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प्लाज़्मा अनुसंधान संस्थान INSTITUTE FOR PLASMA RESEARCH

परमाण् ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त



संस्थान

An Aided Institute of Department of Atomic Energy, Government of India

इन्दिरा पुल के पास, भाट, गांधीनगर – 382 428 भारत दूरभाष: (079) 2396 2020/2021/2028 फैक्स: 91-079-23962277 वेब: <u>www.ipr.res.in</u> NEAR INDIRA BRIDGE, BHAT DIST. GANDHINAGAR - 382 428 (INDIA) Phone: (079) 2396 2020/2021/2028 Fax : 91-079-23962277 Web : <u>www.ipr.res.in</u>

ENQUIRY

ENQUIRY NO Date : IPR/EQL/18-19/069 : 05-06-2018

Due on : 28-06-2018 by 1:00 PM IST

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items:

Important Note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to <u>localpurchase@ipr.res.in</u>

Please ensure your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., <u>http://www.ipr.res.in/documents/tender_terms.html</u> / attached herewith.

Instructions to the bidders & Terms and conditions (refer Form No: IPR-LP-01.V4)
 Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer **clause no: 8** of Form No: **IPR-LP-01.V4**

QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Laying of power cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. A) 22kV 3 C x 185 sq.mm	75.0 Mtrs.
2	Laying of power cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. B) 1.1kV 1 C x 1000 sq.mm	1000.0 Mtrs.
3	Laying of power cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. C) 1.1kV 3.5 C x 630 sq.mm	375.0 Mtrs.
4	Laying of power cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes	2260.0 Mtrs.

	in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. D) 1.1kV 3.5 C x 300 sq.mm	
5	Laying of power cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. E) 1.1kV 3.5 C x 70 sq.mm	250.0 Mtrs.
6	Laying of control cable On existing Cable Trays/wall/RCC/Floors/Ceilings etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. F) 1.1kV 7 C x 2.5 sq.mm	100.0 Mtrs.
7	Supply of HT Heat Shrink type Cable Termination kit complete A) 22kV 3 C x 185 sq.mm	2.0 Nos.
8	Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete B) 1.1kV 1 C x 1000 sq.mm	50.0 Nos.
9	Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete C) 1.1kV 3.5 C x 630 sq.mm	6.0 Nos.
10	Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete D) 1.1kV 3.5 C x 300 sq.mm	56.0 Nos.
11	Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete E) 1.1kV 3.5 C x 70 sq.mm	10.0 Nos.
12	Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete F) 1.1kV 7 C x 2.5 sq.mm	2.0 Nos.
13	Installation Job Work of HT Heat Shrink type Cable Termination kit complete A) 22kV 3 C x 185 sq.mm	2.0 Nos.
14	Installation Job Work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete B) 1.1kV 1 C x 1000 sq.mm	50.0 Nos.
15	Installation Job Work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete C) 1.1kV 3.5 C x 630 sq.mm	6.0 Nos.
16	Installation Job Work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete D) 1.1kV 3.5 C x 300 sq.mm	56.0 Nos.
17	Installation Job Work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete E) 1.1kV 3.5 C x 70 sq.mm	10.0 Nos.
18	Installation Job Work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete F) 1.1kV 7 C x 2.5 sq.mm	2.0 Nos.
Note	 (1). Payment: Pro rata basis against completion of work to our satisfaction and certification by user department. (2). Please quote with complete technical details (Technical compliance sheet and product data sheet). 	
Encl	As per attachment.	64/

Sd/-

Mr. D. Ramesh Purchase Officer-II requirement. Hence, please refer IPR website i.e, <u>http://www.ipr.res.in/documents/tenderseng.html</u> for our future requirement.

RATE CONTRACT FOR LAYING & INSTALLATION OF POWER CABLES, SUPPLY AND INSTALLATION OF HV & LV TERMINATION FOR POWER CABLES

1. <u>RATE CONTRACT:</u>

The work shall be considered as Rate Contract for One Year; hence the rate offered by vendor shall be valid for ONE Year. The Cable laying and termination work will be executed in stage wise as per the site clearance and readiness of LT Panels. The cable laying and termination work shall be executed as per the schedule and instructions from Engineer Incharge, IPR.

2. <u>SCOPE:</u>

The scope covers laying and termination of 22kV and 1.1 kV voltage grade, Aluminium conductors, XLPE insulated, armoured Power and control cables for use in system having continuous maximum voltage of 22kV and 1.1 kV AC. The work in general consists of laying and terminating the power cables between equipment's detailed in schedule available with IPR. The cables shall be laid either in ground/trench/trays depending on the conditions at site including accessories for the same. The tentative total quantity to be laid is as given below.

The bidder shall supply all accessories of HT and LT cable terminating kit materials including compound tapes, supporting materials cleats, cable lugs, double compression brass cable glands, clamps, bricks, sand, cable markers etc. as required to make the installation complete in all respects. The HT termination shall be of heat shrinkable type. The HT & LT Power cables, LT control cables will be provided by IPR.

Vendor/bidder should have valid Electrical Contractor license. In case the electrical contractor has applied for renewal/fresh/new license for electrical contractor, the receipt of the fee shall be submitted during quotation.

3. <u>CODES AND STANDARDS:</u>

The laying and termination of XLPE power cables shall confirm to Indian Electricity Rules, 1956 as amended from time to time, per IS : 1255-1983 (reaffirmed 1996) latest edition and amendments, IEEE and the relevant regulations of the Electricity supply authority concerned and safety codes in the locality where the same shall be installed. All the cabling materials such as cable lugs, tapes, bricks and cable markers etc. shall be of approved quality acceptable to the IPR. Vendor must adhere to the prevailing safety rules in IPR.

4. <u>GENERAL RULES FOR CABLE LAYING:</u>

- a. Installation shall be carried out in neat, workman like manner by skilled experience and competent workman in accordance with the standard practices.
- b. Cable shall be laid preferable in one-piece length to avoid joints, cable joints are only allowed with approval of engineer in-charge.
- c. Proper care should be taken in handling the cable to avoid formation of links etc. and should it become necessary, cable should be bent to a radius not less than 10-12 times the overall diameter of the cables.

- d. Method of installation, routing of cables etc. shall be in every case be subject to the IPR's approval and the vendor shall have to modify or rectify at no extra cost to the any portion of the installation which do not meet with the IPR's approval. All damages to the civil and other works on this account shall have to be made good by the vendor at no extra cost to the IPR.
- e. The cable route shall be shortest and there shall be minimum interference with buildup areas, lawns, other drainage and water pipes etc.
- f. Care shall be exercised by providing suitable support for other services lines in ground at the time of excavation. Where cutting of a lawn etc. becomes inevitable it should be done with prior approval of IPR.
- g. Where cables are laid in built up trenches, they shall be fixed with angle iron frames to be furnished by the vendor as required at site. Distinguishing marks shall be made on the cable for identifications.
- h. Scope covers cable laying underground including excavation, back filling and providing required sand, bricks as per the standards. The scope also includes excavation and back filling of road as required along the route as per site condition as well as laying of cable through existing hume pipes underground.
- i. Scope covers opening of wall for wall crossing cables as required and back filling the same with masonry work.
- j. LT Cable termination shall be done with suitable double compression brass glands. The armour shall be connected to the ring main earth in building with duplicate earth wires as per the relevant IS/BS specifications.
- k. Identification tags designating the number shall be affixed to the cables at the two ends of each circuit and at various salient points over the route as per the requirements of Engineer-in-charge, IPR. Whenever cable deviates from straight line installation, to indicate the cable route marker shall be fixed, also the markers shall be fixed at all points of entry of the cables into the building and at the points where joints are made, suitable cast/galvanised steel cable markers shall be fixed at the convenient points.

5. <u>SUPERVISION:</u>

The vendor shall keep a competent, qualified experienced and approved electrical engineer/supervisor at the site who will be responsible for carrying out all the work in accordance with the drawings, specifications, and instruction. All the workmen employed shall be duly qualified and skilled.

6. MEASUREMENT:

All measurements for purpose of payment shall be done by the vendor at his own cost in the presence of IPR representative who will certify the routes, lengths and quantities for the purpose of determination of the amount payable.

Type of Cable	From	То	No.	Length	Total	Total
			of	/ Run	length	Termination
			Run			
22 kV Grade, Al conductor, XLPE insulated, Armoured Power Cable						able
3 C x 185 Sq.mm.	S#6	Dry DT#1	1	75	75	2
1.1 kV Gra	de, Al condu	ctor, XLPE ins	ulated,	Armoured	l Power C	Cable
1 C x 1000 Sq.mm.	Dry DT#1	LTP#31	11	30	330	22
1 C x 1000 Sq.mm.	LTP#31	LTP#32	7	50	350	14
3.5 C x 630 Sq.mm.	LTP#31	LTP#33	3	125	375	6
1 C x 1000 Sq.mm.	LTP#31	LTP#34	7	50	350	14
3.5 C x 300 Sq.mm.	LTP#31	LTP#35	6	170	1020	12
3.5 C x 300 Sq.mm.	LTP#28	LTP#30	2	120	240	4
3.5 C x 300 Sq.mm.	LTP#34	PDB#1	2	50	100	4
3.5 C x 300 Sq.mm.	LTP#34	PDB#4	2	50	100	4
3.5 C x 300 Sq.mm.	LTP#35	PDB#5	2	50	100	4
3.5 C x 300 Sq.mm.	LTP#32	PDB#MSD	3	50	150	6
3.5 C x 300 Sq.mm.	LTP#33	PDB#Divetr	2	50	100	4
3.5 C x 300 Sq.mm.	LTP#34	PDB#MBPSI	2	50	100	4
3.5 C x 70 Sq.mm.	PDB#1	MDB#1	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#1	MDB#2	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#4	MDB#7	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#4	MDB#8	1	50	50	2
3.5 C x 70 Sq.mm.	PDB#4	MDB#9	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#4	MDB#10	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#5	MDB#11	1	50	50	2
3.5 C x 70 Sq.mm.	PDB#5	MDB#12	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#5	MDB#13	1	50	50	2
3.5 C x 70 Sq.mm.	PDB#5	MDB#14	1	50	50	2
3.5 C x 300 Sq.mm.	PDB#5	MDB#15	1	50	50	2
3.5 C x 70 Sq.mm.	PDB#5	MDB#16	1	50	50	2
7 C x 2.5 Sq.mm	S#6	DRY DT#1	1	100	100	2

7. ESTIMATED LENGTH OF CABLE TO BE LAID:

8. PREFFERED MAKES / MANUFACTURERS

Sr. No.	Description	Manufacturer
1	Cable Termination Lugs / glands etc.	Dowells, HMI, Comet

ANNEXURE-I

PRICE BID FORMAT (Bidders are requested to offer their price bids in the following format)

Sr.	Description	Unit	Qty.	Rate Rs /	GST	Amount (Ps)
110.				Ks./ Unit	70	(KS.)
1	Laying of power and control cable - <u>On existing</u> <u>Cable Trays/wall/RCC/Floors/Ceilings</u> etc. with suitable clamping & saddles, fixing bolts etc., making necessary holes in wall/RCC/cable Trays etc. and making the same good with proper cement work etc. a) 22kV - 3 C x 185 sq.mm b) 1.1kV - 3.5 C x 630 sq.mm c) 1.1kV - 3.5 C x 300 sq.mm d) 1.1kV - 1 C x 1000 sq.mm e) 1.1kV - 3.5 C x 70 sq.mm	RMT		R.O.		
2	 f) 1.1kV - 7 C x 2.5 sq.mm Supply of Cable Termination accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete. a) 22kV - 3 C x 185 sq.mm b) 1.1kV - 3.5 C x 630 sq.mm c) 1.1kV - 3.5 C x 300 sq.mm d) 1.1kV - 1 C x 1000 sq.mm e) 1.1kV - 3.5 C x 70 sq.mm f) 1.1kV - 7 C x 2.5 sq.mm 	Unit		R.O.		
3	Installation job work of Cable Termination using with accessories like brass double compression glands, cable crimping type Al sockets/lugs, insulation tape, sealing compound, extension busbars, etc. complete. a) 22kV – 3 C x 185 sq.mm b) 1.1kV – 3.5 C x 630 sq.mm c) 1.1kV – 3.5 C x 300 sq.mm d) 1.1kV – 1 C x 1000 sq.mm e) 1.1kV – 3.5 C x 70 sq.mm f) 1.1kV – 7 C x 2.5 sq.mm	Unit		R.O.		

Compliance Form:

Sr.	Particulars	IPR Requirement	Vendor's reply
No.			
01	Laying & Installation	As per IS : 1255-1983 (reaffirmed	
	of Power & Control	1996), Code of practice for	
	Cables as per the	installation and maintenance of	
	spricifications.	power cables upto and including	
		33 kv rating	
02	Supply and installation of HT & LT Cable Termination complete	 HT Cable termination shall be done using Heat shrink type kit. LT Cable termination shall be done with suitable double compression brass glands. The armour shall be connected to the ring main earth in building with duplicate earth wires as per the relevant IS/BS 	
		per the relevant IS/BS specifications	

Bidder's Sign with Official Stamp