

## INVITATION OF BIDS FOR THE SUPPLY OF COPPER CABLES

1. Proposals are invited from the interested bidders for the enclosed scope of work in **TWO part** bid basis through Gem portal.
2. The scope of the work includes the Supply of Armoured PIJF copper cables of different capacities(10P,20P,50P,100P) and PVC switch board copper cable (5P) at SDSC SHAR for Telecommunications purpose as mentioned in the specifications.
3. This RFP is divided into Two parts. Part-1 contains General terms & conditions, Technical specifications. Part-2 contains price bid format. Part-1 is divided in to three sections as follows:
  - A. **Section A** – Contains General Information and Instructions for the Bidders about the RFP and also Standard Conditions of RFP, which will form part of the Contract with the successful Bidder
  - B. **Section B** – Essential details of items required, such as technical specifications,
  - C. **Section C** – Contains Evaluation Criteria and Annexures.
4. This RFP is being issued with no financial commitment and SDSC SHAR reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the RFP, should it become necessary at any stage.

### **5. BID SUBMISSION**

The Tenders authorized in online (GeM) on or before the open authorization date and time only be considered as valid tenders. Physical copy of the tender will not be considered, even received before the bid submission date. Bids shall be submitted in GeM only.

The techno-commercial bid should contain the following:

- (a) Submission of bid letter along with one set of proposal document (RFP) duly signed and stamped as token of acceptance.
- (b) Bill of material with Make and cable type of each item with commercial terms, GST, duties, exemption certificates.
- (c) A Technical compliance statement for each item in Bill of Material as per the proforma attached along with technical data sheet/literature highlighting the compliance to specifications. Deviations, if any, shall be brought out clearly.
- (d) Documentation (Product Brochures, leaflets, manuals & related technically supporting documents with respect to the products offered)
- (e) **The bidder shall be the Original Equipment Manufacturers (OEM) of the offered cables or its authorized distributor. Self-declaration to be furnished towards the claim of being OEM for the offered product and authorization certification of having distribution rights from the OEM to be submitted in latter case.**
- (f) *Any bids/offers with price details in Techno-Commercial Offer (Part –I) shall be rejected.*
- (g) *In order to qualify the bid, the Vendor must submit all the relevant standard test certificates/data sheets which complies with the technical specifications of each type of cable in this RFP.*

**5.1. PRICE PART OF THE BID FOR THE WORK**

- a) Unit rate for each of the item shall be indicated separately. The rate quoted shall be on FOR DESTINATION BASIS (SRIHARIKOTA). **However, the unloading of the cable drums at our site (SRIHARIKOTA) is our Department Scope (SDSC SHAR). Hence the bidders are requested to make a note while bidding.** Thus, transportation of material from your works to SDSC SHAR shall be the responsibility of tenderers.
- b) The taxes applicable for supply shall be ***indicated separately in terms of percentage in the price bid.*** If the offers submitted by the tenderers are silent on taxes, it will be presumed that quoted rates are inclusive of taxes & duties and no claim in this regard will be entertained later.
- c) **Evaluation criteria is based on Individual Item wise L1. Hence order can be split as per Item wise L1.**

**PART I****SECTION -A: GENERAL INFORMATION & STANDARD CONDITIONS OF RFP**

S.No	Description	Vendor Compliance
1.	<b>Prices quoted should be on the basis of F.O.R. SDSC SHAR, Sriharikota,</b> The purchaser will not pay separately for transit insurance. All risks in transit shall be exclusively of the contractor and the purchaser shall pay only for such stores as are actually received in good condition in accordance with the contract.	
2.	<b>LIQUIDATED DAMAGES:</b> In the event of the Supplier failing to supply the item within the delivery period specified in the contract agreement or in extension agreed thereto, the Department shall reserve the right to recover from the Supplier as liquidated damages, a sum of <b>0.5</b> percentage per week or part thereof of the undelivered portion of the total contract price of equipment. The Total liquidated damages shall not exceed the <b>10.0%</b> of the undelivered Item.	
3.	<b>OFFER VALIDITY:</b> Bid shall remain valid for acceptance for a period of 120 days from the due date of submission of the Bid. The Bidder shall not be entitled during the said period to revoke or revise his Bid or to vary the Bid except and to the extent required by SDSC SHAR in writing. Bid shall be revalidated for extended period as required by SDSC SHAR in writing. In such cases, unless otherwise specified, it is understood that validity is sought and provided without varying either the quoted price or any other terms and conditions of Bid finalized till that time.	
4.	<b>GST:</b> Please mention the applicable GST percentage with HSN/SAC code	
5.	<b>DELIVERY SCHEDULE:</b> The supply of the items shall be completed within <b>8 weeks</b> from the date of placement of the order.  The time for the date of delivery of the stores stipulated in the purchase order shall be deemed to be the essence of the contract and delivery must be completed no later than the date(s) specified therein. Failure to do so, without adequate justification may involve cancellation of the contract at the discretion of purchaser.	
6.	<b>RISK COVERAGE:</b> The Supplier shall arrange comprehensive risk coverage at his own cost covering the value of items including transportation to the site from manufacturer's works. The period of such coverage shall be up to contractual completion period or any extension granted by Department thereof.	
7.	<b>WARRANTY:</b>  The bidder should provide <b>warranty</b> for the cables for a period of minimum one year from the date of supply and acceptance.	
8.	<b>MODE OF PAYMENT:</b>  Our Bankers are State Bank of India, SDSC SHAR, Sriharikota – 524 124. You may furnish your banker details for transferring the payments through ECS mode	

S.No	Description	Vendor Compliance
9.	<p><b>TERMS OF PAYMENTS:</b></p> <p>General guideline TERMS OF PAYMENTS are as indicated below. Any deviation to these payment terms to be brought out.</p> <p><b>1.1. FOR SUPPLY OF EQUIPMENT / MATERIAL:</b></p> <p>100% payment of the supplied value shall be made after receipt and acceptance of materials on pro-rata basis at our site by CLIP at SDSC SHAR. Payment will be made for the actual quantity supplied, if the supplied Quantity is less than or equal to the ordered quantity. If the quantity supplied is more than the ordered quantity, payment for the additional quantity will be made after formal P.O Amendment.</p>	
10.	<p><b>BANK GUARANTEE: (PBG):</b></p> <p>a) The supplier shall guarantee for the performance of the contract by providing bank guarantee in favor of the Department for an amount equivalent to <b>3 % (three percent) of the total value</b> of this contract valid till the warranty period with a grace period of 2 months.</p> <p>b) The performance bank guarantee shall be submitted by the supplier within <b>fifteen days from the date of accepting the equipment/material</b> as per the CONTRACT. The format for the performance bank guarantee shall be obtained from the Department.</p> <p>Department reserves right to forfeit the PBG in non-performance of the vendor.</p>	
11.	<p><b>Security Deposit:</b></p> <p>The supplier, whose tender is accepted, shall be required to furnish by way of Security Deposit for the due fulfillment of the contract such a sum as shall amount to 3 % of the contract price of the work awarded.</p> <p>The security deposit (bearing no interest) shall be held by the Department as security till satisfactory completion, testing and handing over of all the system and for the due performance of all suppliers' obligations under the contract as per delivery period or extension granted thereof by the Department.</p> <p>The supplier within 10 days of Purchase Order or signing of Contract , deposit with the Accounts officer, Satish Dhawan Space Centre SHAR, Sriharikota as detailed above by any one or more of the following modes namely</p> <ul style="list-style-type: none"> <li>iv. By a crossed demand draft in favour of Accounts officer, Satish Dhawan Space Centre SHAR drawn on SBI and payable at Sriharikota.</li> <li>ii. By an acceptable bank guarantee. The bank guarantee shall be from a nationalized bank &amp; shall be valid for 90 days beyond completion period.</li> </ul> <p>In case of breach of contract, the Security deposit shall be forfeited in addition to other relief available to the Department under this contract.</p>	

S.No	Description	Vendor Compliance
12.	<p><b>COMBINED BANK GUARANTEE:</b> In case, if the tenderer is unable to provide two separate BGs, i.e., one for SD and one for PBG, they can submit a combined BG for SD &amp; PBG for 3% of the Order value valid till the completion of total contractual obligation (i.e. Delivery period plus Warranty period plus 60 days).</p>	
13.	Bidder shall note that the conditional discounts would not have edge in the evaluation process of tenders.	
14.	Non-acceptance of any conditions where ever called for related to guarantee or warrantee, performance bank guarantee, liquidate damages are liable for disqualification of bids.	
15.	<p><b>General Terms &amp; conditions for Bidders:</b></p> <p><b>For this procurement, bids from Class-I is only admissible.</b> Hence provisions contained in Public Procurement (Preference to Make in India), Order 2017 issued by Department for Promotion of Industry and Internal Trade (DIPP), Ministry of Commerce &amp; Industries vide letter No. P-45021/2/2017-PP(BE-II) dated 04.06.2020 and subsequent amendment &amp; directives shall be followed. Accordingly, offer will be evaluated &amp; processed in conformation with above referred GOI order (Specially mentioned below). The bidder shall provide compliance and undertaking as per order and hereafter amendments:</p> <p>(a) Order no: F.No.6/18/2019 PPD dated 23.07.2020 of Department of Expenditure), Ministry of Finance Under Public procurement division for the General Financial rule (GFRs).</p> <p>(b) Class-I local supplier means a supplier or service provider, whose goods, service or works offered for procurement, has local content equal to or more than 50%, as defined under order.</p> <p>I Verification of local content:</p> <p>(i) The Class I local supplier at the time to tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for Class-I local supplier as the case may be. They shall also give details of the location(s) at which the local value addition is made.</p> <p>(ii) In case bid value is in excess of Rs. 10 Cr., Class-I local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.</p> <p>(iii) False declarations will be in breach of the code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (GFR) for which a bidder or its</p>	

S.No	Description	Vendor Compliance
	<p>successors can be debarred for up to two years as per Rule 151(iii) of the general Financial Rules along with such other actions as may be permissible under Law.</p> <p>(iv) A supplier who has been debarred by any procuring entity for violation of this order shall not be eligible for preference under this order for procurement by any other procuring entity for the duration of the debarment.</p> <p>(d) The percentage of local content should be specifically mentioned in the offer, without which it will be summarily rejected.</p>	
16.	<b>Quality:</b> Materials used in the installation will be new and exclusively developed, produced and supplied to meet site requirements.	
17.	<b>Safety:</b> All equipment shall be complete with approved safety devices.	
18.	Test Certificates, wherever necessary, should be forwarded along with supplies.	
19.	The tenderer shall at all times indemnify the Purchaser against all claims which may be made in respect of the stores for infringement of any right protected by the patent Registration of design or Trade Mark and shall take all risks of accidents or damage, which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all means used by him for the contract.	
20.	<p><b>ARBITRATION:</b></p> <p>The Work Order shall be interpreted, construed and governed by the Laws in India. In the event of any dispute(s) and/or difference(s) arising out of or relating to the interpretation and application of the Work Order, such dispute(s) and/or difference(s) shall be settled amicably by mutual consultations of the good Office of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible within 30 days from the date of receipt of written notice of the existence of such dispute(s) and/or difference(s), the unsolved dispute(s) and/or difference(s) shall be referred to the Arbitrators appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Amendment Act, 2015 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre-Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be "English" only.</p> <p>Services under the Work Order shall be continued by Party during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the Centre (SDSC SHAR) or unless the matter is such the Work Order cannot be possible continued until the decision (whether final or interim) of the Arbitrator is obtained.</p>	

S.No	Description	Vendor Compliance
21.	<b>FORCE MAJEURE:</b> Should a part or whole work covered under this P.O be delayed due to reasons of Force Majeure which shall include legal lockouts, strikes, riots, civil commotion, fire accident, quarantines, epidemic, natural calamities and embargoes the completion period for work, equipment referred to in this agreement shall be extended by a period not in excess of the duration of such Force Majeure. The occurrence shall be notified within reasonable time.	
22.	<b>PACKING, FORWARDING &amp; TRANSPORT:</b> The tenderer will be held responsible for the stores being sufficiently and properly packed for transport, to withstand transit hazards and ensure safe arrival at the destination. The packing, marking of packages and transport to the destination (SDSC SHAR) shall be done by and at the expenses of the tenderer. All the costs relevant shall be included in the quotation.	
23.	<b>Earliest Acceptable Year of Manufacture.</b> Items which are to be supplied shall be manufactured recently.	
24.	The following information/documents are to be furnished online wherever applicable. (a) Product literature (b) Core banking account number (c) PAN details in quotation and invoices (d) GST Registration details.	
26	<b>Pre- Delivery inspection:</b>  <b>Bidder shall arrange for the Inspection of items at factory site/online video mode before the dispatch of the items as per the standard Quality Assurance Plan and the dispatch of the items shall be made only after obtaining the clearance from Pre- Delivery inspection team of SDSC SHAR.</b>	
27	<b>Packing Length:</b>  The Drum length of each type of cable shall be as per the nominal length as specified in the Table-1 of TEC-GR/CUG-01/03Aug2003 or as per TEC GR WIR 06/03, March 2002. A Tolerance of +5% / -2% of the nominal length is acceptable in drums. Payment shall be done on pro-rata basis against actual supply. However, the supply quantity shall not be less than the overall PO requirement for each type of cable.	
28	Acceptance for Split order placement	
29	<b>Quality Assurance Plan:</b>  Bidder shall submit the QAP for the department approval if the bidder was awarded Purchase order.	

## SECTION- B

### ESSENTIAL DETAILS OF ITEMS REQUIRED

#### **1. Requirement of the cables:**

S.No	Description of the cable	Quantity in kms
1	100 pair, 0.5mm diameter, PIJF armoured Telecom copper cable (single strand)	20 kms
2	50 Pair, 0.5mm diameter, PIJF armoured Telecom copper cable (Single strand)	19 kms
3	20 Pair, 0.5mm diameter, PIJF armoured Telecom copper cable (Single strand)	8 kms
4	10 pair, 0.5mm diameter,PIJF armoured Telecom copper cable (Single strand)	5 kms
5	5 pair, 0.5mm diameter, UTP Telecom Copper cable (Single strand)	5kms

**Note:**

Cable Drums are non-returnable.

#### **2. Specifications of PIJF (polythene insulated jelly filled) armoured copper cables for telecom**

S.No	Description	Specifications	Vendor Compliance (yes/No) /Remarks
1.	Copper cable	Polythene Insulated Jelly filled armoured Telecom copper cable	
2.	Applicable Standards	Generally configurable to DOT TEC GR/CUG-01/03 Aug 2003.	
3.	No. of pairs with length a) 10 Pair b) 20 pair c) 50 pair d) 100 pair	5 kms 8 kms 19kms 20kms	
4	Conductor a) Diameter b) Shape c) Material	0.5mm $\pm$ 0.010mm Solid- Circular Solid Annealed high conductive Copper with quality confirming to IEC:28 or12444.	
5	Insulation a) Grade b) Oxidation	Solid Polythene confirming to ASTMD1248 Type-II or III. Anti-oxidant/copper inhibitor	

	c) Sheath d) Colourcoding  e) Thickness f) Spark test	Polythene material As per table 2 of TEC GR/CUG-01/03 Aug 2003. Uniform for entire cable length As per Electrical data table 2(b)	
6	Twining / Pairing  a) Twisting  b) Capacitance unbalance c) Cross talk	Uniform for entire cable length complying to TEC GR/CUG-01/03 Aug-2003(Clause 5.1 of TEC GR mentioned that the lay length of any twisted pair shall not exceed 150mm)  As per Electrical data table 2(b)  As per Electrical data table 2(b)	
7	Units: a) No of pairs b) Unit identification c) Colour of binder  d) Group Twinning	10, 20, 50 and 100 Pairs Coloured binder As per Table-3 of TEC GR/CUG-01/03 Aug-2003. 1) 10P contains 1unit of 10P 2) 20P contains 1unit of 20P 3) 50P contains 5 units of 10P 4) 100P contains 5units of 20P	
8	Filling Compound-  a) Compatibility  b) Material  c) Homogenous	Petroleum Jelly  Compatible with polythene insulation, binders and tapes  It shall be of homogenous and uniformly mixed material containing an anti-oxidant and water-resistant compound.  shall not contain dirt, metallic particles or other foreign matter.	
9	Core Wrapping a) Tape  b) Jelly	A closed helical or longitudinal lapping of a non - hygroscopic and non-wicking polyester tape shall be laid over the cable core.  Impregnated or flooded with jelly to meet the water penetration test requirements.	

	c) flooding compound	Application of a flooding compound below and above the core wrapping tape is recommended.	
10	Moisture barrier / Screen  a) Tape  b) Size	Polythene coated aluminum tape shall be applied longitudinally on the core with a minimum overlap of 3 mm.  The thickness of the aluminum tape shall be $0.3\text{ mm} \pm 15\%$ extruded over it with any suitable method.	
11	Sheath  a) Type  b) Nature  c) Diameter over sheath for 10 pair cable  d) Diameter over sheath for 20 pair cable  e) Diameter over sheath for 50 pair cable  f) Diameter over sheath for 100 pair cable  g) Minimum thickness	Solid polythene confirming to type 03C or H03C of BS 6234 with a suitable anti-oxidant system  Reasonable circular, and free from pin holes, joints and other defects  Shall not exceed 13.2mm (Table-7 of TEC GR/CUG-01/03 Aug-2003)  Shall not exceed 17mm (Table-7 of TEC GR/CUG-01/03 Aug-2003)  Shall not exceed 22mm (Table-7 of TEC GR/CUG-01/03 Aug-2003)  Shall not exceed 28mm (Table-7 of TEC GR/CUG-01/03 Aug-2003)  Shall not be less than 75% of nominal specified(2mm) (As per Table-6 of TEC GR/CUG-01/03 Aug-2003.)	
12	Bedding tape	Polythene tape or polypropylene tape shall be applied helically over the sheath.	
13	Armouring: 1) Material 2) Type 3) Size (Thickness)	Galvanized steel tape Helical (double) (Cl 11.3 of TEC GR) 0.5mm $\pm 10\%$	
14	Jacket: 1) Material 2) Thickness 3) Diameter over Jacket	Solid polythene confirming to type 03C or H03C of BS-6234  Shall not be less than 1.05mm a) For 10P, shall not exceed 20.2mm b) For 20P, shall not exceed 24mm	

		c) For 50P, shall not exceed 29mm d) For 100P, shall not exceed 36mm (note: a,b,c values are as per Table-7 of TEC GR/CUG-01/03 Aug-2003.	
15	Packing  a) Cable Length  b) Wounding  c) Sealing  d) Stampings	1) Drums shall have cables of length 1000 meters +5%/- 2% or as per nominal length mentioned in Table-1 of TEC GR/CUG-01/03 Aug-2003.  2) Cable shall be wound on strong wooden drums.  3) Ends of the cable shall be sealed by enclosing them in rubber or PVC caps.  4) Hot stamping with authorities of SDSC SHAR stamp at the ends shall be done, if inspected at site.	
16	Marking  a) The following information shall be stenciled on the drums,  b) The following information should be engraved/printed on the sheath throughout the length.  c) Marking intervals	1. Manufactures name 2. Number of pairs and diameter of conductor 3. Length of cable on the drum 4. Direction of rotation of the drum 5. Drum number 6. Year of manufacture 7. Approximate gross weight  1. Manufactures name 2. No. of pairs and dia of conductor 3. Length (sequential marking) 4. Year of manufacture “TELECOM SDSC” should be engraved/printed on the sheath throughout the length  The marking shall be at intervals of one meter and shall be throughout the length. The running length marking is critical.	
17	Inspection and Testing Inspection		

	<p>a) Sampling</p> <p>b) Quantity</p> <p><b>Testing</b></p> <p>Mechanical Test</p> <p>Electrical Test</p> <p>1) Low frequency (audio frequency) range tests</p> <p>2) High frequency (150KHz) range tests:</p>	<p>Cable drums shall be chosen at random from the lot for taking samples to do the mechanical and electrical test.</p> <p>Insulation Resistance and High Voltage Tests for 100% of the samples. Remaining tests as per the sampling plan selection by SHAR Department team.</p> <ol style="list-style-type: none"> <li>1. Polythene for conductor insulation</li> <li>2. Dielectric constant or permittivity</li> <li>3. Volume resistivity of petroleum jelly</li> <li>4. Permittivity of petroleum jelly</li> <li>5. Thickness of Poly-Al tape</li> <li>6. Thickness of Sheath</li> <li>7. Diameter over Sheath</li> <li>8. Variation between the maximum and minimum diameter over sheath at any cross section.</li> <li>9. Elongation and tensile strength of conductor insulation</li> <li>10. Thickness of conductor</li> <li>11. Annealing of conductor</li> <li>12. Cable bend test</li> <li>13. Water penetration test</li> </ol> <ol style="list-style-type: none"> <li>1. Continuity of conductors</li> <li>2. Conductor resistance</li> <li>3. Resistance unbalance</li> <li>4. Resistance of poly-al tape</li> <li>5. Mutual capacitance</li> <li>6. Capacitance unbalance (Pair to Pair)</li> <li>7. Capacitance unbalance (Pair to Gnd)</li> <li>8. Dielectric strength (High voltage) between conductors</li> <li>9. Dielectric strength (High voltage) between all conductors and shield.</li> <li>10. Insulation resistance</li> </ol> <ol style="list-style-type: none"> <li>1. Equal level far end cross talk</li> <li>2. Near end cross talk</li> <li>3. Attenuation</li> </ol>
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18	Tests	Any other type tests as per standards shall be shown along with QAP.	
19	Other Technical terms if any	Shall comply to TEC GR/CUG-01/03 Aug-2003.	

**2(a) Mechanical data:**

S.No	Description	Specifications	Vendor Compliance
<b>1. Pairs</b>	No of pairs	10/20 / 50/100	
<b>2. Conductor</b>	a) Material	Annealed copper conductor (single strand).	
	b) Thickness	0.5mm $\pm$ 0.010mm diameter	
	c) Annealing	Min 15% of a sample wire of 250mm long	
<b>3. Insulation</b>	a) Material& its standard	Solid polythene confirming to ASTMD-1248 Type-II or III, Class-A cat.4 or 5 (Cl.4.0 of TEC GR/CUG-01/03 Aug.2003)	
	b) Dielectric Constant	Maximum 2.35	
	c)Tensile strength of Insulation	Min 100 kg/cm <sup>2</sup>	
	d) Elongation of Insulation	: Min 300%	
<b>4. Colour scheme for core insulation</b>	As per Table-2 of TEC GR/CUG-01/03 Aug.2003		
<b>5. Sheath</b>	a) Diameter over sheath	1) For 10Pair $\leq$ 13.2mm 2) For 20Pair $\leq$ 17mm 3) For 50 pair $\leq$ 22mm 4) For 100 pair $\leq$ 28mm	
	b) Sheath thickness	1.50 mm (min) and 2.0 mm (nom) (excluding poly-Al laminate)	
	c)Tensile strength of sheath	Min 70kg/cm <sup>2</sup>	
	d) Elongation of sheath	Min 300%	
<b>6. Color of binder tap</b>	Blue, Orange, Green, Brown, Grey		
<b>7. Filling compound</b>	Petroleum Jelly		
<b>8. Poly - Al overlap</b>	Min 3 mm		
<b>9. Thickness of Aluminium tape</b>	Min 0.3 mm $\pm$ 15%		

**2(b) Electrical data:**

S.No	Description	Specifications	Vendor Compliance
1.	<b>Conductor resistance</b>	86 Ohms / km ± 6 Ohms / km	
2.	<b>Maximum Percentage of Conductor Resistance unbalance</b>	1 ( avg) / 2.5(Individual)	
3.	<b>Average Mutual capacitance of individual pairs at 800 to 1000 Hz</b>	52 ± 3nF/km	
4.	<b>Capacitance unbalance (Pair to Pair)(@800-1000Hz)</b>	≤ 50 pF/Km (average)	
5.	<b>Capacitance unbalance (Pair to Gnd) (@800-1000Hz)</b>	≤ 750 pF/Km (average)	
6.	<b>Spark test:</b>		
	<b>a) Dielectric strength:</b>		
	1) Conductor to conductor	At 2.4 KV DC for 3 Sec.	
	2) Conductor to shield	At 5.0 KV DC for 3 Sec.	
	<b>b) Insulation Resistance:</b>		
	1) Conductor to conductor	Min 5000 MΩ-KM at 500 V DC-1 Min	
	2) Conductor to shield	Min 5000 MΩ-KM at 500 V DC-1 Min.	
	<b>c) Dielectric strength of the sheath</b>		
	Sheath thickness	2.0 to 2.4mm: At 17KV dc or at 11KV RMS ac	
7.	<b>Equal level far end cross talk at 150Khz (individual value)</b>	Better than 55dB/Km	
8.	<b>Near end cross talk at 150Khz (individual value)</b>	Better than 55dB/Km	
9.	<b>Maximum average Attenuation of the pairs at 150Khz at 20 deg C</b>	8.25 dB/Km	

**3. Specifications for Unshielded Twisted pair cables (PVC sheathed Unarmored Telephone cables):**

S.No	Description	Specifications	Vendor Compliance
1	Cable Type	0.5mm $\pm$ 0.010mm diameter, Unshielded Twisted pair copper cable (PVC sheathed, Unarmoured)	
2	Applicable standard	GR/WIR 06/03. Mar2002	
3	No of pairs 5 pair	5 kms	
4	<b>Conductor:</b>		
	1) Material	Solid annealed Bare copper conductor as per IS:8130 (Single strand).	
	2) Grade	Electrolytic	
	3) Diameter	0.5mm $\pm$ 0.010mm	
	4) Shape of conductor	Solid- circular	
5	<b>Insulation:</b>		
	1) Material	Extruded Polyethylene	
	2) Lay length of Twisted pair	$\leq$ 80mm	
6	<b>Colour coding</b>	As per Table-2 of GR/WIR 06/03. March 2002.	
7	<b>Sheath:</b>		
	1) Material	PVC type 'TM-2 as per IS:13176 or ST1 as per IS:5831"	
	2) Thickness	Minimum 0.65mm	
	3) Colour	Grey	
	4) Diameter of overall cable	$6 \pm 1$ mm	
8	<b>Electrical tests:</b>		
	1) conductor Resistance	$86 \pm 6$ ohms/km	
	2) Minimum Insulation resistance	50M.ohms/km	
	3) High Voltage test	2KV RMS for 1 minute.	
	4) Capacitance Unbalance (pair to pair)	Shall not exceed 230PF	
9	Packing & Delivery	Cable length of 500m +5%/-2% in a single drum/reel or nominal length specified in TEC GR WIR 06/03, March 2002. Marking of the drums is as per TEC GR document.	

## Section-C

### EVALUATION CRITERIA & ANNEXURES

**A. Minimum Qualification Criteria:**

S.No	Qualification Criteria	Vendor Remarks (with supporting documents)
1.1.	<p>The Bidders should have prior experience in supplying Telecom Copper cables. They should have supplied at Government/ Public organizations/ Reputed MNC's in the last 3 years ending with march 2024.</p> <p>The documentary evidence(s) like Purchase Order copies, acceptance/completion report/ user satisfaction certificate(s) with user contact details should be submitted along with the technical proposal.</p>	
1.2.	<p>Purchase order's in relevant supplies in the last five years ending with march 2024 such that any</p> <ol style="list-style-type: none"> <li>1) One P.O with order value greater than 100 lakhs or</li> <li>2) Two P.O's with order value greater than 75 lakhs each or</li> <li>3) Three P.O's with order value greater than 50 lakhs each.</li> </ol>	
1.3.	Average Annual Turnover of minimum 100 lakhs for the past three years ending with March 2024	
1.4.	Technical proposal of the bidder, which is not able to substantiate/satisfy the claims made by it with respect to the technical requirements laid down in this RFP, is liable to be rejected	
1.5.	<b>The bidder shall be the Original Equipment Manufacturers (OEM) of the offered cables or its authorized distributor. Self-declaration to be furnished towards the claim of being OEM for the offered product if bidder is OEM or authorization certification of having distribution rights from the OEM to be submitted if Bidder is Authorized Distributor</b>	
1.6.	All the Documentary evidences shall be attached.	
1.7.	The Bidder (OEM & OEM Authorized Distributor) must provide a self-declaration that they have not been black listed by any Govt. Department/PSU.	
1.8.	The Department reserve the right for vendor evaluation to verify the manufacturing capability of the tenderer for the offered quantity.	
1.9.	OEM Shall be in the field of manufacturing copper cables of Telecom in the last five years ending with march 2024.	

(Authorized Signatory of Company)

**B. Compliance:** The broad guidelines for evaluation of Bids will be as follows:

S.No	Description	Vendor Compliance
1.0	In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the Department with reference to the technical characteristics of the equipment as mentioned in the RFP. The compliance of Technical Bids would be determined on the basis of the parameters specified in the RFP. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.	
2.0	The Vendor must submit all the relevant standard test certificates/data sheets which complies with the technical specifications of each type of cable in this RFP.	
3.0	During evaluation, SDSC SHAR may request Bidder for any clarification on the bid, additional documents.	
4.0	SDSC SHAR reserves the right to reject any bid if technically/commercially not meeting the requirement/terms & conditions. Such decisions by the SDSC SHAR shall bear no liability whatsoever consequent upon such decision.	
5.0	The Bidder of the quoted items shall give an affidavit declaring that they are not supplying any equipment that has been manufactured by 3rd party that is Blacklisted by any Government Department in India or any Government Globally as per GFR2017 Clause 144 (xi) and neither do they get the products manufactured from any of the above companies, else they are liable to be disqualified irrespective of the models offered.	
6.0	<b><i>Individual Item wise L1 is considered for the placement of order</i></b>	

(Authorized Signatory of Company)

**Annexure -I**

**NAME OF THE ITEM :** \_\_\_\_\_  
 \_\_\_\_\_

**NAME OF BIDDER :** \_\_\_\_\_

**EXCEPTIONS AND DEVIATIONS**

In line with Proposal Document, Bidder may stipulate Exceptions and deviations to the Proposal conditions if considered unavoidable.

SL. NO	Reference in Specification		Dept. Specification	Offered Specification	DEVIATION
	PAGE NO	CLAUSE NO			

**NOTE :**

Any deviations taken by the Bidder to the stipulations of the Proposal document shall be brought out strictly as per this format and enclosed along with the bid.

Any deviations not brought out as per this Proforma and written elsewhere in the Proposal document shall not be recognized and the same is treated as null and void.

Any willful attempt by the Bidders to camouflage the deviations by giving them in the covering letter or in any other documents that are enclosed may render the Bid itself non-responsive.

**(Authorized Signatory of Company)**

**TO BE SUBMITTED ALONGWITH TECHNICAL BID****Annexure -II****ACCEPTANCE OF TERMS AND CONDITIONS BY THE VENDOR**

We hereby agree to all the terms and conditions as given in Tender Notice No. \_\_\_\_\_ dated: \_\_\_\_\_ for Supply of copper cables at SDSC SHAR as per tender specifications.

**Company Seal****(Authorized Signatory of Company)**

Place : \_\_\_\_\_

Date : \_\_\_\_\_

**TO BE SUBMITTED ALONGWITH TECHNICAL BID****Annexure -III****CERTIFICATE TO BE FURNISHED BY THE VENDOR**

1. The items once ordered will be subjected to an inspection by the Department CLIP team at factory site/online video mode before the dispatch of the items as per the Pre-Delivery Inspection clause of this tender document. The specifications of the items will be in conformity with the details provided by the user and as per given specifications.
2. We confirm that we abide by the delivery schedule as laid out in tender enquiry.

**Company Seal****(Authorized Signatory of Company)**

Place : \_\_\_\_\_

Date : \_\_\_\_\_

**Annexure -IV****BILL OF MATERIAL**

S.No	Description of Items to be supplied	Units	Qty	Vendor Compliance	Remarks/Vendor to Specify Make	MII content
1.	100 Pair, 0.5mm diameter, PIJF armoured Telecom copper cable (Single strand).	km	20			
2.	50 Pair , 0.5mm diameter, PIJF armoured Telecom copper cable (Single strand)	Km	19			
3.	20 Pair, 0.5mm diameter, PIJF armoured Telecom copper cable (Single strand)	km	8			
4.	10 pair, 0.5mm diameter,PIJF armoured Telecom copper cable (Single strand)	km	5			
5.	5 pair, 0.5mm diameter, UTP Telecom copper cable (Single strand)	km	5			

**Signature of Authorized Person with Seal****Note:**

The Bidder has to declare the item wise MII Content, value addition in location etc., If the Bidder is an OEM, Self-Declaration to be submitted regarding the MII Content. If the Bidder is the sole authorized Distributor of the OEM, OEM Certificate to be submitted regarding the MII content along with the authorization letter to the Bidder.

**TO BE SUBMITTED ALONGWITH TECHNICAL BID****Annexure -V****CHECK LIST**

S.No	Description	Compliance
1.	The detailed scope of work and technical specifications are understood and price was quoted accordingly.	Yes / No
2.	Validity of Offer is 120 days	Yes / No
3.	Supporting documents is attached for Minimum Evaluation Criteria	Yes / No
4.	Declaration of Make in India content (MII as per Page no.05, point no :15)	Yes / No
5.	OEM of copper cables shall be in manufacturing since 05 years is attached	Yes / No
6.	GST to be indicated in % if not mentioned it shall be assumed that the price quoted are inclusive of taxes	Yes / No
7.	Delivery Schedule is acceptable	Yes / No
8.	Accepted the Department Payment Terms	Yes / No
9.	Warranty after the receipt and acceptance for a period of minimum 12 months	Yes / No
10.	3% of the order value shall be submitted as PBG, valid till the completion of total contractual obligation (i.e. Supply period plus Warranty period plus 60 days).	Yes / No
11.	3% of the order value shall be submitted as SD, valid till the completion of total contractual obligation	Yes / No
12.	Combined BG if not providing separate PBG and SD	Yes/No
13.	Liquidated Damages clause acceptable	Yes / No

**Signature of Authorized Person with Seal**

**PART-II****Annexure -VI****PRICE BID Format:**

S.NO	Item Description	Quantity	Unit cost/km	Total Cost	Tax in Rs. ( <u>  </u> %)	Grand Total cost with Tax (Rs.)
1	100 Pair, 0.5mm diameter ,PIJF armoured Telecom Copper Cable (single strand)	20 kms				
2	50 Pair, 0.5mm diameter PIJF armoured Telecom Copper Cable (single strand)	19 kms				
3	20 Pair, 0.5mm diameter PIJF armoured Telecom Copper Cable (single strand)	8 kms				
4	10 Pair, 0.5mm diameter PIJF armoured Telecom Copper Cable (single strand)	5 kms				
5	5 Pair, 0.5mm diameter UTP Telecom copper cable (Un armoured)	5 kms				
	Overall cost of cables supplied					

**Signature of Authorized Person with Seal****Note:**

Price bid format should not be submitted/Uploaded along with Part-I of the technical and commercial documents. Doing so, the bid will not be considered for Technical evaluation.