

	GENERAL & TECHNICAL SPECIFICATION FOR AC CABLE	Doc. No.: REG -20210513/01	
Rudrapur	GROUP : RENEWABLE ENGERGY GROUP	Rev no	00

**PROJECT: 6.5 MWp (DC)/ 5 MW (AC) GRID
INTERACTIVE SOLAR POWER PLANT AT NALANDA
UNIVERSITY, RAJGIR - BIHAR.**

**GENERAL & TECHNICAL SPECIFICATIONS
FOR
0.6/1.1 KV AC CABLE**


 राजेश बाबु
 अधिकारी (प्रकल्प प्रमुख)
 बी.एम.ई.एल., रुद्रपुर
 पत्ता: राजगिर - 803153

Bidder's signature & stamp

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General Specification:

- i. **Scope:** Supply of 3.5C X 150 Sqmm XLPE insulated & PVC sheath ST-2 plain Aluminium conductor armoured cables.
- ii. Prices quoted shall be on F.O.R site basis (NALANDA UNIVERSITY – RAJGIR, BIHAR -803116) & shall be firm till completion of delivery. Consignee address to be provided alongwith dispatch clearance.
- iii. **Delivery schedule:** Delivery schedule shall be :-

S.No.	Item Description	Quantity (Mtrs.)	Delivery schedule
1.	3.5C x 150 SQMM AC CABLE	3000.00	30 days from the date of P.O.

Note:-

1. Technical data sheet, QAP/MQP shall be submitted by successful bidder for approval within 5 days from the date issue of purchase order. BHEL will review the documents & will issue approval/ manufacturing clearance within 3 working days.
2. Tentative quality plan for the cable is enclosed. Bidders shall submit quality assurance plan (QAP) for approval. Inspection shall be done as th approved QAP.
3. Bidders shall submit Type Test reports alongwith offer. Type Test report shall be considered during technical evaluation.
- iv. **Inspection :-** Cables shall be inspected at vendor's work. Bidder has to arrange complete visit & give a call for the Inspection & testing in prior (at least 5 days). The BHEL/ third party representative or duly authorized inspector shall be entitled to attend the said tests and/or inspection. All related cost for Pre dispatch inspection (PDI) to be borne by the supplier.
- v. **Despacth clearance:-** MDCC (material despacth clearance certificate) for each lot shall be issued after inspection & compliance of comments made by BHEL/third party during inspection.
- vi. **Extension of Delivery Time :-** Extension in delivery schedule is permitted only in such cases wherein causes for the delay are not attributable to the supplier. In such case, supplier make a request to BHEL for the extension of delivery time with the all genuine facts. Extension of time will be given only if the facts given by supplier are found to be true/justified.
- vii. Annex-I has to be filled & submitted by bidders alongwith Technical bid. Bidders shall also submit technical datasheet for cables of offered Make.
- viii. Cable shall be supplied in bundles/drums. No loose cables are allowed to supply.

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Technical Specification:

Cables shall have the following characteristics:


- i. Temp. Range: -10 Degree C to +90 Degree C.
- ii. Voltage rating 0.6/1.1 kV.
- iii. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation.
- iv. Flexibility as per relevant standard.
- v. Cables shall have XLPE insulation and PVC sheath ST-2, four-core electrolytic class-2 plain Aluminium Conductor & armour.
- vi. Cable shall have marked “ Manufacturer’s Name, insulating material, conductor size, volatage class & standard on its surface at every meter.

Accepted Make: POLYCAB/ KEI/ RAVIN/ LAPP/ HAVELLS/ RR KABEL.

Standards:

Cables shall meet following standards:

- | | | |
|------|-----------|------------------|
| i. | IS:7098 | for XLPE Cables. |
| ii. | IS:8130 | for Conductor. |
| iii. | IS: 5831 | for Sheath. |
| iv. | IS: 3975 | for armour. |
| v. | IS: 10810 | for Testing. |
| vi. | IS: 10418 | for packaging. |

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ANNEXURE-1

TECHNICAL DATA SHEET

0.65/1.1KV 3.5 C X 150 SQMM XLPE INSULATED PVC ST-2 SHEATH PLAIN ALUMINIUM CONDUCTOR ARMOURED CABLE

S.No	Specification	Range/ Standard
1.	Construction	
1.a	Conductor material	
1.b	No. of strand/Dia of wire	
1.c	Insulation& thickness of Insulation	
1.d	Armour	
1.e	Sheath material & thickness	
1.f	Outer sheath Colour	
2.	Electrical Characteristics	
2.a	Rated Voltage (U ₀ /U)	
2.b	Rated Dc Voltage	
2.c	Max.Permitted DC Voltage:	
2.d	Max.Permitted AC Voltage:	
2.e	Max D.C resistance @ 20C for Cond.	
2.f	Max A.C resistance @90C for Cond	
2.g	Insulation Resistance:	
2.h	Spark Test Voltage (for 5min);	
2.i	Voltage withstand	
3	Thermal characteristics	
3.a	Ambient Temp.(Lower)	
3.b	Ambient Temp.(Upper)	
3.c	Short Circuit Temp (for 5sec).	
3.d	Thermal endurance Test	
3.e	High Temprature Pressure	
4	Mechanical Characteristes	
4.a	Minimum bending Radius	
4.b	DynemicPentretion	
4.c	Notch propogation	
4.d	Tensile Strength	
4.e	Elongation of insulation and sheathing	
4.f	Anticipated Years of Use	
5	Chemical Characteristic	
5.a	Wheathering Resistance	
5.b	Minreral Oil Resistance	
5.c	Ozone Resistance	
5.d	Acid &Alkile Resistance	
5.e	Acid &Alkile Resistance	
6	Fire Performance	


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6.a	Vertical Flame Restardant	
6.b	Halogens	
6.c	Low Smoke Emission	
6.d	Toxicity	
6.e	Acid gas emission	
7	Printing on Cable Surface	

Note:-

1. For those properties where different values for different sizes are involved, separate rows may be created against the particular line item and values may be filled.
2. The format can be retyped. Please don't change the text or sequence of the technical particulars as listed above to enable proper evaluation and comparison.
3. Please don't only mention "as per IS or standard. Please do mention standard number and clause.

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ANNEXURE-2

BILL OF QUANTITY

S.No.	Item Description	Unit	Quantity
1.	3.5C X 150 Sqmm XLPE insulated & PVC sheath ST-2 plain Aluminium conductor armoured cables.	Mtr.	3000.00
	Total		3000.00


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Bidder's signature & stamp