



CD 21C/2021

**SUPPLY AND DELIVERY OF OVERHEAD
POWERLINE EQUIPMENT**

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1. STATEMENT OF INVITATION

CENTLEC (SOC) (Ltd) invites suitable bidders to bid for supply and delivery of Overhead Powerline Equipment as detailed in the technical specification below for a period of three (3) years.

2. MINIMUM REQUIREMENTS

- 2.1 Supply unique security personal identification number (PIN) and/or original TAX Clearance Certificate for TAX compliant status.
- 2.2 Supply municipal services (water, sanitation, rates and electricity) clearance certificate or Lease Agreement with a current Bill and rates clearances, or Current Bill of Account not owing more than 30 days or Lease Agreement in case the services are paid for by the Landlord, the lease agreement must be signed by the applicable stakeholders.
 - 2.2.1 In an event that the Bidder utilizes prepaid services (e.g. water and or electricity) a valid municipal clearance certificate(s) must still be provided.
 - 2.2.2 Bidders that are CENTLEC (SOC) Ltd customers are also expected to attach a valid electricity clearance certificate.
- 2.3 Submit proof of registration on the National Treasury Centralized Supplier's Database.

3. DEFINITIONS AND ABBREVIATIONS

- 3.1. SANS:- South African National Standard
- 3.2. SLA:- Services Level Agreement
- 3.3. kV:- Kilo Volt
- 3.4. MVA:- Mega Volt Ampere
- 3.5. Pt:- Power Transformer
- 3.6. Ct:- Current Transformer
- 3.7. SOP:- Standard Operating Procedures
- 3.8. ECSA:- Engineering Council of South Africa
- 3.9. RSA:- Republic of South Africa
- 3.10 kV rms:- Kilo Volt root mean square
- 3.11 Ah:- Amp Hour
- 3.12 μ s:- Micro seconds
- 3.13 °C:- Degree Celsius
- 3.14 HV:- High Voltage

4. SCOPE OF WORK

This contract covers the manufacture, supply and delivery of overhead powerline equipment as described in the technical specification and schedules. All equipment shall be suitable for use on the distribution systems of CENTLEC (SOC) Ltd, the Regional Electrical Distributor

5. TECHNICAL SPECIFICATION

5.1 General Information.

The electrical equipment covered by this Bid must be suitable for a 50 Hz AC network, which operates at the voltages specified for the various items.

The neutral point of the 420/240V network is solidly earthed. The star point on **the 11 kV system in Bloemfontein is earthed through a 600 A (10Ω) and 300A (20Ω)** resistor. The meteorological conditions for Bloemfontein are:

1. Outdoor temperatures in degrees Celsius	Annual mean – 24.4; Maximum = 40; Minimum = -10
2. Average relative humidity	At 8h00 = 76%; at 14h00 = 33%; at 20h00 = 48% Minimum = 7% and Maximum = 98%
3. Thunder storm activity	Severe Thunderstorms

Table 1: Climatological data

5.2 MARKING OF EQUIPMENT / MATERIAL

All equipment / material which are to be marked shall be embossed or imprinted with the letters "**CENTLEC**" unless otherwise specified. No paint or ink markings will be accepted. ACSR, Aluminium and Copper conductors shall be marked with a unique method (embossed with an indent of CENTLEC's logo) visible from the outside of the conductor.

Cable and wire drums shall be clearly mark with the following information: Drum number, type of cable, size, number of cores and voltage rating. **Marking plates shall be stapled to the drum and weather resistant as some cable drums are stored for years in the open. Computer printed-paper marking material is not acceptable.**

All PVC & PE cable outer sheaths to be clearly marked as follow; a) at intervals of ± 600 mm with the words: " **CENTLEC**" by **imprint** or **Embossed** Printing (Paint markings will not be acceptable) and b) sequential length marking, with ink every 1 meter from the inside of the drum outwards.

Sample of Centlec's logo:

5.3 TYPE OF EQUIPMENT REQUIRED

These shall be in accordance with SANS 182-1: 2008.

5.3.4 CONDUCTORS - COPPER & STEEL (continue)

Earth rods and spikes to be copper plated bright tensile steel (500 MPa min), copper plating to be 250 um of 99% copper and to comply with SANS 1063: 2008.

Item	Description	Manufacturer & Item Code	Name Of Manufacturer	Delivery Period	SANS
J	Earth bar: Copper plated mild steel busbar known as "CADSTRAP" – 3mm x 50mm x 2,4m lengths, Copper plating to have a minimum thickness of 250 microns - bars to be painted black and bear SANS mark of approval.				

11. SURGE ARRESTER– MEDIUM VOLTAGE

Surge arresters shall be in accordance with **NRS 039-2: 2008** and SANS 0313:2008. These shall be for operation on an outdoor 11 kV overhead rural distribution network with a non-secured earthing system, and shall be supplied complete with phase conductor terminal, earth conductor terminal and mounting bracket suitable for 135 - 159 mm DIA cross arm. Similar to Joslyn ZHP012-8009000, ABB Polim-D10N or Alstom HE12sd2.

IEC line discharge class 1, Arrestor classification: 10kA,

Nominal lightning discharge current (8/20:s) : 10kA,

Minimum energy absorption capacity: 2.5 kJ/kV,

Minimum MCOV (Uc): 10 kV,

Maximum residual voltage (Ures) @10kA (8/20:s): > 40kV,

Maximum residual voltage for 10kA steep current impulse (1/20:s) [4 x Ur] : > 50kV and

Lightning impulse (1,2/50:s) insulation withstand level [(1,3/0,82) x Ures] : > 63,5kV.

Technical information including arrester characteristics must be submitted with the tender in NRS 39-2 schedule A and B format.

DROPOUT SURGE ARRESTORS shall comply with all the above electrical specifications.

Item	Description	Manufacturer Item Code	Name Of Manufacturer	Delivery Period	SANS
11 F	D/O Arrestor holding bracket to house item 11C				
11 G	D/O Arrestor Pole clamp & bracket - Hot dipped galvanized complete with bolts, washers and nuts				

13 CLAMPS: U-BOLT TYPE CROSSBY CLAMP

U-bolt clamp, single grip, single saddle s-type to SANS 813 - 2008. Hot dipped Galvanized drop forged base to SANS 121:2000/ISO 1461:1999. Rolled anodized U-bolt threads to be preferred. U-bolt to handle a minimum torque as indicated in table. Similar to ESKOM drawing D - DT 3025. Alternatives will be considered provided that full technical literature and samples is supplied with the tender.

Item 13	Description	Maximum Torque (Nm)	Manufacturer Item Code	Name Of Manufacturer	Delivery Period	SANS
		Guaranteed				
13 a	6 mm DIA	(15)				

15. FUSE: DISTRIBUTION TYPE DROPOUT FUSE (OUTDOOR) 11 kV

Fuses shall be in accordance with NRS 035 - 2002. Fuses must be complete with mounting bracket suitable for 135 - 159 DIA. cross arm as depicted on attached drawing

TS - 1 - 2. Preference will be given to Dearney type CX 360 – 22kV BIL 125kV.

Item 15	Description	Manufacturer Item Code	Name Of Manufacturer	Delivery Period	SANS
15 c	Fuse tube only (to fit Karg tipe)				
15 d	Surge Proof Fuse tube (DOC DPF – 50Hz)				
15 e	Modification to clamp for Dearney CX360 unit to take item d)				

31. WOODEN POLES AND CROSS ARMS

These poles and cross arms shall be suitable for overhead transmission lines and shall be of 55 MPa/KN tested strength in accordance with SANS 754: 2007 in the sizes specified unless otherwise specified. All poles shall be marked with the relevant tested breaking strengths as required.

Poles must be impregnated in accordance with SANS 1290: 2000. The method of banding shall be galvanized nail plates, of a size which would cover at least 75% of the pole top area.

The wire binding known as "farmers knot" at top end of poles and both ends in the case of the cross arm could be used as an alternative banding method. Holes must be drilled into wood poles precisely and accurately as indicated on drawings TS - 1 - 1 and TS - 1 - 2.

All holes must be impregnated. The average pole-top Diameter of any batch of poles supplied must be at least equal to the average pole-top Diameter as specified and no poles with a Diameter less than the specified minimum Diameter will be accepted.

Item	Description Wooden Transmission Poles	Manufacturer Item Code	Name Of Manufacturer	Delivery Period	SANS
I	6 m - 100 to 120 mm top diameter(no holes required)				
li	7 m - 110 to 130 mm top diameter (no holes required)				
lii	8 m - 120 to 140 mm diameter (no holes required)				
Iv	9 m - 160 to 180 mm top diameter				
V	10 m - 160 to 180 mm top diameter				
Vi	11 m -160 to 180 mm top diameter (55 Mpa)				
Vii	11m - 200 to 220 mm top diameter (75 MPA)				
Viii	13 m - 160 to 180 mm top diameter (55 MPA)				
Ix	13 m - 200 to 220 mm top diameter (75 MPA)				
X	14 m - 160 to 180 mm top diameter (55 MPA)				
Xi	14 m- 200 to 220 mm top diameter (75 MPA)				

Table 51: WOODEN POLES AND CROSS ARMS**31B CROSSARMS:** (Drilling details as indicated on drawing TS - 1 - 2)

Item	Description Wooden Transmission Poles	Manufacturer Item Code	Name Of Manufacturer	Delivery Period	SANS
I	2m - 140 to 160 mm top diameter				
li	2,5m - 140 to 160 mm top diameter				
lii	3m - 160 to 180 mm top diameter				
Iv	3m - 180 to 200 mm top diameter (75 MPA) no holes				

Table 52: WOODEN POLES AND CROSS ARMS

6. HEALTH AND SAFETY REQUIREMENTS

Please involved SHE office to guide what is needed for the bid. This must be included when any form of work will be carried out on any premises of CENTLEC

7. SPECIAL CONDITIONS OF THE CONTRACT

7.1 This will mostly inform the SLA and must have all the criteria that you want from the bidder and what he must comply with

8. EVALUATION CRITERIA

All proposals submitted will be evaluated in accordance with the criteria set out in the policy of Supply Chain Management of CENTLEC (SOC) Ltd.

The most suitable candidate will then be selected. Please take note that CENTLEC (SOC) Ltd is not bound to select any of the bidders submitting proposals.

Furthermore, technical competence is the principal selection criteria, CENTLEC (SOC) Ltd will evaluate the technical criteria first, and will only look at the price and BBEE level of contribution if it is satisfied with the technical evaluation. As a result of this, CENTLEC (SOC) Ltd does not bind itself in any way to select the bidder offering the lowest price.

8.1 TECHNICAL EVALUATION CRITERIA:

No.	Criteria	Description	Points
1.	Track record and experience	Submit reference letter(s), signed off by an authorized official to confirm the successful completion of a supply bid for similar materials to a local authority. Two (2) letter = 20 points ; Three (3) or more letters = 30 points .	30
2.	Delivery Period	Delivery period to be stated next to each item. Within one (1) – two (2) weeks = 30 points Three (3) – four (4) weeks = 20 points Five (5) weeks or more = 10 points	30
3.	Quality and compliance to SANS requirements as specified in the technical specifications	Submit standards certificates for all items that needs to comply with such standards. Certificates submitted for at least: ISO 9001 certificate as obtained from the manufacturer = 20 points Relevant SANS Certificates as per technical specification as obtained from manufacturers = 20 points	40
	TOTAL		100

Evaluation criteria

A bidder who gets a minimum of 70 points and above on will qualify to the next stage. Individual tenders would have to be evaluated according to the preferential point system. The bidder must score minimum points as follows

Item 1: 20 points

Item 2: 10 points

Item 3: 40 points; in the Evaluation Criteria.

The point system applicable to this project will be: 80/20

80 points for Price

20 points for BBEE certificate from accredited verification agencies.

8.2. PRICE AND REFERENTIAL POINTS SCORING – STAGE 2 (Price and B-BBEE status)

All Bidders that have passed the technical evaluation threshold of 70 points would also be scored based the 80/20 principle where 80 Points is for the Price and 20 points for B-BBEE as per the detail given below.

8.3 Points awarded for price

A maximum of 80 Points is allocated for price on the following basis:

$$\text{Where } P_s = 80 \left[1 - \frac{P_t - P_{\min}}{P_{\min}} \right]$$

P_s = Points Scored for comparative price of bid under consideration

P_t = Comparative Price of bid under consideration

P_{\min} = Comparative Price of lowest acceptable bid

8.4 Points awarded for B-BBEE Status Level of Contribution

In terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below;

B-BBEE Status Level of Contributor	Number of Points (80/20 System)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-Compliant Contributor	0

Table 63: B-BBEE Status level

8.5 Quotation Price

8.5.1. The quotation price(s) shall be SEIFSA based priced

8.5.2. The quotation price(s) shall be subject to negotiated increase, if absolutely unavoidable, should the contract be extended for one or more further periods, each period not exceeding 12 months.

NB: All traveling cost will only be paid as per updated AA ratings at the time of invoicing!

9. PRICING SCHEDULES

Pricing for all items in the pricing schedules are **Excluding VAT**.

5.3.3 CONDUCTOR- BARE COPPER & COPPER PLATED RODS:

These shall be in accordance with SANS 182-1: 2008.

Item 5.3.3	Description	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
J	Earth bar: Copper plated mild steel busbar known as "CADSTRAP" – 3mm x 50mm x 2,4m lengths, Copper plating to have a minimum thickness of 250 microns - bars to be painted black and bear SANS mark of approval.				

11. SURGE ARRESTER– MEDIUM VOLTAGE (continue)

DROPOUT SURGE ARRESTORS

Item	Description	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
11 F	D/O Arrestor holding bracket to house item 12c				
11 G	D/O Arrestor Pole clamp & bracket - Hot dipped galvanized complete with bolts, washers and nuts				

Table 99: Pricing Surge Arrester– Medium Voltage

13 A CLAMPS: U-BOLT TYPE CROSSBY CLAMP

Item 13	Description	Maximum Torque (Nm) Guaranteed	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
13 a	6 mm DIA	(15)				

Table 101: Pricing Clamps: U-Bolt Type Crossby Clamp

15. FUSE: DISTRIBUTION TYPE DROPOUT FUSE (OUTDOOR) 11 kV

Item 15	Description	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
15 c	Fuse tube only (to fit Karg tipe)				
15 d	Surge Proof Fuse tube (DOC DPF – 50Hz)				
15 e	Modification to clamp for Dearney CX360 unit to take item d)				

Table 103: Pricing Fuse: Distribution Type Dropout Fuse (Outdoor) 11 kV**31. WOODEN POLES AND CROSS ARMS**

Item	Description	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
	Wooden Transmission Poles				
I	6 m - 100 to 120 mm top diameter(no holes required)				
li	7 m - 110 to 130 mm top diameter (no holes required)				
lii	diameter (no holes required)				
Iv	9 m - 160 to 180 mm top diameter				
V	10 m - 160 to 180 mm top diameter				
Vi	11 m -160 to 180 mm top diameter (55 Mpa)				
Vii	11m - 200 to 220 mm top diameter (75 MPA)				
Viii	13 m - 160 to 180 mm top diameter (55 MPA)				
Ix	13 m - 200 to 220 mm top diameter (75 MPA)				
X	14 m - 160 to 180 mm top diameter (55 MPA)				
Xi	14 m- 200 to 220 mm top diameter (75 MPA)				

Table 127: Pricing Wooden Poles and Cross Arms

31B CROSSARMS: (Drilling details as indicated on drawing TS - 1 - 2)

Item	Description	Price (R) Year 1	Price (R) Year 2	Price (R) Year 3	Delivery Period
	Wooden Transmission Poles				
I	2m - 140 to 160 mm top diameter				
II	2,5m - 140 to 160 mm top diameter				
III	3m - 160 to 180 mm top diameter				
IV	3m - 180 to 200 mm top diameter (75 MPA) no holes				

Table 128: Pricing Wooden Poles and Cross Arms

10. CONTACT DETAILS

- 10.1 For any further technical information regarding the document contents please contact Mr. Andre Oelofse, e-mail: Andre.Oelofse@centlec.co.za. Such queries must be done in writing, the email address provided serves for this purpose. The answer to one question will be sent to all the other prospective bidders that have bought the bid documents.
- 10.2 For Supply Chain Related questions, Please contact Ms Palesa Makhele at 051 412 2753 or at Palesa.Makhele@centlec.co.za.