INDIAN INSTITUTE OF TECHNOLOGY, MADRAS
ENGINEERING UNIT

CHENNAI – 600 036

Price Bid (Volume 2)

T. No 34/2012-13/Eldb

Name of the work : **Augumentation of ESB substation by providing 1000kVA 11/0.433kV Distribution Transformers and shifting of existing transformer to Central Workshop and Narmada Hostel Substations inside IITM Premises.**

Date of Submission of Technical & Price bid : **03.00 pm on 02/01/2013**

Date of opening of Technical bid : **03.10 pm on 02/01/2013**

Date of opening of Price bid : **Will be intimated later to the qualified tenderers.**

Bid Submitted to : **The Executive Engineer (E),**
Engineering Unit,
Administrative Block III Floor,
IITM, Chennai-36

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Consultant (Elec)

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Executive Engineer (Elec)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS
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TENDER DOCUMENT

FOR

Augumentation of ESB substation by providing 1000kVA 11/0.433kV Distribution Transformers and shifting of existing transformer to Central Workshop and Narmada Hostel Substations inside IITM Premises

VOLUME-2 (PRICE BID)

BILL OF QUANTITIES

Other volume:

Vol-1: Notice inviting tenders, Conditions of Contract, Additional specifications, General Conditions of Contract , list of approved makes etc.,

INDIAN INSTITUTE OF TECHNOLOGY MADRAS					
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Tender No.34/2012-13/Eldb					
BILL OF QUANTITIES					
Sl no	**Description of Work**	**Qty**	**Per**	**Rate**	**Amount**
I	**Distribution Transformer**				
1	Supply, Installation, Testing and Commissioning of 1000kVA 11/0.433kV Distribution type mineral oil filled ONAN outdoor type transformer with complete fittings and accessories as per the enclosed specifications.				
	(i) Supply	2	Each		
(Rate in words Rupees……)					
	(ii) Erection	2	Each		
(Rate in words Rupees……)					
II	**BUS-TRUNKING**				
2	Supply, Installation, Testing and Commissioning of 1600A TPN fabricated air insulated bus trunking suitable for 415V 3 phase 4 wire 50HZ AC supply system (between transformer LT side and up to the incomer of the MV Panel) of Aluminium busbars complete with bends, expansion joints, fire barriers , flexible etc end connections at both ends, earthing with 2 runs of copper earth of size 25 x 5mm strips etc including necessary supports etc as per specifications as required.	20	Mt		
(Rate in words Rupees……)					

III	**MV PANEL**				
3	Supply, Installation, Testing and Commissioning of suitable size floor mounting cubical type following LT Main Panel board suitable for 415V 3ph 4 wire 50Hz AC supply system fabricated in a compartmentalized design from CRCA sheet steel of 2mm thick for frame works and cover with 3mm thick removable gland plate ,cleaning and finishing with 7 tank process for powder coating with siemens grey having extensible type TPN copper alloy busbar of suitable capacity as per the incomer ACB /MCCB/SDF ratings with DMC/SMC busbar supports with short circuit withstand capacity of 31MVA / 1Second , bottom base channel of 100mmX 50mm X 5mm. In/Out going cables are to be entered from the rear side of the panel. The entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2nos earth studs, solid connection from main bus bars and conductors single core cable, cable alloys. The scope of work includes removal of existing cubical type panel after disconnection of cable shifting it to the nearby substation and reconnecting the removed UG cables to the new panel including end terminations if necessary by excavation of earth out side the building breaking the flooring and construction of masonary trench and suitable MS channels for the new panel as per the instruction from the Engineer in Charge. Necessary Panel drawings, QAP and GTP should be get approved from the Engineer incharge before fabrication				
	Incomers: 1600A TP ACB -2nos (MDO independent manual spring closing mechanism-1no, microprocessor release for o/c , e/f and short circuit protection-1no, breaker ON/OFF/Trip indication Lamps) as two incomers from two different sources .				
	Outgoings: 1600A 4P ACB -1No (MDO independent manual spring closing mechanism-1no, microprocessor release for o/c , e/f and short circuit protection-1no, breaker ON/OFF/Trip indication Lamps/ CT's 3 nos and a micro processor based multi function meter -1No with suitable wiring for measuring the active and reactive components) **as bus coupler** and inter locking with 3 locks with two key arrangement.				

	1000A TP ACB-1no(MDO independent manual spring closing mechanism-1no, microprocessor release for o/c , e/f and short circuit protection-1no, breaker ON/OFF/Trip indication Lamps/CT's 3 nos and a micro processor based multi function meter -1No with suitable wiring for measuring the active and reactive components)	1	Set		
	630A TPN 35kA MCCB with rotary front operated handle - 4 Nos				
	400A TPN 35kA MCCB with rotary front operated handle - 6 Nos				
	250A TPN 35kA MCCB with rotary front operated handle - 6 Nos				
	1600A copper bus bars for 3phases and neutral				
	3 phase indication lamps with individual toggle switch-2set, microprocessor based digital multi function meter with communication port and the facility for active and reactive power measurements -2set with required CTs for the individual incomers.				
(Rate in words Rupees……)					
IV	**<u>Earthings</u>**				
4	Supply, Erection, Testing and Commissioning of Cast iron pipe and copper plate earth as per IS - 3043 - 1987 including excavation of soil and sub soil , back filling with equal layers of salt and charcoal and the excavated soil , ramming, consolidating, Masonry construction, heavy duty cover slab etc. The CI pipe should be 100mm dia and 300 mm long bolted with 600 x 600 x 3 mm thick copper plate at the bottom. 2R of 50 x 3 mm copper flats should be taken from the copper plate to the top of the CI pipe and clamping with suitable clamps.	4	set		
(Rate in words Rupees……)					
5	Supplying and laying of following earth strips at 0.5 m below ground as strip earth electrode including connection /terminating with GI nut, bolt, spring washers etc as required. (Jointing shall be done by overlapping and with 2 sets of GI nut bolt and washers spaced 50mm)				

5.1	50 x5 mm GI flat	50	Mt		
(Rate in words Rupees……)					
5.2	25 x 5 mm GI flat	100	Mt		
(Rate in words Rupees……)					
6	Shifting of the existing 500kVA 11/0.433kV Distribution Transformer complete set from substation plinth including removal of existing HT /LT UG Cables /terminations, earth connections etc and re-erect the same transformer in other substation plinth and terminating the existing/new cable, earthing etc, testing the transformer and making it in good working condition. The rate should be inclusive of transport, labour/ Machineries and all tools as required.	2	LS		
(Rate in words Rupees……)					
	TOTAL				

Total Amount in words Rupees ……..

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Signature of the Contractor **Consultant (Elect)**

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Executive Engineer (E)