



CEYLON ELECTRICITY BOARD SRI LANKA

MANNAR NADUKUDA EMBILIPITIYA GRID SUBSTATIONS AUGMENTATION PROJECT

(Funds: Savings from ADB Loan Nos.3585-SRI and 3147-SRI)

GRID SUBSTATIONS Procurement of Plant

Design, Supply, and Installation

Single-Stage: Two-Envelope
Bidding Procedure

BIDDING DOCUMENT
FOR

Augmentation of:

Mannar 220/33 kV Grid Substation

Nadukuda 220/33 kV Grid Substation

Embilipitiya 132/33 kV Grid Substation

VOLUME 2 of 8

Part I- BIDDING PROCEDURES

Section 4 -Bidding Forms (BDF): Part A-Price Bid

Issued on: 02 Sep 2021

Invitation for Bids No.: CEB/AGM/PRO/2021/IFB/MNEGSAP

OCB No.: CEB/AGM/PRO/2021/OCB/MNEGSAP

Employer: Ceylon Electricity Board

Country: Sri Lanka

Projects Division

Ceylon Electricity Board,

P.O. Box 540, Colombo 02

Sri Lanka

Document – Revision 1

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Preface

This Bidding Document for Procurement of Plant – Design, Supply, and Installation, has been prepared by Ceylon Electricity Board and is based on the Standard Bidding Document for Procurement of Plant – Design, Supply, and Installation (SBD Plant) issued by the Asian Development Bank dated June 2018.

ADB's SBD Plant has the structure and the provisions of the Master Procurement Document entitled "Procurement of Plant – Design, Supply, and Installation", prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

Savings of ADB Loan No. 3585-SRI is used for the Augmentation of Mannar Grid Substation and Nadukuda Grid Substation. Savings of ADB Loan No. 3147-SRI is used for the Augmentation of the Embilipitiya Grid Substation. In order to make the payment for the augmentation of Mannar Grid Substation and Nadukuda Grid Substation by ADB Loan No. 3585-SRI and augmentation of Embilipitiya Grid Substation by ADB Loan No. 3147-SRI, this procurement is separated into two lots as follows.

Lot A - Augmentation of Mannar 220/33kV Grid Substation and Nadukuda 220/33kV Grid Substation

Lot B - Augmentation of Embilipitiya 132/33kV Grid Substation

Separation of this procurement into two lots is only for the above mentioned purpose. It is mandatory for all Bidders to bid for both lots (Lot A and Lot B). Preparation of Bidding Document, evaluation, awarding etc. is carried out accordingly and a single contract that includes both lots will be signed with the successful Bidder.

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This Section specifies the procedures to be followed by Bidders in the preparation and submission of their Bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of contract.

Section 2 - Bid Data Sheet (BDS) ----- 2-1

This Section consists of provisions that are specific to each procurement and supplement the information or requirements included in Section 1 - Instructions to Bidders.

Section 3 - Evaluation and Qualification Criteria (EQC) ----- 3-1

This Section contains the bid evaluation criteria to determine the lowest evaluated bid and lists the necessary qualifications of Bidders.

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Part A-Price Bid

This Section contains the forms which are to be completed by the Bidder and submitted as part of its Bid.

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Section 4 - Bidding Forms

Part A - Price Bid

This section contains the forms to be completed by the Bidder and submitted as part of its Bid.

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Letter of Price Bid

-- Note --

The bidder must accomplish the Letter of Price Bid on its letterhead clearly showing the bidder's complete name and address.

Date:

OCB No.:

Invitation for Bid No.:

To: [. . . insert complete name of the employer . . .]

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We offer to design, manufacture, test, deliver, install, pre-commission, and commission in conformity with the Bidding Document the following Plant and Services: [. . . insert narrative . . .]
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is the sum of

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]

The total bid price from the Grand Summary (Schedule No. 5) should be entered by the Bidder inside this box. Absence of the total bid price in the Letter of Price Bid may result in the rejection of the bid.

- (d) The discounts offered and the methodology for their application are as follows: [. . . insert discounts and methodology for their application if any . . .]
- (e) Our Bid shall be valid for a period of [. . . insert bid validity period as specified in ITB 20.1 of the BDS . . .] days from the date fixed for the submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (f) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document.

- (g) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: ¹

Name of Recipient	Address	Reason	Amount
.....
.....

- (h) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (i) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (j) We agree to permit ADB or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB.

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

¹ If none has been paid or is to be paid, indicate "None."

Price Schedules

PREAMBLE

General

1. The Price Schedules are divided into separate Schedules as follows:
 - Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad
 - Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country
 - Schedule No. 3: Design Services
 - Schedule No. 4: Civil Works, Installation, Other Services and Training
 - Schedule No. 5: Grand Summary
 - Schedule No. 6: Recommended Spare Parts, Tools and Instruments
 - Schedule No. 7: Day Works (Provisional)
 - Schedule No. 8: Rates for Variations
 - Schedule No. 9: Schedule of Major Items of Constructional Plant
2. The Schedules do not generally give a full description of the plant to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Employer's Requirements and other sections of the Bidding Document and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to cover the full scope as aforesaid, including overheads and profit.
3. If Bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with ITB 7 prior to submitting their bid.
4. Schedule No. 01 & Table 01(a) are the list of the total quantity of items relevant to the project. If the bidder wishes to supply any of the Schedule No. 01/ Table 01(a) item from employer's country, it must be included only in Schedule No. 02. The remaining items which are to be supplied from abroad shall remain only in Schedule No. 01 & Table 01(a). No item shall be included in both schedules.

Pricing

5. The units and rates in figures entered into the Price Schedules should be typewritten or if written by hand, must be in print form. Price Schedules not presented accordingly may be considered nonresponsive. Any alterations necessary due to errors, etc., shall be initialed by the Bidder. As specified in the Bid Data Sheet and Special Conditions of Contract, prices shall be fixed and firm for the duration of the Contract, or prices shall be subject to adjustment in accordance with the corresponding Appendix (Price Adjustment) to the Contract Agreement.
6. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the Bidding Document. For each item, Bidders shall complete each appropriate column in the respective Schedules, giving the price breakdown as indicated in the Schedules. Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in Section 6 (Employer's Requirements) or elsewhere in the Bidding Document.
7. Payments will be made to the Contractor in the currency or currencies indicated under each respective item.

8. When requested by the Employer for the purposes of making payments or part payments, valuing variations or evaluating claims, or for such other purposes as the Employer may reasonably require, the Contractor shall provide the Employer with a breakdown of any composite or lump sum items included in the Schedules.

Taxes and Duties

- 9 Taxes within the Employer's Country: The bid price of the Contractor shall include all direct taxes including corporate income tax, individual income tax, remittance tax and other taxes that may be levied in accordance to the laws and regulations in being as of the date 28 days prior to the closing date for submission of bids in the Employer's country on the Contractor's Equipment, and consumable acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from its responsibility to pay any tax that may be levied in the Employer's country on profits made by it in respect of the Contract.

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LOT A

AUGMENTATION OF MANNAR 220/33 kV GRID SUBSTATION

AUGMENTATION OF NADUKUDA 220/33 kV GRID SUBSTATION

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Lot A

Schedules of Rates and Prices

Schedule No. 1A: Plant and Mandatory Spare Parts Supplied from Abroad for Lot A

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
1.2.1 MANNAR GRID SUBSTATION							
A	1.2.1.1 OUTDOOR SWITCHGEAR						
1	1.2.1.1.1 Extension to the existing 245kV double busbar system						
	3000A, 40kA, 245kV three phase tubular double bus bars with post insulators		1 Sets				
2	1.2.1.1.2 02 Nos. 245kV Transformer bays						
	Three phase busbar disconnecter		4 Nos.				
	Three phase circuit breaker		2 Nos.				
	Single phase current transformers		6 Nos.				
	Single phase surge arresters with leakage current indicators & counters		6 Nos.				
	Neutral current transformer		2 Nos.				
	Set of accessories		2 Lots				
3	1.2.1.1.3 02 Nos. 36kV Transformer Bays						
	Single phase pluggable surge arresters with counters		6 Nos.				
	Neutral current transformer		2 Nos.				
	Set of cable connection between indoor switchgear and outdoor equipment including accessories etc.		2 Lots				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
4	1.2.1.1.4 01 No. of 36kV Auxiliary transformer bay						
	Set of cable connections between Power transformer and auxiliary transformer including accessories etc.		1 Lot				
	Connections, connectors, clamps and access ladders etc. including connections to auxiliary transformer 36kV bushings.		1 Lot				
	Set of cable connection between indoor LVAC switchgear and LV cable box including set of connections, connectors, clamps, structures		1 Lot				
5	1.2.1.1.5 02 Nos. of 36kV Earthing transformer bays						
	Set of cable connections between Power transformer and Earthing transformer including accessories etc.		2 Lots				
	Connections, connectors, clamps, and access ladders etc. including connections to transformer 36kV bushings		2 Lots				
	Outdoor equipment including set of connections, connectors, clamps, structures, access ladders etc. to connect NCTs		2 Lots				
6	1.2.1.1.6 12 Nos. 36kV Generator Feeder Bays						
	Single phase surge arresters with counters		36 Nos.				
	Set of bay connections, connectors, and clamps etc.		12 Lots				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Set of cable connection between indoor switchgear and outdoor equipment including accessories etc.		12 Lots				
B	1.2.1.2 SF₆ INSULATED INDOOR SWITCHGEAR						
1	1.2.1.2.1 02 Nos. 36kV Transformer bays						
	Three phase busbars		2 Sets				
	Three phase busbar disconnector with earth switch		2 Nos.				
	Three phase circuit breaker		2 Nos.				
	Single phase current transformers		6 Nos.				
	Single phase VT		6 Nos.				
	Cable termination and accessories specified		2 Lots				
	Set of miscellaneous items		2 Lots				
2	1.2.1.2.2 12 Nos. 36kV Generator Feeder bays						
	Three phase busbars		12 Sets				
	Three phase busbar disconnector with earth switch		12 Nos.				
	Three phase circuit breaker		12 Nos.				
	Single phase current transformers		36 Nos.				
	Single phase VT		36 Nos.				
	Cable termination and accessories specified		12 Lots				
	Set of miscellaneous items		12 Lots				
3	1.2.1.2.3 01 No. 36kV Bus Section bay						
	Three phase busbars		1 Set				
	Three phase disconnector with earth switch		2 Nos.				
	Three phase circuit breaker		1 No.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Single phase current transformers		3 Nos.				
	Single phase VT		6 Nos.				
	Set of miscellaneous items		1 Lots				
4	1.2.1.2.4 01 No. 36kV Interconnection panel / Bus Section bay between existing 36kV GIS and new 36kV GIS						
	Three phase busbars		1 Set				
	Three phase disconnecter with earth switch		2 Nos.				
	Three phase circuit breaker		1 No.				
	Single phase current transformers		3 Nos.				
	Accessories required for interconnection arrangement between existing 36kV GIS and new 36kV GIS.		1 Lot				
	Complete set of miscellaneous items		1 Lot				
C	1.2.1.3 ADDITIONS / MODIFICATIONS TO THE EXISTING LVAC SWITCH BOARDS						
1	Modifications to the existing LVAC switch boards to accommodate new Aux. transformer		1 Lot				
2	1.2.1.3.1 Additions and modifications to the existing 400V distribution panel		1 Lot				
D	1.2.1.4 ADDITIONS / MODIFICATIONS TO DC DISTRIBUTION BOARDS						
	Addition of new DC distribution panel to the existing 220V DC system to accommodate the load of proposed augmentation works including modifications to the existing DC distribution board.		1 Lot				
E	1.2.1.5 PROTECTION, METERING, MONITORING AND CONTROL						

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
1	1.2.1.5.1 Additions / Modifications to the existing Substation Automation System		1 Lot				
	Engineering Workstation (EWS) with two 27' Monitors		1 No.				
	Industrial type layer 2 Manageable Gigabit Ethernet Switch and Ethernet connections		1 No.				
	Next Generation Firewall		1 No.				
	Industrial type layer 2 Manageable Ethernet Switch and connections for two power transformer bays and two 33 kV bus sections		4 Nos.				
	1.2.1.5.2 Additions / Modifications to the existing Digital Disturbance Recorder		1 Lot				
3	1.2.1.5.3 245kV Protection & Control facilities						
	1.2.1.5.3.1 245kV Transformer bays		2 Nos.				
	1.2.1.5.3.2 Extension to the 245kV Busbar protection and Bus Coupler bay protections and Control system		1 Lot				
3	1.2.1.5.4 36kV Protection & Control facilities						
	1.2.1.5.4.1 36kV Transformer bays		2 Nos.				
	1.2.1.5.4.2 36kV Bus Section bay		2 Nos.				
	1.2.1.5.4.3 36kV Generator Feeder bays		12 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	1.2.1.5.4.4 Gas Pressure Monitoring System		1 Lot				
	1.2.1.5.4.5 Station Alarm and Annunciation		1 Lot				
4	1.2.1.5.5 Energy Metering Panels		1 Lot				
F	1.2.1.6 ADDITIONS AND MODIFICATIONS TO THE EXISTING COMMUNICATION EQUIPMENT AND SCADA GATEWAYS/RTUs						
	1.2.1.6.1 Fiber Optic Multiplexer at Mannar						
	Optical interface module of type SAMO5 with SFPs and patch cables for Nadukuda and New Anuradhapura directions		1 No				
	Optical patch cables		2 Nos				
	Small Form-factor Pluggable (SFP) optical transceiver modules (with DDM support) of 1.25Gbit/s		2 Nos				
	1.2.1.6.2 Required SCADA for Mannar GSS		1 Lot				
	1.2.1.6.3 Modifications Required at New Anuradhapura GSS						
	Optical interface module of type SAMO5		1 No.				
	Teleprotection interface modules of type TEPI1 (for the direction of Mannar GSS)		3 Nos				
	Teleprotection interface modules of type OPIC1 (for the direction of Mannar GSS)		1 No.				
	Small Form-factor Pluggable (SFP) optical transceiver modules (U 1.2) and 02 nos. of patch cable 10m LC/PC-FC/PC		2 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Small Form-factor Pluggable (SFP) optical transceiver modules (with DDM support) of 1.25Gbit/s and 02 nos. Optical patch cables		2 Nos.				
G	1.2.1.7 ADDITIONS AND MODIFICATIONS OF SUBSTATION EARTHING SYSTEM		1 Lot				
H	1.2.1.8 ADDITIONS AND MODIFICATIONS OF LIGHTNING PROTECTION SYSTEM		1 Lot				
I	1.2.1.9 ADDITIONS AND MODIFICATIONS OF GROUNDING SYSTEM		1 Lot				
J	1.2.1.10 POWER AND CONTROL CABLES						
1	1.2.1.10.1 36kV Power Cables and Terminations						
	Between Power transformers and 36kV indoor switchgear		2 Lots				
	Between Power transformer and Auxiliary Transformer.		1 Lot				
	Between Power Transformers and Earthing Transformers.		2 Lots				
	From switchgear panels to outdoor gantries for Generator feeders.		12 Lots				
2	1.2.1.10.2 All LVAC power cables and terminations.		1 Lot				
3	1.2.1.10.3 All DC power and control cables and terminations.		1 Lot				
4	1.2.1.10.4 All cables required for		1 Lot				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Protection, Control, Instrumentation, Communication, SCADA and termination.						
5	1.2.1.10.5 All cables required for station lighting, small power, fire protection, ventilation equipment.		1 Lot				
K	1.2.1.11 TRANSFORMERS						
	Power Transformer		2 Nos.				
	Earthing Transformer		2 Nos.				
	Auxiliary Transformer		1 No.				
L	1.2.1.12 WATER SPRAY SYSTEM FOR TRANSFORMERS		1 Lot				
M	1.2.1.13 SUPPORTING STRUCTURES INCLUDING GANTRIES		1 Lot				
N	1.2.1.14 MARSHALLING KIOSK		1 Lot				
O	1.2.1.15 MISCELLANEOUS WORKS		1 Lot				
TOTAL Column (7) to be carried forward to Summary table for Schedule 1A							

Name of Bidder _____

Signature of Bidder _____

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
1.2.2 NADUKUDA GRID SUBSTATION							
A	1.2.2.1 OUTDOOR SWITCHGEAR						
1	1.2.2.1.1 01 Nos. 245kV Transformer bay						
	Neutral current transformer		1 No.				
	Set of connections and accessories		1 Lot				
5	1.2.2.1.2 01 Nos. 36kV Transformer Bays						
	Single phase pluggable surge arresters with counters		3 Nos.				
	Neutral current transformer		1 No.				
	Set of cable connections between Power transformer and Earthing transformer		1 Lot				
	Set of cable connection between indoor switchgear and Power transformer		1 Lot				
	Connections, connectors, clamps, and access ladders etc. including connections to Earthing Transformer 36kV bushings.		1 Lot				
	Set of connections, connectors etc. to connect Earthing transformer and Neutral Current Transformer		1 Lot				
B	1.2.2.2 MODIFICATION OF LVAC SWITCH BOARDS						
	Modification of existing 400V AC main switchboard and distribution panel		1 Lot				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
C	1.2.2.3 MODIFICATION OF BATTERIES, CHARGERS, DISTRIBUTION BOARDS & INVERTER EQUIPMENT						
	Modification of existing 220V DC main switchboard		1 Lot				
D	1.2.2.4 PROTECTION, METERING, MONITORING AND CONTROL						
1	1.2.2.4.1 Additions / Modifications of Substation Automation System		1 item				
	Industrial type layer 2 Manageable Gigabit Ethernet Switch and Ethernet connections		1 No.				
	Next Generation Firewall		1 No.				
	Industrial type layer 2 Manageable Ethernet Switch and connections for power transformer bay		1 No.				
2	1.2.2.4.2 Protection & Control facilities						
	1.2.2.4.2.1 Transformer bay						
	(a) AVR panel		1 No.				
	(b) Protection and Control panel with IEDs		1 Lot				
F	1.2.2.5 COMMUNICATION EQUIPMENT AND SCADA GATEWAYS/RTUs						
1	1.2.2.5.1 Fiber Optic Multiplexer at Nadukuda GSS						
	Optical interface module of type SAMO5 with SFP and patch cable for Mannar GSS direction		1 No				
	Ethernet Interface module with minimum 04 numbers of Ethernet ports with L2- switching, also configurable for VLAN and L3- routing facility (10/100 Mbps) of type EPSI1		1 No				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	FXS interface module of type LESU1		1 No				
	Small Form-factor Pluggable (SFP) optical transceiver modules (with DDM support) of 1.25Gbit/s and 02 nos. Optical patch cables		2 Nos				
2	1.2.2.5.2 Required SCADA for Nadukuda GSS		1 Lot				
G	1.2.2.6 SUBSTATION EARTHING SYSTEM		1 Lot				
H	1.2.2.7 LIGHTNING PROTECTION SYSTEM		1 Lot				
I	1.2.2.8 GROUNDING SYSTEM		1 Lot				
J	1.2.2.9 POWER AND CONTROL CABLES						
1	1.2.2.9.1 245kV Power Cables and Terminations						
	Between Power transformer and 245kV indoor switchgear		1 Lot				
	Cable termination for above mentioned cable circuits to be supplied and terminated at power transformer and 245kV GIS bays		1 Lot				
2	1.2.2.9.2 36kV Power Cables and Terminations						
	Between Power transformer and 36kV indoor switchgear		1 Lot				
	Between Power transformer and Earthing transformer		1 Lot				
3	1.2.2.9.3 All LVAC power cables and terminations.		1 Lot				
4	1.2.2.9.4 All DC power and control		1 Lot				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	cables and terminations.						
5	1.2.2.9.5 All cables required for Protection, Control, Instrumentation, Communication, SCADA and termination.		1 Lot				
6	1.2.2.9.6 All cables required for station lighting, small power, fire protection, ventilation equipment.		1 Lot				
K	1.2.2.10 TRANSFORMERS						
	Power Transformer		1 No.				
	Earthing Transformer		1 No.				
L	1.2.2.11 WATER SPRAY SYSTEM FOR TRANSFORMERS		1 Lot				
M	1.2.2.12 SUPPORTING STRUCTURES INCLUDING GANTRIES		1 Lot				
N	1.2.2.13 MISCELLANEOUS WORKS		1 Lot				
TOTAL Column (7) to be carried forward to Summary table for Schedule 1A							

Name of Bidder _____

Signature of Bidder _____

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Table 1A (a): Mandatory Spare Parts, Tools and Instruments for Lot A

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
MANDATORY SPARE PARTS, TOOLS AND INSTRUMENTS							
1.2.1.16, 1.2.1.17, 1.2.2.14, 1.2.2.15							
MANNAR 220/33 kV GRID SUBSTATION & NADUKUDA 220/33 kV GRID SUBSTATION							
A	OUTDOOR SWITCHGEAR						
A.1	245kV Transformer Bay						
	245kV, 40kA CT with cores:- 400/200/1 A(Class 5P20), 400/200/1 A(Class 5P20), 400/200/1 A (Class 0.2), 3000/1 A (Class 5P20) with clamps		1 No.				
	192kV, 10kA Class 2 Surge arrestors with leakage current indicators and counters		2 No.				
	NCT with cores:- 400/1 A (5P20), 400/1 A (5P20)		1 No.				
	NCT with cores:- 200/1 A (5P20), 200/1 A (5P20)		1 No.				
	245 kV Circuit Breaker opening coil		1 No.				
	245 kV Circuit Breaker closing coil		1 No.				
A.2	36 kV Transformer Bays						
	36kV, 10 kA, Class 2 Pluggable Surge arresters with counters		2 No.				
	NCT with cores:- 800/1A (5P20), 800/1A (5P20)		1 No.				
A.3	36 kV Generator Feeder Bays						
	36 kV, 10kA, Class 2 Surge arresters with counters		2 Nos.				
B	SF₆ INSULATED INDOOR SWITCHGEAR						
B.1	36 kV Transformer Bays						
	36 kV Circuit Breaker opening coil		1 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	36 kV Circuit Breaker closing coil		1 Nos.				
B.2	36 kV incoming Generator Feeder Bay						
	36 kV Circuit Breaker opening coil		1 Nos.				
	36 kV Circuit Breaker closing coil		1 Nos.				
C	Control & Protection						
	Transformer Main Protection IED (220 kV/ 33kV)		1 No.				
	Bay Controller & Back Up Protection IED 220 kV		1 No.				
	Bay Controller & Back Up Protection IED 33 kV		2 Nos.				
	Bus Bar bay Unit		1 No.				
	Digital Measurement Unit		2 Nos.				
	Trip Lockout Relays		4 Nos.				
	TCS Relays		6 Nos.				
	Ethernet Switch		1 No.				
D	Substation Automation System (as specified in Clause: 5.24 of Chapter 5, Technical Specification of Volume 5 of 8 of the bidding document)						
	Rack Type Industrial PC		1 Nos.				
	27" Monitors		2 Nos.				
	GPS Time Server with Antenna		2 Nos.				
	Ethernet Switch		2 Nos.				
	Following Software with license shall be provided for Siemens SIMATIC WinCC Ver 7.5 SP2 with latest update and SICAM SCC V9.x latest version with latest hotfix.						
	SIMATIC NET- Industrial Ethernet SOFTNET-S7 Basis		2 Nos.				
	SIMATIC NET- Industrial Ethernet SOFTNET-S7 Lean		2 Nos.				
	SIMATIC HMI- WinCC RC (8192) version 7.5		2 Nos.				
	SIMATIC HMI- WinCC Redundancy version 7.5		2 Nos.				
	SIMATIC HMI - WinCC Archives (1500) version 7.5		2 Nos.				
	SICAM- SCC Runtime version 9		2 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	SICAM- SCC Topological Coloring version 9		2 Nos.				
	SICAM- SCC Network Management version 9		2 Nos.				
	SICAM- SCC Configuration version 9		2 Nos.				
	SICAM- SCC IEC61850 data import version 9		2 Nos.				
E	Miscellaneous						
	SF6 Gas filling/handling kit suitable for the offered GIS model		1 Nos.				
	SF6 Pressure gauge compatible to the offered GIS		3 Nos.				
	Power cable termination Kits 33 kV bay (GIS End)		2 Nos.				
	Dehydrating Breathers for 220/33kV 63 MVA Power Transformers (Main Tank)		1 No.				
	Dehydrating Breathers for 220/33kV 63 MVA Power Transformers (OLTC)		1 No.				
	Set of Dehydrating Breathers for 33kV, 800A Earthing Transformers		2 No.				
F	Communication Equipment						
	Optical Multiplexer						
	Power Supply Module		1 No.				
	CPU Module		1 No.				
	Optical Interface Module		2 Nos.				
	FXS Interface module		2 Nos.				
	Data (V.24/V.28) Interface module		1 No.				
	Differential Protection Interface module		2 Nos.				
	Tele protection Interface module (with connection cables)		10 Nos.				
	Ethernet Interface module (L2 & L3)		2 No				
	Ethernet Interface module (L2 only)		2 Nos.				
	Connection Cable set for each module		1 Lot				
	SFP L 1.1		2 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Gateway						
	Two numbers (02 Nos) of each Interface modules with cables and accessories for Gateway.		1 Lot				
	Gateway configuration and maintenance software installed in a Local Craft Terminal (Utility grade semi rugged).		2 Nos.				
	Complete software and licenses for gateway configuration and maintenance (including dongles if any)		1 No				
G	Tools and Instruments						
1	Optical Multiplexer configuration software installed in a Local Craft Terminal (Utility grade semi rugged with webcam)		2 Nos.				
2	OTDR Both 1310nm &1550nm wavelengths shall be supported, with a measurable dynamic range not less than 45dB (160km), along with the feature enabled VFL (fault locator), optical power meter function, power source function and built-in fiber optic microscope of not less than x 250 zoom		1 No.				
3	Optical power meter set (meter and generator)		1 No.				
4	Fiber Optic Splicing Machine (Single Mode and Multimode)		1 No.				
5	Fiber termination kit (multimode) with terminations.		1 No.				
6	Network cable (Cat5e/Cat6) bandwidth tester.		1 No.				
7	Ferrule Printer		1 No.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
8	DC Power Supply (220 / 110 VDC)		1 No.				
TOTAL Column (7) to be carried forward to Summary table for Schedule 1A							

Name of Bidder _____

Signature of Bidder _____

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

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Summary Table for Schedule No. 1A: Plant and Mandatory Spare Parts Supplied from Abroad for Lot A

Item	Description	Total Price
(1)	(2)	Foreign Currency (3)
(i)	Mannar 220/33 kV Grid Substation	
(ii)	Nadukuda 220/33 kV Grid Substation	
(iii)	Mandatory Spare Parts, Tools and Instruments	
Total Column 3 to be carried forward to schedule No. 5A- Grand Summary for Lot A		

Name of Bidder _____

Signature of Bidder _____

Country of Origin Declaration Form

[illegible]

Name of Bidder

Signature of Bidder

Schedule No. 2A: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country for Lot A

Item	Description	Quantity	Unit Price ^a		Total EXW Price ^a	Sales and other Taxes
			Local Currency	EXW Price		
1	2	3	4	5	6 = 3 x 5	7
TOTAL Column 6 to be carried forward to schedule No. 5A- Grand Summary for Lot A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.

^b Column 5 EXW Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items.

Schedule No. 3A: Design Services for Lot A

Item	Description	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
A	MANNAR GRID SUBSTATION					
a)	Electrical works					
	Design and Liaison of Electrical Works	1 Lot				
	Drawings and Documentation required for the Electrical Works	1 Lot				
b)	Mechanical Works					
	Design and Liaison of Mechanical Works	1 Lot				
	Drawings and Documentation required for the Mechanical Works	1 Lot				
c)	Civil Works					
	Design and Liaison of Civil Works	1 Lot				
	Drawings and Documentation required for the Civil Works	1 Lot				
B	NADUKUDA GRID SUBSTATION					
a)	Electrical works					
	Design and Liaison of Electrical Works	1 Lot				
	Drawings and Documentation required for the Electrical Works	1 Lot				
b)	Mechanical Works					
	Design and Liaison of Mechanical Works	1 Lot				
	Drawings and Documentation required for the Mechanical Works	1 Lot				
c)	Civil Works					
	Design and Liaison of Civil Works	1 Lot				

Item	Description	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
	Drawings and Documentation required for the Civil Works	1 Lot				
TOTAL Columns 6 and 7 to be carried forward to schedule No. 5A- Grand Summary for Lot A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.

Schedule No. 4A – CIVIL WORKS, INSTALLATION AND OTHER SERVICES FOR LOT A

4A.1 CIVIL WORKS (1.3.1)

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
A1	1.3.1.1 MANNAR GRID SUBSTATION					
1	1.3.1.1.1 Preliminary Works					
	Site Survey	1 Lot				
	Sub Soil Investigations	1 Lot				
2	1.3.1.1.2 Site Clearing					
	Cutting and removing trees, shrubs & boulders	1 Lot				
	Demolishing existing constructions	1 Lot				
3	1.3.1.1.3 Site formation and up keeping					
	Cutting & filling earth	1 Lot				
	Rock Excavation	1 Lot				
	Rock volume < 50m ³	50m ³				
	50m ³ <Rock volume < 200m ³	150m ³				
	200m ³ <Rock volume < 500m ³	300m ³				
	500m ³ <Rock volume < 1000m ³	500m ³				
	Earth retaining structures	1 Lot				
	Landscaping	1 Lot				
	Surface Chipping	1 Lot				
4	1.3.1.1.4 Cable Trenches & Ducts					
5	1.3.1.1.5 Foundations					
	For take-off structures & switchgear	1 Lot				
	For Main Power Transformers with firewall	1 Lot				
	For Auxiliary Transformers	1 Lot				
	For Earthing Transformers	1 Lot				
6	1.3.1.1.6 Lightning protection system					
	Extensions and modifications	1 Lot				
7	1.3.1.1.7 Water Supply & Drainage System					
	Surface water drainage system	1 Lot				
8	1.3.1.1.8 Construction & Maintenance of Roads					
	Extension of existing access road	1 Item				
9	1.3.1.1.9 Fence, Gates and Boundary Walls					
	Chain link fence extension	1 Lot				

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
10	1.3.1.1.10 External Lighting & Small Power Supply Services	1 Lot				
11	1.3.1.1.11 Construction of Control & Other Buildings					
	Required modifications to the Control building at Mannar	1 Lot				
	Temporary Site Office at Mannar	1 Lot				
	Temporary Works (Stores, access, contractor's offices etc)	1 Lot				
12	1.3.1.1.12 Miscellaneous Work	1 Lot				
TOTAL Columns 6 & 7 to be carried forward to Summary table for Schedule 4A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
A2	1.3.1.2 NADUKUDA GRID SUBSTATION					
1	1.3.1.2.1 Cable Trenches & Ducts	1 Lot				
2	1.3.1.2.2 Foundations					
	For take-off structures & switchgear	1 Lot				
	For Main Power Transformer with firewall	1 Lot				
	For Earthing Transformers	1 Lot				
3	1.3.1.2.3 Lightning protection system	1 Lot				
4	1.3.1.2.4 Construction of Control & Other Buildings					
	Required modifications of Control building at Nadukuda	1 Lot				
	Temporary Site Office at Nadukuda	1 Lot				
	Temporary Works (Stores, access, contractor's offices etc)	1 Lot				
5	1.3.1.2.5 External Lighting & Small Power Supply Services	1 Lot				
6	1.3.1.2.6 Miscellaneous Works	1 Lot				
TOTAL Columns 6 & 7 to be carried forward to Summary table for Schedule 4A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

4A.2 INSTALLATION (1.3.2)

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
B	1.3.2 INSTALLATION Erection, Installation and commissioning of structures, Plant & Equipment specified in the clause 1.2 of Employer's Requirements					
	Mannar Grid Substation	Item				
	Nadukuda Grid Substation	Item				
TOTAL Columns 6 & 7 to be carried forward to Summary table for Schedule 4A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

4A.3 OTHER SERVICE (1.3.3)

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
C	1.3.3 OTHER SERVICES					
1	1.3.3.1 Transport					
	Four Wheel Drive SUV	02 Nos				
	Running and maintenance cost	168000 km				
	Four Wheel Drive Double Cabs	03 Nos				
	Running and maintenance cost	216000 km				
	Two (02) nos. of Four Wheel Drive SUV for 24 months on Hiring basis with running and maintenance*	168000 km				
	Three (03) nos. of Four Wheel Drive Double Cabs for 24 months on Hiring basis with running and maintenance*	216000 km				
2	1.3.3.2 Engineers Living Accommodation	1 Lot				
4	Prices for the Environmental mitigation measures according to clause 1.1.9 of Part A - Scope of Works, Section 6 - Employer's Requirements:	Item				
TOTAL Columns 6 & 7 to be carried forward to Summary table for Schedule 4A						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

* This will be utilized as per the employer's instructions.

Summary Table for Schedule No. 4A: Civil works, Installation and other services for Lot A

(1)	(2)	Total Price	
		Local Currency (3)	Foreign Currency (4)
4A.1	Civil Works		
A1	Mannar 220/33 kV Grid Substation		
A2	Nadukuda 220/33 kV Grid Substation		
4A.2	Installation		
4A.3	Other Services		
Total Column 3 & 4 to be carried forward to schedule No. 5A- Grand Summary for Lot A			

Name of Bidder _____

Signature of Bidder _____

Schedule No. 5A: Grand Summary for Lot A

Schedule No.	Title	Total Price ^a	
		Foreign	Local
1A	Plant and Mandatory Spare Parts Supplied from Abroad ^b (Summary Table for Schedule No. 1A)		
2A	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country ^b		
3A	Design Services		
4A	Civil Works, Installation and Other Services (Summary Table for Schedule No. 4A)		
Grand Total to be carried forward to Schedule No. 5, Grand Summary			

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

^b Taxes and/or duties from Schedules 1 and 2 may be added to the contract price in accordance with GCC 14 (Taxes and Duties) but excluded from bid evaluation in accordance with ITB 39.2.

LOT B

AUGMENTATION OF EMBILIPITIYA 132/33 kV GRID SUBSTATION

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Lot B

Schedules of Rates and Prices

Schedule No. 1B: Plant and Mandatory Spare Parts Supplied from Abroad for Lot B

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
2.2.1 EMBILIPITIYA GRID SUBSTATION							
A	2.2.1.1 Outdoor Switchgear						
1	2.2.1.1.1 02 Nos. 36kV Transformer Bays						
	Set of connections, connectors, clamps, access ladders, structures, cable sealing end or terminal arrangement suitable to connect the 36kV cable from 36kV GIS		2 Lots				
	Complete set of miscellaneous items		2 Lots				
2	2.2.1.1.2 08 Nos. 36kV Line Feeder Bays						
	Single phase surge arresters with counters		24 Nos.				
	Set of accessories		8 Lots				
	Set of cable connection between indoor switchgear and outdoor equipment		8 Lots				
3	2.2.1.1.3 02 Nos. 36kV Generator Feeder Bays						
	Single phase surge arresters with counters		6 Nos.				
	Set of accessories		2 Lots				
	Set of cable connection between indoor switchgear and outdoor equipment		2 Lots				
B	2.2.1.2 SF₆ INSULATED INDOOR SWITCHGEAR						
1	2.2.1.2.1 02 Nos. 36kV Transformer bays						
	Three phase busbars		2 Sets				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	Three phase busbar disconnecter with earth switch		2 Nos.				
	Three phase circuit breaker		2 Nos.				
	Single phase current transformers		6 Nos.				
	Single phase VT		6 Nos.				
	Cable termination and accessories specified		2 Lots				
	Set of miscellaneous items		2 Lots				
2	2.2.1.2.2 08 Nos. 36kV Line Feeder bays						
	Three phase busbars		8 Sets				
	Three phase busbar disconnecter with earth switch		8 Nos.				
	Three phase circuit breaker		8 Nos.				
	Single phase current transformers		24 Nos.				
	Single phase VT		24 Nos.				
	Cable termination and accessories specified		8 Lots				
	Set of miscellaneous items		8 Lots				
3	2.2.1.2.3 02 Nos. 36kV Generator Feeder bays						
	Three phase busbars		2 Sets				
	Three phase busbar disconnecter with earth switch		2 Nos.				
	Three phase circuit breaker		2 Nos.				
	Single phase current transformers		6 Nos.				
	Single phase VT		6 Nos.				
	Cable termination and accessories specified		2 Lots				
	Set of miscellaneous items		2 Lots				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
4	2.2.1.2.4 01 No. 36kV Bus Section bay						
	Three phase busbars		1 Set				
	Three phase circuit breaker		1 No.				
	Three phase disconnecter with earth switch		2 Nos.				
	Single phase current transformers		3 Nos.				
	Single phase VT		6 Nos.				
	Set of miscellaneous items		1 Lots				
C	2.2.1.3 LVAC SWITCH BOARDS (This will be utilized as per the instructions of the employer)						
1	2.2.1.3.1 400V Main switchboard						
	Busbars (3 Phases, Neutral and Earth)		1 Set				
	4pole MCCBs		9 Nos.				
	Equipment required for interlocking and automatic switch over		1 Set				
	Indicator lamps		3 Sets				
	Ammeters		3 Nos.				
	Voltmeters		3 Nos.				
2	2.2.1.3.2 400V Distribution Panel						
D	2.2.1.4 ADDITIONS / MODIFICATIONS OF DC DISTRIBUTION BOARDS & INVERTER EQUIPMENT						
1	Modification of 110V DC main switch board		1 Lot				
2	2.2.1.4.1 Inverter System for Substation Automation System						
	Inverters with automatic load transfer facility		2 Nos.				
3	2.2.1.4.2 Roof-Top Solar PV System						
			1 Lot				
E	2.2.1.5 PROTECTION, METERING, MONITORING AND CONTROL						
1	2.2.1.5.1 Substation Automation System						
			1 Lot				
2	2.2.1.5.2 36kV Protection & Control facilities						
	2.2.1.5.2.1 36kV Line Feeder bays		8 Nos.				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency Portion	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
	2.2.1.5.2.2 36kV Generator Feeder bays		2 Nos				
	2.2.1.5.2.3 36kV Transformer bays		2 Nos				
	2.2.1.5.2.4 36kV Bus Section bay		1 No.				
	2.2.1.5.2.5 Auxiliary LVAC Control		1 Lot				
	2.2.1.5.2.6 Gas Pressure Monitoring System		1 Lot				
F	2.2.1.6 COMMUNICATION EQUIPMENT AND SCADA GATEWAYS / RTUS						
	2.2.1.6.1 Modification to Fiber Optic Multiplexer at Embilipitiya GSS		1 Lot				
	2.2.1.6.2 Required SCADA for Embilipitiya GSS		1 Lot				
G	2.2.1.7 ADDITIONS AND MODIFICATIONS OF SUBSTATION EARTHING		1 Lot				
H	2.2.1.8 ADDITIONS AND MODIFICATIONS OF LIGHTING PROTECTION SYSTEM		1 Lot				
I	2.2.1.9 ADDITIONS AND MODIFICATIONS OF GROUNDING SYSTEM		1 Lot				
J	2.2.1.10 POWER AND CONTROL CABLES						
1	2.2.1.10.1 36kV Power cables and terminations						
	Between power transformer and 36kV indoor switchgear		2 Lots				
	From switchgear panels to outdoor gantries for Line Feeders.		8 Lots				
	From Switchgear panels to outdoor gantries for Generator feeders.		2 Lots				

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
2	2.2.1.10.2 All LVAC power cables and terminations.		1 Lot				
3	2.2.1.10.3 All DC power and control cables and terminations.		1 Lot				
4	2.2.1.10.4 All cables required for Protection, Control, Instrumentation, Communication, SCADA and termination.		1 Lot				
5	2.2.1.10.5 All cables required for station lighting, small power, fire protection, ventilation equipment.		1 Lot				
K	2.2.1.11 DIESEL GENERATOR SYSTEM		1 Lot				
L	2.2.1.12 SUPPORTING STRUCTURES INCLUDING GANTRIES		1 Lot				
M	2.2.1.13 MISCELLANEOUS WORKS		1 Lot				
TOTAL Column 7 to be carried forward to Summary table for Schedule No. 1B							

Name of Bidder _____

Signature of Bidder _____

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Table 1B (a): Mandatory Spare Parts, Tools and Instruments for Lot B

Item	Description ¹	Country of Origin	Quantity	Unit Price ^a		Total Price ^a	Taxes and Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8
MANDATORY SPARE PARTS, TOOLS AND INSTRUMENTS							
2.2.1.14, 2.2.1.15							
	EMBILIPITIYA 132/33 kV GRID SUBSTATION						
A	OUTDOOR SWITCHGEAR						
A.1	36 kV Feeder bays for outgoing lines						
	36kV, 10kA, Class 2 Surge arresters with counters		2 Nos.				
A.2	36 kV Feeder bays for incoming generations						
	36kV, 10kA, Class 2 Surge arresters with counters		2 Nos.				
B	SF ₆ INSULATED INDOOR SWITCHGEAR						
	36kV Circuit Breaker opening coils		2 Nos.				
	36kV Circuit Breaker closing coils		2 Nos.				
C	CONTROL AND PROTECTION						
	Bay Controller & Back Up Protection IED 33 kV		3 Nos.				
	Digital Measurement Unit		5 Nos.				
	Trip Lockout Relays		4 Nos.				
	TCS Relays		6 Nos.				
	Ethernet switch		2 Nos.				
D	MISCELLANEOUS						
	36kV Power cable termination kit (GIS End)		2 Nos.				
	SF6 Pressure gauge compatible to offered GIS		3 Nos.				
TOTAL Column 7 to be carried forward to Summary table for Schedule No. 1B							

Name of Bidder

Signature of Bidder

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Summary Table for Schedule No. 1B: Plant and Mandatory Spare Parts Supplied from Abroad for Lot B

Item	Description	Total Price
(1)	(2)	Foreign Currency (3)
(i)	Embilipitiya 132/33 kV Grid Substation	
(iii)	Mandatory Spare Parts, Tools and Instruments	
Total Column 3 to be carried forward to schedule No. 5B- Grand Summary for Lot B		

Name of Bidder _____

Signature of Bidder _____

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Schedule No. 2B: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country for Lot B

Item	Description	Quantity	Unit Price ^a		Total EXW Price ^a	Sales and other Taxes
			Local Currency	EXW Price		
1	2	3	4	5	6 = 3 x 5	7
TOTAL Column 6 to be carried forward to schedule No. 5B- Grand Summary for Lot B						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.

^b Column 5 EXW Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items.

Schedule No. 3B: Design Services

Item	Description	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
A	EMBILIPITIYA GRID SUBSTATION					
a)	Electrical works					
	Design and Liaison of Electrical Works	1 Lot				
	Drawings and Documentation required for the Electrical Works	1 Lot				
b)	Mechanical Works					
	Design and Liaison of Mechanical Works	1 Lot				
	Drawings and Documentation required for the Mechanical Works	1 Lot				
c)	Civil Works					
	Design and Liaison of Civil Works	1 Lot				
	Drawings and Documentation required for the Civil Works	1 Lot				
TOTAL Columns 6 and 7 to be carried forward to schedule No. 5B- Grand Summary for Lot B						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.

Schedule No. 4B - Civil Works, Installation and Other Services**4B.1 CIVIL WORKS (2.3.1)**

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion (Currency)
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
A1	2.3.1.1 EMBILIPITIYA GRID SUBSTATION					
1	2.3.1.1.1 Preliminary work					
	Site Survey	1 Item				-
	Sub soil investigation	1 Item				-
2	2.3.1.1.2 Site Clearing					
	Removing existing concrete/ masonry foundations and boulders	1 Item				-
	Removing existing 02 Nos. of outdoor gantries of 36kV Feeders	1 Item				
	Removing of portion of existing Control Building and Wash Room	1 Item				
	Removing and Disposal of existing 36kV Indoor Air Insulated Switchgears and existing buried power cables	1 Item				
	Removing existing chain link fence as necessary for the scope of the works.	1 Item				
	Any other removals required for the execution of the contract.	1 Item				
3	2.3.1.1.3 Site formation & up keeping					
	Cutting & filling earth	1 Item				-
	Rock Excavation	1 Item				-
	Rock Volume <50 m ³	50 m3				-
	50 m3 <Rock Volume <200 m3	150 m3				-
	200 m3 <Rock Volume <500 m3	300 m3				-
	500 m3 <Rock Volume <1000 m3	500 m3				-
	Earth retaining structure	1 Item				-
	Anti-Termite soil treatment	1 Item				-
	Surface chipping	1 Item				-
4	2.3.1.1.4 Cable trenches & Ducts					
5	2.3.1.1.5 Foundations					
	For take-off structures & Switchgears	1 Item				-
6	2.3.1.1.6 Lightning protection system					
		1 Item				

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6=3 X 4	7=3 X 5
7	2.3.1.1.7 Water Supply & Drainage System					-
	Water supply system	1 Item				
	Waste water & Sewerage system	1 Item				
	Surface water drainage system	1 Item				
8	2.3.1.1.8 Construction & Maintenance of Roads					
	Access road	1 Item				-
9	2.3.1.1.9 Fence , Gates and Boundary Walls					
	Chain-link fence	1 Item				-
10	2.3.1.1.10 External Lighting & small power supply services	1 Item				
11	2.3.1.1.11 Construction of Control & Other Buildings					
	Control Building at Embilipitiya GSS					
	- Sub Structures	01 Lot				
	- Super Structures (Structure frame and walls)	01 Lot				
	- Doors and windows	01 Lot				
	- Roof	01 Lot				
	- RCC ceiling Slab	01 Lot				
	- Floor and Tranches	01 Lot				
	- Finishes and fitting	01 Lot				
	- Curtaining and furniture for control building	01 Lot				
	Temporary site office at Embilipitiya	01 Item				
	Temporary works (Stores, access, Contractor's offices etc.)	01 Item				
	House for Diesel Generator	01 Item				
12	2.3.1.1.12 Construction of building Services					
	Air conditioning & ventilation system	01 Item				
	Fire protection	01 Item				

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
	Internal Lighting & small power supply services	1 Item				
14	2.3.1.1.13 Miscellaneous Work	1 Item				
TOTAL Column 6 & 7 to be carried forward to Summary table for Schedule 4B						

Name of Bidder _____

Signature of Bidder _____

^a Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

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4B.2 INSTALLATION (2.3.2)

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
B	2.3.2 INSTALLATION Erection, Installation and commissioning of structures, Plant & Equipment specified in the clause 2.2 of Employer's Requirements					
	Embilipitiya Grid Substation	Item				
TOTAL Column 6 & 7 to be carried forward to Summary table for Schedule 4B						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

4B.3 OTHER SERVICE (1.3.3)

Item	Description ¹	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
C	2.3.3 OTHER SERVICES					
1	2.3.3.1 Engineers Living Accommodation	1 Lot				
D	2.3.4 TRAINING					
1	Training Module given in 14.2.6: Substation Automation by a competent person from OEM.	1 Lot				
	Course fee					
	Other Cost					
2	Prices for the Environmental mitigation measures according to clause 1.1.9 of Part A - Scope of Works, Section 6 - Employer's Requirements:	Item				
TOTAL Columns 6 & 7 to be carried forward to Summary table for Schedule 4B						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.¹ The sub-clause numbers indicated in the table are related to Section 6 (Employer's Requirements), Part A - Scope of Work.

Summary Table for Schedule No. 4B: Civil works, Installation and other services for Lot B

(1)	(2)	Total Price	
		Local Currency (3)	Foreign Currency (4)
4B.1	Civil Works		
A1	Embilipitiya 132/33 kV Grid Substation		
4B.2	Installation		
4B.3	Other Services		
Total Column 3 & 4 to be carried forward to schedule No. 5B-Grand Summary for Lot B			

Name of Bidder

Signature of Bidder

Schedule No. 5B: Grand Summary for Lot B

Schedule No.	Title	Total Price ^a	
		Foreign	Local
1B	Plant and Mandatory Spare Parts Supplied from Abroad ^b (Summary Table for Schedule No. 1B)		
2B	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country ^b		
3B	Design Services		
4B	Civil Works, Installation and Other Services (Summary Table for Schedule No. 4B)		
Grand Total to be carried forward to Schedule No. 5, Grand Summary			

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

^b Taxes and/or duties from Schedules 1 and 2 may be added to the contract price in accordance with GCC 14 (Taxes and Duties) but excluded from bid evaluation in accordance with ITB 39.2.

Schedule No. 5: Grand Summary

Schedule No. (1)	Title (2)	Total Price ^a	
		Foreign (3)	Local (4)
1	Grand Summary for Lot A		
2	Grand Summary for Lot B		
Grand Total to be carried forward to Letter of Price Bid			

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS. Create additional columns for foreign currencies if so required.

^b Taxes and/or duties from Schedules 1 and 2 may be added to the contract price in accordance with GCC 14 (Taxes and Duties) but excluded from bid evaluation in accordance with ITB 39.2.

Schedule No. 6: Recommended Spare Parts, Tools and Instruments

Item	Description	Quantity	Unit Price ^a		Total Price ^a	
			EXW Local Parts Local Currency	CIP Imported Parts Foreign Currency	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
TOTAL						

Name of Bidder _____

Signature of Bidder _____

^a Specify currency in accordance with ITB 19.1 of the BDS.

Schedule No. 7 - Day Works (Provisional)

1. No works whatsoever may be executed as day works, nor will payment be made for any Day works, except in such works necessary are brought to the notice of the employer and his agreement is receive

LABOUR

2. The contractor shall be entitled to the following payments in respect of labour employed on Day works:
 - a) The aggregate amount of wages for such labour calculated on the actual hours worked at the wage rates set out in this Schedule up to the grade of charge hand or overseer working with the men (time for foremen is to be included in the percentage under 2(b) below).
 - b) 10 Percent of aggregate amount of wages calculated according to sub paragraph 2(a) above.
3. The percentage addition provided in sub paragraph 2(b) above shall cover Contractor's profit, on cost, superintendence, insurance and all allowances to labour, time keeping and all clerical and office work as well as the use of tools, timber, light equipment and non-mechanical equipment and all incidental charges whatever.
4. The "Normal working Day" as hereinafter referred to shall be taken to be of eight hours excluding meal breaks and rest periods.
5. In calculating the sums due to the Contractor for the execution of Day works, the hours for which payment shall be made for all personnel and the hire of all equipment shall be reckoned from the time of starting the particular item of day work, either at the beginning of or during the course of a normal working day to the end of the normal working day or the time of completion of the particular item of Day work, whichever may be sooner. No payment shall be made for personnel or plant for hours outside the normal working day unless the said personnel and plant are employed on Day works outside the Normal Working Day on the written instruction of the Employer's Representative. The same Day work rate shall apply for works done both during and outside the Normal Working Day.
6. On completion of any authorised Day works, a written statement shall be issued by the Employer's Representative who shall sign it together with the Contractor and which shall state the number of workmen and their grades involved in the Day work, the number of hours worked and a detailed description of the Material used and the work carried out. A copy of this signed statement shall retained by the Employer's Representative and the Contractor and shall be the sole basis upon which payment for Day works will be made.

7. Day Work Rate for Labour

Class of Labour	Normal working Day of 8 Hours
<u>Local Labour</u>	
Unskilled Labourer	
Skilled Labourer	
Driver	
Steel Erector	
Linesman / Foreman	
Chargehand/Overseer	
Surveyor (on survey work only)	
Engineer	
	Average:
	Foreign Currency (...../Day) Average
<u>Expatriate Labour</u>	
Linesman/ Foreman	
Chargehand / Overseer	
Steel Erector	
Surveyor (on survey work only)	
Junior Engineer	
Senior Engineer	
	Average:

8. Any other class of labour envisaged by Contractors for the execution of any Dayworks, except that covered by Paragraph 3 above, i.e. superintendence, etc., shall be entered above together with the appropriate labour rates, and such rates shall be the only rates considered in any Dayworks claim.
9. The labour rates to be entered above shall include all other benefits or contributions made by the employer such as contributions to Social Insurance Schemes, Annual Leave, Termination of Employment and Redundancy Law, Provident Fund, Health Schemes, etc., which are imposed either by Law or by agreement with Trade Unions.

EQUIPMENT AND TRANSPORT

10. The rates for hire of equipment and transport shall apply only to equipment, which the Contractor has on site, and are to apply for the actual running hours for which the equipment is employed on work.
11. The rates shall include service, operators and necessary attendants, fuel, lubricants and other consumable.
12. The contractor may insert additional items and quantities provided that such are extended and added into the total of the Schedule.

MATERIALS

13. The rates for materials shall apply to the net amount of materials actually provided, erected and forming part of the works and shall include for delivery to the site of operations.
14. The contractor may insert additional items and quantities provided that such are extended and added into the total of the schedule.

Item	Qty	Description	Unit	Local Transport & Erection				
				Foreign			Local	
				Foreign Currency	Rates	Total	Rates	Total
1	-	<u>LABOUR</u>						
1.01	10	Local	Days					
1.02	10	Expatriate	Days					
2	-	<u>EQUIPMENT</u>						
2.01	25	Welding set for two welders	Hours					
2.02	25	Acetylene cutting equipment	Hours					
2.03	25	Air compressor (180 m3/hr. at 7 atmospheres) complete with hoses and tools	Hours					
2.04	20	Live line scaffolding complete for 1 existing line (excluding labour element)	Hours					
2.05	25	Tractor with winch	Hours					
2.06	25	Tractor without winch	Hours					
2.07	25	5-tonne lorry	Hours					
2.08	25	2-tonne lorry	Hours					
2.09	10	5-seater saloon car (or similar)	Hours					

Item	Qty	Description	Unit	Local Transport & Erection				
				Foreign			Local	
				Foreign Currency	Rates	Total	Rates	Total
2.1	20	Bulldozer (D6 or similar)	Hours					
2.11	50	2 wheel trailer (for use with tractor or lorry).	Hours					
2.12	10	Unimong	Hours					
2.13	50	Landrover, jeep or similar	Hours					
2.14	50	Pick-up Truck	Hours					
2.15	10	Mobile crane up to 6 tonne lift	Hours					
3		<u>MATERIAL</u>						
3.01	20	Cement	ton					
3.02	50	Sand	m ³					
3.03	50	Crushed stone	m ³					
3.04	10	Reinforcing steel	m ³					
3.05	10	Structural ungalvanised mild steel sections	m ³					
3.06	30	Welding rods	kg					
3.07	20	Sawn timber	m ²					
3.08	100	Imported material for backfill	m ³					
3.09	150	Rubble stones for foundation work (150-300mm dia.)						
4		<u>Works</u>						
4.01	200	Rock blasting (controlled) or rock excavation and carting away	m ³					
		Total						

The following rates shall apply where, by agreement with the Employer's Representative, supervisory staff are employed on day works in a direct capacity, i.e. other in their normal supervisory capacity.

The rates also be used as a basis for assessing any legitimate claims for extra costs in accordance with the provisions of the Conditions of Contract, where these have not been claimed as day works.

No payment shall be made without the prior written authority of the Employer's Representative, and the provisions of the conditions of Contract shall apply to any claim for payment.

The Contractor shall insert in the following Schedule descriptions and rates for any clause of supervisory staff envisaged which are not already included.

Class of supervisory staff	Normal working Day of 8 Hours
	Foreign
Expatriate	Currency / Day
Senior Engineer	
Junior Engineer	
Surveyor	
Foreman	
Local	LKR./Day
Surveyor	
Foreman	

Schedule No. 8 - Rates for Variations

PART I – CIVIL WORKS

The Tenderer is reminded that this is a Turnkey Contract. No additional costs will be considered for any items, which the Tender has overlooked.

The Tenderer shall insert rates against each of the items listed in the Schedule. The rates shall be analogous to those used in calculating the Tender Price, and shall be used to evaluate modifications omissions and or additions to the Works where these are instructed by the Employer's Representative before the commencement of the Maintenance Period.

The rates shall be the fully inclusive value of the work described including the cost of any temporary work associated therewith. They shall also include all overheads profit supervision accommodation insurance transport duties risks liabilities obligations and the like but shall exclude design cost which are included as a separate item. Design costs shall only be applied for the work, which necessitates the approval of calculations and/or drawings, by the Employer's Representative.

Rates for items not included in the Schedule shall be based on those quoted where appropriate. Where no suitable rates are existing a new rate based on invoices and other cost records may be agreed. In the event of disagreement, the Employer's Representative shall fix such rates or prices as shall, in his opinion, be reasonable and proper having regard to the circumstances.

The Contract Price shall be adjusted on the basis of the value of the Employer's Representative's instructions priced as described in the foregoing paragraphs.

Item	Description	Unit	Rate
			LKR
1	Foundation Piling		
1.1	Mobilization & Demobilization	Item	
1.2	Type and size of pile :		
1.2.1	Type : Cast in situ		
	Size : 460 mm Dia Pile	lin.m	
1.2.2	Type : Precast		
	Size: 350 mm x 350 mm square	lin.m	
2	Excavation		
2.1	Excavated to reduced level and remove and deposit where directed on site-include of timbering, de-watering, etc. (measured net sized as drawing)	cu.m	
2.2	Excavated to form pit, base, or trench as previously described	cu.m	
2.3	Additional excavation beyond net sizes for working space to fix and remove form work and to backfill	cu.m	
2.4	Extra Over excavation rates for excavation in rock and carting away	cu.m	
2.5	Approved hard-core well rammed and consolidated in layers of various thickness up to 300 mm and blinded to concrete		
3	Concrete		

Item	Description	Unit	Rate
			LKR
3.1	Grade C10 in weak fill	cu.m	
3.2	Grade C10 in 50 mm thick blinding	sq.m	
3.3	Grade C20 in foundations and bases	cu.m	
3.4	Grade C25 in foundations and bases		
4	Reinforced Concrete		
4.1	Grade C30 concrete in foundations bases, plinths, etc.	cu.m	
4.2	Grade 20 concrete, ditto	cu.m	
4.3	Grade C25 concrete, ditto	cu.m	
4.4	Grade C25 concrete in columns	cu.m	
4.5	Grade C25 concrete in beams	cu.m	
4.6	Grade C25 concrete in walls	cu.m	
4.7	Extra over all concrete rates for sulphate resisting cement	cu.m	
5	Reinforcement		
5.1	16 mm Diameter and upwards mild steel bar or round reinforcement hooked, bent and fixed including all necessary typing wire	Kg	
5.2	12 mm Diameter as previously described	Kg	
5.3	10 mm Diameter as previously described	Kg	
5.4	Fabric reinforcement weighing 4 kg per square meter, including fixing	Sq.m	
5.5	Extra over mild steel rates for high tensile reinforcement (as sizes)	Kg	
6	Formwork		
6.1	To foundations	sq.m	
6.2	To columns	sq.m	
6.3	To soffits of beam	sq.m	
6.4	To walls	sq.m	
6.5	To soffits of slabs	sq.m	
6.6	Extra over straight formwork for in any position	sq.m	
7	Pre-cast Concrete		
7.1	Including reinforcement and hoisting		
7.2	1 meter wide x 130 mm thick plant with ditto and ditto	lin.m	
7.3	50 mm thick paving slabs size 600 mm square on and including bed of sand	sq.m	
7.4	Duct or cable trench covers	sq.m	
8	Sundries		
8.1	Damp proof membrane under floor slab	sq.m	
8.2	Form pocket in concrete 150 mm square x 450 mm deep	No.	
8.3	Form pocket in concrete 100 mm square x 225 mm deep	No.	
8.4	Form anti-vibration joint 18 mm wide x 200 mm deep and seal with approved sealant	lin.m	
8.5	Concrete contraction joint s	lin.m	
9	Block-work		

Item	Description	Unit	Rate
			LKR
9.1	100 mm thick hollow cement block walling in mortar, left rough for plaster both sides and include for all labour, cutting and waste	Sq.m	
9.2	150 mm thick solid cement block walling as before described	Sq.m	
9.3	200 mm thick hollow cement block walling in mortar and left rough for plaster both sides and include for all labor cutting and waste	sq.m	
9.4	Extra over 200 mm block walling as before described or reinforcing every second horizontal bed joint with approved reinforcement	sq.m	
9.5	Form 300 mm square opening in 200 mm thick concrete block walling	No.	
9.6	Bituminous felt damp proof course and bed and point in walling	sq.m	
9.7	Brick masonry in wall panel in concrete framed building	sq.m	
9.8	R/R/ Masonary walls	cu.m	
10	Roofing		
10.1	Lightweight screed of pumice aggregate or similar, laid to falls	sq.m	
10.2	Asphalt covering in two layers total 20 mm thickness, laid to falls on sheathing felt, including for dressing over edges and round pipes, etc. and for white spar chipping.	sq.m	
10.3	Asbestos cement corrugated sheets fixed to and including steel purlins, to include labour, fixing, laps, cutting and waste	sq.m	
11	Joinery		
11.1	50 mm plywood faced, solid core, flush door size 85 x 200 cm hung complete, including door frame, door fittings' locks and decoration as specified		
11.2	Adjustable louvered ventilators, at high or low level, fixed complete, including for hardwood and metal framing and glassing louvers complete	sq.m	
11.3	Double leaf smoke-stop door 16=70 cm. Side x 200 cm high, opening in direction indicated, fully glazed with wired glass		
12	Structural Steelwork		
12.1	Galvanized mild steel structural steelwork fabricated, and erected	Tonne	
12.2	Galvanized mild steel support structures for sub station equipment and take off structures fabricated and erected in sub station	Tonne	
13	Metalwork		
13.1	Galvanised steel louvers, fixed complete	sq.m	
13.2	60 x 60 m mild steel angle with lugs welded on and stop to support chequered plate (measured elsewhere) cover to cable trench include for forming rebate for angle bedding, grouting and fixing	lin.m	
13.3	8 mm thick galvanised mild steel chequered plate cover to cable trench and include for fixing	sq.m	
13.4	Supply, bed and fix complete aluminium windows with sliding lights with and including glass and glazing with fittings	sq.m	
13.5	Steel door 850x2000mm		

Item	Description	Unit	Rate
			LKR
14	Building Work in Connection with Service and Plant Installation		
14.1	Cut or form hole for pipe through 150 mm thick cement block walling and make good plaster both sides	No.	
14.2	Cut or form hole for pipe through 200 mm thick concrete block wall as described before	No.	
14.3	Cut or form hole for pipe through 250 mm overall thickness cavity block wall as before described	No.	
14.4	Cut or form hole for pipe through 150 mm thick reinforced concrete wall	No.	
14.5	Cut or form hole for pipe through 150 mm thick reinforced concrete slab	No.	
14.6	100 mm thick solid concrete block walling in cement mortar in duct walls finished fair face with flush joint one side	sq.m	
14.7	Concrete Class "C30" in plinth or base including all necessary formwork	cu.m	
14.8	Break-out reinforced concrete exceeding 300 mm thick and remove	sq.m	
14.9	Break-out reinforced concrete exceeding 300 mm thick and remove	cu.m	
14.10	Break-out 200 mm thick rendered/plastered hollow concrete block walling and remove	sq.m	
14.11	Ditto but 100 mm overall thickness concrete block-work cavity wall	sq.m	
14.12	Ditto but 250 mm overall thickness concrete block-work cavity wall	sq.m	
14.13	Cut chase for conduit or pipe in brick or block walling and make good	lin.m	
14.14	Cut chase for conduit in concrete and make good	lin.m	
14.15	Supply and fix complete light switch	No.	
14.16	Supply and fix complete power socket outlet 13 AMPS	No.	
14.17	Supply and fix complete light fittings (60 Watt fluorescent)	No.	
15	Plasterwork and other Floor Wall and Ceiling Fishes		
15.1	Plasterwork as specified on concrete block walling inclusive of forming key, narrow widths, small quantities and all labors	sq.m	
15.2	Ditto but on ceilings	sq.m	
15.3	Tyrolean external render as specified on concrete and block walling as previously described	sq.m	
15.4	40 mm thick cement and sand screed finished hard and smooth with surface hardener	sq.m	
15.5	Ceramic tiles laid on screeded floor	sq.m	
15.6	Ditto in walls	sq.m	
16	Glazing		
16.1	3 mm clear sheet glass and glazing in various sizes to wood or metal frames with mastic putty	sq.m	
16.2	4 mm wired cast glass and ditto	sq.m	

Item	Description	Unit	Rate
			LKR
17	Paint and Decoration		
	Preparing and Applying the Following Finished Surface All as Specified and Described	sq.m	
17.1	Emulsion on fair face concrete or block walling	Sq.m	
17.3	Emulsion on Tyrolean rendered walls	sq.m	
17.4	Emulsion on plastered soffit	sq.m	
17.5	Paint as specified to wooden frames and doors	sq.m	
17.6	Paint – ditto – to steel surfaces	sq.m	
18	Roads and Fences		
18.1	Constructed complete, including excavation or fill, compacted stone base, sub-based, etc	sq.m	
18.2	2.5 m high 200 mm thick rendered concrete block wall with coping, piers		
	Security barbed wire etc. erected complete as specified including excavation, concrete footings etc.	Lin.m	
18.3	Double leaf gates all as specified	No.	
18.4	Block masonry boundary walls 1.5m high	lin.m	
19	Drainage		
19.1	100 mm pipe laid and jointed complete average depth to invert 1 meter, including excavation and reinstatement	lin.m	
19.2	150 mm ditto and ditto	lin.m	
19.3	Ditto but average depth to invert 2 meters and ditto	lin.m	
19.4	Manhole constructed complete, including excavation, rendered concrete walls, benching, cover and frame, internal size	No.	
	Size 1.3 x 1.0 meter, depth to invert not exceeding 2 meters		
19.5	Ditto but inspection chamber, internal size 600x500 mm not exceeding 500 mm to invert	No.	
20	Water Supply		
20.1	40 mm diameter UPVC pressure pipe laid complete, depth not exceeding 1 meter	lin.m	
20.2	40 mm diameter sluice valve laid and jointed complete with hatch box and cover	No.	
21	Design Work		
	Percentage to be added to cost of construction, for design and detailing of any part of the work, including architectural, structural including architectural,. Structural	Item	

PART II – MECHANICAL AND ELECTRICAL WORKS

The Contractor is reminded that this is a Turnkey Contract in which he is entirely responsible for every aspect. No additional costs will be considered for any items, which the Contractor has overlooked, but which is essential for the proper completion of the project in every respect, so that the works fulfil the purpose for which they are required.

If the Employer or the Engineer requires modifications, additions or omissions to the scope of the Civil Works/services, during the period of construction or maintenance, adjustment to the contract price will be made on the basis of the rates entered in the following schedule.

The rates entered shall include all costs and expenses involved in the proper construction of the work, including overheads, profit, supervision, accommodation, insurance, transport, duties, all risks, liabilities or obligations, etc., but excluding design costs, which are covered by a separate item.

The rate will be used to evaluate Employer's or Engineer's modifications, omissions or additions to the works. Rates for any items not included shall be based on those quoted or analogous thereto.

The tenderer shall price all items, which are relevant to his design and tender.

Item	Description	Unit	Rate Sri – Lanka Rupees
1	Mechanical	each	
1.1	Extract ventilation units	m	
1.2	Ductwork 25 mm	m	
1.3	Ductwork 38 mm	m	
1.4	Ductwork 50 mm		
1.5	Ductwork (weather proof) 50 mm	m	
1.6	Extract air grills complete with internal fittings, gaskets screws, etc. as specified	each	
1.7	External louver for item 6	each	
1.8	Air Conditioning unit (split type)	each	
2	Electrical		
	Switches complete with box, up to 3 m circuit wiring, junction box and glands		
2.1	Surface 15 amp 1 way	per gang	
2.2	Surface 15 amp 2 way	per gang	
2.3	Spur unit complete with box, up to 6m of circuit wiring junction box and glands	per gang	
2.4	Type S1 surface	per gang	
2.5	Type S2 fixed spur box	per gang	
2.6	Time switch	each	
2.7	Photo-electric cell control	each	
2.8	Extra circuit wiring	m	

PART III – EXTRA WORKS**CONTROL AND POWER CABLES**

(See Employer Requirements for details)

Bidder should extend in the table below based on drum lengths of each cable offered.

Item No.	Description	No of cores & cross section		Rate		
		mm ²		Foreign	Local	
1	220kV/132kV/36kV/12kV single phase XLPE cable					
1.1	Cable Supply rate per km					
1.2	Cable Installation rate per km					
1.3	Cable Termination rate per unit					

EARTHING SYSTEM

(See Employer Requirements for details)

Earthing Supply and Installation

Rate per m/no.

Item	Supply		Install		Rates per Termination	
	Foreign	Local	Foreign	Local	Foreign	Local
Currency		LKR		LKR		LKR

Details:

Schedule No. 9 - Schedule of Major Items of Constructional Plant

Description (Type, Model, Make)	No. of Each	Year of Manufacture	New or Used	Owned (O) or Leased (L)	CIP Value	Est. Power Rating	Capacity ton or m3
Information Copy - Not for Bidding							