

**PART V**

**FORMS OF TENDER**



**Form-2**

(Letterhead of the Tenderer)

**Acknowledgment of Addendum**

Tender for: The Project for Rehabilitation of Power Distribution System in Laamu Atoll

To: Japan International Cooperation System (JICS) Liaison Office in Maldives

We, the undersigned hereby, acknowledge the receipt of the following addendum and understand that this addendum forms an integral part of the Tender Documents.

Tender Addenda No. \_\_\_\_\_ Dated \_\_\_\_\_

Dated this \*\*th day of \*\*\*\*\*, 2005

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_

**(FORM OF TENDER)**

**FORM OF TENDER**

Date : (Day, Month, Year)

To : Project Manager,  
Project Management Department,  
Japan International Cooperation System (JICS)

Tender for : The Project for Rehabilitation of Power Distribution System  
in Laamu Atoll under Japan's Grant Aid 2004  
in Response to the Damages Caused by the Great Earthquake  
off the Coast of Sumatra, the Republic of Indonesia,  
and by the Indian Ocean Tsunami Disaster  
for the Republic of Maldives

Tender Reference No. : NPTMD04-003

We, the undersigned, having carefully examined the Tender Documents, hereby submit the tender in accordance with all provisions and conditions as described in the Tender Documents.

**1. Tender Price:** We offer tender price as mentioned below,

Total DDU-Sites Price : _____	United States Dollar (in figures)
_____	United States Dollar (in words)

**2. Validity of Tender**

This Tender is valid until \_\_\_\_\_ (Maldivian Standard Time).

\_\_\_\_\_  
(Date)  
\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Name of Signer)  
\_\_\_\_\_  
(Title, Section, Department)  
\_\_\_\_\_  
For and on behalf of

**Schedule I: BREAKDOWN OF TENDER PRICE (1)**

**(The Goods and Installation & Commissioning Works for Laamu Isdhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
1/ Low Voltage Cables	m										
1.2) Main Distribution Cables 4 cores 70 sq.mm	500										
1.3) Main Distribution Cables 4 cores 50 sq.mm	1000										
1.4) Main Distribution Cables 4 cores 35 sq.mm	2300										
1.5) Main Distribution Cables 4 cores 25 sq.mm	1500										
1.6) Branch Distribution Cables 4 cores 16 sq.mm	200										
1.7) Branch Distribution Cables 2 cores 6 sq.mm	19750										
2/ Distribution Box	Units										
2.1) Type 1 ( 5 MCCBs ) Feeder Pillars	2										
2.2) Type 2 (18 MCCBs) completed box	6										
2.3) Type 3 (12 MCCBs) completed box	32										
3/ Accessories	Nr										
3.1) PVC glands for 4 core 70 sq.mm copper cables	12										
3.2) PVC glands for 4 core 50 sq.mm copper cables	24										
3.3) PVC glands for 4 core 35 sq.mm copper cables	52										
3.4) PVC glands for 4 core 25 sq.mm copper cables	32										
3.5) PVC glands for 4 core 16 sq.mm copper cables	12										
3.6) PVC glands for 2 core 6 sq.mm copper cables	500										
3.7) Copper lugs 70 sq.mm with 12mm dia (terminal bolt connecting hole)	12										
3.8) Copper lugs 50 sq.mm with 12mm dia (terminal bolt connecting hole)	76										
3.9) Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)	152										

**Schedule I: BREAKDOWN OF TENDER PRICE (1)**  
**(The Goods and Installation & Commissioning Works for Laamu Isdhoo Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
3.10) Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	120										
3.11) Lug sleeves 70 sq.mm (red color)	14										
3.12) Lug sleeves 70 sq.mm (yellow color)	14										
3.13) Lug sleeves 70 sq.mm (blue color)	14										
3.14) Lug sleeves 70 sq.mm (black color)	14										
3.11) Lug sleeves 50 sq.mm (red color)	80										
3.12) Lug sleeves 50 sq.mm (yellow color)	80										
3.13) Lug sleeves 50 sq.mm (blue color)	80										
3.14) Lug sleeves 50 sq.mm (black color)	80										
3.15) Lug sleeves 35 sq.mm (red color)	160										
3.16) Lug sleeves 35 sq.mm (yellow color)	160										
3.17) Lug sleeves 35 sq.mm (blue color)	160										
3.18) Lug sleeves 35 sq.mm (black color)	160										
3.19) Lug sleeves 25 sq.mm (red color)	130										
3.20) Lug sleeves 25 sq.mm (yellow color)	130										
3.19) Lug sleeves 25 sq.mm (blue color)	130										
3.20) Lug sleeves 25 sq.mm (black color)	130										
3.21) Roll insulation tape (black color)	100										
3.22) Roll scotch tape	4										
3.23) Cable ties 300 mm length	456										
3.24) Cable ties 150 mm length	456										

**Schedule I: BREAKDOWN OF TENDER PRICE (1)**  
**(The Goods and Installation & Commissioning Works for Laamu Isdhoo Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
4.1) Level indicator 12"	2										
4.2) Screwdriver 12" (-)	2										
4.3) Screwdriver 12" (+)	2										
4.4) Screwdriver 6" (-)	2										
4.5) Screwdriver 6" (+)	2										
4.6) Philips voltage neon light testers 6"	2										
4.7) Pliers 12"	2										
4.8) Side cutters normal size	2										
4.9) Cable cutters medium size	2										
4.10) Hacksaw frames	2										
4.11) Hacksaw blades ( high speed )	12										
4.12) NT cutters	2										
4.13) NT cutler blade packets	4										
4.14) Adjustable wrench 6" adjustable range	2										
4.15) Adjustable wrench 8" adjustable range	2										
4.16) Eiankee set 24 piece set	2										
4.17) Hammers 01 lb	2										
4.18) Hammers 02 lb	2										
4.19) Hammers 18 lb	1										

**Schedule I: BREAKDOWN OF TENDER PRICE (1)**

**(The Goods and Installation & Commissioning Works for Laamu Isdhoo Island )  
Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
4.20) Alignment indicator with 3m rope (Olanbu) metal ty	2									
4.21) Measuring wheel 100m	1									
4.22) Measuring wheel 10m	1									
4.23) Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1									
5. Installation Materials and commissioning works	Nr and lots									
5.1) Brass screws 2" x 12no.	184									
5.2) Self tap screws 2" x 12 no.	184									
5.3) Well plus 06 mm dia, 50 mm length	220									
5.4) Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, 100mm cutting dies c/w other accessories.	2									
5.5) Cable ties 200 mm length	504									
5.6) Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	2									
5.7) Met hose, PVC rigid Spiral 2"	20m									
5.8) Met hose, PVC discharged 2" ( Superhose )	70m									
5.9) Foot valve	2									
5.10) Hose clip	8									
5.11) Ring hose Clip	8									
5.12) Tool	01 unit									
5.13) Petrol drums for the water with petrois 200 ltrs drums	2									



**Schedule I: BREAKDOWN OF TENDER PRICE (1)**  
**(The Goods and Installation & Commissioning Works for Laamu Isdhoo Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
5.14) All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1										
5.15) Install all the DBs on the concrete frames	42										
5.16) Cement bags (50kg)	80										
5.17) Install all the PVC glands to the DBs	01 lot										
5.18) Connect all the main cables to the DBs terminals	01 lot										
5.19) Connect all the consumer cables to the DBs	01 lot										
5.20) Label all the consumers and main cables of the DBs	01 lot										
5.21) Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot										
5.22) Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot										
5.23) Commission the distribution network	01 lot										
5.24) Commission all the consumers of the island to the new distribution network	01 lot										
5.25) Seal the spare glands of the DBs with silicon	01 lot										
5.26) Label all the DB from the external side of the front door.	01 lot										
5.27) Hand over the distribution network to the client	01 lot										
Total											

\_\_\_\_\_  
(Date)  
\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Name of Signer)  
\_\_\_\_\_  
(Title, Section, Department)  
\_\_\_\_\_  
(For and on be

**Schedule I: BREAKDOWN OF TENDER PRICE (2)**

**(The Goods and Installation & Commissioning Works for Laamu Isdhoo-Kalaidhoo Island )  
Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
1. Low Voltage Cables	m										
1.3) Main Distribution Cables 4 cores 50 sq.mm	1100										
1.4) Main Distribution Cables 4 cores 35 sq.mm	2600										
1.6) Branch Distribution Cables 4 cores 16 sq.mm	200										
1.7) Branch Distribution Cables 2 cores 6 sq.mm	14000										
2. Distribution Box	Units										
2.1) Type 1 ( 5 MCCBs ) Feeder Pillars	1										
2.2) Type 2 (18 MCBs) completed box	6										
2.3) Type 3 (12 MCBs) completed box	22										
3. Accessories	NL										
3.1) PVC glands for 4 core 50 sq.mm copper cables	24										
3.2) PVC glands for 4 core 35 sq.mm copper cables	64										
3.3) PVC glands for 4 core 16 sq.mm copper cables	12										
3.4) PVC glands for 2 core 6 sq.mm copper cables	400										
3.5) Copper lugs 50 sq.mm with 12mm dia (terminal bolt connecting hole)	112										
3.6) Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)	184										
3.7) Lug sleeves 50 sq.mm (red color)	32										
3.8) Lug sleeves 50 sq.mm (yellow color)	32										
3.9) Lug sleeves 50 sq.mm (blue color)	32										

**Schedule I: BREAKDOWN OF TENDER PRICE (2)**  
**(The Goods and Installation & Commissioning Works for Laamu Isdho-Kalaidhoo Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
3.10) Lug sleeves 50 sq.mm (black color)	32									
3.11) Lug sleeves 35 sq.mm (red color)	72									
3.12) Lug sleeves 35 sq.mm (yellow color)	72									
3.13) Lug sleeves 35 sq.mm (blue color)	72									
3.14) Lug sleeves 35 sq.mm (black color)	72									
3.15) Roll insulation tape (black color)	100									
3.16) Roll scotch tape	4									
3.17) Cable ties 300 mm length	400									
3.18) Cable ties 150 mm length	400									
4.1) Tools	N/A									
4.1) Level indicator 12"	2									
4.2) Screwdriver 12" (-)	2									
4.3) Screwdriver 12" (+)	2									
4.4) Screwdriver 6" (-)	2									
4.5) Screwdriver 6" (+)	2									
4.6) Philips voltage neon light testers 6"	2									
4.7) Pliers 12"	2									
4.8) Side cutters normal size	2									
4.9) Cable cutters medium size	2									

**Schedule I: BREAKDOWN OF TENDER PRICE (2)**

(The Goods and Installation & Commissioning Works for Laamu Isdhoo-Kalaidhoo Island )  
 Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
4.10) Hacksaw frames	2									
4.11) Hacksaw blades ( high speed )	12									
4.12) NT cutters	2									
4.13) NT cutter blade packets	4									
4.14) Adjustable wrench 6" adjustable range	2									
4.15) Adjustable wrench 8" adjustable range	2									
4.16) Elankee set 24 piece set	2									
4.17) Hammers 01 lb	2									
4.18) Hammers 02 lb	2									
4.19) Hammers 18 lb	1									
4.20) Alignment indicator with 3m rope (Olanbu) metal	2									
4.21) Measuring wheel 100m	1									
4.22) Measuring wheel 10m	1									
4.23) Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1									
5) Installation Materials and commissioning works	Nr and lots									
5.1) Brass screws 2" x 12no.	150									
5.2) Self tap screws 2" x 12 no.	150									
5.3) Wall plus 06 mm dia, 50 mm length	220									
5.4) Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, 100mm cutting dies c/w other accessories.	2									

**Schedule I: BREAKDOWN OF TENDER PRICE (2)**

**(The Goods and Installation & Commissioning Works for Laamu Isdhoo-Kalaidhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
5.5) Cable ties 200 mm length	420									
5.6) Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	2									
5.7) Met hose, PVC rigid Spiral 2"	20m									
5.8) Met hose, PVC discharged 2" ( Superhose )	70m									
5.9) Foot valve	2									
5.10) Hose clip	8									
5.11) Ring hose Clip	8									
5.12) Tool	01 unit									
5.13) Petrol drums for the water with petrols 200 litres drums	2									
5.14) All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1									
5.15) Install all the DBs on the concrete frames	29									
5.16) Cement bags (50kg)	58									
5.17) Install all the PVC glands to the DBs	01 lot									
5.18) Connect all the main cables to the DBs terminals	01 lot									
5.19) Connect all the consumer cables to the DBs	01 lot									
5.20) Label all the consumers and main cables of the	01 lot									
5.21) Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot									

**Schedule I: BREAKDOWN OF TENDER PRICE (2)**

**(The Goods and Installation & Commissioning Works for Laamu Isdhoo-Kalaidhoo Island )  
Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
5.22) Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot									
5.23) Commission the distribution network	01 lot									
5.24) Commission all the consumers of the island to the new distribution network	01 lot									
5.25) Seal the spare glands of the DBs with silicon	01 lot									
5.26) Label all the DB from the external side of the front door.	01 lot									
5.27) Hand over the distribution network to the client	01 lot									
<b>Total</b>										

(Date)

(Signature)

(Name of Signer)

(Title, Section, Department)

(For and on be

**Schedule I: BREAKDOWN OF TENDER PRICE (3)**  
**(The Goods and Installation & Commissioning Works for Laamu Maabaidhoo Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
1. Low Voltage Cables	(m)										
1.5) Main Distribution Cables 4 cores 25 sq.mm	1900										
1.6) Branch Distribution Cables 4 cores 16 sq.mm	300										
1.7) Branch Distribution Cables 2 cores 6 sq.mm	13500										
2. Distribution Box	Units										
2.1) Type 1 ( 5 MCCBs ) Feeder Pillars	1										
2.2) Type 2 ( 18 MCCBs ) completed box	12										
2.3) Type 3 ( 12 MCCBs ) completed box	10										
3. Accessories	(N)										
3.1) PVC glands for 4 core 25 sq.mm copper cables	65										
3.2) PVC glands for 4 core 16 sq.mm copper cables	12										
3.4) PVC glands for 2 core 6 sq.mm copper cables	364										
3.6) Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	186										
3.7) Lug sleeves 25 sq.mm (red color)	54										
3.8) Lug sleeves 25 sq.mm (yellow color)	54										

**Schedule I: BREAKDOWN OF TENDER PRICE (3)**

**(The Goods and Installation & Commissioning Works for Laamu Maabaidhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( If any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
3.9) Lug sleeves 25 sq.mm (blue color)	54										
3.10) Lug sleeves 25 sq.mm (black color)	54										
3.15) Roll insulation tape (black color)	100										
3.16) Roll scotch tape	4										
3.17) Cable ties 300 mm length	400										
3.18) Cable ties 150 mm length	400										
4. Tools	N/A										
4.1) Level indicator 12"	2										
4.2) Screwdriver 12" (-)	2										
4.3) Screwdriver 12" (+)	2										
4.4) Screwdriver 6" (-)	2										
4.5) Screwdriver 6" (+)	2										
4.6) Philips voltage neon light testers 6"	2										
4.7) Pliers 12"	2										
4.8) Side cutters normal size	2										
4.9) Cable cutters medium size	2										
4.10) Hacksaw frames	2										



**Schedule I: BREAKDOWN OF TENDER PRICE (3)**

**(The Goods and Installation & Commissioning Works for Laamu Maabaidhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
4.11) Hacksaw blades ( high speed )	12										
4.12) NT cutters	2										
4.13) NT cutter blade packels	4										
4.14) Adjustable wrech 6" adjustable range	2										
4.15) Adjustable wrech 8" adjustable range	2										
4.16) Elankee set 24 piece set	2										
4.17) Hammers 01 lb	2										
4.18) Hammers 02 lb	2										
4.19) Hammers 18 lb	1										
4.20) Alignment indicator with 3m rope (Olanbu) metal type	2										
4.21) Measuring wheel 100m	1										
4.22) Measuring wheel 10m	1										
4.23) Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1										
5. Installation Materials and commissioning works	1										
5.1) Brass screws 2" x 12no.	135										
5.2) Self tap screws 2" x 12 no.	135										
5.3) Wall plus 06 mm dia, 50 mm length	260										
5.4) Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, 100mm cutting dies c/w other accessories.	2										
5.5) Cable ties 200 mm length	300										

**Schedule I: BREAKDOWN OF TENDER PRICE (3)**

**(The Goods and Installation & Commissioning Works for Laamu Maabaidhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
5.6) Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	2										
5.7) Met hose, PVC rigid Spiral 2"	20m										
5.8) Met hose, PVC discharged 2" ( Superhose )	70m										
5.9) Foot valve	2										
5.10) Hose clip	8										
5.11) Ring hose Clip	8										
5.12) Tool	01 unit										
5.13) Petrol drums for the water with petrols 200 litres drums	2										
5.14) All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1										
5.15) Install all the DBs on the concrete frames	24										
5.16) Cement bags (50kg)	46										
5.17) Install all the PVC glands to the DBs	01 lot										
5.18) Connect all the main cables to the DBs terminals	01 lot										
5.19) Connect all the consumer cables to the DBs	01 lot										
5.20) Label all the consumers and main cables of the DBs	01 lot										
5.21) Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot										

**Schedule I: BREAKDOWN OF TENDER PRICE (3)**

**(The Goods and Installation & Commissioning Works for Laamu Maabaidhoo Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
5.22) Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot									
5.23) Commission the distribution network	01 lot									
5.24) Commission all the consumers of the island to the new distribution network	01 lot									
5.25) Seal the spare glands of the DBs with silicon	01 lot									
5.26) Label all the DB from the external side of the front door.	01 lot									
5.27) Hand over the distribution network to the client	01 lot									
<b>Total</b>										

(Date)

(Signature)

(Name of Signer)

(Title, Section, Department)

(For and on bc

**Schedule I: BREAKDOWN OF TENDER PRICE (4)**

**(The Goods and Installation & Commissioning Works for Laamu Gan-Mukurimagu Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)				
					FOB	Freight	DDU	FOB	Freight	DDU		
1) Low Voltage Cables	m											
1.1) Main Distribution Cables 4 cores 120 sq.mm	900											
1.4) Main Distribution Cables 4 cores 35 sq.mm	1000											
1.5) Main Distribution Cables 4 cores 25 sq.mm	4150											
1.6) Branch Distribution Cables 4 cores 16 sq.mm	250											
1.7) Branch Distribution Cables 2 cores 6 sq.mm	20200											
2) Distribution Box	Units											
2.1) Type 1 ( 5 MCCBs ) Feeder Pillars	2											
2.2) Type 2 (18 MCCBs) completed box	10											
2.3) Type 3 (12 MCCBs) completed box	22											
3) Accessories	Nr											
3.1) PVC glands for 4 core 120 sq.mm copper cables	12											
3.2) PVC glands for 4 core 35 sq.mm copper cables	18											
3.3) PVC glands for 4 core 25 sq.mm copper cables	22											
3.4) PVC glands for 4 core 16 sq.mm copper cables	12											
3.5) PVC glands for 2 core 6 sq.mm copper cables	470											
3.6) Copper lugs 120 sq.mm with 12mm dia (terminal bolt connecting hole)	12											
3.7) Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)	60											

**Schedule I: BREAKDOWN OF TENDER PRICE (4)**

**(The Goods and Installation & Commissioning Works for Laamu Gan-Mukurimagu Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
3.8) Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	192										
3.9) Lug sleeves 120 sq.mm (red color)	4										
3.10) Lug sleeves 120 sq.mm (yellow color)	4										
3.11) Lug sleeves 120 sq.mm (blue color)	4										
3.12) Lug sleeves 120 sq.mm (black color)	4										
3.13) Lug sleeves 35 sq.mm (red color)	15										
3.14) Lug sleeves 35 sq.mm (yellow color)	15										
3.15) Lug sleeves 35 sq.mm (blue color)	15										
3.16) Lug sleeves 35 sq.mm (black color)	15										
3.17) Lug sleeves 25 sq.mm (red color)	48										
3.18) Lug sleeves 25 sq.mm (yellow color)	48										
3.19) Lug sleeves 25 sq.mm (blue color)	48										
3.20) Lug sleeves 25 sq.mm (black color)	48										
3.21) Roll insulation tape (black color)	66										
3.22) Roll scotch tape	4										
3.23) Cable ties 300 mm length	400										
3.24) Cable ties 150 mm length	400										
4) Tools	N/A										

**Schedule I: BREAKDOWN OF TENDER PRICE (4)**

**(The Goods and Installation & Commissioning Works for Laamu Gan-Mukurimagu Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
4.1) Level indicator 12"	2									
4.2) Screwdriver 12" (-)	2									
4.3) Screwdriver 12" (+)	2									
4.4) Screwdriver 6" (-)	2									
4.5) Screwdriver 6" (+)	2									
4.6) Philips voltage neon light testers 6"	2									
4.7) Pliers 12"	2									
4.8) Side cutters normal size	2									
4.9) Cable cutters medium size	2									
4.10) Hacksaw frames	2									
4.11) Hacksaw blades ( high speed )	12									
4.12) NT cutters	2									
4.13) NT cutter blade packets	4									
4.14) Adjustable wrench 6" adjustable range	2									
4.15) Adjustable wrench 8" adjustable range	2									
4.16) Elanke set 24 piece set	2									
4.17) Hammers 01 lb	2									
4.18) Hammers 02 lb	2									

**Schedule I: BREAKDOWN OF TENDER PRICE (4)**

**(The Goods and Installation & Commissioning Works for Laamu Gan-Mukurimagu Island )  
Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
4.19) Hammers 18 lb	1									
4.20) Alignment indicator with 3m rope (Olanbu) meta	2									
4.21) Measuring wheel 100m	1									
4.22) Measuring wheel 10m	1									
4.23) Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1									
<b>5) Installation, Materials and Commissioning works Ni and Jols</b>										
5.1) Brass screws 2" x 12no.	164									
5.2) Self tap screws 2" x 12 no.	164									
5.3) Wall plus 06 mm dia, 50 mm length	200									
5.4) Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, 100mm cutting dies c/w other accessories.	2									
5.5) Cable ties 200 mm length	480									
5.6) Unit water Pump ( petrol used as fuel ) 50 mm pipe	2									
5.7) Met hose, PVC rigid Spiral 2"	20m									
5.8) Met hose, PVC discharged 2" ( Superhose )	70m									
5.9) Foot valve	2									
5.10) Hose clip	8									
5.11) Ring hose Clip	8									
5.12) Tool	01 unit									
5.13) Petrol drums for the water with petrols 200 litres drums	2									
5.14) All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1									
5.15) Install all the DBs on the concrete frames	32									
5.16) Cement bags (50kg)	68									
5.17) Install all the PVC glands to the DBs	01 lot									

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**Schedule I: BREAKDOWN OF TENDER PRICE (4)**  
**(The Goods and Installation & Commissioning Works for Laamu Gan-Mukurimagu Island )**  
**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
5.18) Connect all the main cables to the DBs terminals	01 lot										
5.19) Connect all the consumer cables to the DBs	01 lot										
5.20) Label all the consumers and main cables of the	01 lot										
5.21) Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot										
5.22) Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot										
5.23) Commission the distribution network	01 lot										
5.24) Commission all the consumers of the island to the new distribution network	01 lot										
5.25) Seal the spare glands of the DBs with silicon	01 lot										
5.26) Label all the DB from the external side of the front door.	01 lot										
5.27) Hand over the distribution network to the client	01 lot										
Total											

(Date) \_\_\_\_\_  
 (Signature) \_\_\_\_\_  
 (Name of Signer) \_\_\_\_\_  
 (Title, Section, Department) \_\_\_\_\_  
 (For and on bt) \_\_\_\_\_



**Schedule I: BREAKDOWN OF TENDER PRICE (5)**

**(The Goods and Installation & Commissioning Works for Laamu Maavah Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
1. Low Voltage Cables	m										
1.5) Main Distribution Cables 4 cores 25 sq.mm	3750										
1.6) Branch Distribution Cables 4 cores 16 sq.mm	300										
1.7) Branch Distribution Cables 2 cores 6 sq.mm	12300										
2. Distribution Box	Units										
2.1) Type 1 ( 5 MCCBs ) Feeder Pillars	1										
2.2) Type 2 (18 MCCBs) completed box	13										
2.3) Type 3 (12 MCCBs) completed box	22										
3. Accessories	N/										
3.1) PVC glands for 4 core 25 sq.mm copper cables	65										
3.2) PVC glands for 4 core 16 sq.mm copper cables	12										
3.4) PVC glands for 2 core 6 sq.mm copper cables	364										
3.6) Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	186										
3.7) Lug sleeves 25 sq.mm (red color)	54										
3.8) Lug sleeves 25 sq.mm (yellow color)	54										
3.9) Lug sleeves 25 sq.mm (blue color)	54										
3.10) Lug sleeves 25 sq.mm (black color)	54										
3.15) Roll insulation tape (black color)	100										
3.16) Roll scotch tape	4										

**Schedule I: BREAKDOWN OF TENDER PRICE (S)**

**(The Goods and Installation & Commissioning Works for Laamu Maavah Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
3.17) Cable ties 300 mm length	400									
3.18) Cable ties 150 mm length	400									
4.1) Cables	NF									
4.1) Level indicator 12"	2									
4.2) Screwdriver 12" (-)	2									
4.3) Screwdriver 12" (+)	2									
4.4) Screwdriver 6" (-)	2									
4.5) Screwdriver 6" (+)	2									
4.6) Philips voltage neon light testers 6"	2									
4.7) Pliers 12"	2									
4.8) Side cutters normal size	2									
4.9) Cable cutters medium size	2									
4.10) Hacksaw frames	2									
4.11) Hacksaw blades ( high speed )	12									
4.12) NT cutters	2									
4.13) NT cutter blade packets	4									
4.14) Adjustable wrench 6" adjustable range	2									
4.15) Adjustable wrench 8" adjustable range	2									
4.16) Elankee set 24 piece set	2									
4.17) Hammers 01 lb	2									
4.18) Hammers 02 lb	2									
4.19) Hammers 18 lb	1									

**Schedule I: BREAKDOWN OF TENDER PRICE (5)**

**(The Goods and Installation & Commissioning Works for Laamu Maavah Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)			
					FOB	Freight	DDU	FOB	Freight	DDU	
4.20) Alignment indicator with 3m rope (Olanbu) metal ty	2										
4.21) Measuring wheel 100m	1										
4.22) Measuring wheel 10m	1										
4.23) Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1										
5) Installation Materials and commissioning works	Nr. and lots										
5.1) Brass screws 2" x 12no.	135										
5.2) Self tap screws 2" x 12 no.	135										
5.3) Wall plus 06 mm dia, 50 mm length	260										
5.4) Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, 100mm cutting dies c/w other accessories.	2										
5.5) Cable ties 200 mm length	300										
5.6) Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	2										
5.7) Met hose, PVC rigid Spiral 2"	20m										
5.8) Met hose, PVC discharged 2" ( Superhose )	70m										
5.9) Foot valve	2										
5.10) Hose clip	8										
5.11) Ring hose Clip	8										
5.12) Tool	01 unit										
5.13) Petrol drums for the water with petrols 200 liters drums	2										
5.14) All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1										

**Schedule I: BREAKDOWN OF TENDER PRICE (5)**

**(The Goods and Installation & Commissioning Works for Laamu Maavah Island )**

**Name of the Project: The Project for Rehabilitation of Power Distribution System in Laamu Atoll**

Items	Quantity	Manufacturer	Model No. ( if any )	Country of Origin	Unit Price (US\$)			Total Price (US\$)		
					FOB	Freight	DDU	FOB	Freight	DDU
5.15) Install all the DBs on the concrete frames	20									
5.16) Cement bags (50kg)	72									
5.17) Install all the PVC glands to the DBs	01 lot									
5.18) Connect all the main cables to the DBs terminals	01 lot									
5.19) Connect all the consumer cables to the DBs	01 lot									
5.20) Label all the consumers and main cables of the DB	01 lot									
5.21) Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot									
5.22) Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot									
5.23) Commission the distribution network	01 lot									
5.24) Commission all the consumers of the island to the new distribution network	01 lot									
5.25) Seal the spare glands of the DBs with silicon	01 lot									
5.26) Label all the DB from the external side of the front door.	01 lot									
5.27) Hand over the distribution network to the client	01 lot									
Total										

(Date)

(Signature)

(Name of Signer)

(Title, Section, Department)

(For and on be

**Schedule II: DELIVERY SCHEDULE AND METHOD**

**Name of the Project: The Project for Rehabilitation of Power Distribution System**

1	Embarkation Place		
2	Disembarkation Place		
3	Delivery Site (Destination)		
4	Delivery Schedule	Estimated Time of Departure at embarkation place	
		Time of Arrival at the Site	
5	Transportation Route and Method		
6	Packing		
7	Inspection (At the manufacturing place)	Contents of Inspection	
8	Estimated date of Installation Completion		
9	Acceptance Test	Contents of Inspection	

\* Tenderer is required to specify the detailed condition of the packing method.

\*\* When the conditions above are different from item by item, the tenderer is required to describe all conditions in the prescribed blank space. In case that the blank space is not enough, attached sheet is acceptable.

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

For and on behalf of \_\_\_\_\_

**Schedule III**

**Implementation Schedule**

Tender for: The Project for Rehabilitation of Power Distribution System in Laamu Atoll  
To: Japan International Cooperation System (JICS) Liaison Office in Maldives

Description	Year, Month		2005					2006			
	8	9	10	11	12	1	2	3	4		
<b>General Schedule</b>	◆ Expected Contract Date		Target Date of Delivery ▼					Target Completion Date of the Project ▼			
<b>1. Site investigation and coordination with Island Development Committee</b>											
<b>2. Preparation of drawings</b>											
<b>3. Fabrication of the Goods at factories</b>											
<b>4. Factory test and inspection</b>											
<b>5. Ocean and island transportation</b>											
<b>To Male'</b>											
<b>From Male' to each site</b>											
<b>6. Inspection at the Delivery Points</b>											
<b>7. Installation of equipment</b>											
<b>8. Site test and commissioning</b>											
<b>9. Submission of As-built Drawings</b>											
<b>10. Handing over</b>											

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_

**Schedule IV**

**Personnel Dispatch Schedule**

Tender for: The Project for Rehabilitation of Power Distribution System in Laamu Atoll

To: Japan International Cooperation System (JICS) Liaison Office in Maldives

Description	2005					2006			
	8	9	10	11	12	1	2	3	4
1. Site representative									
2. (Please specify)									
3. (Please specify)									
4. (Please specify)									

Note: The number of engineer/technician engaged in the Project shall be proposed by the Supplier.

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_

**TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND**

**No. 1. 2): Main Distribution Cables 04 core 70 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	500 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	70 sq.mm	
	No. / diameter of wire	19/2.14 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	1.16mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.76mm	
	Approx. diameter over inner covering	30.26mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.48mm	
	Approx. diameter of completed cable	39.2mm	
	Voltage test on completed cable	3.5/5 kV/min	
	Max. conductor resistance at 20 degree cent.	0.268 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	4501 kg/km	



**TECHNICAL SPECIFICATION SHEET (1) LISDHOO ISLAND**

**No. 1. 3): Main Distribution Cables 04 core 50 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	1000 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	50 sq.mm	
	No. / diameter of wire	19/1.78 mm	
	Shape of conductor	90 degree centrifgrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	1.16mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.76 mm	
	Approx. diameter over inner covering	26.69mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.40mm	
	Approx. diameter of completed cable	35.4mm	
	Voltage test on completed cable	3.5/5 KV/min	
	Max. conductor resistance at 20 degree cent.	0.387 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	3485 kg/km	

**TECHNICAL SPECIFICATION SHEET (1) LISDHOO ISLAND****No. 1. 4): Main Distribution Cables 04 core 35 sq.mm**

	Required Specification	Tenderer's Specifications
1	Quantity	2300 m
2	Manufacturer (to be specified)	
3	Model (to be specified)	
4	Country of Origin (to be specified)	
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	35 sq.mm
	No. / diameter of wire	7/2.52 mm
	Shape of conductor	90 degree centigrade sector
	Insulation Material	XLPE
	Min. thickness of insulation	0.98mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.60mm
	Approx. diameter over inner covering	22.85mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	0.60mm
	Approx. diameter of completed cable	30.3mm
	Voltage test on completed cable	3.5/5 kV/mins
	Max. conductor resistance at 20 degree cent.	0.524 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	2514 kg/km

**TECHNICAL SPECIFICATION SHEET (1)L.ISDHOO ISLAND****No. 1. 5): Main Distribution Cables 04 core 25sq.mm**

	Required Specification	Tenderer's Specifications
1 Quantity	1500 m	
2 Manufacturer	(to be specified)	
3 Model	(to be specified)	
4 Country of Origin	(to be specified)	
5 General Description	Underground Cables for Power Distribution	
6 Specifications		
Applicable Standard	BS 6004	
Voltage Class	600/1000V	
Number of cores	4	
Conductor	Plain annealed copper wire	
Nominal cross sectional area	25 sq.mm	
No. / diameter of wire	7/2.14 mm	
Shape of conductor	90 degree centigrade sector	
Insulation Material	XLPE	
Min. thickness of insulation	0.98mm	
Inner covering	PVC TYPE TM1	
Min. thickness of inner covering	0.60mm	
Approx. diameter over inner covering	20.5mm	
Sheath	PVC TYPE ST2(Flame Retardant)	
Min. thickness of sheath	1.24mm	
Approx. diameter of completed cable	27.8mm	
Voltage test on completed cable	3.5/5 kV/mins	
Max. conductor resistance at 20 degree cent.	0.727 ohm/km	
Max. insulation resistance at 70 degree cent.	5 Mohm/km	
Core identification	Red, Yellow, Blue, Black	
Max. length of cable drum	500 m	
Approx. weight of completed cable	2026 kg/km	

**TECHNICAL SPECIFICATION SHEET (1)L.ISDHOO ISLAND****No. 1. 6): Branch Cables 04 core 16 sq.mm**

	Required Specification	Tenderer's Specifications
1	Quantity	200 m
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	16 sq.mm
	No. / diameter of wire	7/1.70 mm
	Shape of conductor	Circular compact
	Insulation Material	XLPE
	Min. thickness of insulation	0.80mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.90mm
	Approx. diameter over inner covering	21.8mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	1.16mm
	Approx. diameter of completed cable	26.3mm
	Voltage test on completed cable	3.5/5 kV/min
	Max. conductor resistance at 20 degree cent.	1.15 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	1545 kg/km

# TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND

No. 1. 7): Brach Cables 02 core 06 sq.mm

		Required Specification	Tenderer's Specifications
1	Quantity	19750 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	2	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	06 sq.mm	
	No. / diameter of wire	7/1.04 mm	
	Shape of conductor	Round	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.40mm	
	Approx. diameter over inner covering	10.6mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.92mm	
	Approx. diameter of completed cable	12.5mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	3.08 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red/Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	209 kg/km	

**TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND**

**No.2. 1) : Distribution Box: Type 01: Feeder Pillars**

		Required Specification	Tenderer's Specifications
1	Quantity	02 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution Feeders	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		Five (5) MCCB(TPN) 100A, 20KA	
		Five (5) ELRs complete with ZCTs.	
		Five (5) shunt trip coil for the MCCBs	
		One (01) set of flexible wiring with 70 sq.mm cables	
		One (01) set of lugs and lug sleeves	
	Outgoing side	One (1) terminal blocks capable to connect 120 sq.mm 04 core cables.	
		Four (4) terminal blocks capable to connect 70 sq.mm 04 core cables.	
		One (1) set of wiring	
	Size	Maximum 1150mm(height)x 850mm(width)x 300mm(depth)	
	Carrying weight	6 - 200 kg	

**TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND**

**No. 2.2) : Distribution Box: Type 02 : 18MCBs**

		Required Specification	Tenderer's Specifications
1	Quantity	06 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Eighteen (18) MCBs (SP) 40A, 16kA	
		One (1) insulated Prong Bus 18 CCTs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 650mm(height)x 500mm(width)x 200mm(depth)	
	Carrying weight	6 - 150 kg	

**TECHNICAL SPECIFICATION SHEET (1)L-LSDHOO ISLAND**

**No. 2. 3) : Distribution Box: Type 03 : 12 MCBs**

		Required Specification	Tenderer's Specifications
1	Quantity	32 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Twelve (12) MCBs (SP) 40A, 16kA	
		One (1) insulated Prong Bus 18 CCTJs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 500mm(height)x 400mm(width)x 200mm(depth)	
	Carrying weight	6 - 120 kg	



TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND

No. 3.: Accessories

Tenderer's Specifications		Required Specification	1 Lot
1	Quantity		(to be specified)
2	Manufacturer		(to be specified)
3	Model		(to be specified)
4	Country of Origin		
5	General Description	All accessories to install LV Cables and Distribution Box	
6	Specifications		
	6.1 PVC glands for 4 core 70 sq.mm copper cable		12
	6.2 PVC glands for 4 core 50 sq.mm copper cable		24
	6.3 PVC glands for 4 core 35 sq.mm copper cable		52
	6.4 PVC glands for 4 core 25 sq.mm copper cable		32
	6.5 PVC glands for 4 core 16 sq.mm copper cable		12
	6.6 PVC glands for 2 core 6 sq.mm copper cables		500
	6.7 Copper lugs 70 sq.mm with 12mm dia (terminal bolt connecting hole)		12
	6.8 Copper lugs 50 sq.mm with 12mm dia (terminal bolt connecting hole)		76
	6.9 Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)		152
	6.1 Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)		120
	6.11 Lug sleeves 70 sq.mm (red color)		14
	6.12 Lug sleeves 70 sq.mm (yellow color)		14
	6.13 Lug sleeves 70 sq.mm (blue color)		14
	6.14 Lug sleeves 70 sq.mm (black color)		14
	6.15 Lug sleeves 50 sq.mm (red color)		80
	6.16 Lug sleeves 50 sq.mm (yellow color)		80
	6.17 Lug sleeves 50 sq.mm (blue color)		80
	6.18 Lug sleeves 50 sq.mm (black color)		80
	6.19 Lug sleeves 35 sq.mm (red color)		160
	6.2 Lug sleeves 35 sq.mm (yellow color)		160
	6.21 Lug sleeves 35 sq.mm (blue color)		160
	6.22 Lug sleeves 35 sq.mm (black color)		160
	6.23 Lug sleeves 25 sq.mm (red color)		130
	6.24 Lug sleeves 25 sq.mm (yellow color)		130
	6.25 Lug sleeves 25 sq.mm (blue color)		130
	6.26 Lug sleeves 25 sq.mm (black color)		130
	6.27 Roll insulation tape (black color)		100
	6.28 Roll scotch tape		4
	6.29 Cable ties 300 mm length		456
	6.30 Cable ties 150 mm length		456

**TECHNICAL SPECIFICATION SHEET (1) L- ISDHOO ISLAND**

**No. 4.: Tools**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All tools to install LV Cables	
6	Specifications		
	6.1 Level indicator 12"	2	
	6.2 Screwdriver 12" (-)	2	
	6.3 Screwdriver 12" (+)	2	
	6.4 Screwdriver 6" (-)	2	
	6.5 Screwdriver 6" (+)	2	
	6.6 Philips voltage neon light testers 6"	2	
	6.7 Pliers 12"	2	
	6.8 Side cutters normal size	2	
	6.9 Cable cutters medium size	2	
	6.10 Hacksaw frames	2	
	6.11 Hacksaw blades ( high speed )	12	
	6.12 NT cutters	2	
	6.13 NT cutter blade packets	4	
	6.14 Adjustable wrench 6" adjustable range	2	
	6.15 Adjustable wrench 8" adjustable range	2	
	6.16 Elnkee set 24 piece set	2	
	6.17 Hammers 01 lb	2	
	6.18 Hammers 02 lb	2	
	6.19 Hammers 18 lb	1	
	6.20 Alignment indicator with 3m rope (Olanbu) metal type	2	
	6.21 Measuring wheel 100m	1	
	6.22 Measuring wheel 10m	1	
	6.23 Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1	

## TECHNICAL SPECIFICATION SHEET (1) LISDHOO ISLAND

## No. 5.: Installation and commission works

		Required Specification	Tender's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All the items and workmanshi required to do the installation and commissioning work	
6	Specifications		
	6.1	Brass screws 2" x 12no.	184
	6.2	Self tap screws 2" x 12 no.	184
	6.3	Wall plus 06 mm dia, 50 mm length Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	220
	6.4	Cable ties 200 mm length	2
	6.5	Unit water Pump ( petrol used as fuel ) 50 mm pipe Type: 4 stroke overhead valve single cylinder, 25	504
	6.6	Total displacement 118 cm <sup>3</sup> ( 7.2 cu.in ) Bore and stroke 60 x 42 mm ( 2.4 x 1.7 in ) Max Horse power 2.9 KW ( 4.0 HP ) / 3600 min <sup>-1</sup> Max. Torque 7.5 N.M ( 0.75 kg.m, 5.4 lbf.ft ) 2500 min <sup>-1</sup> r.p.m crank P.T.O	2
		Compression Ratio : 7.5:1, 8.5:1	
		Fuel consumption: 313 g/kwh (230g/HP, 0.51 lb/Hph)	
		Colling system : Forced air	
		Ignition system : Transistorized magento ignition	
		Ignition timing : 25 degree B. T. D. C fixed	
		Spark plug : BP6 ES (NGK)	
		Carburetor : Horizontal type butterfly valve	
		Air cleaner : Dual element type	
		Governor : Centrifugal mechanical governor	
		Lubricating system : Splash	
		Oil capacity : 0.6 litres	
		Starting system: Recoil starter	
		Stopping system: Ignition primary circuit ground	

## TECHNICAL SPECIFICATION SHEET (1) L. ISDHOO ISLAND

### No. 5.: Installation and commission works

	Required Specification	Tenderer's Specifications
	Fuel used : Regular gasoline ( 86 pump octane : Unleaded preferred	
	Fule tank capacity : 2.5 litres	
6.7	Met hose, PVC rigid Spiral 2"	20m
6.8	Met hose, PVC discharged 2" ( Superhose )	70m
6.9	Foot valve	2
6.10	Hose clip	8
6.11	Ring hose Clip	8
6.12	Tool	01 unit
6.13	Petrol drums for the water with petrols 200 litres	2
6.14	All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs,	1
6.15	Cement bags (50kg) for DB	80
6.16	Install all the DBs on the concrete frames	42
6.17	Install all the PVC glands to the DBs	01 lot
6.18	Connect all the main cables to the DBs terminals	01 lot
6.19	Connect all the consumer cables to the DBs	01 lot
6.20	Label all the consumers and main cables of the DBs	01 lot
6.21	Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot
6.22	Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot
6.23	Commission the distribution network	01 lot
6.24	Commission all the consumers of the island to the new distribution network	01 lot
6.25	Seal the spare glands of the DBs with silicon	01 lot
6.26	Label all the DB from the external side of the front	01 lot
6.27	Hand over the distribution network to the client	01 lot

### TECHNICAL SPECIFICATION SHEET (2) LISDHOO-KALAIHOO ISLAND

#### No. 1. 3): Main Distribution Cables 04 core 50 sq.mm

Required Specification		Tenderer's Specifications
1	Quantity	1100 m
2	Manufacturer (to be specified)	
3	Model (to be specified)	
4	Country of Origin (to be specified)	
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	50 sq.mm
	No. / diameter of wire	19/1.78 mm
	Shape of conductor	90 degree centigrade sector
	Insulation Material	XLPE
	Min. thickness of insulation	1.16mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.76 mm
	Approx. diameter over inner covering	26.69mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	1.40mm
	Approx. diameter of completed cable	35.4mm
	Voltage test on completed cable	3.5/5 kV/min
	Max. conductor resistance at 20 degree cent.	0.387 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	3485 kg/km

**TECHNICAL SPECIFICATION SHEET(2) LISDHOO-KALAI DHOO ISLAND**

**No. 1. 4): Main Distribution Cables 04 core 35 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	2600 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	35 sq.mm	
	No. / diameter of wire	7/2.52 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.98mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.60mm	
	Approx. diameter over inner covering	22.85mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.60mm	
	Approx. diameter of completed cable	30.3mm	
	Voltage test on completed cable	3.5/5 kV/min	
	Max. conductor resistance at 20 degree cent.	0.524 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	2514 kg/km	

**TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAI DHOO ISLAND**

**No. 1. 6): Branch Cables 04 core 16 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	200 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	16 sq.mm	
	No. / diameter of wire	7/1.70 mm	
	Shape of conductor	Circular compact	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.90mm	
	Approx. diameter over inner covering	21.8mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.16mm	
	Approx. diameter of completed cable	26.3mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	1.15 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	1545 kg/km	

**TECHNICAL SPECIFICATION SHEET(2) L..ISDHOO-KALAI DHOO ISLAND**

**No. 1. 7): Brach Cables 02 core 06 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	14000 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	2	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	06 sq.mm	
	No. / diameter of wire	7/1.04 mm	
	Shape of conductor	Round	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.40mm	
	Approx. diameter over inner covering	10.6mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.92mm	
	Approx. diameter of completed cable	12.5mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	3.08 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red/Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	209 kg/km	



**TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAI DHOO ISLAND****No. 2. 1) : Distribution Box: Type 01: Feeder Pillars**

	Required Specification	Tenderer's Specifications
1	Quantity	01 Unit
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution Feeders
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 23	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening
		Depth adjustment slides for orion enclosure
		Plain mounting plates
		Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
		Five (5) MCCB(TPN) 100A, 20kA
		Five (5) ELRs complete with ZCTs.
		Five (5) shunt trip coil for the MCCBs
		One (01) set of flexible wiring with 70 sq.mm cables
		One (01) set of lugs and lug sleeves
	Outgoing side	
		One (1) terminal blocks capable to connect 120 sq.mm 04 core cables.
		Four (4) terminal blocks capable to connect 70 sq.mm 04 core cables.
		One (1) set of wiring
	Size	Maximum 1150mm(height)x 850mm(width)x 300mm(depth)
	Carrying weight	6 - 200 kg

**TECHNICAL SPECIFICATION SHEET(2) LISDHOO-KALAIHOO ISLAND**

**No. 2. 2) : Distribution Box: Type 02 : 18MCBs**

		Required Specification	Tenderer's Specifications
1	Quantity	06 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Eighteen (18) MCBs (SP) 40A, 16kA	
		One (1) insulated Prong Bus 18 CCTs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 650mm(height)x 500mm(width)x 200mm(depth)	
	Carrying weight	6 - 150 kg	

**TECHNICAL SPECIFICATION SHEET(2) L.ISDHOON-KALAIIDHOON ISLAND****No. 2. 3) : Distribution Box: Type 03 : 12 MCBs**

		Required Specification	Tenderer's Specifications
1	Quantity	22 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Twelve (12) MCBs (SP) 40A, 16kA	
		One (1) insulated Prong Bus 18 CCTs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 500mm(height)x 400mm(width)x 200mm(depth)	
	Carrying weight	6 - 120 kg	

**TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAI DHOO ISLAND**

**No. 3.: Accessories**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All accessories to install LV Cables and Distribution Box	
6	Specifications		
	PVC glands for 4 core 50 sq.mm copper cables	24	
	PVC glands for 4 core 35 sq.mm copper cables	64	
	PVC glands for 4 core 16 sq.mm copper cables	12	
	PVC glands for 2 core 6 sq.mm copper cables	400	
	Copper lugs 50 sq.mm with 12mm dia (terminal bolt connecting hole)	112	
	Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)	184	
	Lug sleeves 50 sq.mm (red color)	32	
	Lug sleeves 50 sq.mm (yellow color)	32	
	Lug sleeves 50 sq.mm (blue color)	32	
	Lug sleeves 50 sq.mm (black color)	32	
	Lug sleeves 35 sq.mm (red color)	72	
	Lug sleeves 35 sq.mm (yellow color)	72	
	Lug sleeves 35 sq.mm (blue color)	72	
	Lug sleeves 35 sq.mm (black color)	72	
	Roll insulation tape (black color)	100	
	Roll scotch tape	4	
	Cable ties 300 mm length	400	
	Cable ties 150 mm length	400	

**TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAIHOO ISLAND**

**No. 4. : Tools**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All tools to install LV Cables	
6	Specifications		
	Level indicator 12"	2	
	Screwdriver 12" (-)	2	
	Screwdriver 12" (+)	2	
	Screwdriver 6" (-)	2	
	Screwdriver 6" (+)	2	
	Philips voltage neon light testers 6"	2	
	Pliers 12"	2	
	Side cutters normal size	2	
	Cable cutters medium size	2	
	Hacksaw frames	2	
	Hacksaw blades ( high speed )	12	
	NT cutters	2	
	NT cutter blade packets	4	
	Adjustable wrech 6" adjustable range	2	
	Adjustable wrech 8" adjustable range	2	
	Elankee set 24 piece set	2	
	Hammers 01 lb	2	
	Hammers 02 lb	2	
	Hammers 18 lb	1	
	Alignment indicator with 3m rope (Olanbu) metal type	2	
	Measuring wheel 100m	1	
	Measuring wheel 10m	1	
	Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1	

### TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAI DHOO ISLAND

#### No. 5 : Installation and commission works

1	Quantity	Required Specification	Tenderer's Specifications
2	Manufacturer		
3	Model		
4	Country of Origin		
5	General Description	All the items and workmanshi required to do the installation and commissioning work	
6	Specifications		
6.1	Brass screws 2" x 12no.	150	
6.2	Self tap screws 2" x 12 no.	150	
6.3	Wall plus 06 mm dia, 50 mm length	220	
6.4	Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	2	
6.5	Cable ties 200 mm length	420	
6.6	Unit water Pump ( petrol used as fuel ) 50 mm pipe	2	
	Type: 4 stroke overhead valve single cylinder, 25		
	Total displacement 118 cm <sup>3</sup> ( 7.2 cu.in )		
	Bore and stroke 60 x 42 mm ( 2.4 x 1.7 in )		
	Max Horse power 2.9 KW (4.0 HP ) / 3600 min <sup>-1</sup>		
	Max. Torque 7.5 N.M ( 0.75 kg.m, 5.4 lbf.ft ) 2500		
	Compression Ratio : 7.5:1, 8.5:1		
	Fuel consumption: 313 g/kwh (230g/HPH,0.51 lb/Hph)		
	Colling system : Forced air		
	Ignition system : Transistorized magento ignition		
	Ignition timing : 25 degree B.T.D.C fixed		
	Spark plug : BP6 ES (NGK)		
	Carburetor : Horizontal type butterfly valve		
	Air cleaner : Dual element type		
	Governor : Centrifugal mechanical governor		
	Lubricating system : Splash		
	Oil capacity : 0.6 litres		
	Starting system: Recoil starter		
	Stopping system: Ignition primary circuit ground		
	Fuel used : Regular gasoline ( 86 pump octane :		

# TECHNICAL SPECIFICATION SHEET(2) L.ISDHOO-KALAIHOO ISLAND

## No. 5 : Installation and commission works

	Required Specification	Tenderer's Specifications
	Fule tank capacity : 2.5 litres	
6.7	Met hose, PVC rigid Spiral 2"	20m
6.8	Met hose, PVC discharged 2" ( Superhose )	70m
6.9	Foot valve	2
6.10	Hose clip	8
6.11	Ring hose Clip	8
6.12	Tool	01 unit
6.13	Petrol drums for the water with petrols 200 litres	2
6.14	All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1
6.15	Cement bags (50kg) for DB	58
6.16	Install all the DBs on the concrete frames	29
6.17	Install all the PVC glands to the DBs	01 lot
6.18	Connect all the main cables to the DBs terminals	01 lot
6.19	Connect all the consumer cables to the DBs	01 lot
6.20	Label all the consumers and main cables of the DBs	01 lot
6.21	Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot
6.22	Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot
6.23	Commission the distribution network	01 lot
6.24	Commission all the consumers of the island to the new distribution network	01 lot
6.25	Seal the spare glands of the DBs with silicon	01 lot
6.26	Label all the DB from the external side of the front	01 lot
6.27	Hand over the distribution network to the client	01 lot

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND**

No. 1. 5) : Main Distribution Cables 04 core 25 sq.mm

		Required Specification	Tenderer's Specifications
1	Quantity	1900 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	25 sq.mm	
	No. / diameter of wire	7/2.14 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.98mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.60mm	
	Approx. diameter over inner covering	20.05mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.24mm	
	Approx. diameter of completed cable	27.8mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	0.727 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	2026 kg/km	



**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIIDHOO ISLAND****No. 1. 6) : Branch Cables 04 core 16 sq.mm**

	Required Specification	Tenderer's Specifications
1	Quantity	300 m
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	16 sq.mm
	No. / diameter of wire	7/1.70 mm
	Shape of conductor	Circular compact
	Insulation Material	XLPE
	Min. thickness of insulation	0.80mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.90mm
	Approx. diameter over inner covering	21.8mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	1.16mm
	Approx. diameter of completed cable	26.3mm
	Voltage test on completed cable	3.5/5 kV/min
	Max. conductor resistance at 20 degree cent.	1.15 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	1545 kg/km

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIHOO ISLAND**

**No. 1. 7): Brach Cables 02 core 06 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	13500 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	2	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	06 sq.mm	
	No. / diameter of wire	7/1.04 mm	
	Shape of conductor	Round	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.40mm	
	Approx. diameter over inner covering	10.6mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.92mm	
	Approx. diameter of completed cable	12.5mm	
	Voltage test on completed cable	3.5/5 kV/min	
	Max. conductor resistance at 20 degree cent.	3.08 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red/Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	209 kg/km	

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND**

**No. 2. 1) : Distribution Box: Type 01: Feeder Pillars**

		Required Specification	Tenderer's Specifications
1	Quantity	01 Unit	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution Feeders	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		Five (5) MCCB(TPN) 100A, 20kA	
		Five (5) ELRs complete with ZCTs.	
		Five (5) shunt trip coil for the MCCBs	
		One (01) set of flexible wiring with 70 sq.mm cables	
		One (01) set of lugs and lug sleeves	
	Outgoing side		
		One (1) terminal blocks capable to connect 120 sq.mm 04 core cables.	
		Four (4) terminal blocks capable to connect 70 sq.mm 04 core cables.	
		One (1) set of wiring	
	Size	Maximum 1150mm(height)x 850mm(width)x 300mm(depth)	
	Carrying weight	6 - 200 kg	

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND**

**No. 2. 2) : Distribution Box: Type 02 : 18MCBs**

		Required Specification	Tenderer's Specifications
1	Quantity	12 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Eighteen (18) MCBs (SP) 40A, 16kA	
		One (1) Insulated Prong Bus 18 CCTs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 650mm(height)x 500mm(width)x 200mm(depth)	
	Carrying weight	6 - 150 kg	

### TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND

No. 2.3) : Distribution Box: Type 03 : 12 MCBs

Required Specification		Tenderer's Specifications
1	Quantity	10 Units
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution circuit with MCB
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 232	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening
		Depth adjustment slides for orion enclosure
		Plain mounting plates
		Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
		One(1) MCCB(TPN) 63A, 20kA
	Outgoing side	Twelve (12) MCBs (SP) 40A, 16kA
		One (1) insulated Prong Bus 18 CCT's "U" type.
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One(1) set of flexible wiring c/w lugs, lug sleeves and others
	Size	Maximum 500mm(height)x 400mm(width)x 200mm(depth)
	Carrying weight	6 - 120 kg

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIIDHOO ISLAND**

**No. 3 : Accessories**

Quantity		Required Specification		Tenderer's Specifications	
1	Quantity		1 Lot		
2	Manufacturer	(to be specified)			
3	Model	(to be specified)			
4	Country of Origin	(to be specified)			
5	General Description	All accessories to install LV Cables and Distribution Box			
6	Specifications				
	PVC glands for 4 core 25 sq.mm copper cables		65		
	PVC glands for 4 core 16 sq.mm copper cables		12		
	PVC glands for 2 core 6 sq.mm copper cables		364		
	Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)		186		
	Lug sleeves 25 sq.mm (red color)		54		
	Lug sleeves 25 sq.mm (yellow color)		54		
	Lug sleeves 25 sq.mm (blue color)		54		
	Lug sleeves 25 sq.mm (black color)		54		
	Roll insulation tape (black color)		100		
	Roll scotch tape		4		
	Cable ties 300 mm length		400		
	Cable ties 150 mm length		400		

**TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND**

**No. 4. : Tools**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All tools to install LV Cables	
6	Specifications		
	Level indicator 12"	2	
	Screwdriver 12" (-)	2	
	Screwdriver 12" (+)	2	
	Screwdriver 6" (-)	2	
	Screwdriver 6" (+)	2	
	Philips voltage neon light testers 6"	2	
	Pliers 12"	2	
	Side cutters normal size	2	
	Cable cutters medium size	2	
	Hacksaw frames	2	
	Hacksaw blades ( high speed )	12	
	NT cutters	2	
	NT cutter blade packets	4	
	Adjustable wrench 6" adjustable range	2	
	Adjustable wrench 8" adjustable range	2	
	Elankee set 24 piece set	2	
	Hammers 01 lb	2	
	Hammers 02 lb	2	
	Hammers 18 lb	1	
	Alignment indicator with 3m rope (Olanbu) metal type	2	
	Measuring wheel 100m	1	
	Measuring wheel 10m	1	
	Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1	

### TECHNICAL SPECIFICATION SHEET(3) L.MAABAIIDHOO ISLAND

#### No. 5.: Installation and commission works

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All the items and workmanshi required to do the installation and commissioning work	
6	Specifications		
	6.1 Brass screws 2" x 12no.	135	
	6.2 Self tap screws 2" x 12 no.	135	
	6.3 Wall plus 06 mm dia, 50 mm length	260	
	6.4 Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	2	
	6.5 Cable ties 200 mm length.	300	
	6.6 Unit water Pump ( petrol used as fuel ) 50 mm pipe	2	
	Type: 4 stroke overhead valve single cylinder, 25		
	Total displacement 118 cm <sup>3</sup> ( 7.2 cu.in )		
	Bore and stroke 60 x 42 mm ( 2.4 x 1.7 in )		
	Max Horse power 2.9 KW (4.0 HP ) / 3600 min <sup>-1</sup>		
	Max.Torque 7.5 N.M ( 0.75 kg.m, 5.4 lb.ft ) 2500		
	Compression Ratio : 7.5:1, 8.5:1		
	Fuel consumption: 313 g/kwh (230g/HPh,0.51 lb/Hph)		
	Colling system : Forced air		
	Ignition system : Transistorized magento ignition		
	Ignition timing : 25 degree B.T.D.C fixed		
	Spark plug : BP6 ES (NGK)		
	Carburetor : Horizontal type butterfly valve		
	Air cleaner : Dual element type		
	Governor : Centrifugal mechanical governor		
	Lubricating system : Splash		
	Oil capacity : 0.6 litres		
	Starting system: Recoil starter		
	Stopping system: Ignition primary circuit ground		



### TECHNICAL SPECIFICATION SHEET(3) L.MAABAIDHOO ISLAND

#### No. 5.: Installation and commission works

	Required Specification	Tenderer's Specifications
	Fuel used : Regular gasoline ( 86 pump octane :	
	Fule tank capacity : 2.5 litres	
6.7	Met hose, PVC rigid Spiral 2"	20m
6.8	Met hose, PVC discharged 2" ( Superfosse )	70m
6.9	Foot valve	2
6.10	Hose clip	8
6.11	Ring hose Clip	8
6.12	Tool	01 unit
6.13	Petrol drums for the water with petrols 200 litres	2
6.14	All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1
6.15	Cement bags (50kg) for DB	46
6.16	Install all the DBs on the concrete frames	24
6.17	Install all the PVC glands to the DBs	01 lot
6.18	Connect all the main cables to the DBs terminals	01 lot
6.19	Connect all the consumer cables to the DBs	01 lot
6.20	Label all the consumers and main cables of the DBs	01 lot
6.21	Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot
6.22	Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot
6.23	Commission the distribution network	01 lot
6.24	Commission all the consumers of the island to the new distribution network	01 lot
6.25	Seal the spare glands of the DBs with silicones	01 lot
6.26	Label all the DB from the external side of the front	01 lot
6.27	Hand over the distribution network to the client	01 lot

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 1. 1): Main Distribution Cables 04 core 120sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	900 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	120 sq.mm	
	No. / diameter of wire	37/2.03 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	1.52mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	1.30mm	
	Approx. diameter over inner covering	37.87mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	2.25mm	
	Approx. diameter of completed cable	49.3mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	0.153 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	7422 kg/km	

### TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND

No. 1. 4) : Main Distribution Cables 04 core 35 sq.mm

Required Specification		Tenderer's Specifications
1	Quantity	1000m
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	35 sq.mm
	No. / diameter of wire	7/2.52 mm
	Shape of conductor	90 degree centrifgrade sector
	Insulation Material	XLPE
	Min. thickness of insulation	0.98mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.60mm
	Approx. diameter over inner covering	22.85mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	0.60mm
	Approx. diameter of completed cable	30.3mm
	Voltage test on completed cable	3.5/5 kV/mins
	Max. conductor resistance at 20 degree cent.	0.524 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	2514 kg/km

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 1. 5) : Main Distribution Cables 04 core 25sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	4150 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	25 sq.mm	
	No. / diameter of wire	7/2.14 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.98mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.60mm	
	Approx. diameter over inner covering	20.5mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.24mm	
	Approx. diameter of completed cable	27.8mm	
	Voltage test on completed cable	3.5/5 kV/min	
	Max. conductor resistance at 20 degree cent.	0.727 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	2026 kg/km	

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 1. 6) : Branch Cables 04 core 16 sq.mm**

Required Specification		Tenderer's Specifications
1	Quantity	250 m
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Underground Cables for Power Distribution
6	Specifications	
	Applicable Standard	BS 6004
	Voltage Class	600/1000V
	Number of cores	4
	Conductor	Plain annealed copper wire
	Nominal cross sectional area	16 sq.mm
	No. / diameter of wire	7/1.70 mm
	Shape of conductor	Circular compact
	Insulation Material	XLPE
	Min. thickness of insulation	0.80mm
	Inner covering	PVC TYPE TM1
	Min. thickness of inner covering	0.90mm
	Approx. diameter over inner covering	21.8mm
	Sheath	PVC TYPE ST2(Flame Retardant)
	Min. thickness of sheath	1.16mm
	Approx. diameter of completed cable	26.3mm
	Voltage test on completed cable	3.5/5 kV/mins
	Max. conductor resistance at 20 degree cent.	1.15 ohm/km
	Max. insulation resistance at 70 degree cent.	5 Mohm/km
	Core identification	Red, Yellow, Blue, Black
	Max. length of cable drum	500 m
	Approx. weight of completed cable	1545 kg/km

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 1.7) : Brach Cables 02 core 06 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	20200 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	2	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	06 sq.mm	
	No. / diameter of wire	7/1.04 mm	
	Shape of conductor	Round	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.40mm	
	Approx. diameter over inner covering	10.6mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.92mm	
	Approx. diameter of completed cable	12.5mm	
	Voltage test on completed cable	3.5/5 kV/min	
	Max. conductor resistance at 20 degree cent.	3.08 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red/Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	209 kg/km	

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 2. 1) : Distribution Box: Type 01: Feeder Pillars**

		Required Specification	Tenderer's Specifications
1	Quantity	02 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution Feeders	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for onion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		Five (5) MCCB(TPN) 100A, 20kA	
		Five (5) ELRs complete with ZCT's.	
		Five (5) shunt trip coil for the MCCBs	
		One (01) set of flexible wiring with 70 sq.mm cables	
		One (01) set of lugs and lug sleeves	
	Outgoing side	One (1) terminal blocks capable to connect 120 sq.mm 04 core cables.	
		Four (4) terminal blocks capable to connect 70 sq.mm 04 core cables.	
		One (1) set of wiring	
	Size	Maximum 1150mm(height)x 850mm(width)x 300mm(depth)	
	Carrying weight	6 - 200 kg	

**TECHNICAL SPECIFICATION SHEET(4) L. GAN-MUKURIMAGU ISLAND**

**No. 2. 2) : Distribution Box: Type 02 : 18MCBs**

Required Specification		Tenderer's Specifications
1	Quantity	10 Units
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution circuit with MCB
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 232	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening
		Depth adjustment slides for orion enclosure
		Plain mounting plates
		Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
		One(1) MCCB(TPN) 63A, 20kA
	Outgoing side	Eighteen (18) MCBs (SP) 40A, 16kA
		One (1) insulated Prong Bus 18 CCTs "U" type.
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One(1) set of flexible wiring c/w lugs, lug sleeves and others
	Size	Maximum 650mm(height)x 500mm(width)x 200mm(depth)
	Carrying weight	6 - 150 kg



**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 2. 3) : Distribution Box: Type 03 : 12 MCBs**

Required Specification		Tenderer's Specifications
1	Quantity	22 Units
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution circuit with MCB
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 232	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening Depth adjustment slides for orion enclosure Plain mounting plates Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
	Outgoing side	One(1) MCCB(TPN) 63A, 20kA Twelve (12) MCBs (SP) 40A, 16kA One (1) insulated Prong Bus 18 CCTs "U" type. One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm) One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm) One(1) set of flexible wiring c/w lugs, lug sleeves and others
	Size	Maximum 500mm(height)x 400mm(width)x 200mm(depth)
	Carrying weight	6 - 120 kg

### TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND

#### No. 3 : Accessories

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All accessories to install LV Cables and Distribution Box	
6	Specifications		
	PVC glands for 4 core 120 sq.mm copper cables	12	
	PVC glands for 4 core 35 sq.mm copper cables	18	
	PVC glands for 4 core 25 sq.mm copper cables	22	
	PVC glands for 4 core 16 sq.mm copper cables	12	
	PVC glands for 2 core 6 sq.mm copper cables	470	
	Copper lugs 120 sq.mm with 12mm dia (terminal bolt connecting hole)	12	
	Copper lugs 35 sq.mm with 12mm dia (terminal bolt connecting hole)	60	
	Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	192	
	Lug sleeves 120 sq.mm (red color)	4	
	Lug sleeves 120 sq.mm (yellow color)	4	
	Lug sleeves 120 sq.mm (blue color)	4	
	Lug sleeves 120 sq.mm (black color)	4	
	Lug sleeves 35 sq.mm (red color)	15	
	Lug sleeves 35 sq.mm (yellow color)	15	
	Lug sleeves 35 sq.mm (blue color)	15	
	Lug sleeves 35 sq.mm (black color)	15	
	Lug sleeves 25 sq.mm (red color)	48	
	Lug sleeves 25 sq.mm (yellow color)	48	
	Lug sleeves 25 sq.mm (blue color)	48	
	Lug sleeves 25 sq.mm (black color)	48	
	Roll insulation tape (black color)	66	
	Roll scotch tape	4	
	Cable ties 300 mm length	400	
	Cable ties 150 mm length	400	

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 4 : Tools**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All tools to install LV Cables	
6	Specifications		
	Level indicator 12"	2	
	Screwdriver 12" (-)	2	
	Screwdriver 12" (+)	2	
	Screwdriver 6" (-)	2	
	Screwdriver 6" (+)	2	
	Philips voltage neon light testers 6"	2	
	Pliers 12"	2	
	Side cutters normal size	2	
	Cable cutters medium size	2	
	Hacksaw frames	2	
	Hacksaw blades ( high speed )	12	
	NT cutters	2	
	NT cutter blade packets	4	
	Adjustable wrench 6" adjustable range	2	
	Adjustable wrench 8" adjustable range	2	
	Elankee set 24 piece set	2	
	Hammers 01 lb	2	
	Hammers 02 lb	2	
	Hammers 18 lb	1	
	Alignment indicator with 3m rope (Olanbu) metal	2	
	Measuring wheel 100m	1	
	Measuring wheel 10m	1	
	Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1	

### TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND

#### No. 5 : Installation and commission works

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All the items and workmanshi required to do the installation and commissioning work	
6	Specifications		
	6.1 Brass screws 2" x 12no.	164	
	6.2 Self tap screws 2" x 12 no.	164	
	6.3 Wall plus 06 mm dia, 50 mm length Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	200	
	6.4 Cable ties 200 mm length	2	
	6.5 Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	480	
	6.6 Type: 4 stroke overhead valve single cylinder, 25 degree inclined	2	
	Total displacement 118 cm <sup>3</sup> ( 7.2 cu.in )		
	Bore and stroke 60 x 42 mm ( 2.4 x 1.7 in )		
	Max Horse power 2.9 KW (4.0 HP ) / 3600 min <sup>-1</sup>		
	Max.Torque 7.5 N.M ( 0.75 kg.m, 5.4 lbf.ft ) 2500 min <sup>-1</sup> r.p.m		
	Compression Ratio : 7.5:1, 8.5:1		
	Fuel consumption: 313 g/kwh (230g/HPH,0.51 lb/Hph)		
	Colling system : Forced air		
	Ignition system : Transistorized magento ignition		
	Ignition timing : 25 degree B.T.D.C fixed		
	Spark plug : BP6 ES (NGK)		
	Carburetor : Horizontal type butterfly valve		
	Air cleaner : Dual element type		
	Governor : Centrifugal mechanical governor		
	Lubricating system : Splash		
	Oil capacity : 0.6 litres		
	Starting system: Recoil starter		
	Stopping system: Ignition primary circuit ground		

**TECHNICAL SPECIFICATION SHEET(4) L.GAN-MUKURIMAGU ISLAND**

**No. 5 : Installation and commission works**

	Required Specification	Tenderer's Specifications
	Fuel used : Regular gasoline ( 86 pump octane : Unleaded	
	Fule tank capacity : 2.5 litres	
6.7	Met hose, PVC rigid Spiral 2"	20m
6.8	Met hose, PVC discharged 2" ( Superhose )	70m
6.9	Foot valve	2
6.10	Hose clip	8
6.11	Ring hose Clip	8
6.12	Tool	01 unit
6.13	Petrol drums for the water with petrols 200 litrs drums	2
6.14	All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1
6.15	Cement bags (50kg) for DB	68
6.16	Install all the DBs on the concrete frames	32
6.17	Install all the PVC glands to the DBs	01 lot
6.18	Connect all the main cables to the DBs terminals	01 lot
6.2	Connect all the consumer cables to the DBs	01 lot
6.20	Label all the consumers and main cables of the DBs	01 lot
6.2	Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot
6.2	Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot
6.2	Commission the distribution network	01 lot
6.2	Commission all the consumers of the island to the new distribution network	01 lot
6.3	Seal the spare glands of the DBs with silicons	01 lot
6.3	Label all the DB from the external side of the front door.	01 lot
6.3	Hand over the distribution network to the client	01 lot

**TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND****No. 1. 5) : Main Distribution Cables 04 core 25 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	3750 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	25 sq.mm	
	No. / diameter of wire	7/2.14 mm	
	Shape of conductor	90 degree centigrade sector	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.98mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.60mm	
	Approx. diameter over inner covering	20.05mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.24mm	
	Approx. diameter of completed cable	27.8mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	0.727 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	2026 kg/km	

**TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND****No. 1. 6) : Branch Cables 04 core 16 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	300 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	4	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	16 sq.mm	
	No. / diameter of wire	7/1.70 mm	
	Shape of conductor	Circular compact	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.90mm	
	Approx. diameter over inner covering	21.8mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	1.16mm	
	Approx. diameter of completed cable	26.3mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	1.15 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red, Yellow, Blue, Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	1545 kg/km	

**TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND**

**No. 1.7) : Brach Cables 02 core 06 sq.mm**

		Required Specification	Tenderer's Specifications
1	Quantity	12300 m	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Underground Cables for Power Distribution	
6	Specifications		
	Applicable Standard	BS 6004	
	Voltage Class	600/1000V	
	Number of cores	2	
	Conductor	Plain annealed copper wire	
	Nominal cross sectional area	06 sq.mm	
	No. / diameter of wire	7/1.04 mm	
	Shape of conductor	Round	
	Insulation Material	XLPE	
	Min. thickness of insulation	0.80mm	
	Inner covering	PVC TYPE TM1	
	Min. thickness of inner covering	0.40mm	
	Approx. diameter over inner covering	10.6mm	
	Sheath	PVC TYPE ST2(Flame Retardant)	
	Min. thickness of sheath	0.92mm	
	Approx. diameter of completed cable	12.5mm	
	Voltage test on completed cable	3.5/5 kV/mins	
	Max. conductor resistance at 20 degree cent.	3.08 ohm/km	
	Max. insulation resistance at 70 degree cent.	5 Mohm/km	
	Core identification	Red/Black	
	Max. length of cable drum	500 m	
	Approx. weight of completed cable	209 kg/km	



### TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND

No. 2. 1) : Distribution Box: Type 01: Feeder Pillars

Required Specification		Tenderer's Specifications
1	Quantity	01 Unit
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution Feeders
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 232	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening
		Depth adjustment slides for orion enclosure
		Plain mounting plates
		Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
		Five (5) MCCB(TPN) 100A, 20kA
		Five (5) ELRs complete with ZCTs.
		Five (5) shunt trip coil for the MCCBs
		One (01) set of flexible wiring with 70 sq.mm cables
		One (01) set of lugs and lug sleeves
	Outgoing side	
		One (1) terminal blocks capable to connect 120 sq.mm 04 core cables.
		Four (4) terminal blocks capable to connect 70 sq.mm 04 core cables.
		One (1) set of wiring
	Size	Maximum 1150mm(height)x 850mm(width)x 300mm(depth)
	Carrying weight	6 - 200 kg

### TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND

No. 2. 2) : Distribution Box: Type 02 : 18MCBs

	Required Specification	Tenderer's Specifications
1	Quantity	13 Units
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	Branch distribution circuit with MCB
6	Specifications	
	Enclosure	GRP (Glass Reinforced Polyester)
	IP rating according to IEC 529	IP 65
	Insulation class according to IEC 232	Class II
	Canopies	Both top and bottom
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers
	Color	RAL 7032
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening
		Depth adjustment slides for orion enclosure
		Plain mounting plates
		Modular chassis with front cover
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables
		One(1) MCCB(TPN) 63A, 20kA
	Outgoing side	Eighteen (18) MCBs (SP) 40A, 16kA
		One (1) insulated Prong Bus 18 CCTs "U" type.
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)
		One(1) set of flexible wiring c/w lugs, lug sleeves and others
	Size	Maximum 650mm(height)x 500mm(width)x 200mm(depth)
	Carrying weight	6 - 150 kg

### TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND

No. 2. 3) : Distribution Box: Type 03 : 12 MCBs

		Required Specification	Tenderer's Specifications
1	Quantity	22 Units	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	Branch distribution circuit with MCB	
6	Specifications		
	Enclosure	GRP (Glass Reinforced Polyester)	
	IP rating according to IEC 529	IP 65	
	Insulation class according to IEC 232	Class II	
	Canopies	Both top and bottom	
	Door	Plain door equipped with 2 or 3 locks with 8mm triangular centers	
	Color	RAL 7032	
	Other function for enclosure	4 fixing bolts in the back of the enclosure for mounting plate fastening	
		Depth adjustment slides for orion enclosure	
		Plain mounting plates	
		Modular chassis with front cover	
	Incoming side	One(1) Terminal block (4 pole) capable to connect 4 core 70 sq.mm copper cables	
		One(1) MCCB(TPN) 63A, 20kA	
	Outgoing side	Twelve (12) MCBs (SP) 40A, 16kA	
		One (1) insulated Prong Bus 18 CCTs "U" type.	
		One (1) insulated neutral link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One (1) insulated earth link 18 holes (4 holes 16 sq.mm, and others 6 sq.mm)	
		One(1) set of flexible wiring c/w lugs, lug sleeves and others	
	Size	Maximum 500mm(height)x 400mm(width)x 200mm(depth)	
	Carrying weight	6 - 120 kg	

**TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND**

**No. 3. : Accessories**

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All accessories to install LV Cables and Distribution Box	
6	Specifications		
	PVC glands for 4 core 25 sq.mm copper cables	65	
	PVC glands for 4 core 16 sq.mm copper cables	12	
	PVC glands for 2 core 6 sq.mm copper cables	364	
	Copper lugs 25 sq.mm with 12mm dia (terminal bolt connecting hole)	186	
	Lug sleeves 25 sq.mm (red color)	54	
	Lug sleeves 25 sq.mm (yellow color)	54	
	Lug sleeves 25 sq.mm (blue color)	54	
	Lug sleeves 25 sq.mm (black color)	54	
	Roll insulation tape (black color)	100	
	Roll scotch tape	4	
	Cable ties 300 mm length	400	
	Cable ties 150 mm length	400	

**TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND**

**No.4. : Tools**

Required Specification		Tenderer's Specifications
1	Quantity	1 Lot
2	Manufacturer	(to be specified)
3	Model	(to be specified)
4	Country of Origin	(to be specified)
5	General Description	All tools to install LV Cables
6	Specifications	
	Level indicator 12"	2
	Screwdriver 12" (-)	2
	Screwdriver 12" (+)	2
	Screwdriver 6" (-)	2
	Screwdriver 6" (+)	2
	Philips voltage neon light testers 6"	2
	Pliers 12"	2
	Side cutters normal size	2
	Cable cutters medium size	2
	Hacksaw frames	2
	Hacksaw blades ( high speed )	12
	NT cutters	2
	NT cutter blade packets	4
	Adjustable wrench 6" adjustable range	2
	Adjustable wrench 8" adjustable range	2
	Elankee set 24 piece set	2
	Hammers 01 lb	2
	Hammers 02 lb	2
	Hammers 18 lb	1
	Alignment indicator with 3m rope (Olanbu) metal type	2
	Measuring wheel 100m	1
	Measuring wheel 10m	1
	Empty PVC big size tool box (200mm height, 600mm length, 200mm depth at least)	1

### TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND

#### No. 5 : Installation and commission works

		Required Specification	Tenderer's Specifications
1	Quantity	1 Lot	
2	Manufacturer	(to be specified)	
3	Model	(to be specified)	
4	Country of Origin	(to be specified)	
5	General Description	All the items and workmanshi required to do the installation and commissioning work	
6	Specifications		
	6.1 Brass screws 2" x 12no.	135	
	6.2 Self tap screws 2" x 12 no.	135	
	6.3 Wall plus 06 mm dia, 50 mm length Metal type round saw set which shall include 25 mm, 30 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	260	
	6.4 mm, 35 mm, 50 mm, 75mm, cutting dies c/w other accessories.	2	
	6.5 Cable ties 200 mm length "	300	
	6.6 Unit water Pump ( petrol used as fuel ) 50 mm pipe dia	2	
	Type: 4 stroke overhead valve single cylinder, 25 degree		
	Total displacement 118 cm <sup>3</sup> ( 7.2 cu.in )		
	Bore and stroke 60 x 42 mm ( 2.4 x 1.7 in )		
	Max Horse power 2.9 KW ( 4.0 HP ) / 3600 min <sup>-1</sup>		
	Max.Torque 7.5 N.M ( 0.75 kg.m, 5.4 lbf.ft ) 2500 min <sup>-1</sup>		
	Compression Ratio : 7.5:1, 8.5:1		
	Fuel consumption: 313 g/kwh (230g/HPh,0.51 lb/Hph)		
	Colling system : Forced air		
	Ignition system : Transistorized magento ignition		
	Ignition timing : 25 degree B.T.D.C fixed		
	Spark plug : BP6 ES (NGK)		
	Carburetor : Horizontal type butterfly valve		
	Air cleaner : Dual element type		
	Governor : Centrifugal mechanical governor		
	Lubricating system : Splash		
	Oil capacity : 0.6 litres		
	Starting system: Recoil starter		

## TECHNICAL SPECIFICATION SHEET(5) L.MAAVAH ISLAND

### No. 5. : Installation and commission works

No.	Description of Work	Required Specification	Tenderer's Specifications
	Stopping system: Ignition primary circuit ground		
	Fuel used : Regular gasoline ( 86 pump octane :		
	Fule tank capacity : 2.5 litres		
6.7	Met hose, PVC rigid Spiral 2"	20m	
6.8	Met hose, PVC discharged 2" ( Superhose )	70m	
6.9	Foot valve	2	
6.10	Hose clip	8	
6.11	Ring hose Clip	8	
6.12	Tool	01 unit	
6.13	Petrol drums for the water with petroils 200 litrs drums	2	
6.14	All other materials required to complete the installation of the DBs, connection of the incoming, outgoing and all consumer cables to the DBs.	1	
6.15	Cement bags (50kg) for DB	72	
6.16	Install all the DBs on the concrete frames	20	
6.17	Install all the PVC glands to the DBs	01 lot	
6.18	Connect all the main cables to the DBs terminals	01 lot	
6.19	Connect all the consumer cables to the DBs	01 lot	
6.20	Label all the consumers and main cables of the DBs	01 lot	
6.21	Connect all the main cables to the existing switchboard and new feeder pillars which will be installed inside the P/H control room or the new switchboard and the new feeder pillars. If it is a switchboard the installation of the switchboard will be completed by the client.	01 lot	
6.22	Connect all the consumer cables to the existing consumer KWH meter boards and new KWH meter boards.	01 lot	
6.23	Commission the distribution network	01 lot	
6.24	Commission all the consumers of the island to the new distribution network	01 lot	
6.25	Seal the spare glands of the DBs with silicon	01 lot	
6.26	Label all the DB from the external side of the front door.	01 lot	
6.27	Hand over the distribution network to the client	01 lot	

**Schedule VI**

**Letterhead of the Manufacturer**

**Supply Guarantee Certificate of the Goods from Manufacturer**

Tender for: The Project for Rehabilitation of Power Distribution System in Laamu Atoll

To: Japan International Cooperation System (JICS) Liaison Office in Maldives

We, (Name of Manufacturer), a manufacturer duly organized under the laws of (Name of Country) and having its principal office of business at (Address of Manufacturer), hereby make, constitute and appoint (Name of Tenderer), a company duly organized under the laws of (Name of country) and having its principal office of business at (Address of Tenderer), to be our true and lawful attorney-in-fact to do the following sets and deeds:

To present and bind us in the tendering for the captioned Project for supply of the following equipment proposed in the tender which we manufacture or produce and provide services related thereto, if any.

Name of the Goods

Notes

We hereby also guarantee to (Name of Tenderer) that we will undertake to provide spare parts and maintenance service of the equipment at cost basis for at least five (5) years beyond the Guarantee Period.

IN TESTIMONY WHEREOF, we have hereunto signed this document this \*\*th day of \*\*\*\*\* , 2005.

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_



**Schedule VII**

Letterhead of the Tenderer

**Certificate of Origin of the Goods**

Tender for: The Project for Rehabilitation of Power Distribution System in Laamu Atoll

To: Japan International Cooperation System (JICS) Liaison Office in Maldives

We, (Name of Tenderer), duly organized under the laws of Japan and having its principal office of business at (Address of Tenderer), hereby certify that the country of origin for the Goods supplied under this tender shall have their origin mentioned below.

Item No.

Name of the Goods

Country of Origin

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_

**Schedule VIII: Company Information**

Name of Tenderer :

Foundation Year :

Number of Employees :

**A. FINANCIAL INFORMATION (in US\$ equivalent)**

Year	2002	2003	2004
1. Total assets			
2. Current assets			
3. Total liabilities			
4. Current liabilities			
5. Profits before taxes			
6. Profits after taxes			
7. Annual Turnover			
Summarize actual assets and liabilities in US dollar equivalent ( at the rates of exchange current at the end of each year ) for the previous three years			

**B. CREDIT LINE**

Source of credit line	Amount (US \$ )
1. Cash flow - Company	
2. Bank Of Maldives	
3. The Hong Kong & Shanghai Banking Corp.	
4. Suppliers Credit	
Specify proposed source of credit line to meet the cash flow demand of the Project.	
Attach audited financial statements for the last three years (for bidder or each partner of a joint venture). Firms owned by individuals, and partnerships, may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns, if audits are not required by the laws of their countries of registration.	

<Office in Japan if there is>

Name :

Address :

Tel :

Fax :

Contact Person :

<Office in Maldives>

Name :

Address :

Tel :

Fax :

Contact Person :

\*The tenderer is required to provide JICS with information more in detail upon request of JICS.

(Date)

(Signature)

(Name of Signer)

(Title, Section, Department)

For and on behalf of

**Schedule IX**

**List of Similar Work Experience of the Tenderer**  
(or his nominated subcontractor)

Name of the Project	Client	Contract Amount (in US\$)	Source of Fund	Contract Period	Description of the Work	
					Voltage Level	Length of Transmission or Distribution Lines

- The Tenderer or his nominated sub-contractor shall have similar experiences of the completed electrical works of which the total contract price shall not be less than Five hundred thousand US dollars (US\$500,000), in either the Recipient country or other island countries, during the last ten (10) years, regardless of prime contracting or subcontracting.

- At the tender, the Tenderer shall submit a photocopy of completion certificates of the said completed electrical works issued by the client of the respective contract.

\_\_\_\_\_  
(Date)  
\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Name of Signer)  
\_\_\_\_\_  
(Title, Section, Department)  
\_\_\_\_\_  
(For and on behalf of)

**Schedule X**

**Curriculum Vitae of the Personnel**

(Assigned in the Personnel Dispatch Schedule)

- 
1. Office name and address:
- 
2. Name of resident staff:
- 
3. Nationality of resident staff:
- 
4. Date of birth:
- 
5. Education:
- 
6. Qualifications:
- 
7. Languages and degree of proficiency:  
(Grade degree of proficiency as A; Excellent, B; Good C; Weak)
- 
8. Relevant projects undertaken:  
(List on a separate sheet for project's name, location, years, positions held, exact duties and duration rendered on each project)
- 
9. Other information (if any)
- 

(Date) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Name of Signer) \_\_\_\_\_

(Title, Section, Department) \_\_\_\_\_

(For and on behalf of) \_\_\_\_\_

**Form-3**

Name of the issuing Bank  
Branch Name  
Its address

L/G No.:  
Date:

JAPAN INTERNATIONAL COOPERATION SYSTEM  
SHINJUKU EAST BLDG.,  
10-5, TOMIHISA-CHO, SHINJUKU-KU,  
TOKYO 162-0067, JAPAN

Letter of Guarantee No. (number)  
**(for Performance Bond)**

Dear Sirs:

We hereby guarantee to pay you up to an aggregate amount of (US\$ amount in figures) of (US\$ amount in words) for the account of (Supplier's Name), being Performance Bond as per (Contract No.) for the supply of (Name of the Goods) UNDER JAPAN'S GRANT AID 2004 IN RESPONSE TO THE DAMAGES CAUSED BY THE GREAT EARTHQUAKE OFF THE COAST OF SUMATRA, THE REPUBLIC OF INDONESIA, AND BY THE INDIAN OCEAN TSUNAMI DISASTER FOR THE REPUBLIC OF MALDIVES subject to the terms and conditions stipulated below:

This Guarantee is unconditionally payable against the presentation of

1. the beneficiary's receipt accompanied by
2. the original Letter of Guarantee and
3. beneficiary's first written demand supported by the beneficiary's written statement stating that the applicant is in breach of his obligation under the Contract.

This guarantee expires on [date (Estimated Arrival Date + 60DAYS)].

All claims hereunder must be submitted to us not later than the above-mentioned expiry date, after which date this Guarantee automatically becomes null and void.

This guarantee is subject to ICC Uniform Rules for Demand Guarantees (ICC Publication No.458).

All bank charges are for account of applicant.

Yours faithfully,

(the name of the issuing bank)  
(Authorized signature)  
(name in block letter)

Please note:

This Guarantee must be returned to us for cancellation as soon as it expires.

**Certificate of Receipt**

To : Japan International Cooperation System (JICS)

This is to confirm and certify that the Goods procured by Japan International Cooperation System (JICS) on behalf of the Government of the Republic of Maldives under Japan Grant Aid in response to the damages caused by the great earthquake off the coast of Sumatra, the Republic of Indonesia, and by the Indian Ocean Tsunami Disaster have been delivered, and the undersigned received the Goods in proper condition, without delay or any other problem.

Contract No. :  
Name of the Supplier :  
Name of the Goods :  
Name of Consignee and Consignee's designated site :  
Quantity (units) :  
Date of Receipt of the Goods at delivery Site :

Date: (Day, Month, Year)

(Signature) \_\_\_\_\_  
(Person in Charge)  
(Name of Consignee)

\*Shall be stamped.