969 it is under the Department of Health they should also be consulted. • Demarcation should be done so as we can know clearly if the project will involve land take and if there is any disruption of community's properties and if any how will it be compensated. • If part of a building or a plot will be affected the title deed will be not valid anymore; therefore it should be rectified for modification. • Sensitization/awareness should be provided to the community from the *Mtaa* and Ward level to the district level so as to avoid Land conflicts in the project area. • Laying poles close/within the service roads tends to obstruct pedestrians this is common in most of the road reserve therefore this is not recommendable. TANESCO should acquire its own land and they should compensate affected people. • The contractor/TANESCO should be very carefully so as not to disrupt community infrastructures such as water

Date	Meeting Participants	Issues Discussed	Major comments from Participants
			pipes, and access roads.ie we advise activities to work across various responsible sectors • There is the tendency of paying encroachers to comply with the World Bank policies particularly those projects funded by World Bank; this habit is bringing problems to the local/government funded projects. Open spaces are owned by Municipal Council this should also be compensated and in-kind compensation is recommended.
-	Kinondoni Municipal Council Office- Health and Community Development Office IRA Team	- Introduce the project to the Municipal - Inform the Municipal about JICA Principals - Inform the Municipal about the type and magnitude of impact - Inform the Municipal that most PAPs are encroachers - Obtain information about the process of relocating the graves	• Due to the nature of the project working close to the graves is not a problem but if it happen grave is too close to the poles they should be shifted. • Provision of education and a clear introduction of the project to the community are recommended. • The intention to remove graves idea should be submitted to the Municipal council and Health department will prepare the announcement to be announced in the government media in 21 days. The Municipal finance committee will prepare the budget basing on the existing rates. During removal of graves Health department is responsible and not anyone else for the matter of health and safety.
-	Kinondoni Municipal Council-Trade Office IRA Team	- Introduce the project to the Municipal - Inform the Municipal about JICA Principals - Inform the Municipal about the type and likely magnitude of impact on billboards	• Most of the Billboards are owned by individual companies and some by institutions and they normally pay rent to the responsible Municipality • The rent paid depends on the size of the billboard which is 13,000 per square feet for lightened one and 10,000 per square feet for unenlightened; the location

Date	Meeting Participants	Issues Discussed	Major comments from Participants
			doesn't change the price.
3/08/2013	Mchikichini Ward Officials TANESCO Head Quarters Staff Likely PAPs IRA Team	- Introduce the project to the ward officials - Inform the ward officials about JICA Principals - Inform the officials about the type and magnitude of impact - Inform the officials that most PAPs are encroachers	
4/08/2013	Mchikichini Ward Officials TANESCO Head Quarters Staff	- Discuss with ward officials that focus will only be on PAPs that are within the required working space	- This will create confusion and conflicts among those PAPs that will be left out of the valuation under JICA It is important for TANESCO to conduct a meeting with all PAPs to inform them about these changes.
5-6/08/2013	Ubungo Ward Officials Mianzini Ward Officials IRA Team	- Introduce the project to the ward officials - Inform the ward officials about JICA Principals - Inform the officials about the type and magnitude of impact - Inform the officials that most PAPs are encroachers	• Community meetings should be conducted in the affected places. The removal of graves should be announced to the media (magazine, radio) Payments should be of the same rate in both Muslim and Christian graves
-	-Ubungo and Manzese Ward Officials and respective street leaders PAPs that have graves identified to be affected by the project IRA Team TANESCO	- Introduce the project to the PAPs - Inform the PAPs about the magnitude and type of impact - Inform the PAPs that the land that they have graves is owned by TANESCO. - Inform the PAPs about JICA Principals that also recognizes encroachers - Inform the PAPs about the grave relocation process as per Tanzanian laws - Agree with PAPs to form a grievance committee	• We need to be informed clearly on the magnitude of the project and the specific time and day of removing/ shifting graves. • Payments for grave removal should be flat rate for the matter of consistency. • We need to be informed clearly on the amount to be paid before the process
1/09/2013	IRA Team JICA Team ERM Team TANESCO Officials	- Discuss number of PAPs especially those on the transmission line	- Agreed that the number of PAPs to be relocated was not as significant as indicated and it was later agreed that field reconciliation should be undertaken. - This was followed by a site visit with team to the Ilala Sub station and some of the towers (tower 1 and tower 2)

Date	Meeting Participants	Issues Discussed	Major comments from Participants
10/09/2013	TANESCO transmission line Directorate staff IRA team	Regarding those who have structures within the way leave but are not considered as PAPs and their properties will not be considered for valuation by JICA project.	- TANESCO is currently clearing its way leaves as a mechanism to deal with encroachers and this will involve the Ubungo-Ilala transmission line - The projects should only focus on structures that are within the working space of the proposed project and not all structures that have encroached the transmission line.
16/09/2013	TANESCO transmission line Directorate staff IRA team Magomeni(TANESCO District Office Staff) Mchikichini Ward Officials PAPs	ARAP team in collaboration with TANESCO conducted a meeting with Mchikichini ward officials and some encroachers in order to provide clarification of the proposed working space that will eliminate some of the PAPs (encroachers of the transmission line)	- Concern that once other PAPs are compensated under JICA project the rest will be evicted without any compensation as they are classified as encroachers.
-	Kinondoni Municipal Valuer IRA Team Mwinyi mkuu street officials PAPs	Discuss Valuation exercise	- Concerned with delay in receiving their compensation package - Concern that once the house has been marked no tenants will want to rent in the house - Concern that they don't know how much they will be compensated and if it will enable them build another structure/house
-	Ilala Municipal Valuer IRA Team Mchikichini ward officials PAPs	- Discuss the valuation exercise specifically the process	- Concerned with delay in receiving their compensation package - Concern that once the house has been marked no tenants will want to rent in the house - Concern that they don't know how much they will be compensated and if it will enable them build another structure/house
27/10/2013	IRA Team Grievance committee Ward and street officials (Midizini, Manzese, Ubungo)	Discuss and verify number of graves	- The committee agreed that for that 250 graves are likely to be affected but there is a possibility of more graves that are not visible to increase the number during implementation phase.

2.3 Assessment of the proposed project sites

Currently TANESCO in collaboration with JICA have already determined the proposed project sites and areas likely to be affected by the proposed project. Therefore, the team conducted a site visit in order to determine the magnitude of impact, likely impact associated with the project, type of PAPs in order to derive mechanisms to minimize impacts.

One major challenge observed was the level of encroachment on the TANESCO way leave for the Ubungo- Ilala transmission lines considering that the line transverses mainly in un-planned settlements of the city of Dar es Salaam. Visits were also made in all the proposed project distribution line sites that include (Tegeta-Jangwani, City-Centre- Muhimbili, Moroco-Msasani Makumbusho - Mwananyamala and Victoria Mwananyamala) as well as all the proposed sites for substations (Muhimbili, Jangwani Beach and Mwananyamala) and the transmission lines all in Kinondoni and Ilala Municipals.

2.4 Resettlement Action Plan or ARAP Review and Disclosure

The final RAP or ARAP as the case may be will be approved by project implementers that include TANESCO as well as JICA as a grant funding agency relevant to this project. As per JICA requirement the approved RAP or ARAP report should be made available to the public by TANESCO at the following places:

- JICA
- Ministry of Energy and Minerals
- Ministry of Lands and Human Settlement Development
- TANESCO Headquarters
- TANESCO Regional Offices
- Kinondoni Municipal Council
- Ilala Municipal Council
- Respective Ward Authorities Offices

3.0 GUIDING PRINCIPLES FOR RESETTLEMENT OF PEOPLE DISPLACED BY THE PROJECT

The objectives of the policy on involuntary resettlement are mainly the following;

- To avoid or minimize involuntary resettlement and land acquisition where feasible, exploring all viable alternatives of project location and designs.
- To consult with displaced and compensated persons and provide them opportunities to participate in planning and implementing resettlement and compensation programs.
- To assist displaced and compensated persons - regardless of the legality of land tenure - in their efforts to improve their livelihoods and standards of living (income earnings capacity and production levels) or at least to restore them, in real terms, to pre-displacement levels or levels prevailing prior to the beginning of the project implementation, whichever is higher

It is likely that implementation of the proposed project will involve involuntary resettlement and related issues which will need to be managed through this RPF as a mechanism to minimize conflicts between PAPs and project implementers and impacts associated with involuntary resettlement. Though most of the land to be utilized by the project is under the ownership of TANESCO, in some cases, the project activity may cause land acquisition other than that of TANESCO and people may be affected because they may have encroached and built their houses or business structures. There could be graveyards located in the project are that might be affected by project implementation. According to JICA involuntary resettlement as a result of project implementation, PAPs must be compensated for their loss either in kind or in cash, and the PAPs will have to be given sufficient information or time to enable them make informed decisions on the best form of compensation they would like. Therefore TANESCO will be required to follow procedures stipulated by the Tanzania Land Act and those of JICA while acquiring land and for meeting the necessary best practice standards. This policy framework sets out the following principles to guide the resettlement of such affected people:

- The policy applies to all components under the proposed project that includes rehabilitation and construction of new TANESCO infrastructures that will be under the JICA funding.

- The policy applies to all affected persons regardless of the severity of impact and whether or not they have legal title to the land.
- The policy covers direct economic and social impacts caused by the involuntary taking of land and other assets resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location and (iv) relocation of grave yards
- Though land to be utilized is mostly under TANESCO, resettlement cannot be avoided in all cases. The policy requires that the implementation of RAP or ARAP is a prerequisite for the implementation of any project activity causing resettlement, to ensure that displacement or restriction to access does not occur before necessary measures for resettlement and compensation are in place. Where relocation or loss of shelter occurs, the policy requires that measures to assist the displaced persons be implemented in accordance with the resettlement and compensation plan of action.
- This RPF seeks to ensure that affected persons, communities and local authorities (e.g. municipalities) are regularly and genuinely informed and meaningfully consulted; are encouraged and assisted to participate in the resettlement planning and implementation process; and displaced people are adequately compensated to the extent that their pre-displacement incomes have been restored and that the process is a fair and transparent one.
- Resettlement measures shall be provided to persons and entities with recognized property rights in accordance with the Tanzanian land and compensation laws and practices. Wherever necessary they will be supplemented with additional measures to meet the JICA guidelines requirements. Eligible displaced persons will be provided with such assistance as: transport allowances where physical relocation is involved; and transitional support such as a disturbance allowance and accommodation to enable them to restore their livelihoods and standards of living.
- JICA requires that displaced persons without recognized rights to compensation ("non- land owners" e.g. tenants and unlawful land users or occupiers) should be provided with resettlement measures that are similar to those that lawful landowners are entitled to, although the form of the measures may differ. TANESCO should ensure that Landlords serve tenants with at least three months' notice to vacate the premises. In those instances where

their tenants has paid rents in advance (e.g. for the coming year) the land lord is required to refund the amount of the unused advance payment.

- Particular attention should be paid to the needs of vulnerable groups among those displaced; especially those below the poverty line; the landless, the elderly, women and children, indigenous groups and the ethnic minorities or other displaced persons who may not be protected through Tanzania land compensation legislation.
- The policy required that resettlement measures include provision of compensation and of other assistance required for relocation and preparation and provision of resettlement sites with adequate facilities (where required) prior to displacement. In particular, the taking of land and related assets or the denial of access to assets may take place only after compensation has been paid.
- The value of compensation shall be determined on the basis of the markets value or replacement cost and should include necessary additional costs incurred to achieve full restoration.
- Displaced persons should be informed about their options and rights pertaining to resettlement and about easily accessible complain and dispute registration and resolution mechanisms available to them.

3.1 Process for Preparing and Approving Resettlement Action Plan

As stated earlier, the JICA policy on Involuntary Resettlement is likely to be triggered, because the project of construction of new infrastructures as well as rehabilitation may require land acquisition or use of land already owned by TANESCO but encroached. Currently some of the location of these sites is known at the time of the preparation of the proposed project. Therefore, if such impacts occur, the project will call for preparation of RAP that must be in consistent with this RPF and disclosed as conditionality for appraisal of the project.

To address the impacts under this policy, resettlement plans must include measures to ensure that the project affected persons are;

(a) Informed about their options and rights pertaining to resettlement.

(b) Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives.

(c) Provided prompt and effective compensation at full replacement cost for losses of assets and access attributable to the project implementation.

(d) Enabled to restore and preferably improve their living standards compared to pre-project ones.

The initial stage in the process of preparing RAP is the screening process to identify the land acquisition and land use needs that will cause resettlement. The resettlement and compensation plans will contain the analysis of alternative sites undertaken during the land screening process. Subsequently, a preliminary assessment will be carried out to determine whether the project may potentially affect people who need to relocate. If there are no resettlement and compensation issues, then the provisions of this RPF do not apply. This is expected to be the case in most of the project areas considering that TANESCO is utilizing its way leaves as well as those under Government Agencies and or Municipals. However, if there are resettlement and compensation issues especially if they are fairly large or too costly, TANESCO supported by other technical agencies and Municipal Officials would then make the decision to identify alternative sites that would have little or no resettlement and compensation issues.

Once final design is ready, the consultative and participatory process with local communities affected by the proposed project must begin at this stage by sensitizing the respective local/community and leaders about the project and their entitlement and eligibility as by Tanzanian Laws and JICA guidelines. It is important to ensure in these meetings that likely PAPs do attend so that a timetable can be agreed specifically for socio-economic studies, census and determining cut-off dates.

The socio-economic study would focus on the identification of stakeholders (demographic data), the participation process, economic and livelihoods activities, identification of affected people (including owners and users of land) and impact on their property and their production systems, the institutional analysis and the system for monitoring and evaluation.

Where the impacts on the entire displaced population are minor (i.e. if affected people are **not** physically displaced and less than 10% of their productive assets are lost) or fewer than 200 people are displaced (economically or physically) per District, the preparation of an Abbreviated

Resettlement Plan (ARAP) is required and becomes mandatory. The contents of the ARAP are to be:

(a) A census survey of displaced (economically or physically) persons and valuation of assets.
(b) Description of compensation and other resettlement assistance to be provided.
(c) Consultations with displaced people about acceptable alternatives.
(d) Institutional responsibility for implementation and procedures for grievance redress
(e) Arrangements for monitoring and implementation, and
(f) A timetable and budget.

For impacts that are not considered minor, the preparation of a Resettlement Plan (RAP) is required for each site. The requirements of the RAP to include:

(a) Description of the project;
(b) Potential Impacts;
(c) Objectives;
(d) Socioeconomic Studies;
(e) Legal Framework;
(f) Institutional Framework;
(g) Eligibility;
(h) Valuation of and compensation for losses;
(i) Resettlement measures;
(j) Site selection, site preparation, and relocation;
(k) Housing, infrastructure, and social services;
(l) Community participation;
(m) Grievance procedures;
(n) Organizational responsibilities;
(o) Implementation schedule;
(p) Cost and budget; and
(q) Monitoring and evaluation.

The resettlement and compensation plans would then be forwarded for screening and approval to the Government land officials in compliance with the program institutional and administrative

requirements. This will include approval of the valuation report by the Government Chief Valuers Office, Respective Region and Districts Commissioners, Ward Executives officials are respective PAPs. All resettlement and compensation plans would be subject to the final approval of the JICA to ensure compliance.

4.0 IDENTIFICATION OF IMPACTS AND MEASURES TO MINIMIZE RESETTLEMENT

4.1 Project Impact: Activities that Will Lead to Resettlement Impact

The proposed development project in Dar es Salaam will have resettlement impacts arising from the following undertaking:

4.1.1 Rehabilitation of Transmission line from Ilala Sub-station to Ubungo- Substation

The project will entail rehabilitation of the existing transmission line from Ubungo Substation to Ilala Substation and therefore there will be no additional land take other than the current way leave that is owned by TANESCO.

4.1.2 Construction and Rehabilitation of Various Distribution Lines

The project will involve construction of new distribution lines that will include new distribution lines from Muhimbili Substation to New City Center (2km), Mwananyala to Makumbusho Substation (1.1km) and Jangwani Beach to Tegeta Substation (6.5km). Rehabilitation will include Msasani to Makumbusho Substation (7.6km) lines in Kinondoni and Ilala Municipalities. It is proposed that these activities will be undertaken on land owned either by TANESCO, TANROADS or respective Municipal Councils to be used for development of various linear infrastructures.

4.1.3 Construction of Substations

The project will construct substations that include the Mwananyamala sub station, which will require TANESCO to purchase land from two individuals, Jangwani Beach substation where TANESCO intends to request land from the Tanzania Peoples Defense Force (Government Organization), Muhimbili substation where TANESCO will request land from the Muhimbili General Hospital and the Ilala and Msasani substations where TANESCO will utilize its own land to construct the Substation.

For the Muhimbili and Jangwani substation there will be no relocation as currently these pieces of land have no structures and therefore no PAPs for the two substations. Similarly scenario will apply for the Msasani and Ilala substations there will be no PAPs as the land is under the

ownership of TANESCO. However, for the Mwananyamala substation TANESCO has purchased two residential houses that had tenants and therefore a total of 62 people have been relocated.

Prior to purchasing the houses, TANESCO identified the site, consulted the owners and once they agreed, TANESCO engaged a Municipal Valuer to determine the market value of the houses as per the Tanzanian Laws and then compensated the owners, this was a participatory and voluntary process.

4.2 Measures to Minimize Resettlement and Compensation Cost

The proposed project is to be implemented in Dar es Salaam specifically in the Kinondoni and Ilala Municipalities. Currently land in Dar es Salaam is scarce and expensive and therefore for implementation of such projects, it is important to apply mechanisms that will minimize number of PAPs so as to cut down compensation costs and impacts to PAPs. Various mechanisms have already been considered during project design and therefore it is likely that some of the sub projects will have no PAPs and in other some projects the number of PAPs will be significantly low. Some of the measures include

- Utilizing way leaves that are currently under the ownership of TANESCO and other Government Institutions such as TANROADs and Kinondoni and Ilala Municipal Councils (to minimize resettlement).
- Using Government Institution land for construction of sub stations (to minimize cost); these include land under the Tanzania Peoples Defense Force for the Jangwani Sub Station, land under the ownership of Muhimbili National Hospital for the Muhimbili substation.
- Use of alternative design of the project example polymetric wire support to minimize impact at the Muhimbili and Msasani area, use of underground cable (about 100meters) at Upanga area (minimize cost and resettlement)
- Alternative route to avoid major compensation impact; example alternative route for the Makumbusho-Msasani 33Kv line.

- Minimize working space required for the rehabilitation of the Ubungo-Ilala transmission line to avoid significant impact from encroachers with buildings and grave yards (minimize resettlement and compensation).

5.0 A LEGAL FRAMEWORK REVIEW OF THE LAWS AND REGULATIONS OF TANZANIA AND JICA POLICY REQUIREMENTS

Currently in Tanzania, there are policies, legal and institutional framework for management of social issues related to land and property acquisition and compensation enshrined in the National Constitution, the Land Policy and Land Acts as well as supporting local laws and by-laws. However the operation of the proposed project will follow the Tanzania existing laws and regulations as well as JICA guidelines as far as involuntary settlement is concerned. This chapter presents an overview of Tanzania policy, legal and institutional framework of relevance to RPF. Though currently there is no specific "resettlement policy" in Tanzania. These laws and policies should form the basis of the RAP or ARAP to inform the practice.

5.1. Overview of Policies and Laws Governing Land

The following relevant policies and legal instruments provide guidance for acquisition of land and associated properties and compensation and resettlement procedures in Tanzania.

Constitution of the United Republic of Tanzania (1977 - as amended)

The Constitution also provides for the protection of the rights and interest of citizens in matters concerning their property and acquisition. Under article 24 (1), every person is entitled to own property, and has a right to the protection of his property held in accordance with the law. Sub-article (2) prescribes that it is unlawful for any person to be deprived of property for any purposes without the authority of law, which makes provision for fair and adequate compensation.

National Land Policy (1996)

The overall aim of the National Land Policy among other things is to promote and ensure a secure land tenure system in Tanzania that protects the rights in land for all its citizens.

The National Human Settlements Development Policy (2000)

The policy promotes the development of human settlement that is sustainable. Among others, the policy objective that is relevant to the HFP is to make serviced land available for shelter and human settlements development in general to all sections of the communities.

The Land Acquisition Act, 1967 (Act No 47/1967)

The Act stipulates the power and procedures for acquiring land and the required degree of compensation. Section 3 and 4 of the Act gives the President of Tanzania powers to acquire any land where such land is required for public purpose such as general public use, any government scheme or development of social services The act makes provision for the procedures and method of compulsory acquisition of land for public purposes whether for temporary or permanent use. This act also sets out the legal process for payment of compensation.

The Land Act, 1999 (Act No 4/1999)

The Land Act is the principle land legislation on all land matters. The Land Act signifies that land in Tanzania is public land and remain vested in the President as trustee for and on behalf of all citizens of Tanzania. The Act specifies that an interest in land has a value and that value is taken into consideration in any transaction affecting that interest. The recognized land ownership is the granted right of occupancy and customary ownership. The act states that where persons with a right of occupancy (including land which is occupied by persons under customary law) are to be moved or relocated, they must be compensated for loss of interest in the land and for other losses.

Land (Assessment of the Value of Land for Compensation) Regulations, 2001

These regulations were made under section 179 of Land Act no. 4 of 1999. Regulation 3 of the Land (Assessment of the Value of Land for Compensation) Regulations, 2001 and Part III of the Village Land Regulations, 2002 provide for practical guidelines on assessment of compensation. The full and fair compensation is assessed by including all components of land quality and the market value should be used as basis for valuation of land and properties. Presently in assessing the value of the unexhausted improvements for compensation purposes, the law emphasizes that the value should be the price which the said improvements can fetch if sold in the open market.

According to the regulation, the valuation of the affected properties must be done by a qualified and authorized valuer.

The Land (Compensation Claims) Regulations, 2001

The regulations apply to all application or claims for compensation against the government or Local authority or any public body or Institution and they also cover compensation which may be claimed by occupier.

The Land Disputes Court Act. 2002 (Act No.2/2002)

This act provides the respective courts and their functions. Before implementation of sub projects, any land conflicts existing in the areas shall be resolved through the appropriate land courts to ensure that harmony prevails in the intended undertaking. Project beneficiaries will therefore be bounded by these Acts.

The Graveyard Removal Act (No. 9 of 1969)

An Act to provide for the removal of graves from land required for public purposes. Subject to the provisions of this Act under section 3, "where any land on which a grave is situated is required for a public purpose the Minister may cause such grave and any dead body buried therein to be removed from the land and, in such case, shall take all such steps as may be requisite or convenient for the re-instatement of the grave and the re-interment of the dead body in place approved by him for the purpose". The Act specifies, among other things, that graves shall be relocated, after official notice is given to interested parties and published in the Gazette:

- With due regard to the views of the persons interested and the religious susceptibilities of the members of the religious community to which the person belonged whose grave or dead body it is;
- In a manner which is not injurious to public health;
- In accordance with such directions as may be given by the public officer appointed by the Minister to supervise the undertaking; and
- Accompanied by such religious rites or ceremonies as are appropriate to the religious community to which the person belonged whose dead body is removed.

Section 9 of the Act, provides for compensation to be paid to an interested person, who undertakes the removal, transportation, reinstatement and re-interment of a grave or dead body on behalf of the Government.

5.2 Institutional Framework

Tanzania has no policy on involuntary resettlement, but has elaborate policies and acts on acquisition of land, access, use and management of public resources. The acts stipulate the various actors in land and natural resources administration and management. Taking this and requirement of the JICA guidelines into consideration, three institutional frameworks comes into play in the development and implementation of the RPF, these include

- Central Government Ministries – Ministry of Finance, Ministry of Energy and minerals and Ministry of Lands, Housing and Human Settlement Development
- Department and Agencies- TANESCO
- Local Government Authorities- Kinondoni Municipal Council and Ilala Municipal Council

The Ministry of Lands and Human Settlement Development is responsible for policy, regulation and coordination of matters pertaining to land in Tanzania. The Ministry administers the various land acts: Land Acquisition Act, the Land Act and the Village Land Act. Land use planning, management and land delivery activities are conducted at the Ministry. The Ministry of Finance is responsible in managing all financial issues in the Country that will include financial resources for resettlement and compensation implementation while the Ministry of Energy is the overall responsible ministry for matters related to implementation of Energy projects in the Country which for electricity related projects TANESCO is the responsible Agency.

The Local Government system in Tanzania is based on the decentralization policy and administratively, Tanzania is divided into three levels of Local Governments whereby each level has statutory functions with respect to development planning. The three levels are: District /Municipal / City Councils; Town Councils and Ward; and Village/"Mtaa" Councils. Municipal Councils are subdivided into Municipal Wards followed by sub-wards or "Mtaa".

The Municipal Councils are body Corporate responsible for planning, financing and implementing development programmes within their areas of jurisdiction. Within a Municipal there are Land Department with sections /units valuation, Community Development for communities mobilization and sensitization and Land Tribunals (District, Ward levels) for handling and resolving land-related disputes and grievances;

5.3 JICA Guidelines

JICA guidelines stipulates that for Environmental review of for projects that will result in large-scale involuntary resettlement, a Resettlement Action Plan (RAP) must be submitted to JICA (category A projects)

It should also be noted that JICA confirms that projects do not deviate significantly from the World Bank's Safeguard Policies and therefore on issues related to compensation JICA stipulates that compensation should be based on legal systems of the host countries and at full replacement cost of assets affected (houses, land etc). With regard to resettlement assistance, JICA guidelines takes this as an additional measure to fill gaps between target level and country system level for example JICA guidelines recognizes squatters and encroaches and that they also do require some kind of assistance.

5.4 Comparison between Land Law in Tanzania and JICA Guidelines

Whereas the law relating to land administration in Tanzania is wide and varied (section 4.1 above), entitlements for payment of compensation are essentially based on the right of ownership. The JICA Guidelines is fundamentally different from this, and states that affected persons are entitled to some form of compensation whether or not they have legal title if they occupy the land by a specified cut-off date. In this regard, JICA Guidelines which is the higher of the two standards will be followed in this policy framework, since its procedure also satisfies the requirements of the Tanzania standards.

Below is a table which provides a clear comparison of the two, specify the gap and what will be relevant for the Resettlement Policy under this project.

Table 3: Gap between Tanzania and JICA Guidelines

No.	JICA Guidelines	Laws of Tanzania	Gap between JICA Guidelines and Laws of Tanzania	Resettlement Policy for this project
1.	Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives. (JICA GL)	No specific provisions on avoiding involuntary resettlement and loss of means of livelihood although these can come from Environmental and Social Impact Assessment (ESIA)	Avoiding involuntary resettlement is not mentioned in Tanzania land laws	Consider alternative alignment to avoid unnecessary loss of livelihoods
2.	When population displacement is unavoidable, effective measures to minimize impact and to compensate for losses should be taken. (JICA GL)	When displacement is unavoidable, compensation will be given as follows (Land Act, 1999 – Cap 113, Part II Section 3 (1) (g) , Section 34 and 156) Market value of unexhausted improvement[1], disturbance allowance, transport allowance, accommodation allowance and loss of profits, although depreciated replacement value is given and valuation is often not done properly because some aspects that need to be included are not taken into account – for example, using market values is sometimes ignored and information to affected persons is not sufficiently provided	Full replacement value (market value) plus transaction costs are not mentioned in Tanzania laws Measures to minimize impacts are not explicit in Tanzania laws	Consider full replacement value (market value plus transaction cost into compensation package)
3.	People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and	Livelihood restoration is not addressed although, sometimes done through provision of alternative affected social services- for example, providing an alternative health facility or a school are cases in point.	Livelihood restoration is not explicit in Tanzania laws	Prepare a livelihood restoration plan, including transitional support(for example putting in place deliberate policies to employ affected persons between the transition period so that they can have some work and earn

[1] Land Act, 1999 interprets unexhausted improvement as anything or any quality permanently attached to the land directly resulting from the expenditure of capital or labor by an occupier or any person acting in his behalf and increasing the productive capacity, the utility, the sustainability of its environmental quality and includes trees standing crops and growing produce whether of an agricultural or horticulture nature. This condition has been amended by the Land (Amendment Act), 2004 by replacing Subsection 8 and 9 of the Land Act 1999 to allow for sale land without unexhausted improvements. For development purposes or as joint venture.

No.	JICA Guidelines	Laws of Tanzania	Gap between JICA Guidelines and Laws of Tanzania	Resettlement Policy for this project
	production levels to pre-project levels. (JICA GL)			income as well as providing alternative services points while new social services are being developed for them etc.) to ensure standards of living are restored and improved
4.	Compensation must be based on the full replacement cost as much as possible. (JICA GL)	Market values but usually in practice provide with depreciated replacement values (although the law does not direct the use of depreciated values)	Full replacement cost not paid	Consider adopting full replacement value (market values plus transaction costs)
5.	Compensation and other kinds of assistance must be provided prior to displacement. (JICA GL)	Compensation must be provided prior to displacement (Land Acquisition Act, 1967 (15-(1)) and Land Act 1999-Cap 113)	Tanzania laws does not have consideration of other assistance to project affected persons	Consider provision of other assistance (for example affirmative policies to employ affected persons, provision of support on land acquisition, payment of land and related fees, and power or water utilities , provision of temporary social services etc. to ease the burden on affected persons) beside statutory compensation
6.	For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public. (JICA GL)	For large scale involuntary resettlement compensation must be provided (Land Acquisition Act 1967 Part II Section 11 and Land Cap 113, Part II Section 3 (1) (g))	Tanzania Law does not consider Resettlement Action Plan as mandatory	Using JICA GL, consider RAP as mandatory tool to manage impacts
7.	In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance. (JICA GL)	Prior to conducting valuation affected people and local authorities are informed about the project, its effect, valuation and compensation process(Land Act Cap. 113 Section 34 (6), 35 (3))	The level of consultation in Tanzania laws is not as detailed as in others including JICA GL and WB	Consider adopting detailed and sufficient consultations and information sharing with affected persons
8.	When consultations are held, explanations must be given in a form, manner,	Prior to conducting valuation affected people and local authorities are	The level of consultation in Tanzania laws is not	Consider adopting detailed and sufficient consultations and

No.	JICA Guidelines	Laws of Tanzania	Gap between JICA Guidelines and Laws of Tanzania	Resettlement Policy for this project
	and language that are understandable to the affected people. (JICA GL)	informed about the project, its effect, valuation and compensation process(Land Act Cap. 113 Section 34 (6), 35 (3) and Part XIV Section 168 (1) and 169 (1) and (2). And Land Acquisition Act Part II Section 7(1))	as detailed as in others including JICA GL and WB	information sharing with affected persons
9.	Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans. (JICA GL)	In Tanzania land laws, Resettlement Action Plan is not mandatory, although compensation is required	There is no sufficient participation of affected persons in planning, implementation and monitoring of Resettlement Action Plan	Consider ensuring effective and appropriate participation of affected persons in planning, implementation and monitoring of RAP
10.	Appropriate and accessible grievance mechanisms must be established for the affected people and their communities. (JICA GL)	Tanzania land laws provide a mechanism for dealing with grievances including lodging complaints to the courts (Land Acquisition Act 1967, Section 13 (1) and (2) and Land Act, Cap 113. Part XIII Section 167 (1))	Tanzania grievance mechanism is not easily accessible to affected persons	Provide an easily accessible grievance mechanism procedures to all affected persons
11.	Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advance of such benefits. (WB OP4.12 Para.6)	Affected People are identified during the valuation exercise and the valuation date is the eligible cut-off date[2]	Socio-Economic baseline survey is not undertaken as part of the valuation exercise	Undertake socio-economic baseline data collection as part of the valuation exercise
12.	Eligibility of benefits includes, the PAPs who have formal legal rights to land (including customary	Eligibility of benefits includes, the PAPs who have formal legal rights to land (including customary	Tanzania Law does not recognize encroachers	Consider compensating informal settlers who have been using the

[2] This is adopted as best practice but not provided in any land law in Tanzania

No.	JICA Guidelines	Laws of Tanzania	Gap between JICA Guidelines and Laws of Tanzania	Resettlement Policy for this project
	and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying. (WB OP4.12 Para.15)	and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of valuation but have invested on land will be eligible for compensation of assets but not land (recognized as tenants) Land Act Cap 133		way leave for their livelihoods for crops, businesses, and shelter
13.	Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. (WB OP4.12 Para.11)	Compensation for land can either be in form of cash or land based)Land Act Cap 113 Section 49 (3) for cash transactions and Land Acquisition Act , 1967 Section 11 (2)	There is no preference to land based resettlement strategies	Where appropriate preference to land based resettlement strategies should be adopted, especially taking into account land scarcity in Dar es Salaam
14.	Provide support for the transition period (between displacement and livelihood restoration). (WB OP4.12 Para.6)	-	The law is silent about provision of support during transition and for livelihood restoration	Consider providing support during transition (for example for acquiring new lands, paying for land registration as well as temporary social services) and for livelihood restoration
15.	Particular attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children, ethnic minorities etc. (WB OP4.12 Para.8)	-	There is no attention for particular group of project affected persons in Tanzania land laws, all PAPs are treated in equally in the compensation process	Assess existence of such groups during socio-economic survey in the proposed site and pay particular attention to their needs if found to be available, especially, women, children and elderly person.
16.	For projects that entail land acquisition or involuntary resettlement of fewer than 200 people, abbreviated resettlement plan is to be prepared. (WB OP4.12 Para.25)	For projects that affect a large size of people, a Land Use Plan is required to accommodate the project. (Land Use Planning Act, 2007. Section 23, 32 and 35 and Village Land Use Guidelines on 2002)	ARAP is not mandatory in the Tanzania law	Adopt ARAP for this project as part of best practice to manage impacts

6.0 ELIGIBILITY AND ENTITLEMENT

Since in some parts of the project area the exact locations of the sub-project that may cause resettlement are not yet known, at this stage it would be impossible to attempt to quantify the estimated likely number of people who may be affected due to the implementation of the project. However through site visit and stakeholders consultation the likely category of PAPs was identified. The various categories of PAPs depend on magnitude of impact, type of asset likely to be affected or owned and vulnerability condition of the PAP. Therefore, for the implementation of this project in Dar es Salaam, the project is likely to affect mainly two types of PAPs as categorized below:

6.1 Categories of Displaced Persons Eligible for Compensation

This RPF suggests the following criterions for eligibility:

a) Those who have formal rights to land (including customary/village land, traditional recognized under Tanzanian Law. Persons under this criterion are to be provided compensation for the land they lose, and other assistance in accordance with the policy.
b) Squatters, Encroachers and other opportunistic land occupiers- These are people who do not own land that they occupy or use; rather take advantage of undeveloped public or private land to erect permanent or semi-permanent structures without permission of the owner. They occupy land with no formal legal right or claim to the land. Encroachers and others may incur losses but are presently not considered eligible for compensation under the Tanzania law. Particular efforts are to be made not to negatively impact these people where possible, because this category of affected persons without official title is likely to be the larger group for this proposed project considering that TANESCO intends to utilize it way leaves and those of other Government Authorities to implement the project.

Persons covered under this criterion are to be provided with resettlement assistance in lieu of compensation for the land they occupy, and other assistance, as necessary, to achieve the objectives set out in this policy, if they occupy the project area prior to a cut-off date.

6.1.1 PAPs with Legal Ownership of Land

These are PAPs who legally own the land that is likely to be affected by the proposed implementation of the project. PAPs under this category are mainly of the following type:

Government Institutions

Government institution that own way leaves for infrastructure development mainly roads, and within these way leaves other liner infrastructures can be developed such as distribution lines. These include institutions such as TANROADs, Ilala Municipal Council and Kinondoni Municipal Council.

For such PAPs TANESCO will be required to consult the respective Government institution, provide them with drawings of where exactly the project will be implemented for the purpose of obtaining permit to use the way leave. In cases where it is likely to find any encroacher within the way leave, TANESCO will have to compensate the PAP as per JICA guidelines.

The project design also indicates that some of the sub stations are proposed to be constructed on land currently owned by Government Institutions such as the Tanzania Peoples Defence Force and Muhimbili National Hospital, similarly for such PAPs TANESCO requires to consult these authorities during RAP implementation and any agreement reached should be appended in the RAP report and if there will be any compensation associated with these transactions, TANESCO should compensate as per JICA guidelines and those of Tanzania Land Act.

Public services and recreational grounds

These include areas used by people permanently or periodically for activities that do not require built structures such as playing grounds that are commonly owned by Government or Community institutions. Considering that the project is located in various parts of Dar es Salaam, such impact is likely to occur. TANESCO should ensure prior consultation to relevant authorities is provided that would include discussing the design and likely magnitude of impact to the area and if any agreement is reached between the two parties, the evidence should be appended in the RAP report.

6.1.2 Individuals with Legal Land Ownership

These include those likely to be affected by construction of a new substation at Mwananyamala as well as those likely to be affected by construction and rehabilitation of transmission and Distribution lines. These PAPs are entitled to compensation as by Tanzanian Laws as well as those of JICA regardless if they have title deed or not.

Illegal Land Owners

These are PAPs who do not have legal ownership of land and therefore are utilising the land by encroaching or illegally. PAPs under this category are mainly of the following type: For the implementation of this project, PAPs of this type are likely to be of the following categories

Owners of graves

Considering land scarcity and poor planning of most parts of Dar es Salaam people tend to use transmission line way leaves (approximately 30 metres width) for burial. Considering that the proposed project will include rehabilitation of a transmission line from Ubungo Substation to Ilala Substation (Mchikichini) it is therefore likely to affect some graves. Relocation of graves is clearly stipulated in various National laws; however considering that those with graves are classified as encroachers, JICA guidelines will also be applicable.

Owners of houses and/or annex structures /business properties

Most of the areas that the proposed project are squatters or areas with high density plots (less than 600sqm); this has forced people to encroach part of road reserves or TANESCO way leave as an extension for above mentioned development. This proposed project is likely to affect such PAPs. According to Tanzania Laws such PAPs are not entitled for any type of compensation but for this particular project under JICA such PAPs are eligible for some kind of compensation.

PAPs with movable business

These are PAPs who are who are permanently stationed in an area but the business infrastructures used are movable. Most of these are petty business either locating them along the transmission line or on the distribution line.

According to Tanzania Laws such PAPs are not entitled for any type of compensation; but for

this particular project under JICA such PAPs will have to be consulted and informed about the project so as to ensure a smooth vacation of the site. Where necessary, TANESCO can work with the respective Ward and District Authority to identify alternative sites to relocate these PAPs.

PAPs with crops

There are mainly two types of crops-seasonal and permanent crops that are likely to be affected by implementation of the proposed project. It is common in Dar es Salaam for people to grow seasonal crops for commercial purposes (vegetables or flowers) along way leaves owned by TANESCO, Municipal council or TANROADs. Such activities are likely to be affected by the implementation of the proposed project. However under the Tanzania land law such PAPs are not entitled for any type of compensation, however with JICA standards such PAPs are entitled for some kind of compensation and therefore under this project TANESCO will be required to consult such PAPs, request them to harvest their crops and where necessary re allocate them to an alternative site in collaboration with the respective ward and District Authorities.

For PAPs with permanent Tanzania, TANESCO will have to compensate these crops as per JICA requirements.

6.1.3 Other General types of PAPs include:

Affected Tenants:

These are people who do not own property but rent house, premises or land for the respective purposes; this category of PAPs is classified in different sub-categories including residential tenants, business tenants, or farm tenants. It is important for RAP implementation to consider such PAPs and ensure that the owner of the affected property considers the tenant to some form of compensation depending on the type of impact.

Vulnerable Groups or Persons requiring Special Provisions

These include elderly, sick people, Women headed households and orphans. These groups are being identified as particularly vulnerable so that special attention would be paid to them by identifying their needs from the baseline study. These individuals will need support if the project

implementation will affect any of their properties to enable them, maintain/improve their livelihoods or at least restore their livelihood to their pre-project conditions.

TANESCO should ensure that a social worker either from TANESCO offices or special arrangement with social workers at District level are involved in the compensation exercise to ensure that vulnerable people get special attention.

Therefore, it is clear that all project affected persons irrespective of their status or whether they have formal titles, legal rights or not, squatters or otherwise encroaching illegally on land, are eligible for some kind of assistance if they occupied the land before the entitlement cut-off date. Persons who encroaches the area after the socio-economic study (census and valuation) are not eligible for compensation or any form of resettlement assistance. The entitlement matrix presented here below sets standards for compensations:

Table 4: Entitlement Standards for the PAPs Compensation

TYPE OF LOSS	Unit of Entitlement	ENTITLEMENTS		
		Compensation for Lost Assets	Transport Allowance	Other Allowances
Loss of residential structure	Household	Compensation at replacement value	Moving 12 tons of goods for a 20 km. distance	Disturbance Allowance Accommodation Allowance
Loss of commercial structure	Enterprise owner	Compensation at replacement value	Moving 12 tons of goods for a 20 km. distance	Disturbance Allowance Loss of profit Allowance
Loss of permanent crops and trees	Household	Compensation at market value	-	Disturbance Allowance
Public/community structure	Concerned public or private entity	Compensation at replacement value or alternative site by agreement	Moving 12 tons of goods for a 20 km. distance	Disturbance Allowance
Loss of Land	Household/Public	Compensation at Market value	-	Disturbance Allowance
Loss of graves	Household/family members	Relocation of graves to a designated grave yard by TANESCO in collaboration with Municipal Authorities	-	Ceremonial allowance

TYPE OF LOSS	Unit of Entitlement	ENTITLEMENTS		
		Compensation for Lost Assets	Transport Allowance	Other Allowances
Loss of Community/public land (open space, road reserve)	Government Institutions (TANROADs, Municipals)			

6.2 Categories of Impact and Entitlement for Compensation

After identification of types of losses due to land acquisition and corresponding project affected persons, the TANESCO will need to define compensation entitlement to various categories of affected people using criteria and entitlement matrix that sets standards for compensations. The RAP will need to further elaborate on amount of losses, ownership status, tenancy status, and any other relevant information.

This section provides details of the categories of impacts likely to occur as a result of implementation of the proposed project funded by JICA that could lead to economic loss and/or physical displacement and resettlement eligibility for compensation.

6.2.1 Loss of Productive Land and Resources

The proposed project will as much as possible utilize land that is currently under the ownership of TANESCO (way leaves) or those owned by TANROADs and Municipal council and therefore with very minimal impact on loss of land. However, some of this land piece have been encroached and being utilized for various activities that include construction of structures (residential and commercials), burial and cultivation.

There will be a minimal impact of loss of land that will affect PAPs with legal ownership of land these include individual PAPs and Government institutions.

For PAPs that mainly fall under public institution TANESCO has special arrangement of acquiring land however for individual PAPs that will lose land to the project will receive the following compensation

- Compensation of the land according to the market value
- Disturbance allowance

It should be noted that illegal land owners are not entitled for any form of compensation.

6.2.2 Residential structures

The project will result in the demolition of residential houses that are within the project area and more specifically within the working space as specified by the contractors. Most of these houses have encroached TANESCO or other institutions way leaves. According to Tanzania Regulations, such PAPs are not entitled to any form of compensation but under JICA such PAPs will be entitled for the following compensation:

- Compensation of the residential structure according to the type of structure and based on market value
- Loss of Accommodation allowance that is paid as per price of renting a similar structure per month for 36 months (3 years).
- Transport allowance calculated to transport goods weighing 12tonnes at a distance of 20 kilometers in that particular area
- Disturbance allowance, which is calculated at 5 % (based on commercial banks current interest rate) of the total compensation amount

For PAPs with legal ownership of the residential houses, they will be entitled to all above mention including compensation for the loss of land according to size and market value.

6.2.3 Commercial Structures

Various commercial structures are likely to be affected by the proposed project components. The commercial structures are mainly small petty businesses (such as shops, and groceries). The project will result in the demolition of these structures, thus leading to disruption of income-generating activities and affect PAPs and their families and employees who are directly dependent on the businesses for their livelihoods.

Most of these commercial premises are located in structures that are within TANESCO or other institutions way leave and therefore under the Tanzanian Law are not entitled for any form of compensation. However under JICA such entities are entitled for the following compensation:

- Compensation of the commercial structure according to the type of structure and market value
- Loss of profit allowance that is obtained from the affected business per month paid for 36months (3 years)
- Transport allowance calculated to transport goods weighing 12tonnes at a distance of 20 kilometers in that particular area
- Disturbance allowance which is calculated based on commercial banks current interest rate of the total compensation amount

For PAPs with legal ownership of the commercial structures, they will be entitled to all above mention including compensation for the loss of land according to size and market value.

6.2.4 Annexed structures

Considering that in most places where the project will be implemented, the size of plots are those of high density, most legal land owners have extended their annex structures into TANESCO way leave or those under other authorities such as TANROADs and Municipal councils. This implies that implementation of this project is likely to affect some annex structures that include septic tanks, toilets, Kitchen or commercial structures. Demolition of such outer structures could result in the loss of household basic services that PAPs depend upon for sanitation, security and general wellbeing. Though impact on just annexed structures alone does not necessitate physical relocation of PAPs or demolition of the whole main structure, such properties are entitled for compensation.

PAPs with annexed structures are entitled to the following compensation

- Compensation of the annex structure according to the type of structure and market value without calculating depreciation
- Compensation of land where the structure is according to the market value
- Disturbance allowance which is 5% (subject to change) of the total compensation amount

For PAPs with illegal ownership of the land that annex structures have been constructed, will not be entitled to compensation the loss of land.

6.2.5 Impact on Crops/Trees

Permanent crops include those that take more than a year to reach full maturity and can be harvested over a long period of time. Considering that the proposed project anticipates taking place on land owned by TANESCO and other authorities as way leave, permanent crops are unlikely to be affected with this project. Seasonal crops are most likely to be affected which include vegetables and flowers.

PAPs loosing permanent crops are entitled to the following compensation

- Compensation of value of each crop/ tree according to the market value and level of maturity
- Compensation of land where the crops are grown according to the market value
- Disturbance allowance

Encroachers will not be entitled for compensation of land while those with seasonal crops TANESCO should consult them and request PAPs to harvest their crops.

6.2.6 Loss of Graves

It was revealed that graveyards are scatted along the Ubungo-Ilala transmission line way leave that will have to be relocated to give way to the implementation of the project. It should be noted that owners of these graves are encroachers and according to Tanzania laws they are not entitled for any form of compensation. However for this particular project that is implemented with JICA guidelines these PAPs are entitled to some form of compensation.

Compensation of the graves will be according to the Tanzania Land Act as well as the Grave removal Act of 1967. TANESCO will have to work closely with the respective Municipal Authority and specifically the District Medical Officer who will provide TANESCO with the cost of relocating each grave. This is paid for expenses related to the relocation of graves that include cost for ceremonies and labor in connection with exhumation and reburial. TANESCO will also have to consult affected PAPs to determine ceremonial costs for such relocation of

graves; this will have to be paid directly to the PAP. To avoid unnecessary grievances, it is recommended that a uniform rate should be paid to all PAPs losing graves.

6.2.7 Other unintended impacts

There are people that might suffer unintentionally and temporal damage to their land and property during construction due to unforeseen actions or simply by accidents such as damage to nearby infrastructure caused by movement of machines. Whenever an unintentional impact occurs, during mobilization, construction or operation phase of the projects, TANESCO is responsible for meeting remedial costs.

6.3 Methods of Valuing Affected Assets and Compensation Payments

The calculation of compensation and other resettlement allowances for displaced property owners is based on current practices in Tanzania for valuation and compensation of properties as stipulated under the Land Act, 1999 and Land Regulations, 2001 only provide for compensation equivalent to the market value of the affected land, structure or asset (direct comparison method) and standing crops (earnings approach) as determined by the valuation assessments. This approach to valuation is not consistent with the resettlement measures required by JICA which requires that compensation is paid based on the full replacement value (not depreciated) of an asset. In addition, JICA prefers the replacement of 'land for land' where appropriate for all PAPs (including those without title/squatters/encroachers).

In order to meet the requirements for a RPF consistent with JICA, the valuations should be done in compliance with the JICA guidance and those of the Tanzania that the compensation value is obtained from the Replacement Cost added with allowances. The Valuer should conduct market survey to determine the current replacement costs and open market values (e.g. cost of construction materials, price of buying and selling land and transportation costs, labour) at the date of valuation.

Allowances: The Land Act considers the following allowances as part of compensation.

Disturbance allowance This is calculated by applying value of real property by average percentage rate of interest offered by commercial banks on deposits for 12months. The current average rate of the interest obtained on fixed deposits at the time of valuation should be

applicable. Therefore the total compensation value, then obtain the % of the value and add to the previous total. All PAPs that are illegible for any kind of compensation shall receive a disturbance allowance.

Transport Allowance Section 179 subsection 11 of the aforesaid Land Act (1999) directs how this allowance is to be assessed: *''Transport Allowance shall be the actual costs of transporting twelve tons of luggage by rail or road (whichever is cheaper) within twenty Kilometers from the point of displacement (i.e. Transport allowance = 12 tons x Actual Cost/ton/km x 20km)".* Transport allowance is computed on the basis of prevailing market rates within an area and is paid only to PAPs with occupied residential/commercial structure.

Loss of accommodation Section 179 sub-sections 8 of the Land Act (1999) stipulates how accommodation allowance is to be arrived at:-The market rent for the building shall be assessed and multiplied by 36 months in order to arrive at accommodation allowance payable. **(i.e.** Accommodation allowance = **Rent/p.m. x 36 months**). Accommodation allowance shall be paid only to PAPs loosing occupied residential structures.

Loss of Profit

This is provided under Section 179 subsection 9 of the Land Act (1999) inter alia: The net monthly profit of the business carried out shall be assessed, evidenced by audited accounts where necessary and applicable and multiplied by 36 months in order to arrive at the loss of profits payable. **(i.e. Loss Profit = Net profit/p.m. x 36 months).** Under this RPF, the owners of businesses should be compensated for the loss of profit regardless of having an audited account as most of those likely to be affected are owners of small petty business.

6.4 Methods for Valuing State Owned Land

State owned land if not in use would be allocated free (perhaps except for surveying and registration fees). However, TANESCO would be expected to pay to acquire land in this category in cases where the state-owned land is being used by another user. This is because, although state owned, the land may be used by individuals and/or community. The guiding principle is that whoever was using the land to be acquired by the sub project would be provided other land of equal size and quality.

6.5 Community Compensation Payments

Community compensation will be in-kind only for a community as a whole in the form of reconstruction of the facility to at least the same standard or equivalent better standard required by local planning regulation. Examples of community compensation include;

- School Building (public or religious)
- Public Toilets
- Well or Pump
- Market Place
- Road
- Storage warehouse

Community compensation may in itself require land take and people may be affected, thus a change of impacts which will be compensated for.

6.6 Forms of Compensation Payments for Various Eligible PAPs

The project may affect a variety of properties and assets which should all be screened as for their value and their eligibility for due compensation. To settle compensation payments for the loss of assets, in accordance with JICA guidelines, compensation may be made any and/or more of the following forms:

a. Cash payments – compensation calculated and paid in Tanzania shillings
b. In kind-compensation may include item such as land, relocation of graves or houses/buildings
c. Assistance – to include moving allowance, transportation and relocating of graves

Thus, Individual and household compensation will be made in cash, in kind, and/or through assistance. The type of compensation will be an individual choice for loss of various assets except for graves compensation should be as per The Graveyard Removal Act (No. 9 of 1969) and cash should be only for ceremonial allowance. The question of security, especially for people who will be receiving cash compensation payments needs to be addressed by TANESCO and respective local Authorities. This RPF recommends use of bank transfer as the best option and therefore it is important for TANESCO to ensure that all PAPs especially those receiving an

amount exceeding Tanzanian shillings 500,000, the money is deposited into their bank accounts. For those with no accounts, TANESCO should assist in opening Bank accounts for PAPs.

6.7 Cut-Off-Date

The entitlement cut-off date refers to the time when the assessment of persons and their property in the area is carried out, i.e. the time when the project area has been identified and when the socio-economic study is taking place. Thereafter, no new cases of affected people will be considered. Persons who encroach the area after the socio-economic study (census and valuation) are not eligible for compensation or any form of resettlement assistance. The establishment of a cut-off date is required to prevent opportunistic invasions /rush migration into the chosen land thereby posing a major risk to the project. Therefore, establishment of a cut-off date is of critical importance.

Cut-off date will be determined once TANESCO has finalized the design and further consultation with other authorities that TANESCO intends to utilize their land. This will be followed by meetings with Municipal Land Officials to discuss and agree on a programme of implementation of the RAP preparation exercise as well as to choose tentative cut-off dates. The dates would then be communicated to the community through their respective representatives in the Village/Mtaa Councils (i.e. Chairperson or Executive Officers).

Persons occupying the project area after the cut- off date are not eligible for compensation or resettlement assistance. Similarly, fixed assets—such as built structures or graves established after the date of completion of the assets inventory, or / and alternative mutually agreed on date, will not be compensated. District/Municipal land officers and Mtaa /Village governments will play a crucial role in ensuring that PAPs do not utilize the site after cut-off date as this might be another source of conflict that might delay project implementation. These measures should include close consultation with the recognized PAP's, signs that inform general public of intended use of site and security patrols to identify opportunistic invaders.

7.0 GRIEVANCE REDRESS MECHANISMS

At the time that the individual resettlement plans are approved and individual compensation contracts are signed, affected individuals and households would have been informed of the process for expressing dissatisfaction and to seek redress. The grievance procedure will be simple, administered as far as possible at the local levels to facilitate access, flexible and open to various proofs taking into cognizance the fact most people have limited knowledge on issues related to compensation.

Considering that there has already been consultation with PAPs with various proposals for working space mainly for the distribution line, it is therefore important for TANESCO to ensure that during consultation processes and at various forums, the extent of damages to properties should be made known. When the amount of compensation to be paid is made known, the affected people have the right to appeal if not satisfied. The grievances could be various but commonly concerning:
Non-fulfillment of contracts;

- Levels of compensation i.e. Inadequacy of compensation paid; or
- Seizure of assets without compensation

7.1 Mediation through Committees at Local and District Levels

Considering that the major impact of the project is likely to be relocation of graves to pave way for the rehabilitation of the transmission line, it is important for a specific committee to be formed that will only deal with those loosing graves and then another two committees for other losses- one for the Kinondoni PAPs and another one for Ilala PAPs. When grievance entails any of the above concerns, the grievance procedure shall be simple, administered as far as possible at the local level in collaboration with the PAP committees to facilitate access, flexibility and open to various proofs taking into cognizance of the fact some of the PAPs are not competent of their entitlement while they would require a speedy and fair resolution of their grievances. The Local Government Authorities system would be the best offices to receive handle and rule on disputes.

Those seeking redress and wishing to state grievances would do so by first notifying their Local Government and Ward offices. If not resolved the matter would be sent to higher local authorities - the District Commissioner (DC) and/or the Municipal/District Executive Director (DED). The DC/DED may constitute a valuation/compensation committee that will consult with the Developers and respective local governments (Ward/Village/Mtaa), the Value assessors and other records to determine claims validity. If valid, through the local government administration will notify the complainant and the PAP will be settled.

If a complaint pattern emerges, involving several cases the DC/DED and the valuation/compensation committee will discuss possible remediation. The local leaders will be required to give advice concerning the need for revisions to procedures. Once the District level leadership has agreed on necessary and appropriate changes, then a written description of the changed process will be made. The lower level government offices (Ward and Village/Mtaa) will be responsible for communicating any changes to the population.

7.2 Appeals through Tribunals / Court System

Failure of the Councils to settle the disputes will be addressed to the existing tribunals and/or local courts system of administration of justice in the Districts.

If the complainant's claim is rejected, then the matter will be brought before the Land Tribunals and/or the local courts for settlement. If the matter cannot be settled by the local courts and/or the Ward/District Land Tribunals, the matter will go the High Court for resolution. The Court of Appeals of Tanzania will be the highest appellate "judge" in this system and its decision would be final.

7.3 Time Frame

In the local cultures it takes people time to decide that they are aggrieved and want to complain. Therefore, the grievance procedures should give PAPs before it is decided that no further grievances are received by the committee.

7.4 Organizational Procedures for the Delivery of Entitlements

TANESCO with support from Municipal Council will post notices in the affected areas advising PAPs to collect their compensation payments from respective Council (for those who will be paid via cheque) and from the specified banks (for those will be paid via banks). TANESCO will create a written record, to be signed by the PAP, indicating that the PAP has received the payment. PAPs without bank accounts will be helped by local government authorities to open bank accounts. Local government will be responsible for to process bank account openings this assistance will include assisting vulnerable PAPs. Once the account is opened and compensation is credited to the appropriate account, each PAP shall be informed of the transaction.

Entitlement for project affected people would range from cash payments and/or in-kind in accordance with the identification of the impact on their property to which they will have needed to agree. The delivery of compensation could involve a number of agencies, the government, and TANESCO as the developer. Payment of compensation and other entitlement to project affected people will be the responsibility of the Government of Tanzania through TANESCO an agency responsible with the energy sector and specifically this proposed project.

7.5 Key Aspects in the Process of Entitlement Delivery

Prior to any project activity is implemented; PAPs will need to be compensated in accordance with the Resettlement Policy Framework. For activities involving land acquisition or loss, denial or restriction to access, it is further required that these measures include provision of compensation and of other assistance required for relocation, prior to displacement, and preparation and provision of resettlement sites with adequate facilities, where required. In particular, the taking of land and related assets may take place only after compensation has been paid and, where applicable, resettlement sites and moving allowances have been provided to displaced persons.

TANESCO in collaboration with Mtaa officials and Municipal Officers particularly from the Land Office, Community Development Office and Health Office and with local areas leaders will arrange meetings with affected individuals and/or households to discuss the compensation process as well as to identify and locate the property users. For each individual or household

affected, the District Land Officer/Valuer will complete a compensation dossier containing necessary personal information on the affected party and those that she/he claims as household members, total landholdings, inventory of assets affected, and information for monitoring their future situation. This information is confirmed and witnessed by the Local leaders and District /Municipal Officials. Dossiers will be kept current and will include documentation of lands surrendered. Each individual will be provided a copy of the dossier at the time of negotiations. This is necessary because it is one way in which an individual can be monitored over time. All claims and assets will be documented in writing.

All types of compensation are to be clearly explained to the individual and households involved. The respective PAP draws up a contract listing all property and land being surrendered, and the types of compensation (cash and/or in-kind) selected. A person selecting in-kind compensation has an order form which is signed and witnessed. The compensation contract and the grievance redress mechanisms are witnessed in the presence of the affected party and the representative of the local leaders or the PAPs committees to be formed as per this RPF prior to signing.All handing over of property such as land and buildings and compensation payments will be made in the presence of the affected party, the local/community leaders, representative from TANESCO, District and representative from the grievances committee.

7.6 Arrangements for Funding Resettlement and Compensation

Sources of funds for carrying out the socio-economic baseline and inventory assessments as well as all resettlement related costs (land acquisition, relocation of graves, training,) will be provided by the Tanzanian Government through TANESCO. Detailed estimates for the surveys and resettlement component will be available following the socio-economic baseline and inventory assessment, including information on specific impacts, individual and household incomes and numbers of affected people. Payment will be made in a manner that complies with the administrative and financial procedures of the Government of Tanzania under the supervision of TANESCO but with close collaboration with the Municipal Council Officials. The budget in the resettlement and compensation plans will be subject to the approval of the Government Chief Valuer and JICA where necessary.

8.0 MECHANISMS FOR CONSULTATIONS WITH, AND PARTICIPATION OF DISPLACED PERSONS

Public consultation and participation are essential because they afford potential PAPs the opportunity to contribute to both the design and implementation of the program activities. This reduces the likelihood for conflicts between and among PAPs and with the management of the Project. In recognition of this, particular attention should be paid to public consultation with affected individuals, households and homesteads (including host communities) when resettlement and compensation concerns are involved.

Public consultation and participation are essential because they afford potential PAPs the opportunity to contribute to both the design and implementation of the program activities and reduce the likelihood for conflicts between the project and PAPs.As a matter of strategy, public consultation should be an on-going activity taking place throughout the entire project cycle. Hence, public consultation should take place during the:

- Socio-economic study,
- Preparation of the project activities,
- Resettlement and compensation planning,
- Drafting and reading/signing of the compensation agreements,
- Payment of compensations,
- Resettlement activities and
- Implementation of post-project community support activities.
- During monitoring of the effectiveness of the Resettlement measures

Public participation and consultation would take place through meetings, radio programs, request for written comments, filling in of questionnaires, public readings and explanations of project ideas and requirements, making public documents available at the National, District and local levels at suitable locations like the ward/street offices or public places such as schools notice boards or areas of worship. Prior to consulting PAPs, TANESCO should also take into consideration the administration channel that operates in Tanzania during consultation that

includes permits from the Municipals Directors office, channeled to the respective Ward Officials and later at Mtaa/street level.

8.1 Consultation and Communication with PAPs loosing Graves

Grave yard relocation is a sensitive moral and social issue and therefore requires special means of communication to ensure that PAPs affected are informed and agree with the modality of relocating the graves.

After identifying the site for project and determining the location of the graves likely to be affected; TANESCO should contact the respective Municipal Director so that a public notice is prepared by the Municipal to inform PAPs about the intention of TANESCO to relocate graves. The notice among other things informs PAPs about the project, location of the project, anticipated number of graves to be relocated and proposed site to relocate the graves. The notice should be made public through pubic media that includes newspapers and Radio stations.

PAPs should be given not less than thirty days to register themselves with the respective Government officials (at ward and or street level).Consultation with PAPs loosing graves should be an ongoing process to involve officials from the Municipal Council (Municipal Health Officer and Community Development Officer) as well as local leaders and religious leaders

9.0 ARRANGEMENTS FOR MONITORING

9.1 Objectives of Resettlement Monitoring

The purpose of resettlement monitoring is to measure whether the objective of this resettlement framework has been met. The design of a resettlement monitoring framework in a RAP will include:

(i) Mechanism to alert project authority(TANESCO) of the necessity for land acquisition during implementation of a project activity

(ii) Mechanism to provide timely information about the valuation and negotiation process,

(iii) Reporting on grievances that require resolution, and

(iv) Documentation of timely completion of project resettlement obligations (i.e. payment of the agreed-upon sums, relocation of graves, etc.) for all permanent and temporary loses, as well as unanticipated, additional construction damage.

9.2 Arrangements for Monitoring

Internal monitoring for RAP implementation will be carried out depending on the maximum time that PAP will be allowed to vacate their existing properties (should not exceed three months). TANESCO will keep a record of all progress and prepare regular monitoring resettlement implementation reports that outline the successes and challenges encountered and submit to the Ministry of Energy and Minerals. Data from field surveys will be used as the benchmark for monitoring the progress of RAP implementation.

Monitoring will be based on representation of TANESCO at the field during resettlement implementation; in coordination with district government authority and the PAPs committee. Internal monitoring will involve the following:

- Administrative monitoring to ensure that implementation is on schedule and problems are dealt with on a timely basis.

- Socio-economic monitoring during and after the relocation process to ensure that persons have been able to recover successfully and as anticipated from the relocation program.

- Data from baseline socio-economic surveys undertaken during consultation will provide the benchmark for monitoring to assess the progress and success of RAP implementation. Monitoring will also include Communication with PAPs and documentation of reactions from PAPs and physical monitoring of progress of the RAP's implementation, including the relocation of PAPs and the affected community assets

9.3 Measuring Resettlement and Compensation Plans Performance

The following parameters and verifiable indicators can be used to measure the resettlement and compensation plans performance;

- Questionnaire data will be entered into a database for comparative analysis at the Developers office. Each individual will have a compensation dossier recording his or her initial situation, all subsequent project use of assets/improvements, and compensation agreed upon and received.
- The Developer will maintain a complete database on every individual impacted by the project land requirements including relocation/resettlement and compensation, land impacts or damages.
- Percentage of individuals selecting cash or a combination of cash and in-kind compensation.
- Proposed use of payments
- The number of grievances and time and quality of resolution
- Ability of individuals and families to re-establish their pre-displacement activities, General relations between the project and the local communities

The following indicators will be used to monitor and evaluate the implementation of resettlement and compensation plans;

9.4 Monitoring Indicators

A number of indicators would be used in order to determine the status of affected people (current quality of grave yard, business trend at the new site compared to the previous, cost of living at the areas relocated compared to the previous, health standards, etc.). Therefore, the resettlement

and compensation plans will set two major socio- economic goals by which to evaluate its success:

- Affected individuals, households, and communities are able to maintain their pre-project standard of living, and even improve on it; and

- The local communities remain supportive of the project. In order to access whether these goals are met, the resettlement and compensation plans will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities.

In order to access whether these goals are met, the resettlement and compensation plans will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities.

The following parameters and verifiable indicators will be used to measure the resettlement and compensation plans performance

- Questionnaire data will be entered into a database for comparative analysis at all levels of Government,
- Each individual will have a compensation signed dossier recording his or her initial situation, all subsequent program use of assets/improvements, and compensation agreed upon and received.
- Percentage of individuals selecting cash or a combination of cash and in-kind compensation,
- Proposed use of payments
- The number of contention cases out of the total cases
- The number of grievances and time and quality of resolution
- Ability of individuals and families to re-establish their pre-displacement activities, land and crops or other alternative incomes

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11.0 ANNEXES

11.1 List of Affected People for the original work space– Along Ilala – Ubungo Transmission Line Ilala District

No	NAME	AFFECTED STRUCTURE	COORDINATES		HOUSE OWNERSHIP AND STATUS	TENANTS	HOUSEHOLD MEMBERS
			X	Y			
1	Halifa H. Shelubea	Shop	0529471	9246298	Owner		04
2	Eliver J. Anyango	House	0529460	9246308	Owner		08
3	Michael J. Lungato	House	0529426	9246330	Owner		12
4	Elizabeth E. Mwingira	House	0529429	9246322	Owner		05
5	Ashura Ally Nchira	House	0529436	9246320	Owner		06
6	Asigo O. Okea	House	0529466	9246298	Owner –Not living in the house		00
						Ali Amir	04
						Fatina Said	04
						Twahiru Juma Amir	05
7	Alex T. Masala	House	0529410	9246334	Owner		10
						Zuena Mduda	04
8	Kaloli Martin Simba	House	0529420	9246342	Owner		03
						Anna Komba	05
						Sharifa Ramadhani	02
9	Joyce S. Simon	House	0529411	9246342	Owner - Not living in the house		00
						Almas Mweta	06
						Salehe Hamis	04
10	Martin S. Utonga	House	0529400	9246356	Owner – Not living in the house		00
						Happiness Paschal	03
						Fatuma Salim	04
11	David M. Utonga	House	0529397	9246350	Owner- Not living in the house		00
						Antony Patrick	07

No	NAME	AFFECTED STRUCTURE	COORDINATES		HOUSE OWNERSHIP AND STATUS	TENANTS	HOUSEHOLD MEMBERS
			X	Y			
12	Anicet I. Mkude	House	0529392	9246356	Owner		06
13	Zena A. Madenge	House	0529399	9246358	Owner		05
						Mwajuma Hussein	04
						Mussa Abbas	03
14	Anatory Augustino Moris	House	0529394	9246364	Owner		07
15	Violeth Minja	House	0529367	9246382	Owner – Not living in the house		00
						Maimuna Idd	06
						Bernadeta Thomas	06
16	Bertha Hezron	House	0529376	9246364	Owner		02
						TOTAL	135

KINONDONI DISTRICT

No	NAME	AFFECTED STRUCTURE	COORDINATES		HOUSE OWNERSHIP & STATUS	TENANTS	HOUSEHOLD MEMBERS
			X	Y			
1	Mohamed A. Mwinyimkuu	House	0528643	9247060	Owner		05
2	Gasper Peter Mshanga	House	0528633	9247098	Owner		06
						Prosper Marandu - Shop	02
3	Asia Omari	Toilet	0528651	9247068	Owner		03
4	Mwamtoro Ramadhani	Annex structure	0528615	9247098	Owner		10
5	Said Mohamed Kalembuka	House	0528595	9247122	Owner		05
6	Anna Ambrose	House	0528578	9247114	Owner		04
7	Yusuph Kazi Singano	House	0528524	9247110	Owner		07
8	Abdallah Idd	Annex structure	0528576	9247112	Owner		02
9	Mandela Mpatila	House	0528518	9247118	Owner		04
						TOTAL	48

11.2 Socio-Economic and Environmental Characteristics of Project Area

11.2.1 Geographical Location

Kinondoni municipal is located in the Northern part of Dar es Salaam city. Administratively, Kinondoni District is broken into 4 divisions, 27 different wards, and 113 sub-wards. This project will cover seven wards of the district, mainly for distribution lines and sub-stations rehabilitations. Ilala district is the mid of Kinondoni and Temeke district. The district boarders the Indian Ocean to the East, the Coastal Region to the West, Kinondoni municipality to the North, and Temeke municipality to the South. Aadministratively, district is sub divided into 3 divisions and 22 wards. Two wards will be touched by the project, especially with transmission line. Ilala Municipal is where almost all government offices and ministries are housed. The Central Business District (locally called "Posta") is also located in this district. Furthermore, it is the transportation hub of the city, as the Julius Nyerere International Airport, Central Railway Station and Tazara Railway Station are all within the district boundaries. The residential areas are mainly middle to high-income earners. Map 2 shows the location of Kinondoni and Ilala Municipal within the City of Dar es Salaam.

Map 1: The Location of Kinondoni and Ilala Municipality

11.2.2 Socio-Demographic Characteristics

Based on the 2012 Population and Housing Census Kinondoni Municipal had a total population of 1,775,049 inhabitants, of whom 860,802 were males and 914,247 were females. The average household size was 4.0 and a sex ratio of 94. On the other hand, Ilala Municipal has a total population of 1,220,611 of whom, 595, 928 are males and 624,683 were females. The Municipal has an average household of 4.0 and a sex ratio of 95. The 2002, Population and Housing Census shows that the population inter-censual growth rate of the two Municipalities was very high (4.1) compared to National inter-censual population growth rate which was 2.9. Table 1 shows the distribution of the total land area and the population of the two Municipalities.

Table 1: Distribution of total land area and population distribution in Kinondoni and Ilala

Municipality	Land size	Population			Population density (per Km²)	Average Household Size
		Male	Female	Total		
Kinondoni	335.0	860,802	914,247	1,775,049	5,298.7	4.0
Ilala	547.2	595,928	624,683	1,220,611	2,230.6	4.0
Total	**882.2**	**1,456,730**	**1,538,930**	**2,995,660**	**3395.7**	**4.0**

Source: Population and Housing Census, 2012

Based on the population statistics in Table 2, Kinondoni Municipal has a higher population compared to Ilala Municipal. The relatively high population growth is attributed partly to an influx of people towards urban areas (coastward migration) and increasing birth rate, and more significantly by transient population.

11.2.3 General Climatic Condition

The climatic condition in the two Municipalities is generally hot and humid throughout the year with an average daily temperature about 29ºC, which could rise to 35oC during the hottest season (from October to March). The average rainfall is 1000mm (ranging between 800 and 1300mm). The climate is often influenced by the south-westerly monsoon winds between April to October, and north westerly monsoon winds between November and March, the maximum wind speed ranging from 3 to 8m/s, lowest during the rainy season (Mahongo, 1999). Tides are semidiurnal, with spring tidal ranges of up to 4m; the mean spring tidal range is 3.2m.

The hottest season is from October to March during which temperatures can raise up to 35ºC. It is relatively cool between May and August, with temperature around 25ºC. There are two main rain seasons; a short rain season from October to December and a long rain season between March and May. The average rainfall is 1000mm (lowest 800mm and highest 1300mm). Humidity is around 96% in the mornings and 67% in the afternoons. The climate is also influenced by the south-westerly monsoon winds from April to October and north-westerly monsoon winds between November and March.

11.2.4 Economic Activities

11.2.4.1 Industrial production and Businesses

The two municipalities are endowed with economic potentials in industrial production and business transactions. The area accommodates about 40% of the total industrial manufacturing units in the country and contributes about 45% of the nation's gross industrial manufacturing output. The two sectors contribute over 80 percent of the Dar es Salaam economy and employs about 90 percent of the workforce in the Region (Dar es Salaam City Profile, 2004). The major productive sectors include agriculture, livestock, fisheries, forestry, cooperatives, tourism, mining and industries. However, Poverty and Human Development Report (PHDR) of 2009 indicated that about 20 percent of Dar es Salaam residents were living below poverty line.

11.2.4.2 Agriculture

Agriculture is however the main activity within the region. A total of 110,850 ha (52,000 ha in Kinondoni, and 13,850 ha in Ilala) of land has potential for agriculture practices, of which over 52% is already in use (Dar es Salaam City Council, 2004). Crop cultivation is dominant in Dar es Salaam (Jacobi 1997, Tesha 1996). Leafy vegetables are in high demand, because they are part of the traditional diet. Eggplant, sweet and hot pepper, okra and tomato as well as fruits like oranges, mangoes, banana, papaya and pineapple are produced in the periurban area. Occasionally, green maize and rice is produced in the inner city during the long rainy season; otherwise, staples come primarily from peri-urban or rural areas.

Cattle, goats and chickens are kept in close vicinity to urban settlements. While cattle are kept exclusively by medium- and high-income groups either in the peri- urban areas or in low- density settlement areas, goats and chickens are affordable to all income groups. The number depends on family income. Current cattle population in Dar es Salaam is projected at 34,000 cattle, 12,500 goats, 1,500,000 poultry and 5,000 pigs (MoAC 1999). However, the land use is rapidly changing from agriculture to built-up areas (Kombe, 2005).

11.2.4.3 Fishing

Fishing is very important in DSM for employment, family food supply and for animal feed. Fishing methods include freshwater fishing, marine fishing, dynamite fishing and beach seine. *Freshwater fishing* is mainly for household consumption. Few lakes and ponds are used for inland fisheries resources in Mikocheni, Kawe, Kimara, Tegeta, Boko, and Pugu. Existing lakes include Luhanga, Makurumula, Msimbazi River and Tandale. No data is available for the actual catch. *Marine fisheries* employ more than 3000 men in villages such as Mbweni, Ununio, Kunduchi, Kawe, Kimbiji, Mjimwema etc. The main types of fishnets are gillnets, shark nets, sieve nets, hand lines and traps. *Beach seine* is practised mostly by small-scale fishermen with canoes or small boats who fish in shallow waters.

11.2.4.4 Quarrying/Mining

Sand, stone, limestone and clay are extracted in key locations for building and construction purposes. Salt is mined in the shore for domestic consumption. Approved sand quarrying areas include Majohe and Bunju, with other more urban areas where mining is carried out unofficially such as Kawe, Mbezi beach, Tegeta, Boko & Tabata. Stone is mainly extracted from Kunduchi, Mjimwema, Boko, Bunju and Kigamboni quarries, supplemented by small scale family operations in disused quarries scattered throughout the urban area, especially in Msasani, Oyster bay & Masaki. Limestone is quarried from Wazo /Kunduchi outcrops for the Tanzania Portland Cement Company Ltd. at Wazo Hill cement factory. Clay is extracted from upper Msimbazi river valley for the manufacturing of bricks.

11.2.5 Education

The project area has several pre-primary schools, primary and secondary schools. There are also a number of higher learning institutions such University of Dar es Saalam, Ardhi University and many other institutions. Due to rapid population increase, education sector in the project is facing several challenges including shortage of desks, teachers and textbooks. Availability of teachers is also a problem because many pupils cannot access the teacher due to high teacher to pupil ratio.

With regard to the level of literacy, available statistics shows that Kinondoni district have high rate of literacy (88 percent) among the population aged 5 years and above. The same situation was experienced in Ilala district where the literacy rate was 89 percent among the population aged 5 years and above. Literacy in Kiswahili stood at 62 percent while 25 percent were literate in both Kiswahili and English. Furthermore, literacy rate was highest among those aged between 10 and 19 years. Literacy was also higher among the urban population than the rural (Kinondoni and Ilala District Profile, 2012).

11.2.6 Health

According to an Environmental Health Profile for DSM region 1998, the Health sector in the area provides curative, preventive, rehabilitative and promotive health care. The curative services are provided in Hospitals, Health Centres, Dispensaries, Mobile health Services and Referrals. Government hospitals are Muhimbili National Hospital, Ocean Road Hospital, Mwananyamala (Kinondoni) and Amana hospital in Ilala. The following table indicates the type, number and ownership of the health facilities available in the Region.

In this area health facilities are located in various parts of the area comprising both informal and formal health establishments. Despite improvements in medical practice, the informal sector still plays an important role in the community. The formal sector is run by various institutions including the Government, voluntary agencies, parastatal and other private organisations. Kinondoni district has 33 public health facilities and 168 private health facilities. There is one municipal public hospital (Mwananyamala), 2 two municipal public health centres, namely, Magomeni and Sinza

11.2.7 Water Resources:

Water Sources for Dar es Salaam Region residents are Ruvu juu, Ruvu Chini and Mtoni distribution plants. Others are underground sources being boreholes, shallow wells and deep wells. All plants have the capacity of supplying 300,000 M3 per day compared to the demand of 450,000 M3 per day (about 67%). However, about 50% of supplied water is lost due to dilapidated infrastructures.

The area contains watersheds of 4 major rivers. Mpiji River forms the northern boundary of DSM, Msimbazi River flows to the north of the city centre and Kizinga and Mzinga Rivers flow into the harbour area of the city. There are also smaller water courses such as Nyakasangwe, Tegeta, Mbezi, Sinza, Tabata and Minerva. Apart from a small pumping station at Mtoni on the Kizinga River, all regulated water comes from Ruvu River outside the city boundary. Due to the distance involved, there is high leakage and limited free flow.

11.2.8 Energy use and Electricity Supply

Biomass is the main source of energy in the project areas dominated by the burning of fuel wood and charcoal. The majority of households in the area use electricity for lighting, however, the supply of electricity is unreliable due to frequent black out, and in many cases without any notification from the responsible authority. These have compelled people to use other alternatives of energy such as kerosene/paraffin for lighting and cooking.

11.2.9 Transport Services

Public transport in Kinondoni and Ilala Municipalities is generally poor and unsafe, lacking efficiency, quality and safety for the passengers. The main factors leading to the above situation include; rapid expansion of the City which has far outpaced the capacity to provide basic infrastructure (such as good roads) and services, poor state of majority of the buses, untrained bus drivers and conductors driven by the pursuit of daily revenue targets payable to the bus owners, non-adherence to traffic rules and regulations and lack of an organized public transport system.

11.3 Socio-Economic Characteristics of Affected People

This section presents a brief description and analysis of the basic socio-economic characteristics of a population likely to be affected by the project based on the results of the household survey conducted in wards and streets along Ilala to Ubungo transmission line. The wards and streets involved are Ubungo (Ubungo Kisiwani Street) and Muzimuni (Mwinyimkuu Street) in Kinondoni district and Mchikichini ward (Ilala Quarter Street) in Ilala district. It should be noted that the potentially affected people along the transmission line were selected based on the working space which was designed by the client (JICA) in collaboration with TANESCO.

11.3.1 Population Distribution and Characteristics

The population figure in the project affected area as per 2012 population and Housing census are shown in Table 3

Table 2: Population distribution in affected Wards

District	Wards	Population			Average Household Size
		Male	Female	Total	
Kinondoni	Ubungo	27,221	28,794	56,015	3.8
	Manzese	34,495	36,012	70,507	3.7
	Muzimuni	10,326	11,160	21,486	4.1
	Makumbusho	33,251	34,842	68,093	3.7
	Mwananyamala	24,322	26,238	50,560	3.7
	Kawe	32,426	34,689	67,115	4.0
	Msasani	24,123	24,797	48,920	3.9
Ilala	Mchikichini	12,977	12,533	25,510	3.9
	Jangwani	9,174	8,473	17,647	4.2
	Total	**208,315**	**217,538**	**425,853**	**3.9**

Source: Population and Housing Census, 2012

From the Table 3, it is obvious that women are slightly higher in the project area than men. Manzese ward is more concentrated, followed by Makumbusho and Kawe. The concentration of people in Manzese ward might be due to the fact that the area is a centre of small business of various types which is attracting people to live near the market area. Besides, most of the houses are in squatter area and slightly affordable to low income earners. The population characteristics of the affected people is presented in Table 4

Table 3: Age Distribution Percentage Distribution

Age (years)	Frequency	Percent
0-14	83	45.4
15-35	61	33.3
36-45	17	9.3
46-65	13	7.1
65+	09	4.9
Total	**183**	**100**

Source: Consultant Survey, 2013

As usual, children (aged 0 – 15yrs) have the largest proportion of 45.4%. The productive segment of the population (15 - 45yrs) is about 42.6% while the population aged 46 and above accounts for people (> 55 years) accounted for 12.0%. The analyses of the population age-sex

structure of the head of households show that the majority were in the age group of 21 – 35 years which accounted for 40 percent of the head of the households. This was followed by the age group of 36 – 45 years (23%), 46 – 65 years (27%) and above 65 years were 10%. Among the head of households, 63% were males and 37% were females. Generally, the population structure is characterized by young population who are in active working age group. The graphical presentation of population distribution of the head of households is presented in Figure 1.

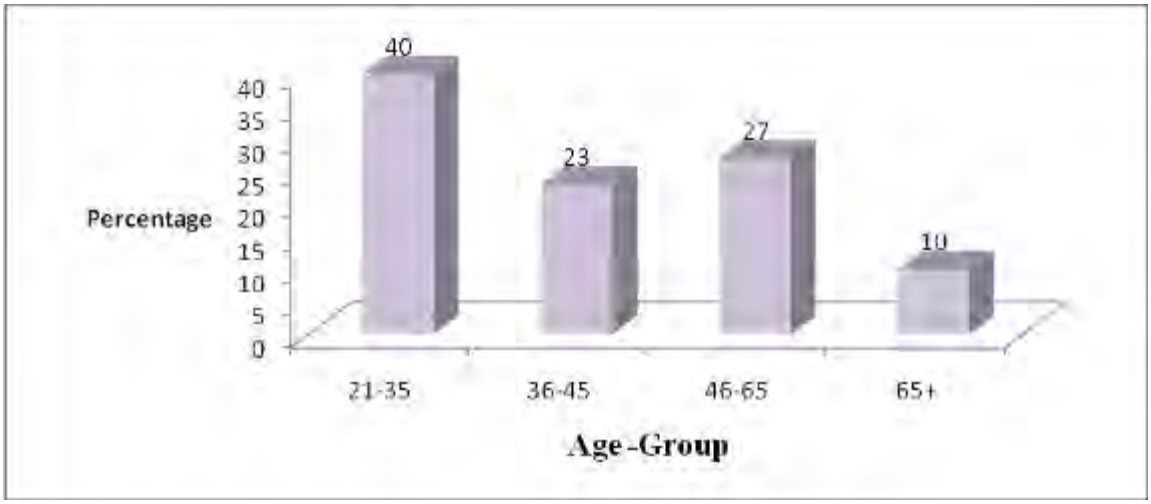


Figure 1: Respondent's Age -Group

11.3.2 Occupation

The occupational distribution of the people in the project area as revealed from the field survey conducted is shown in Table 5:

Table 4: Major Occupation of the Respondents

Type of Work	Frequency	Percent
Employed – by government	4	13
Small business	20	67
Farmer	3	10
Mason	3	10
Total	**30**	**100**

Source: Consultant Survey, 2013

It is clear from the above that majority (67.0%). of the affected people in the project area are involved in small businesses such as food vendors and selling of used clothes. Government employees, including teachers, accounted for 13.0% of the sampled population. Farmers and

Mason constituted 10.0%, and 10.0% respectively. Those engaged in agriculture are mainly cultivating vegetables and very little sweet potatoes.

11.3.3 Marital status

The population data split by marital status show that 73.0% of respondents are married and 14.0% are single (never married. Furthermore, the survey shows that 10.0% are widowed and 3.0% are either separated or divorced. The marital status distribution is presented in Figure 2

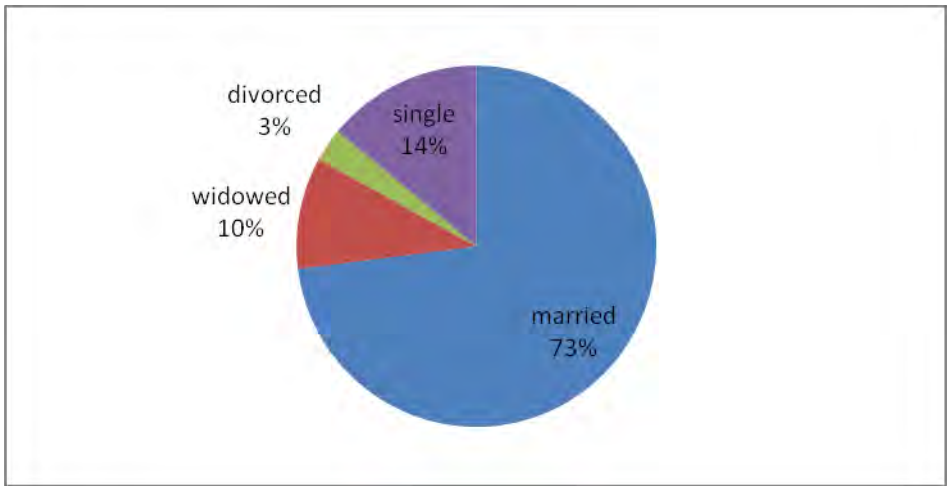


Figure 2: Respondent's Marital Status

The analysis of marital status to the entire population of the selected population shows that the majority (78.0%) of the population is single, the married group constitutes 17.0%, while the widowed and separated constitute 4.0% and 1.0% respectively. The high proportion of single status in population has been caused by presence of dependants (children and other relatives) in these households. However, it should be noted the analysis of marital status have excluded those who are in schools and children under 5 years.

11.3.4 Income and Sources of Income

Despite the complexity to determine average household's income due lack of proper and up to date records, it was important to assess the household income of the affected people and understand the sources of their income. However, it should be noted that due to these

complexities, the income presented is merely indicative and was obtained by summing up the individual incomes of household heads from different sources. The average annual income is presented in Table 6.

Table 5: Estimated Annual income of the Respondent in the Project Area

Income	Frequency	Percent
Less than 100,000	5	16
100,000-500,000	2	7
501,000-100,0000	4	13
1,001,000-5,000,000	15	50
5,001,000-10,000,000	2	7
10,000,000+	2	7
Total	**30**	**100**

Source: Consultant Survey, 2013

The table shows that 16.0% of the respondents earn less than Tshs.100,000 per annum. In addition 50.0% which is the largest proportion of the respondents earn between Tshs. 1,001,000-5,000,000 which is equivalent to Tshs 80,000 – 400,000 per month. Some few households have earning of Tshs 5,000,000 to 10,000,000 (7.0%) and more than 10, 000, 000.(7.0%). The primary sources of income as mentioned earlier for the majority of the respondents is small business. The discussions with the affected people during the household survey revealed that, the proximity to the centre of the City have enabled them to easily access market for their business. Furthermore, they do not incur any cost of transport as they can just walk to the market place.

11.3.5 Education level

Survey results indicate that less than 60% of the head of households have completed primary school education; 27% have completed secondary school; 7.0% have completed college education 3.0 % are secondary school drop-out and other 3.0% have not attended any formal education. The analysis of educational attainment to the household's member is presented in Figure 3.

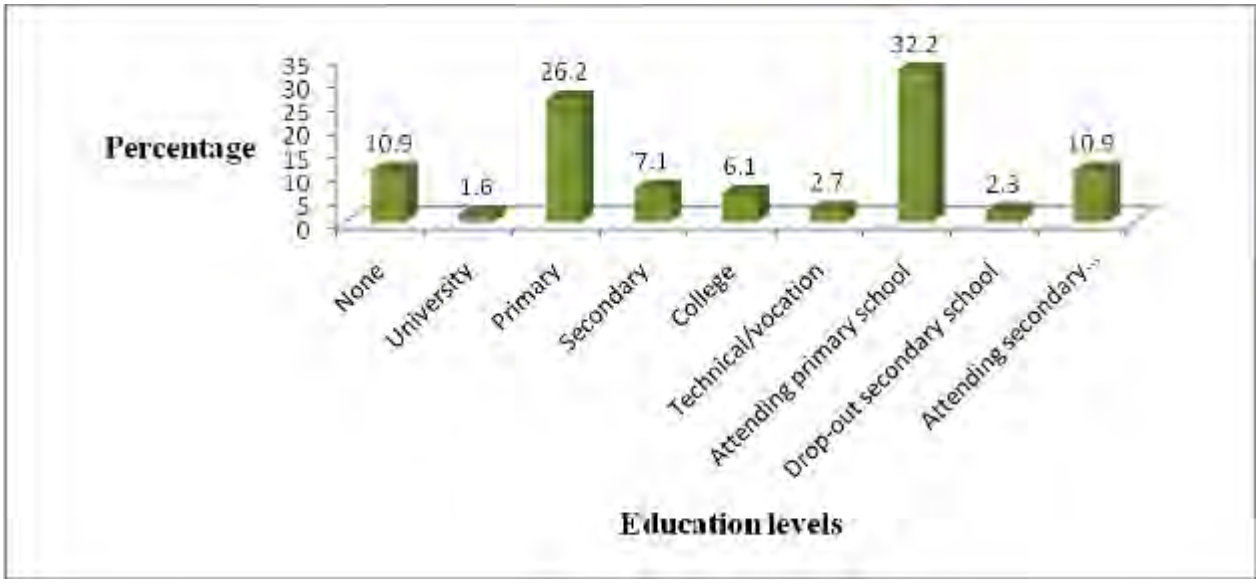


Figure 3: Household's Members Education Level

From Figure 3, it is evident that a slight majority (26.2%) of the population in the selected affected households are attending primary schools. The proportions of those who have completed primary education constitute 26.2% of the population and those who have completed secondary school constitute 7.1%. Within the population there are secondary school students which constitute 10.9%. Findings have shown that about 80% of children who are in primary schools are attending a nearby school which is about 1km from their residential areas

Looking across age groups for both sexes, it is clear that younger respondents have achieved higher educational levels than older ones. This is so for both sexes. For example, men aged 21 45 that have achieved secondary and college education qualifications make up 30.3% of the people in this age group, while the proportion for women is 20.2%. Looking at people aged 65 or over, it is evident that the proportion of people that achieved secondary and college education is small 3.2% for men and 1.6% for women.

11.3.6 Housing ownership, conditions and toilet facilities

The housing condition, sanitation and hygiene of a household directly impact on the quality of life of its members. Use of appropriate toilet facilities is important in controlling hygiene related illnesses like diarrhoea, intestinal infections and cholera among others. The housing condition of affected people is shown in Table 7.

Table 6: Housing conditions and Toilet facilities

Wall materials	**Frequency**	**Percent**
burnt breaks	1	3
cement blocks	29	91
Total	**30**	**100**
Roof materials		
corrugated iron sheet	30	100
Floor materials		
cement	27	90
floor tiles	3	7
Total	**30**	**100**
Number of rooms		
1 - 2	14	46.7
3 - 6	09	30.0
7 - 10	07	23.3
Total	**30**	**100**
Toilet facilities		
Flush toilet	13	43.3
Pit latrine VIP	14	46.7
Pit latrine	3	10.0
	30	**100.0**

Source: Consultant Survey, 2013

From Table 7, it is evident that most of the affected houses are of good quality as they are made up modern construction materials. In terms of house ownership, approximately 56.0% of affected families own a house and 44.0% of households live in rented houses, while the owners are living somewhere else within or outside the City.

11.3.7 Health Facilities

The household survey shows almost households have access to health services owned by the government or private sectors. However, most of the people reported to depend on government health facilities which slightly affordable as compared to private health facilities. The health facilities available in the project affected areas are shown in Table 8.

Table 7: Health Facilities in affected Wards and Streets

District	Ward	Street	Type of Health Facility			
			Hospital	**Health Centre**	**Clinic/Maternity**	**Dispensary**
Kinondoni	Ubungo	Ubungo Kisiwani	-	-	-	1
	Manzese	Midizini	-	-	-	2
	Muzimuni	Idrisa	-	-	-	1
	Makumbusho	Makumbusho	-	-	1	5
	Mwananyamala		1	1	4	6
	Kawe		4	-	1	17
	Msasani		3	-	1	6
Ilala	Mchikichini		-	-	-	1
	Jangwani		1	1	2	4
	Total		**09**	**02**	**09**	**43**

Source: Kinondoni and Ilala Municipal Council Health Facilities Inventory: Data Base, 2012

11.4 List of Stakeholders Consultated during the survey

S/n	Name	Title/Ward/Street	Ward	Street/Mtaa	District
1	Mr. Moston Mwakyoma	District Valuer			Ilala
2	Mr. Joseph Kawiche	District Valuer			Ilala
3	Ms. Genoveva Mazenge	District Valuer			Ilala
4	Mr. Msuya	Health Officer			Ilala
5	Fatuma Maduhu	Health Officer			Ilala
6	Daniel Barnabas-	Municipal Trade officer (supervisor of billboards)			Kinondoni
7	Mathias Kipizo	Municipal Health Officer -			Kinondoni
8	Mr Jacob Ngowi,	Land Officer			Kinondoni
9	Ramadhani Masenza	WEO	Ubungo	-	Kinondoni
10	Agnes Sengonda	VEO	Ubungo	Ubungo Kisiwani	Kinondoni
11	Jovin Ndimbo	Chair person	Ubungo	Ubungo Kisiwani	Kinondoni
12	Stella Mfindo	WEO	Manzese	-	Kinondoni
13	Hamtoni Baho	VEO	Manzese	Midizini	Kinondoni
14	Mwajuma Shomari	Chair person	Manzese	Midizini	Kinondoni
15	Betty Mwaitenda	WEO	Mchikichini	-	Ilala
16	Digna Marandu	VEO	Mchikichini	Ilala Quarter	Ilala
17	Fadhil	VEO	Mchikichini	Msimbazi Bondeni	Ilala
18	Mwajuma Mchuma	WEO	Mburahati	-	Kinondoni
19	Shukra Ally	VEO	Mburahati	NHC	Kinondoni
20	David Chogo	Chair person	Mburahati	NHC	Kinondoni
21	Mwakalinga Silence	Ward Councillor	Mburahati	-	Kinondoni
22	Zuhura Almas	WEO	Makurumla	-	Kinondoni
23	Rashid Semindu	Chair person	Makurumla	Mianzini	Kinondoni
24	Erick Taratibu	VEO	Makurumla	Kwa Jongo	Kinondoni
25	Abdul Shomvi	Chairperson	Makurumla	Kwa Jongo	Kinondoni

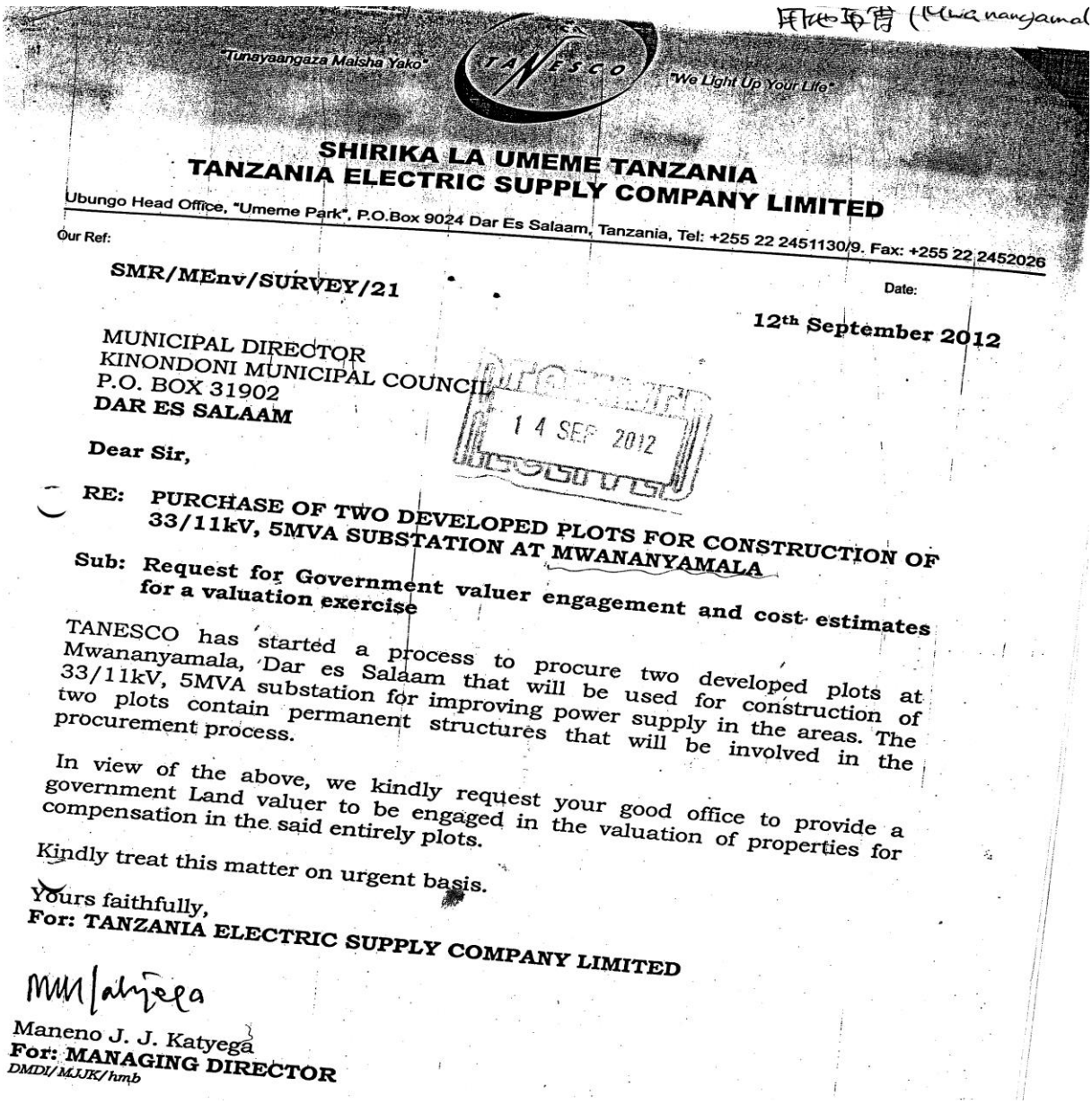
11.5 STAKEHOLDERS VIEWS AND CONCERNS

Name of stakeholder	Views and concerns
Mr Jacob Ngowi, Land Officer (Kinondoni Municipal Council)	• The project is accepted but laws, regulations and policies should be abided. • In case of graves there is grave removal Act of 1969 it is under the Department of Health they should also be consulted. • Demarcation should be done so as we can know clearly if the project will involve land take and if there is any disruption of community's properties and if any how will it be compensated. • .If part of a building or a plot will be affected the title deed will be not valid anymore; therefore it should be rectified for modification. • Sensitization/awareness should be provided to the community from the *Mtaa* and Ward level to the district level so as to avoid Land conflicts in the project area. • Laying poles close/within the service roads tends to obstruct pedestrians this is common in most of the road reserve therefore this is not recommendable. TANESCO should acquire its own land and they should compensate affected people. • The contractor/TANESCO should be very carefully so as not to disrupt community infrastructures such as water pipes, and access roads.ie we advice activities to work across various responsible sectors • There is the tendency of paying encroachers to comply with the World Bank policies particularly those projects funded by World Bank; this habit is bringing problems to the local/government funded projects. • Open spaces are owned by Municipal Council this should also be compensated and in-kind compensation is recommended.
Mathias Kipizo Municipal Health Officer -Kinondoni	• Due to the nature of the project working close to the graves is not a problem but if it happen grave is too close to the poles they should be shifted. • Provision of education and a clear introduction of the project to the community are recommended. • The intention to remove graves idea should be submitted to the Municipal

Name of stakeholder	Views and concerns
	council and Health department will prepare the announcement to be announced in the government media in 21 days. The Municipal finance committee will prepare the budget basing on the existing rates. • During removal of graves Health department is responsible and not anyone else for the matter of health and safety.
Daniel Barnabas-Kinondon Municipal Trade officer(supervisor of billboards)	• Most of the Billboards are owned by individual companies and some by institutions and they normally pay rent to the responsible Municipality • The rent paid depends on the size of the billboard which is 13,000 per square feet for lightened one and 10,000 per square feet for unenlightened; the location doesn't change the price.
Mr. Msuya Municipal Health Officer -Ilala	• Developer (TANESCO) should incur cost for removing/ shifting grave that will be prepared by Municipal Health Department • Graves should be shifted to the proper designated Municipal Grave Yards such as Buyuni, Mwanagali and Segerea. Moving graves out of Dar es Salaam is not recommended as its cost implication and is not Healthier. The normal distance that has been estimated is 15kilometres, however if the owner wants to go beyond the estimated distance they can but with his or her own cost and they should get permit from the responsible municipal. • The appropriate owner of some graves is a big challenge.
Ilala Municipal-Land Officers **Mr. Moston Mwakyoma – Valuer** **Mr. Joseph Kawiche - Acting Municipal valuer** **Ms. Genoveva Mazenge - Valuer**	• TANESCO is advised to maintain utilization of their existing areas/way most of them are encroached so as to minimize compensation cost. • The Department normally does not do the valuation; instead the Health department is responsible under the graves removal Act, 1969. • Open spaces and hazard lands are usually owned by Municipals • Billboards are usually owned by individuals, companies and institutions with the permit from Municipal. • Currently there are no specific laws in place that governed the compensation of billboards.

Name of stakeholder	Views and concerns
PAPs meeting	• We need to be informed clearly on the magnitude of the project and the specific time and day of removing/ shifting graves. • Payments for grave removal should be flat rate for the matter of consistency. • We need to be informed clearly on the amount to be paid before the process
Manzese Ward Meeting - Stela Mfinde –Ward Executive Officer	• Community meetings should be conducted in the affected places. The removal of graves should be announced to the media (magazine, radio) • Payments should be of the same rate in both Muslim and Christian graves

11.6 Letters from variuos stakeholders



"Tunayaangaza Maisha Yako" TANESCO "We Light Up Your Life"

SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Ubungo Head Office, "Umeme Park", P.O.Box 9024 Dar Es Salaam, Tanzania, Tel: +255 22 2451130/9. Fax: +255 22 2452026

Our Ref: **SMR/MEnv/SURVEY/21**

Date: **12th September 2012**

MUNICIPAL DIRECTOR
KINONDONI MUNICIPAL COUNCIL
P.O. BOX 31902
DAR ES SALAAM

14 SEP 2012

Dear Sir,

RE: PURCHASE OF TWO DEVELOPED PLOTS FOR CONSTRUCTION OF 33/11kV, 5MVA SUBSTATION AT MWANANYAMALA

Sub: Request for Government valuer engagement and cost estimates for a valuation exercise

TANESCO has started a process to procure two developed plots at Mwananyamala, Dar es Salaam that will be used for construction of 33/11kV, 5MVA substation for improving power supply in the areas. The two plots contain permanent structures that will be involved in the procurement process.

In view of the above, we kindly request your good office to provide a government Land valuer to be engaged in the valuation of properties for compensation in the said entirely plots.

Kindly treat this matter on urgent basis.

Yours faithfully,
For: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

Maneno J. J. Katyega
For: MANAGING DIRECTOR
DMDI/MJJK/hmb

TANZANIA NATIONAL ROADS AGENCY

TANROADS

Good roads for national development

Dar: 4th July 2013
Our Ref: RM/TNR/DSM/R.80.415/VoL.V/57

P.O Box 40
Dar
Mandela Road
Dar es Salaam

Managing Director,
Tanzania Electric Supply Company Limited
P.O. Box 9024,
DAR ES SALAAM - Fax 2452026

RE: **REHABILITATION OF SUBSTATIONS AND CONSTRUCTION OF NEW DISTRIBUTION LINES AND SUB STATIONS IN DAR ES SALAAM FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA**

Sub: **Request for Construction of 33kV line along New and Old Bagamoyo Road Reserve**

PERMIT No. TRD/DSM/2013/2014/T/P/01

Reference is made to your letter dated 1st July 2013 with reference SMD/MPD/JICA regarding the above captioned subject.

After going through your submssion, we have accepted your request to construct 33Kv Power Line along New and Old Bagamoyo road basing on the following conditions:-

1. The work shall be executed in a accordance with submitted DWG No. DL-R-01 showing the Route Map from Tegeta S/S to Jangwani Beach S/S
2. The 33kV power line shall be constructed within 1.5m from the Road Reserve Marker Posts along New Bagamoyo road and 1.5m from the plot boundaries of Old Bagamoyo road (Africana to TPDF Riffle Range Ground section).
3. Where the power line will cross the road, you are strictly required to maintain the minimum allowable clearance height of 7m from the ground.
4. The Agency reserves the right to carry out any appropriate changes to the part of the developments within the road reserve without any compensation.
5. Carrying the works contrary to this permit shall be considered as an encroachment to the road resrve and the Agency shall take legal actions as per Highway Ordinance Cap. 167.

Tel. + 255 22 2450185/2450046 Fax. + 255 22 2450626, E-Mail: rmo@dsm.tanroads.org

6. A normal supervision fee of **Tshs 2,900,000.00** shall be charged and paid before the commencement of the works as detailed in the attached sheet.

7 When you are ready to to start the works, please inform this office so that arrangements can be made for supervision and close monitoring of your work with regard to compliance to the above conditions.

8 Acknowledge recept of this letter.

Ndyamukama J
Regional Manager
DAR ES SALAAM

TANZANIA NATIONAL ROADS AGENCY

Good roads for national development

P.O Box 4838
Mabibo External
Mandela Road
Dar es Salaam

Date: 5th July 2013
Our Ref: RM/TNR/DSM/R.80.415/VoL.V/58

Managing Director,
Tanzania Electric Supply Company Limited
P.O. Box 9024,
DAR ES SALAAM - Fax 2452026

RE: REHABILITATION OF SUBSTATIONS AND CONSTRUCTION OF NEW DISTRIBUTION LINES AND SUB STATIONS IN DAR ES SALAAM FUNDED BY THE GOVERNMENT OF JAPAN THROUGH JICA

Sub: Request for Construction of 33kV line along New and Old Bagamoyo Road Reserve

Reference is made to your letter dated 1st July 2013 with reference SMD/MPD/JICA regarding the above captioned subject.

After going through your submssion, we have accepted your request to construct 33Kv Power Line along New and Old Bagamoyo road.

The permit will be issued after payment of **Tshs 2,900,000.00** exclusive of VAT being the estimated supervision cost during implementation of your project.

The breakdown of estimated supervision cost is attached to this letter.

Ndyamukama, J.
Regional Manager
DAR ES SALAAM

HALMASHAURI YA MANISPAA YA ILALA

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA MANISPAA

S.L.P. Na. 20950
Simu Na. 2128800
2128805
Fax Na. 2121486

Kumb. IMC/HT.9/

Ofisi ya Mkurugenzi
Manispaa ya Ilala

Tarehe: 04/07/2013

Mkurugenzi wa TANNESCO,
UBUNGO HEAD OFFICE,
S.L.P. 9024,
DAR ES SALAAM.

YAH: **KIBALI CHA KUPITISHA MIUNDOMBINU YA UMEME BARABARA YA MAGORE HADI HOSPITALI YA MUHIMBILI**

Tafadhali husika na kichwa cha habari hapo juu na pia rejea barua yako ya tarehe 24/04/2013 yenye Kumb. Na.SMD/MPD/983/JICA.

Ofisi ya Mkurugenzi wa Manispaa ya Ilala imepokea barua kutoka ofisi yako ya kuomba kibali cha kupitisha miundombinu ya umeme na kukarabati kituo kidogo cha umeme.

Baada ya kupitia barua yako, napenda kukufahamisha kwamba kibali kimetolewa cha kuwaruhusu kazi hiyo kufanyika, Pamoja na kibali hiki tafadhali zingatia masharti yafuatayo:

i. Unatakiwa kuwasiliana na Kitengo cha Maliasili na Idara ya Ujenzi Manispaa ya Ilala kabla ya kuanza utekelezaji.
ii. Kuzingatia sheria za usalama barabarani na kutunza utulivu katika maeneo yatakayotumiwa kwa shughuli hiyo.
iii. Mnatakiwa kulipia gharama za posho ya usimamizi kwa watumishi wa Halmashauri watakaoshiriki katika zoezi hilo.
iv. Unatakiwa kurudishia miundombinu itakayoathirika wakati wa utekelezaji wa kazi hiyo kwenye hali yake ya kawaida mara ukamilishapo kazi zako.

Nakutakia kazi njema.

Arch. A.J. Mcha
Kny: **Mkurugenzi wa Manispaa,**
Halmashauri ya Manispaa ya Ilala.

Nakala: Mkurugenzi wa Manispaa ya Ilala – aione kwenye jalada

KINONDONI MUNICIPAL COUNCIL

ALL CORRESPONDENCES TO BE ADDRESSED TO THE MUNICIPAL DIRECTOR

Tel: 2170173
Fax: 2172951

In reply please quote:

Ref: KMC/MEK /T20/26

MUNICIPAL DIRECTOR
KINONDONI MUNICIPAL COUNCIL
P. O. BOX 31902
DAR ES SALAAM

Date: 03/07/2013

MANAGING DIRECTOR,
TANZANIA ELECTRIC SUPPLY CO. LTD,
P.O. BOX 9024,
DAR ES SALAAM

RE: PERMIT FOR CONSTRUCTION OF 33 KV LINES FROM MAKUMBUSHO SUB STATION TO MASAKI, MAKUMBUSHO SUB STATION TO MWANANYAMALA AND TEGETA SUB STATION TO JANGWANI BEACH ALONG THE ROAD RESERVE AND TREE CUTTING ALONG THE LINES CORRIDOR.

Kindly refer to your letter with reference number SMD/PMD/JICA dated 24th April, 2013 on the above subject matter.

I would like to thank you for upgrading the electric power supply in the Kinondoni Municipality and that this project will enhance the development of our people.

The permit is hereby granted with the following conditions;-

1. You must contact the Municipal surveyor at your own cost for the roads demarcation.

2. TANROADS must be involved for the power transmission in the trunk roads such as Bagamoyo road and Old Bagamoyo road etc.

3. The removal of the road reserve encroachers will be financed by your firm through our assistance. Tree cutting is inevitable in the transmission corridor so as to avoid electric accidents/shocks.

Thank you for your good co-operation with our Municipality.

Eng. Uriyo G. A.
For: **MUNICIPAL DIRECTOR**
KINONDONI MUNICIPAL COUNCIL

CC.

- **Municipal Surveyor** – assist them according to the By Laws.

11.7 Agreement on the mode of compensation of graves at Ubungo Kisiwani and Midizini in Kinondoni and Ilala Districts.

YAH: kukubaliana malipo ya Makaburi yalipwe Sana!

Rejea kichwa cha Habari sisi waathirika tuliyoziko eneo la Ufi ambao Makaburi yetu yapo eneo la Mradi wa TANESCO, tumekubaliana kuwa sisi wote tulipwe Sana gharama za Makaburi bila kujali aina ya Maendeleo yaliyopatikana au Dini ili kuepuka malalamiko.

Ahsante:

Wenu:

1: MATHEW GEORGE KABATA 0714-788704

2: MHUNDE A. NGONDYA 0652-60494

YAH; Kuintena Mwenyekiti wa Serikali ya Mtaa wa Ilbungo kisiwani kusimama Kwa niaba ya wathirika wa Makabu ya eneo la Ufi:

Rejea kichwa cha habari, sisi wathirika tulio ziko eneo la Ufi ambao Makabari yetu yapo eneo la Mradi wa TANESCO tuna mtena Mwenyekiti wa Mtaa ndg: JOVIN MANYOTO NDIMBO asimame yetu katika zoezi la Tathimini: Malipo yote yatokanayo na tathimini yatapokelewa na Mwathirika Mwenyewe

Ahsante

Wako

1. MATHEW G. KABATA [signature] 0714-788704
2. MWINDE A. NGONDOYA [signature] - 0652-604...

Kwa niaba ya wathirika:

	JINA	ANAPOISHI	JINSIA	SHUGHULI YA KIUCHUMI
1.	STEPHEN GAMA	MABIBO FARASI		BIASHARA
2.	KENNY M. LUTTUNGA	MUDIZINI		BIASHARA
3.	PAUL M. KAZYOBA	UB KIGUMANI		BIASHARA
4.	DALILA S. MSAFIRI	MUDIZINI		BIASHARA
5.	MARIBU SALUM	UB KIGUMANI		BIASHARA
6.	ELIZABETI NCHIMBI	MABIBO		BIASHARA
7.	AZIZI MPUCHILA	MUDIZINI		BIASHARA
8.	PENFORD P. ICHO	MUDIZINI		MTUMISHI
9.	ETINA G. SEKATONO	MUDIZINI		BIASHARA
10.	ANNA G. MBATIA	MUDIZINI		MSTAAFU
11.	ENOCK E. MGANGA	UB KIGUMANI		FUNDI
12.	TITUS F. CHOTA	UB KIGUMANI		BIASHARA
13.	ATAJILE MWANJALILE	MABIBO		FUNDI
14.	BARIKI MS. MANONGI	MABIBO		MTUMISHI

11.9 Confirmation of the number of graves ward and stree officials to be removed at Ubungo Kisiwani and Midizini

HALMASHAURI YA MANISPAA YA KINONDONI
BARUA ZOTE ZITUMWE KWA AFISA MTENDAJI KATA YA UBUNGO

Simu Na:0784 317908/ 0715 317908

Unapojibu tafadhali taja:

Kumb Na KMC/UT/UB/VOL/2013

OFISI YA AFISA MTENDAJI
KATA YA UBUNGO
P.O.Box 31902
MANISPAA YA KINONDONI
DAR ES SALAAM
TAREHE 30/10/2013

YAH: UTHAMINISHAJI WA MAKABURI ENEO LA UTT MTAA WA UBUNGO KISIWANI.

Tafadhali rejea kichwa cha habari hapo juu.

OFISI YA AFISA MTENDAJI KATA KWA KUSHIRIKIANA NA OFISI YA MTAA WA KISIWANI. TUMESHUHUDIA NA KUONA ENEO LA MAKABURI YALIYOONESHWA KWA KUSHIRIKIANA NA WATAALAM KUTOKA CHUO KIKUU. PAMOJA NA WAJUMBE WA KAMATI. JUMLA YA MAKABURI KWA ENEO LA UTT – UBUNGO KISIWANI NI 185.

Nawasilisha.

SHABANI KAMAGI
AFISA MTENDAJI KATA

HALMASHAURI YA MANISPAA YA KINONDONI
AFISA MTENDAJI
KATA YA UBUNGO
SAHIHI
TAREHE 30/10/2013
DAR-ES-SALAAM

JOHN NDIMBO
MWENYEKITI WA MTAA KISIWANI

(1) MJUMBE WA KAMATI,
MKUNDE NG'ONDYA

(2) MJUMBE WA KAMATI UTT
MATHEW KABATA

NO:

DATE: 30/10/2013

3

OFISI YA SERIKALI YA MTAA MUDIZINI KUPITIA MWENYEKITI WA MTAA NA AFISA MTENDAJI MTAA TUMEONA ENEO LA MAKABURI YALIOONEKANA TUKIWA NA WATAALAM KUTOKA CHUO KIKUU TUMESHUHUDIA TUKIWA NA WAJUMBE WA KAMATI YA WAATHIRIKA TUMESHUHUDIA MAKABURI YALIOONEKANA (20) ISHIRINI.

MWENYEKITI — [signature] — MWATUMA SHOMARI

MTENDAJI — [signature] — PENFORD P. KIZO

Mjumbe wa Kamati ; Mikande Ng'ondya [signature]

Mjumbe wa Kamati wafi [signature] - Mathew Kalala

*enlivo

11.10 Photos of the Meeting with stakeholders

Meeting with stakeholders at Ubungo Kisiwani in Kinondoni District

Meeting with stakeholders at Mchikichini in Ilala District

11.11 Household Questionnaire

THE ABBRIVIATED RESETTLEMENT ACTION PLAN FOR THE REHABILITATION AND CONSTRUCTION OF NEW LINES AND SUBSTATIONS IN DAR ES SALAAM

SOCIO-ECONOMIC BASELINE CENSUS SURVEY FOR PROJECT AFFECTED PERSONS (PAPs)
PAP QUESTIONNAIRE

Name of Enumerator.....Date.....Questionnaire No.....

1.0 Name of PAP.....Sex.....

2.0 IDENTIFICATION

District	
Ward	
Mtaa	

3.0 Category of Impact
1.
2.
3.
(Graves, House, Annex structure, Crops)

4.0 Category of PAP
1. Legal owner of land
2. Encroacher
3. Both

5.0 PAP and Household Demographic/Census Information

ID	Name	Relationship to Head	Sex	Age	Marital Status	Vulnerable	Education Level
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Relationship to Head: 1=Head; 2=Spouse; 3=Child; 4=Grandchild; 5=Parent; 6=Brother; 7=Sister; 8=In-law; 9=Friends 10=Other relative; 11=Other person
Sex: 1=Male; 2=Female
Marital Status: 1=Married; 2=Widowed; 3=Divorced; 4=Single; 5=Separated; 6=Co-habitation
Education Level: 1=None; 2=Primary; 3=Secondary; 4=College; 5=Technical/Vocation; 6=Attending primary School; 7=Drop-out primary school; 8=Drop-out secondary school; 9=Attending secondary school; 10=University
Vulnerability: (1) Widow (2) Orphan (3) Elderly (4) Disabled (5) Disease/Injury (6) Others

6. 0 Primary Economic Activities and Incomes of PAPs

ID	Type of Work	Duration	Location	Income earnings/sales last annual (Tshs)
1				
2				

7. 0 Secondary Economic Activities and Incomes of PAPs

ID	Type of Work	Duration	Location	Income earnings/sales last annual (Tshs)
1				
2				

Type of work: 1=Salaried; 2= Commerce; 3=Fisher; 4=Farmer, 5= Mason 6=Petty trading;

8.0 Land and Land Sizes of PAPs

	Aspects	Numbers/Sizes
	Number of plots owned by PAP'in the city/ area.	
	Size of plot owned by PAP	
	How did you acquire the area/land	

1=Purchased; 2=Inherited; 3=Encroached

2

9.0 Type of crops cultivated on affected land under the PAP

	Type of crops	Use of crops
i		
ii		
iii		
iv		
v		

Type: 1=Cassava; 2=Paddy; 3=Cashew; 4=Coconut; 5=Maize; 6=G/Nuts; 7=Beans; 8=Fruits; 9=Sweet Potatoes; 10=Other;
Use Primary and Secondary: 1=For household consumption; 2=For sale 3=For both household consumption and for sale

10.0 Income from crops for the past two years

	Income last three years	Amount (Tsh.) Estimated
i	2011	
ii	2012	

11.0: Housing and Living Condition
11 (a) Type of House

House	Floor	Wall	Roof	Number of rooms	Use	Number of houses

11 (b) Type of floors
1=Mud; 2=Cement; 3=Floor tiles; 4=Timber 5=Mud and cement; 6=Cement and floor tiles; 7= Other
11 (c) Type of walls
1=Poles and mud; 2=Burnt bricks; 3=Cement blocks; 4=Other
11 (d) Type of roof
1=Grass; 2=Corrugated iron sheets; 3=Tiles; 4=Concrete; 5=Other
Use: 1=Residence; 2=Commercial; 3=Both residential and commercial 4=Other

11 (e) Toilet facilities	

1=Flush toilet; 2=Pit latrine (VIP) 3=Pit latrine; 4=None; 5=Others

12.0 Type and number of Property/entity likely to be affected

	Property/entity	Yes/No	Number of property
	House		
	Business Structure		
	Other structures (outbuildings)		
	Graves		
	Permanent crops		
	Seasonal crops		

1= Yes, 2= No

3

13.0 Are you willing to relocate to another area if the way leave goes through your land or property?

14.0: Preferred alternative site to relocate

In the Ward	
Outside the ward/area but in the District	
Outside the District	

15.0 Preferred mode of compensation

In-kind compensation	
Cash compensation	

1 = In-kind compensation
2 = Cash compensation

16.0 Availability of suitable substitute land for purchase or rent after compensation
1=Available 2=Not available

17.0 Availability of houses for rent after compensation in the area .....
1=Available 2=Not available

18.0 What kind of benefits/positive impacts do you expect from the proposed development.....

.....

19.0 What kind of loss/negativeimpacts do you expect from the proposed project?

.....

.....

20.0 (Magnitude of impacts)
1. Need relocation within the same plot
2. Need relocation out of the plot
3. No relocation required