

# Ceylon Petroleum Corporation

# SUPPLY, INSTALL REINFORCED CONCRETE POLE AND AERIAL BUNDLE CABLE AT UPPER TANK FARM, CHAINA BAY

B/19/2024

**BIDDING DOCUMENT** 

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#### **INVITATION FOR BIDS**

#### Note:

The relevant form shall be filled by the Procuring Entity and included in Volume 2 of the bidding documents.

#### *Note*:

Bidders are advised to consider the information printed <u>in bold & Italic</u> in the document as a checklist, when preparing their bids. However, it is the responsibility of the bidders to comply with all the requirements given in the bidding document.

### **INVITATION FOR BIDS (IFB)** MINISTRY OF POWER & ENERGY

#### **Cevlon Petroleum Corporation**

#### Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay

#### B/19/2024

1. The Chairman, Departmental Procurement Committee (DPC) on behalf of the Ceylon Petroleum Corporation invites sealed bids from eligible and qualified contractors for the contract "Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay"

The period of Construction of this work is **03 Months**.

- 2. Bidding will be conducted through National Competitive Bidding Procedure.
- 3. To be eligible for contract award, the successful bidder/nominated subcontractor shall have not been blacklisted and shall meet the CIDA grade C6 and C5 or above in relevant civil works and EM2 or above in relevant mechanical works at the time of the submission of the Bid.
- 4. Bidding will be conducted through National Competitive Bidding (NCB). Since the Total Cost Estimate of this procurement is below Rs. 50 Mn., regional preference and CIDA grade preference shall apply as stipulated in Public Finance Circular No. 04/2016 (ii)".
- 5. Bidding documents can be obtained on working days between 0900 hrs. to 1500 hrs. up to 26.04.2024 from the office of Manager (Procurement & Stores), Ceylon Petroleum Corporation, 1st Floor, No. 609, Dr. Danister De Silva Mawatha., Colombo 09, on a written request, or download from CPC website, i.e http://ceypetco.gov.lk/public-tenders/ after payment of non-refundable fee of Rs. 10,000.00 (Rs. 8,267.88 + 2.5% SSCL + 18% VAT per set). As per the Public Contract Act No, 3 of 1987, the Prospective Bidders shall be registered in Department of Registrar of Companies through https://eroc.drc.gov.lk/ website and submit PCA 3 certificate along with their Bid.
- 6. The Bid will be closed at 1400 hrs. on 29.04.2024 and opened at the Office of Manager (Procurement & Stores), Ceylon Petroleum Corporation at the address given below, immediately after the closing time of the Bid.

Clarifications if any please contact,

Electrical Engineer via: 0115455142, priyantha@cepetco.gov.lk

Departmental Procurement Committee, C/o Manager (Procurement & Stores), Procurement & Stores Function, Ceylon Petroleum Corporation, 1<sup>st</sup> Floor, No. 609, Dr. Danister De Silva Mw.

Colombo 09.

Tele: 011-5455335

#### **Section - 1**

#### INSTRUCTIONS TO BIDDERS

#### Notes:

Instructions to Bidders shall be read in conjunction with Bidding Data under Section 5 (Volumn 2). Matters governing the performance of the Contractor, payments under the Contract, or matters affecting the risks, rights, and obligations of the parties under the Contract are included under Section 3 - Conditions of Contract (Volume 1) and Contract Data under Section 5 (Volume 2). However, some information is reproduced in this Section facilitate the bidder to price their bids.

Instructions to Bidders will not be a part of the Contact and will ceases to have effect once the Contract is signed.

#### Note:

Bidders, may consider the information printed in bold & Italic in the document as a checklist when preparing their bids. However, it is the responsibility of the bidders to comply with all the requirements in the bidding document.

#### **Section 1**

#### 1. INSTRUCTIONS TO BIDDERS

Instructions to Bidders applicable for this Contract are that given in Section 1 of the Standard Bidding Document for Procurement of Works, ICTAD Publication No. ICTAD/SBD/01, January 2007, published by the Institute for Construction Training and Development [ICTAD], "Savsiripaya", Wijerama Mawatha, Colombo 07.

This publication will not be issued with the Bidding Document and Bidder is advised to Purchase it from ICTAD.

## **Section - 2**

# STANDARD FORMS (CONTRACT)

- o Letter of Acceptance
- o Agreement
- o Performance Security
- o Advance Payment Security
- o Retention Money Guarantee

#### Notes on Standard Forms:

- Bidders shall submit the completed Form of Bid Security as appropriate in compliance with the requirements of the bidding documents.
- Bidders should not complete the Form of Agreement at the time of preparation of bids.
- The successful bidder will be required to sign the Form of Agreement, after the award of contract.
- Any corrections or modifications to the accepted bid resulting from arithmetic corrections, acceptable deviations, or quantity variations in accordance with the requirements of the bidding documents should be incorporated into the Agreement.
- The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidders at the time of submission of bids.
- The successful bidder will be required to provide these securities in compliance with the requirements herein or as acceptable to the Employer.

#### FORM OF LETTER OF ACCEPTANCE

Notes on Form of Letter of Acceptance

The Letter of Acceptance will be the basis for formation of the Contract as described in Clause 1.6.3 of the Instructions to Bidders. This Form of Letter of Acceptance should be filled in and sent to the successful bidder only after evaluation of Bids and after obtaining approval from the relevant authority.

[Letter heading paper of the procuring entity]

[date]
To:  [name and address of the Contractor]
This is to notify you that your bid dated [insert date] for the construction and remedying defects of the [name of the Contract and identification number] for the Contract price of[name of currency][amount in figures and words] as corrected in accordance
with Instructions to Bidders and / or modified by a Memorandum of Understanding, is hereby accepted.
The adjudicator shall be [name and address of the Adjudicator, if agreed] / shall be appointed by the Institute for Construction Training and Development (ICTAD).
You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.
The Start Date shall be: (fill the date as per Conditions of Contract).
The amount of Performance Security is : (fill the date as per Conditions of Contract).
The Performance Security shall be submitted on or before (fill the date as per Conditions of Contract).
Authorized Signature :
Name and title of Signatory:
Name of Agency:

## STANDARD FORM: AGREEMENT

		of[month] 20 [year] between f Employer] (hereinafter called "the Employer") of
the one		[name and address of Contractor]
identifi the Bio	ication number of Contract] (hereinafter ca	for execute[name and lled "the Works") and the Employer has accepted mpletion of such Works and the remedying of any
NOW '	THIS AGREEMENT WITNESSETH as foll	ows:
1.		shall have the same meanings as are respectively ontract hereinafter referred to, and they shall be as part of this Agreement.
2.	mentioned, the Contractor hereby covenant	le by the Employer to the Contractor as hereinafter its with the Employer to execute and complete the conformity in all respects with the provisions of the
sum	appletion of the Works and the remedying of	Contractor in consideration of the execution and defects wherein the Contract Price or such other as of the Contract at the times and in the manner
aforem	entioned, in accordance with laws of Sri Lar	
	rized signature of Contractor	Authorized signature of Employer
CO	OMMON SEAL	COMMON SEAL
•	presence of:	
Witnes 1.	sses : Name and NIC No	
	Signature	
	Address	
2.	Name and NIC No.	
	Signature	
	A 11	

# FORM OF PERFORMANCE SECURITY (Unconditional)

Beneficiary:  [Name and Address of Employer]  Date:  PERFORMANCE GUARANTEE NO.:  We have been informed that
PERFORMANCE GUARANTEE NO.:  We have been informed that
We have been informed that
We have been informed that
(hereinafter called "the Contractor") has entered into Contract No[reference number of the contract] datedwith you, for theinsert "Construction"] of[name of contract and brief description of
Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
At the request of the Contractor, we
This guarantee shall expire, no later than theday of, 20[insert date, 28 days beyond the Intended Completion Date] and any demand for payment under it must be received by us at this office on or before that date.
This guarantee shall be governed by the laws of Sri Lanka and shall be subject to the Uniform Rules for Demand Guarantees, published as number 758 by the International Chamber of Commerce, except as stated above.
 [Signature(s)]

#### FORM OF ADVANCE PAYMENT SECURITY

<sup>&</sup>lt;sup>4</sup> The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract.

## FORM OF RETENTION MONEY GUARANTEE

Name, and Address of Issuing Branch or Office]
Beneficiary:
Date :
RETENTION MONEY GUARANTEE NO.:
We have been informed that
Furthermore, we understand that, according to the conditions of the Contract, when the works have being taken over and the first half of the Retention Money has been certified for payment, payment of the second half of the Retention Money may be made against a Retention Money guarantee.
At the request of the Contractor, we
This guarantee shall expire, at the latest,
[Signature(s)]

5 The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

# **SECTION – 3**

# **CONDITIONS OF CONTRACT**

Conditions of Contract shall be read in conjunction with Section 5- Contract Data in Volume 2, which shall take precedence over the Conditions of Contract.

#### Section – 3

## 3.0 GENERAL CONDITIONS OF CONTRACT

General Conditions of Contract applicable for this Contract are that given in Section 3 of the Standard Bidding Document for Procurement of Works, ICTAD Publication No. ICTAD/SBD/01, January 2007, published by the Institute for Construction Training and Development [ICTAD], "Savsiripaya", Wijerama Mawatha, Colombo 07.

This publication will not be issued with the Bidding Document and Bidder is advised to Purchase it from ICTAD.

General Conditions of contract shall be read in conjunction with schedule provided under Section 5 of the Bidding Document.

#### **SECTION - 4**

# FORM OF BID AND QUALIFICATION INFORMATION

#### *Note*:

Bidders are advised to consider the information printed in <u>Bold & Italic</u> in the document as a checklist, when submitting their bids. However, it is a responsibility of the bidders to comply with all the requirements given in the bidding document.

#### Form of Bid

Note: Prior to issue of the bidding documents, the Employer should insert relevant data for all

items marked with an asterisk (\*). Name of Contract: Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay To Ceylon Petroleum Corporation Gentleman, Having examined the Standard Bidding Document - Procurement of Works 1. [ICTAD/SBD/01 - Second Edition, January 2007], Specifications, Drawings and Bills of Quantities and Addenda for the execution of the above-named Works, we the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Conditions of Contract, Specifications, Drawings, Bills of Quantities and addenda for the sum of Sri Lankan Rupees may be ascertained in accordance with the said Conditions. 2. We acknowledge that the Contract Data forms part of our Bid. 3. We undertake, if our Bid is accepted, to commence the Works as stipulated in the Contract

Data, and to complete the whole of the Works comprised in the Contract within the time

- 5. Unless and until a formal agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
- 6. We accept / we do not accept the Adjudicator.

•

Witness

stated in the Contract Data.

7. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this day of	luly
authorized to sign tenders for and on behalf of	••••
(IN BLOCK CAPITALS)	
Signature:	
Address :	

# **Qualification Information**

(To be completed and submitted by the bidder, with the Bid)

ICTAD Registration	
Registration number	(attach copies of relevant pages from the registration book)
Grade	
Specialty	
Expiry Date	
Blacklisted Contractors	
	d contractor by NPA or any other Agency? (Yes/No)
IF yes provide details	
VAT Registration Number	
Construction Program	( attach as annex)
Construction Frogram	( attach as annex)
Legal status	(attach relevant status copies, as annex)
Value of Construction works performed in last 5 years	(attach copies of Certificate of Completion etc. and other documents such as profit-loss and income expenditure statement)
Year 2021	
Year 2020	
Year 2019	
Year 2018	
Year 2017	
Value of similar works completed in last 05 years (indicate only the three largest projects)	1. Value Year
Major items of construction equipment proposed	1. type       Capacity         2. type       Capacity         3. type       Capacity         4. type       Capacity         5. type       Capacity
Qualification and experience of key staff – Site & Head Office (Permanent, Contract basis & Consultants)	Technical: 1. 2. 3.
Other information requested under	Managerial: 1. 2. 3.
ITB Clause 4.1	

# SECTION – 5 BIDDING DATA AND CONTRACT DATA

#### 5.1 Bidding Data

#### Instructions to Bidders Clause Reference

1.1 The Employer is

Name : Ceylon Petroleum Corporation

Address: "609", Dr. Danister De Silva Mw., Colombo 09.

The Works Consists of – Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay.

Located at: China Bay

- 1.2 Intended Completion Date is **03 months** from the Start Date.
- **1.3** The Office for collection of bid forms is :

The non-refundable fee is Rupees Rs. 10,000.00 (including Taxes)

- 1.1. The source of funds is Ceylon Petroleum Corporation
- 4.2 The registration required

Specialty: .....

Grade : C6 and C5 /EM2 and above

- 4.3 The following information shall be provided in Section 4:
- \* ICTAD Registration;

Registration number

Grade

Specialty

**Expiry Date** 

- \* VAT Registration number
- \* Construction Programme
- \* Legal Status (Sole proprietor, Partnership, Company etc.)
- \* Total monetary value of construction work performed for each of the last five years;
- \* Experience in Construction work of similar nature jobs performed in last ten (10) years.

- \* Major items of construction equipment proposed to carry out the Contract;
- \* Qualifications and experience of key site management and technical personnel proposed for the Contract;
- \* Audited financial statements for the last three years
- \* Average of the annual volume of construction work performed in the last five years shall be at least Rs. 50.0 million.
  - \* Experience in the construction of at least one contract of a nature and complexity equivalent to the Works over the last 05 years (to comply with this requirement, works cited should be at least 70 percent completed);
  - \* Following technical and managerial Staff:

Technical Staff:

- 1. Charted B.Sc. Civil Engineer with five years 01 (Part Time)
- 2. Civil Engineer with BSc. Engineering, B.TECH Engineering or BEng or similar qualifications and at least 2 years' experience in similar nature works or Assistant Engineer with NDT/ HNDE/TTI or equivalent qualifications and at least 5 years' experience in similar nature works (full time during the civil works).
- 3. Mechanical site supervisor/ Engineering Assistant with NDT/HNDE/TTI or Equivalent qualifications and at least 3 year experience in Welding, steel fabrication works or NVQ level 04 in welding with at least 3 years post qualified experience. (full time)
- 4. A qualified welding inspector having CSWIP 3.1 qualification or similar qualification shall be engaged throughout the contract period.
- **9.1** Employer's address for the purpose of clarification is ;

Name: Mrs. K. Hewagamage

Address: Manager (Procurement & Stores), Procurement & Stores Function,

1st Floor, No. 609, Dr. Danister De Silva Mw. Colombo 09.

Fax : 5455424, Tel: 5455331

- 11.1 The language of the bidding document shall be English.
- 12.0 Any other \_\_\_\_\_

- VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT. However VAT component shall be shown separately at the end of the BOQ.
- 13.4 The Contract is not subjected to price adjustment in accordance with Clause 47 of the Conditions of Contract.
- **14.1** Bidders are not allowed to bid in foreign currencies
- 15.1 The Bid shall be valid up to Seventy Seven days (i.e. up to 15.07.2024) from the date of closing of the Bid.
- **16.1** Bid shall include a Bid Security using the form included in Section 9.
- **16.2** Bid Security shall be:
  - for an amount of Rs. 20,000.00.
  - Valid until 12.08.2024 (105 days) from the date of closing the Bid.
  - **issued by a licensed Commercial Bank in Sri Lanka** and acceptable to Employer using the form for bid security (unconditional guarantee) included in Section 9 Standard Forms.
- 17. Pre-bid Meeting/ Site Visit will be held at 1000 hrs. on 22.04.2024 Venue: China Bay
- 19.2 a The Employer's address for the purpose of Bid submission is

Manager (Procurement & Stores), Procurement & Stores Function, 1<sup>st</sup> Floor, No. 609, Dr. Danister De Silva Mw., Colombo 09.

19.2 b Contract name: Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay

Contract no

20.1 The deadline for submission of Bids shall be 29.04.2024

#### 27.0 Correction of Errors

The existing clause for Correction of Errors in ITB is deleted and shall be replaced with followings.

- \* Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
- \* Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern, and the unit rate will be corrected.

- \* If the total bid price increases due to corrections made on above procedure, the bid price shall not be adjusted to the increased price and the corrections should be readjusted within the bid price in consultation with the bidder.
- \* If the bid price decreases by the above procedure, the amount stated in the Form of Bid shall be adjusted with the concurrence of the bidder and shall be considered as binding upon the bidder.
- \* If the bidder does not accept the corrected amount of bid, its bid shall be rejected and the bid security may be forfeited.
- **28.1** For evaluation and comparison of Bids under Sub-Clause 29.2 rates and prices quoted in foreign currencies by the bidders will be converted to Sri Lanka Rupees using middle exchange rate published by the Central Bank of Sri Lanka, on the date of closing of the Bids.
- 34.0 The successful bidder on being notified by CPC of the acceptance of his Bid, shall furnish at his own expense a Performance Guarantee, within fourteen (14) days of such notification issued by a Commercial Bank in Sri Lanka.

The amount of Performance Security is 5% of the Initial Contract Price.

**36.0** The Adjudicator proposed by the Employer (To be informed after awarding the Contract)

Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case to case basis and shall be shared by the Contractor and the Employer.

#### **Contract Data**

(Please note that the Clause nos. given hereunder are that of Conditions of Contract) 1.1 The Employer is Name: Ceylon Petroleum Corporation Address: No. 609, Dr. Danister De Silva Mw., Colombo 09. Name of Authorized Representative: To be informed after awarding the Contract 1.1 The Engineer is Name ..... Address: Name of Engineer's Representative: To be notified after awarding the Tender 1.1 The Works consists of: Supply, Install Reinforced Concrete Pole and Aerial Bundle Cable at Upper Tank Farm, China Bay 1.1 The Site is located at: China Bay 1.1 The Start Date shall be Fourteen (14) Days from the Letter of Acceptance. 2.3 The following documents also form part of the Contract: 1. Bidding Data 2. Contract Data 3. Specification 4. B.O.Q. 8.1 Schedule of other contractors:

Name

Period

#### **9.1** Schedule of Key Personnel:

Minimum persons with qualifications and experience to be defined,

- 1. Charted Civil B.Sc. Engineer with five years 01 (Part Time)
- Civil Engineer with BSc. Engineering, B.TECH Engineering or BEng or similar qualifications and at least 2 years' experience in similar nature works or Assistant Engineer with NDT/ HNDE/TTI or equivalent qualifications and at least 5 years' experience in similar nature works (full time during the civil works).
- 3. Mechanical site supervisor/ Engineering Assistant with NDT/HNDE/TTI or Equivalent qualifications and at least 3 year experience in Welding, steel fabrication works or NVQ level 04 in welding with at least 3 years post qualified experience. (full time)
- 4. A qualified third party welding inspector having CSWIP 3.1 qualification or similar qualification shall be engaged throughout the contract period.

CV's of key personnel to be submitted with the Bid.

- 13.1 The minimum insurance covers shall be:
  - (a) 10% of the initial Contract value ( for the Employer )
  - (b) 110% of the initial contract value (for the contractor)
- 17.1 The Intended Completion Date for the whole of Works shall be Three (03) months **from the Start Date**
- 21.1 The Site Possession Date shall be Fourteen (14) Days from Letter of Acceptance
- 27.1 The Contractor shall submit a programme for the Works within Seven (07) Days of delivery of the Letter of Acceptance.
- 27.3 The period between Programme update is **One month** 
  - 27.4 The amount to be withheld for late submission of a Programme is Rupees 10% of the value of the bill certified.
  - **35.1** The Defects Liability Period is 365 Days.
  - 39.2 Engineer may order variations up to a total cumulative value of not exceeding Rs. 5% of the initial contract value.

**44.1** The following events shall also be Compensation Events:

#### Not Applicable

- The exchange rate used for calculating the amounts to be paid in currencies other than Sri Lankan Rupees is: **Not Applicable**
- 47.1 The Contract Price is not subjected to price adjustment

Weightings of Inputs: Not Applicable

**48.1** The retention from each payment shall be 10% of the certified work done.

The limit of retention shall be 5% of the Initial Contract Price.

- The liquidated damages for the whole of the Works shall be Rs. 1/2000 of the initial Contract Price Per Day.
- The maximum amount of liquidated damages for the whole of the Works shall be 10% percent of the Initial Contract Price. If the total amount of the liquidated damages exceed 10% of the initial contract value, the contract is liable for termination.
- **51.3** Delete the existing sub-clause 51.3 and reword same as follows:

The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the works on a payment basis. The advance payment shall be repaid in full when the total certified value of work reaches 90% of the initial contract price. But if the contract has not been substantially completed before the Intended Completion Date and hence the advance payment made is not fully recovered, the balance amount of the Advance Payment shall be repaid in full from next progressive interim payment. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses or Liquidated Damages.

- 52.1 The Performance Security shall be 5% percent of the Initial Contract Price issued by a licensed Commercial Bank in Sri Lanka
  - **58.1** Schedule of operating and maintenance manuals.
  - The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is 25%.

Section – 06 SCOPE OF WORKS

# **Scope of Work**

N/A

Section – 7

**SPECIFICATIONS** 

# <u>Construction standards & specifications for Reinforce Concrete poles erection and laying overhead Arial Bundle Cable (ABC)</u>

#### 1) Reinforce Concrete pole (RC)

Reinforce Concrete pole shall be used for overhead line construction. The pole type is 8.3 m/100 kg.

#### **Transport & Handling**

Poles shall be transport and handled at all times with its longer axis in vertical position to ensure that the resulting forces are always resisted by the pole stronger direction. The pole shall be transported on a suitable vehicle supported full length or with limited overhang.

#### Lifting & storage

While lifting the poles shall be held from at least two points and when stacked at the point of delivery the poles shall be separated by timber bearers shall be placed only on lines vertically above each other.

If any damage or cracking occurs to any poles before they are erected such poles shall be rejected.

#### Manufacturer test certificate

Manufacturer test certificate for the RC poles shall be submitted by the successful bidder. The test certificate shall show compliance with the relevant standards specifications which are similar to the RC poles specifications stated by the CEB for overhead cable laying. The test certificate shall be issued by an independent testing laboratory.

#### Foundation types

For the purpose of the support foundation, it is recommended to consider the soil condition of the location. For the poor soil locations special foundations to be constructed to prevent the pole sinking.

Excavate the pole pit of width of pole dimesion+400mm. A 100mm Layer of good soil is hand rammed before erection of the pole. After placing the poles, the pole pit shall be back filled with good soil in layers. Each layer shall not be greater than 150mm compacted by hand ramming. The filling shall be up to a height not less than 250mm above the ground level.

#### Erection of poles

The preferred method of erection is by cranes of adequate size for the height of pole being handled. Manual method of pole erection are acceptable in location inaccessible to cranes.

- a) Poles shall be erected vertically
- b) The face of the narrow side must be aligned with the LV line in straight sections of the line
- c) Brackets, suspension assembly shall be fixed to the pole using nut & bolts at the ground level before erection of the pole

#### 2) Arial Bundle Cable Laying -ABC

#### Applicable Standards

- a) NFC 33-209
- Aerial Bundle Conductor
- b) IEC 502 1994
- Extruded solid dielectric insulated power cables
- c) IEC 1089 1991 conductors
- Round wire concentric lay overhead electrical stranded
- d) IEC 228 1978
- Conductor of insulated cables

#### Description of cable

• Phase Conductor

The conductor shall be multi stranded round compacted hard drawn Aluminum conforming to IEC 1089 with XLPE insulation.

The conductor shall not have any joints.

The Phase conductor for bundle shall conforms to the following

i.	Number of strands	12 or 15
ii.	Nominal cross sectional area	70 sq.mm
iii.	Max linear resistance at 20C	0.443 ohms/km
iv.	Nominal breaking strength	840 da N
v.	Diameter of compacted bare conductor	Max 10.2mm
		Min 9.7 mm
vi.	Thickness of insulating sheath	Max 1.8mm
		Min 1.52 at 1 point
vii.	Insulated cable outside diameter	Max 14.2mm
		Min 13.3mm

#### • Neutral Messenger

The strain bearing Neutral conductor shall consist of multi-strand round aluminium alloy conforming to IEC 1089 with insulation.

The conductor shall not have any joints.

The aluminium alloy neutral messenger conductor shall conforms the following.

a)	Number of strands	07
b)	Nominal cross sectional area	54.6 sq.mm
c)	Max linear resistance at 20C	0.63 ohms/km
d)	Minimal breaking strength	1660 da N
e)	Nominal diameter of strands	3.15mm
f)	Nominal diameter of bare conductor	Max 9.6mm
		Min 9.2 mm
g)	Average thickness of insulating sheath	Max 1.6mm
		Min 1.34mm
h)	Insulated cable outside diameter	Max 13.0mm
		Min 12.3mm

The conductor should be pulled from the top of the drum. Bundled conductor shall not be dragged on the ground. Stringing pulleys used for bundled conductor shall be installed on every pole. The bundled conductor shall be fitted with a complete pulling grip system such that the main pulling force comes only on the neutral messenger. Every care must be taken to avoid damage to the conductor insulation.

#### Clearance parameters

Clearance for LV overhead lines given are based on the subsidiary legislations made through government notified No.1975/44 of 2016 under the Electricity act No.20 of 2009 for overhead lines not exceeding nominal voltage of 1000V.

Above the ground –LV Aerial Bundle Conductor (ABC) surrounded by insulation

Over a road	5.5m
Along the road	4.9m

• From trees - LV Aerial Bundle Conductor (ABC) surrounded by insulation

Vertical distance	0.15m
Horizontal distance	0.15m

#### **Section - 7**

# **BILL OF QUANTITIES**

Notes: In preparation of the Bidding Document the users are advised to;

- (1) Include appropriate Preliminary Bill items as Bill No.01 in Accordance with ICTAD Publication No. ICTAD/ID/04
- (2) Allow provision for the Bidders to include the VAT Components separately and instruct them not to carry the VAT Components to the Form of Bid.
- (3) Advise the bidders that any discount offered will not be considered for Provisional Sum Items.

# SUPPLY, INSTALL REINFORCED CONCRETE POLE AND AERIAL BUNDLE CABLE AT UPPER TANK FARM, CHINA BAY

#### **Route 1-3**

Item	Description	Unit	Qty	Rate Rs. Cts.	Amount Rs. Cts
	Note  The bidder shall carefully refer the specifications before pricing as a guideline.			RS. CIS.	RS. CIS
1	Supply, transport & erect 8.3m(100kg) Reinforced Concrete pole & the burried the pole 1.4m depth from ground floor level The maximum distance between two poles shall be 40m. The Pole Foundation details are given under the specificatins.	Nos	27		
2	Supply, install 3x70mm2+54.6mm2 Arial Bundle cable (ABC). The Cable sag varies between 40-135mm.	m	1060		
3	Supply , install suspension assembly with polymer and UV resistant glass fibre with corrosion resistant Aluminium alloy Bracket with nuts & Bolts	Nos	27		
4	Supply, install Terminal Cap for 70mm2 ABC two phases cable ends	Nos	2		
	Sub Total 1 SSCL Sub Total 2 VAT Total				

#### **Route 1-2**

Item	Description	Unit	Qty	Rate	Amount
				Rs. Cts.	Rs. Cts
	<u>Note</u>				
	The bidder shall carefully refer the specifications before pricing as a guideline.				
1	Supply, transport & erect 8.3m(100kg) Reinforced Concrete pole & the burried the pole 1.4m depth from ground floor level The maximum distance between two poles shall be 40m. The Pole Foundation details are given under the specificatins.	Nos	25		
2	Supply, install 3x70mm2+54.6mm2 Arial Bundle cable (ABC) The Cable sag varies between 40-135mm.	m	1000		
3	Supply , install suspension assembly with polymer and UV resistant glass fibre with corrosion resistant Aluminium alloy Bracket with nuts & Bolts	Nos	25		
4	Supply, install Terminal Cap for 70mm2 ABC two phases cable ends	Nos	2		
	Sub Total 1				
	SSCL				
	Sub Total 2				
	VAT				
	Total				

<u>.</u>	Electrical Distribution Board				
Item	Description	Unit	Qty	Rate Rs. Cts.	Amount Rs. Cts
	All Electrical work shall be followed IEE 18th Wiring			16. 06.	RS. CES
	Regulations.				
	Electrical Items (MCB,RCCB etc.) should be of				
	European/Japanese origin or to the BS or equivalent and				
	items without an accredited agent in Sri Lanka shall not be				
	accepted.				
	Supply, install and wire the following Distribution				
1	Board (DB) at the entry point				
	TP &N Surface Mounted Distribution Board (IP 65)with				
	metal clad body and door, earth and neutral bars, live bus				
	bars, 3 nos pilot lamps ,insulated comb busbar and				
	incorporating din rail type with the following				
	Incoming Circuit Breaker				
	01 No. 32A, 4P MCB, 10kA				
	Outgoing Circuit Breaker				
	02 No. 32A, 4P MCB, 10kA				
	01 No. 32A, 2P MCB, 10kA	Nos	1		
	Connect route1-3 & 1-2, 3x70mm2+54.6mm2 ABC cable to the	<b>.</b>			
2	outgoing 4P MCBs in the DB	Item	1		
2	Testing & Commissioning	Itama	1		
3	Testing & Commissioning	Item	1		
	Sub Total 1				
	SSCL Sub Total 2				
	VAT				
	Total				
	Summary	Total wi	thout VAT	Total W	ith VAT
	<u>-</u>	10tai wi	mout viii	10001 11	101 1711
	Route 1-3				
	Route 1-2				
	Electrical Distribution Board				
	Ţ.				
	Grand Total				
	ne Bidder:				
me of th					
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ame of th					
ame of th	:				
	:				
ldress	:				
ldress	:				

Date

Signature of the Bidder and Seal

# Section - 8 DRAWINGS

# 8.0 DRAWINGS

N//A

# SECTION – 9 STANDARD FORMS [BID]

• BID SECURITY

#### Note:

The bidders are advised to use the information printed in <u>Bold & Italic</u> in this volume as a check list when submitting the bid. However, it is the responsibility of the bidders to comply with all the requirement given in the bidding document. Failure to non compliance with any of them may be a reason for rejection of the bid.

#### Notes on Standard Forms:

- Bidders shall submit the completed Form of Bid Security/Bid Securing Declaration as appropriate in compliance with the requirements of the bidding documents.
- Bidders should not complete the Form of Agreement at the time of preparation of bids.
- The successful bidder will be required to sign the Form of Agreement, after the award of contract.
- Any corrections or modifications to the accepted bid resulting from arithmetic corrections, acceptable deviations, or quantity variations in accordance with the requirements of the bidding documents should be incorporated into the Agreement.
- The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidder s at the time of submission of bids.
- The successful bidders will be required to provide these securities in compliance with the requirements herein or as acceptable to the Employer.

## FORM OF BID SECURITY

[this Guarantee fo	rm shall be filled in accordance with the instructions indicated in brackets] [insert issuing bank's
name, and addres	s of issuing branch or office]
•	l address of Employer]
Date:	[insert (by issuing bank) date]
informed that name of the Bidde -[insert (by issuir	E No.: [insert (by issuing bank) number] We have been [insert (by issuing bank) or] (hereinafter called "the Bidder") has submitted to you its bid dated
_	understand that, according to your conditions, Bids must be supported by a Bid
hereby irrevocabl [insert amoupon receipt by use	the Bidder, we [insert name of issuing bank] y undertake to pay you any sum or sums not exceeding in total an amount of ount in figures] [insert amount in words] s of your first demand in writing accompanied by a written statement stating that the h of its obligation(s) under the bid conditions, because the Bidder:
(a) has withdo	rawn its Bid during the period of bid validity specified; or
	ccept the correction of errors in accordance with the Instructions to Bidders er "the ITB"); or
validity, (i	en notified of the acceptance of its Bid by the Employer during the period of bid ) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to e Performance Security, in accordance with the ITB.
Contract signed by the Bidder is not	nall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the y the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the successful bidder, upon the earlier of (i) the successful bidder furnishing the rity, otherwise it will remain in force up to (insert date)
Consequently, any before that date.	demand for payment under this Guarantee must be received by us at the office on or
	[signature(s) of authorized representative(s) ]

## **Check List for Bidders**

Bidders are advised to fill the following table:

ITEM	ITB	YES	REFERENCE
	Clause	(tick)	
Form of Bid			
Addressed to the Employer ?	18		
Completed?	18		
Signed ?	18		
Bid Security			
Addressed to the Employer?	16		
Format as required ?	16		
Issuing Agency as specified ?	16		
Amount and currency as requested?	16		
Validity 28 days beyond the validity of Bid	16		
<b>Qualification Information</b>			
All relevant information completed?	4		
Signed ?	4		
Addendum			
Contents of the addendum (if any) Taken into account ?	10		
BID package			
All the documents given in ITB Clause 12 enclosed in the original and copy?	12		
ITB Clause 19 followed before Sealing the Bid Package?	19		

SIGNATURE OF THE BIDDER