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PRICE BID
(PART – 2)

Tender document for Roof top Solar Power Installation

At Residential quarters at Begumpet and
Residence at Karitabad

Hyderabad,

Telengana



इंडियन बैंक
Indian Bank

ISSUED TO

M/s. _____

CONSULTANT

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**Works: Roof top solar power Installation
 At Indian Bank, residential quarters at Begumpet and
 Residence at Karitabad, Hyderabad, Telengana**

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
1	Residence at Karitabad							
	Solar Panels							
1.1	DESITC (Design, engineering, supply, installation, testing and commissioning) of 550 Wp monocrystalline solar PV modules as per technical specifications to generate 5.0 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	9	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 5 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 (DC DB)	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 10/5A 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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				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	150	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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
11	Liaison with government agencies (for project approval) and preparation of as- built drawing, SLD etc, liaisoning with state solar agency after arranging inspection and getting approval and arrange for subsidy after completion of work	1	Job					
12	Liaison with TGSPDCL for installing Net metering (bi-directional meter) at point of supply (bi-directional Energy meter will be supplied by TGSPDCL)	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)							
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%							

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
	Grant total for supply and installation including AMC for 5 years and GST							
Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
2	Staff Quarters at Begumpet							
	Solar Panels							
1.1	DESITC (Design, engineering, supply, installation, testing and commissioning) of 550 Wp monocrystalline solar PV modules as per technical specifications to generate 10.0 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 conform to technical specifications given in the tender	18	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 (DC DB)	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	1	No					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
	3 nos copper wound resin cast CTs of ratio 15/5A 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							
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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
7.2	DESTIC of 4C 6Sqmm copper PVC insulated unarmored cable from inverters to ACDB including terminations at both ends	10	Mt					
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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
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					
11	Liaison with government agencies (for project approval) and preparation of as- built drawing, SLD etc, liaisoning with state solar agency after arranging inspection and getting approval and arrange for subsidy after completion of work	1	Job					
12	Liaison with TGSPDCL for installing Net metering (bi-directional meter) at point of supply (bi-directional Energy meter will be supplied by TGSPDCL	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)							
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					

Sr No	Description	Qty	Unit	Rate	Supply Amount (Rs)	Rate	Installation Amount (Rs)	Total Amount (Supply + Installation) Rs
				Supply (Rs)		Installation		
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							