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Karnataka.
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PRICE BID
(PART – 2)

Tender document for Roof top Solar Power Installation

At Indian Bank, No:12, 71/1120 MC Road,

Opp Railway Station,

Mandya 571401

Karnataka



इंडियन बैंक
Indian Bank

ISSUED TO

M/s. _____

CONSULTANT

**K.P.Muralidharan,
Energy Multiples,
2C, Montieth Court, Montieth Road,
Chennai 600008**

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Works: Roof top solar power Installation
**At Indian Bank, No:12, 71/1120, MC Road
Opp. Railway Station, Mandya 571401**

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
1	Solar PV modules							
1.1	DESITC (Design, engineering, supply, installation, testing and commissioning) of 540 Wp monocrystalline solar PV modules as per technical specifications to generate 10 Kwp to be installed on the terrace floor with suitable GI channels fixed to the concrete blocks to be kept on the terrace. The same shall confirm to technical specifications given in the tender	19	No					
1.2	Supply, fabrication and installation of 300mm wide 450mm high concrete blocks to be kept on the terrace without any chipping or grouting to support the GI channel frame	1	Lot					
1.3	Design, detailed engineering, fabrication of GI channels, angle etc including hot dip galvanizing the support frames for mounting the solar PV modules and to rest on the concrete blocks	1	Lot					
2	DESTIC of 10 KW solar inverter as per technical specifications	1	No					
3	DESTIC of IP-65 protected array junction boxes fully loaded with SPD, fuses, terminals etc as per technical specifications	1	No					
4	DESTIC of IP-42 protected cubicle type panel (AC DB) wall mounting fitted with following 1 no Incomer feeders each fitted with 32A 4P MCB, 10 KA front operating handle with door k 3 nos LED type RYB indication lamps controlled by HRC fuses 3 nos copper wound resin cast CTs of ratio 32/5A class-1, 15 VA 1 no electronic type KWH meter 1 set SPD of type 1+2 with suitable HRC fuse protection The panel shall confirm to technical specifications given in the tender	1	No					

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				Supply (Rs)		Installation		
5.1	Supply and installation of 17.2mm dia 2 Mt long low carbon steel earth electrode bonded with 250 micron copper with GI clamp to be installed in a suitable bore and filled with 50 Lbs of carbon bond environment friendly back filling compound. An RCC trough of size 300x300mm shall be provided with RCC cover for protecting the electrode. (2 nos for DC, , 2 no for AC and 2 no for Lighting arrestor)	6	No					
5.2	DESTIC of 25x3mm GI strip to be clamped on wall, cable tray to solar panel frames and DCDB to earth stations for DC earthing and Inverter, ACDB etc for AC earthing. The strip shall be painted with green paint as per electrical inspectorate norms	200	Mt					
5.3	DESTIC of earth station to be fabricated out of 25x6mm GI strip 300mm long to be fixed on roof top	2	No					
6	DESTIC of AC and DC cabling with solar duty copper PVC insulated wires drawn in UPVC conduits to be neatly clamped on to the roof with suitable GI clamps for interconnection between solar modules, ARJ and inverter	1	Lot					
7	Power cables							
7.1	DESTIC of 4x10 SQMM aluminum armored XLPE cable from AC DB to 32A TP MCB fixed in the Main DB of the premises to be routed through cable tray, vertical shaft etc as required including terminations at both ends with single compression gland and aluminum sockets. The gland earthing with 14 SWG copper wire and connecting same to earth grid is included in the scope	30	Mt					
7.2	DESTIC of 4C 6Sqmm copper PVC insulated unarmored cable from inverters to ACDB including terminations at both ends	10	Mt					

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				Supply (Rs)		Installation		
8	Supply and installation of safety items like dry powder fire extinguishers, fire buckets, danger boards, signages, identification stickers on modules, inverters, ARJs etc, first aid kit, rubber mat to be spread below the inverters and AC DB as per BIS, shock treatment chart in laminated form with writings in English, Hindi and Kannada and other items as required as per standards and as per CEA regulations	1	Lot					
9	Lightning protection							
9.1	DESITC of 3 prong copper spike lightning terminal mounted on 3 Mt high GI pipe with anchoring to be mounted on the parapet wall with proper clamping arrangement	2	No					
9.2	DESTIC of 25x3mm copper tape for interconnecting lightning arrestors and taking the down conductor to earth electrodes to be mounted on wall/ building structure etc with insulated base	100	Mt					

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				Supply (Rs)		Installation		
10	<p>DESTIC of IP-42 protected cubicle type panel (Main DB – 4-way VTPN DB) wall mounting fitted with following</p> <p>1 no Incomer feeders fitted with 63A TPN MCB, 10 KA from Electric supply CO</p> <p>1 no incomer feeder fitted with 32A TP MCB, 10 Ka from solar inverter</p> <p>1 no outgoing feeder fitted with 32A TP MCB, 10 ka to feed existing LDB</p> <p>1 no outgoing feeder fitted with 63A TP MCB, 10 ka to feed new PDB</p> <p>The DB shall be manufacturer's factory built only. The work also includes re-termination of cable going to existing DB- branch and DB- currency chest</p>	1	No					
11	Liaison with government agencies (for project approval) and preparation of as- built drawing, SLD etc, liaisoning with MNRE after arranging inspection and getting approval(If Required)	1	Job					
12	Liaison with CESC for installing Net metering (bi-directional meter) at point of supply (bi-directional Energy meter will be supplied by CESC)	1	Job					
	Total value of work excluding GST	1	Job					
13	Operation and maintenance (O& M) of solar PV system (To be considered for tender evaluation purposes)							

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
13.1	O&M during DL period							
13.2	O&M for the first year after DLP	1	Year					
13.3	O&M for the second year after DLP	1	Year					
13.4	O&M for the third year after DLP	1	Year					
13.5	O&M for the fourth year after DLP	1	Year					
13.6	O&M for the fifth year after DLP	1	Year					
	Grant total for supply installation including AMC for 5 years without GST	1	Year					
	GST @ 12%							
	Grant total for supply and installation including AMC for 5 years and GST							