

MUMBAI HOUSING AND AREA DEVELOPMENT BOARD
A REGIONAL UNIT OF
(MAHARASHTRA HOUSING AND AREA DEVELOPMENT AUTHORITY)
Tel no.- 022-66405220, E-mail eelect.mhada@gmail.com

Ref. No.- EE/Elect/M.B./Quotation/ /2024

Date-

Notice to Agency for rates only

Executive Engineer / Electrical Division / Mumbai Housing and Area Development Board, Room no.368, 2nd Floor, GrihnirmanBhavan, Kalanagar, Bandra (East), Mumbai-400051 is inviting the quotation **for obtaining rate of item only** from contractor / agencies having experience in carrying out similar type of work for BDD Naigaon scheme Rehab buildings. Contractor / agency required to submit the Quotation rates with & without GST and duly signed with seal. Sealed quotation will be received in the same office on or before 27/01/2021 up to 3:00 PM. and opened on the same date if possible for the work mentioned below—

	Name of work and Description of Item	Make and model details	Quantity with unit	Rate without GST	GST Rate	Total Rate
1.	Planning, Designing, Supplying, Installation, Testing And Commissioning of Roof Top Solar Power Plant with net metering, having following components such as solar string modules, inverters, structure, lighting arresters, net meters etc. The detailed technical specification of above system can be downloaded from MHADA website www.mhada.gov.in ---->> tenders		As per detailed specification			
2.	Planning, Designing, Supplying, Installation, Testing And Commissioning 750 KVA DIESEL GENERATING SET and related necessary accessories having specification as given at The detailed technical specification of above system can be downloaded from MHADA website www.mhada.gov.in ---->> tenders		As per detailed specification			
3.	Planning, Designing, Supplying, Installation, Testing And Commissioning of Ultra Filtration system, Ozonisation, Mechanical Screen and related necessary accessories for 900KLD STP having specification as given below and have 5 years warranty The detailed technical specification of above system can be downloaded from MHADA website www.mhada.gov.in ---->> tenders		As per detailed specification			

For any queries contact below officers:

Vinod Gaikwad, Dy. Engg, Electrical division :- **022-66405269**

Detailed requirement, advertisement, terms and conditions can be downloaded from our website **www.mhada.gov.in--> tenders**

Terms and Conditions:-

- Interested agencies shall contact above mentioned office for any clarification and collect the detailed expected sample estimation proforma from this office during working hours from 11 am to 3:00 pm in order to get standardized quotations.
- Agency shall provide estimate for complete PDSITC job for all the items mentioned above. In this regards, agency shall visit the site located at BDD Naigaon scheme and meet the L&T CBL site engineer for providing accurate quotation based on plan
- Agency has to quote the rate without GST & With applicable percentage GST for this work.
- Agency has to submit the duly filled quotation along with required documents in sealed envelope accompanied with a forwarding letter.
- Executive Engineer / Electrical Division / Mumbai Housing & Area Development Board reserves the right to accept or reject any or all quotation without assigning any reason.
- The quotations are invited for obtaining rates of item for estimation purpose.



Executive Engineer, Electrical
Division, Mumbai Board

Notice to Agency for rates only

Executive Engineer / Electrical Division / Mumbai Housing and Area Development Board, Room no.368, 2nd Floor, GrihnirmanBhavan, Kalanagar, Bandra (East), Mumbai-400051 is inviting the quotation **for obtaining rate of item only** from contractor / agencies having experience in carrying out similar type of work for BDD Naigaon scheme Rehab buildings. Contractor / agency required to submit the Quotation rates with & without GST and duly signed with seal. Sealed quotation will be received in the same office on or before 27/01/2021 up to 3:00 PM. and opened on the same date if possible for the work mentioned below—

	Name of work and Description of Item	Qty	Unit	Rate without GST for one item	GST Rate	Total Rate
A	Planning, Designing, Supplying, Installation, Testing And Commissioning of Roof Top Solar Power Plant with net metering, having following component					
	1. SPV Module :- Monocrystalline Modules of 540/580Wp and above, solar panel, Tier 1 rated, Monocrystalline Bifacial, PID resistant, Monocrystalline Modules, With Inbuilt Bypass Diode, Frame is made of Aluminum Anodized With Power Tolerance + 5Wp, Product Warranty upto 10 Years and Performance Warranty Upto 25 Year. Panels should be included in the Approved list of module manufacturers (ALMM). IEC 61215-1:2016, IEC 61215-1-1:2016, IEC 61730-1:2016, IEC 61730-2:2016, IEC 61701:2011, IEC 62716:2013, IEC TS 62804-1:2015, IEC 60068-2-68:1994, IEC 61853-1:2011, IEC 61853-2:2016, IEC 61724:2017, IEC 62941:2019.	each				
	2. Module Mounting structure (MMS) :- Hot Dipped Galvanized for RCC roof or Aluminum type structure for GI metal Sheet Roof.	set				
	3. String Inverter :- 30-60KW Grid-tied String Inverter, Three Phase, 50 Hz Inverter output shall be at 400V, & 50 Hz frequency Efficiency-98% or above. 5 years warranty extendable upto 10 yrs, with stand MS Steel Frame for Foundation.	each				
	4. Remote Monitoring system with capability to synchronize with cloud.	set				
	5. ACDB :- 415V, 3 phase 4 wires, 50Hz, CRCA Sheet Steel, 14/16 Gauge thickness, IP54, Aluminum busbar, Bottom cable entry, 63-125 Amp 4P MCCB TM BASED, Auxiliary 1 C/O + TAC 1 C/O, with SPD Type 2	set				
	6. Lightning Arrestor :- Early Streamer Emission Lightning protection device with 107 meter radius. Must include Epoxy insulator, Stainless Steel guide wire and insulated strike counter.	set				
	7. Net Meters, Generation Meters :- Regular/ABT Meters as per power supply company norms, 0.2 S Class ABT & Generation Meter, with appropriate CT and PT. CEIG and Net Metering Approval and power supply company Liaisoning for Meter installation on supplier's scope (No extra cost	set				

	will be provided).													
	8. DC Cable (Solar Module to Inverter):- 1C x 4 sqmm Cu flexible copper conductor solar DC cable of reputed make.	meter												
	9. AC Cable (Inverter to ACDB):- 1.1 kV,4C,25 Sqmm Copper flexible, XLPE, FRLSCABLE of reputed Make	meter												
	10. AC Cable (ACDB to LT Panel):-1.1kV,3.5C, 70 sq mm Al, armoured, XLPE, FRLS CABLE	meter												
	11. Earthing Type :- chemical Earthing and earthing systems with all civil work.	each												
	Additional conditions for roof top solar work Scope of work Includes :-(As per Requirement) 1) Civil foundation for DB's and Earth Pits with materials, Includes all civil work with complete fabrication. 2) Loading, Unloading, Shifting of material 3) Structure & panels installation 4) DC Cabling from solar panels to inverter. 5) AC Cabling UG/AG 6) AC cable laying up to panel room. 7) Inverter, ACDB, DG sync device installation. 8) Earthing 9) Cable trenching, cable laying. 10) Complete Installation, testing &commissioning. 11) With all Miscellaneous. 5 years comprehensive Warranty should be issued by the OEM for the complete system, and not just individual components. And 25 years performance warranty for solar panel													
B	Planning, Designing, Supplying, Installation, Testing And Commissioning 750 KVA DIESEL GENERATING SET and related necessary accessories having specifications given below	each												
<div>TECHNICAL SPECIFICATION OF DIESEL GENERATING SET</div> <div>DIESEL ENGINE</div> <div>The standard Design consists of Direct injection, turbo-charged, four stroke liquid cooled technology confirming to BS:5514 and IS 10000 suitable for prime duty generating set application as follows :</div> <table><tr><th>KVA / kW</th><th>Compliance</th><th>BHP @ 1500 RPM</th><th>NO. OF CYLINDERS</th></tr><tr><td>750 / 600</td><td>CPCB4 or any recent standard whichever is stringent</td><td>900.6</td><td>12</td></tr></table> <div>The engine shall be complete with the following standard accessories: ➤ Dry type air cleaner ➤ Exhaust silencer ➤ Expansion bellows ➤ Lube oil cooler ➤ Lube oil filter ➤ Fuel filter ➤ Radiator, radiator fan and mounting ➤ Fuel pump ➤ Fly wheel with starter ring ➤ Battery charging alternator ➤ 24 Volt electric starter motor ➤ Electronic Governor ➤ ENGINE MONITORING SYSTEM – - a state-of-the-art engine &genset monitoring and safety system, having following features:</div>							KVA / kW	Compliance	BHP @ 1500 RPM	NO. OF CYLINDERS	750 / 600	CPCB4 or any recent standard whichever is stringent	900.6	12
KVA / kW	Compliance	BHP @ 1500 RPM	NO. OF CYLINDERS											
750 / 600	CPCB4 or any recent standard whichever is stringent	900.6	12											

- Control panel consisting of built in On / Off / Start key.
- Battery charging voltmeter
- Electronic Hour meter
- Indication & Monitoring of Oil Pressure & safety trip incase of Low Oil Pressure.
- Indication & Monitoring of Coolant Temperature & safety trip incase of High Coolant Temperature.
- In-built engine shut down system in case of Engine Overspeed.
- Indication & Monitoring of Fuel Level and alarm.
- Indication & Monitoring of Canopy Temperature and alarm / safety trip incase of High Canopy Temperature.

- Vibration Damper
- Set of documents comprising spare parts book and operation & maintenance manual

ALTERNATOR

Alternator suitable rated at 0.8PF, 415V, 3 Phase, 4 Wires, 50 Cycles/Sec., 1500 RPM, self excited and self regulated, with Brushless Excitation Band of voltage regulation $\pm 1\%$ of rated voltage, from no load to full load, Insulation class “H”. The alternator generally conforms to BS: 2613/IS: 4722.

BATTERY

2 Nos. 12 Volts Factory Pre-charged Lead Acid Battery with leads.

STANDARD CONTROL PANEL

Sheet steel made duly painted with stoving enamel paint consists of followings:

- 1 No. MCCB of suitable rating
- 1 No. EMS
- 1 No. KWh meter
- 3 Nos. Current Transformer
- 2 Nos. Indicating Lamps
- 1 Set Control Fuses

FEATURES OF ENGINE MONITORING SYSTEM –

- State-of-the-art Microprocessor based fully configurable technology
- High performance graphical LCD and prominent display
- LED indications for genset status and alarms
- Event logging history (stores last 100 events) for ease of maintenance/service & preventive maintenance annunciation.
- Canopy temperature monitoring
- Individual touch buttons for Manual, Test & Auto modes.
- Battery condition monitoring
- Statistical cumulative counters like No. of starts, Engine run Hrs & kWh
- In-built AMF module

Salient features of Controller

MECHANICAL SAFETIES (along with metering)	ELECTRICAL SAFETIES (along with metering)
Under / Over Speed	Genset Under / Over Voltage
Low Lub Oil Pressure	Under / Over Frequency
High Coolant Temperature	Phase failure
Low coolant level	Phase sequence reverse
Low Fuel level (alarm)	Over current
Start / Stop Fail	Over kW
High Canopy Temperature	Battery Under / Over Voltage
Charging alternator failure	Mains Monitoring

Genset metering parameters	Engine metering parameters
Phase / Line Voltage Line Current	Oil Pressure Coolant Temperature
Frequency Average Voltage	Fuel Status Engine Speed
Average Current Phase kW & Total kW	Canopy Temperature Engine Run Hours
kWH& PF kVA / kVAr	Total Starts Battery condition

Specification of canopy

Construction of Acoustic Enclosure

Acoustic enclosure shall be powder coated and fabricated out of 1.4 / 1.5 mm thickness MS sheet. The silent canopy shall be of nut bolt type construction. Powder coating is done after surface treatment process of sheet metal. Canopy panel and doors shall have inside lining of Fire Retardant Foam as acoustic material. Hinged doors shall be provided to canopy, one door shall have glass window for control panel.

Surface Treatment-Painting

The enclosure surface is pretreated with 11 tank process and thereafter they are coated with high quality powder and are baked in uniform temperature in conveyor oven

Base Frame

The Base frame is rugged in construction and designed for mounting engine and KG alternator close coupled, with cross members mounted on AVM. They are fabricated with MS HR sheet steel of suitable thickness. The Base frame is pretreated and coated with primer based powder / Epoxy paint.

Fuel Tank

Fuel tank is fabricated out of 3mm MS HR sheet integrated with base frame (Detachable) and is fitted with inlet and outlet connections.

Noise suppressor (Silencer)

Residential type Silencer is provided to suppress exhaust noise from the engine to meet CPCB IV+ norms.

Emergency Push Stop Button:

The canopy has the provision of emergency push button, external to the canopy.

Performance Parameters

- ❖ DG with canopy are manufactured as per (ISO 3744 OR 8528 PT 10) to meet CPCB IV+ norms of average 75 DBA under green field conditions @ 1 meter distance from all four sides.
- ❖ The average stabilized hot air temperature rise with in the canopy is maintained within 10° C over and above ambient temperature.

Features of canopies

- Fabrication of canopies are on CNC-operated **AMADA Turret Punch Press AC255NT** for a repeat dimensional accuracy of $\pm 0.1\text{mm}$
- All sheet metal are processed further on **AMAD Press Brake RG100** for accurate bending
- All fabricated parts are pre-treated under 11 tanks process and powder coated on automatic powder-coating plant for the longevity of the color & finish.

C	Planning, Designing, Supplying, Installation, Testing And Commissioning of 750KV ADG SYNCHRONISING PANEL	set				
	750KVADG-1,2 1250A,3Pole,50KAEDOTypeMPBasedO/C,S/C,E/F, Releases with415VU/VCoil,24VDCS/TCoil, NeutralContactor,225A,3Pole,AC-3,CoilVoltge-230V, AC,Aux Contact-2NO+2NC, Control MCB-6A,4Pole,10KA,C-Curve, Control MCB-10A,3Pole,10KA,C-Curve					

	<p>Control MCB-6A,2Pole,10KA,C-Curve, AuxContactor,24VDC,2NO+2NC, AuxContactor,24VDC,4NO+4NC, AuxContactor,240VAC,2NO+2NC, TNC Switch for Breaker control, A/MSel Switch,4Pole,2Way&Off,10A Control On/Off Switch,2Pole On/Off,10A, 3Phase Ammeter With Inbuilt S/S,CL-1, 3Phase Voltmeter With Inbuilt S/S,CL-1 Load Manager With RS-485, Cl-1, CT's1250/5A,Cl.1,10VAforMetering+DGController, RYPhase Indication Lamp B Phase Indication Lamp, ACB ON/Off/Trip Indication Lamp, NeutralContactorON/OFFIndicationLamp, DCON,DGRunning,B/Con, Auto/Manual Mode Selection Indication Lamps, Engine Start&Stop Push Button Emergency Stop Push Button-Mush room Head, Annunciator-8Window,24VDCwithInbuiltTest, Accept,ResetPB's Digital Fault Hooter,24VDC SynchronisingEquipments Synchronizing Relay Line Voltage Monitoring Relay, 6A4PMCB forLVM&BusVOLTageToRelay, AuxContactor,240VAC,2NO+2NC BatteryChargerEquipmentsBatteryCharger-230VAC/24VDC,10A, BatteryDCAmmeter0-30ADC, BatteryDCVoltmeter,Cl-1,0-50VDC Outgoing- 2500A,3Pole,50KAMDOTypeMPBasedO/C,S/C,E/F , Releases ACB ON/OFF/Trip Indication Lamp 6ADP MCB for Control AluminiumBusbars- 3200ATPNMainAluminiumBusbar 1600AbreakerAluminiumBusbar 3200A breaker AluminiumBusbar Fabrication +Powder Coating- 2400mm(W)X2200mm(H)X1000mm(D) Electrical Hardware Mechincal Hardware &Labels Wire for Control Ckt.</p>					
D	Planning, Designing, Supplying, Installation, Testing And Commissioning of AUTOMATIC MAINS FAILURE (AMF) CONTROL PANEL (DOUBLE ACB) having following specifications	set				
	<p>AUTOMATIC MAINS FAILURE (AMF) CONTROL PANEL (DOUBLE ACB) for above 750 KVA DG having necessary ratings The Control Panel will be free standing, floor mounting, cubical type, front operated dust and vermin proof, fabricated out of 14/16 SWG MS CRCA Sheet duly POWDER COATED after necessary pre-treatment process & consisting of following: <u>Power Circuit</u> Mains 1 No. 3P electrically operated fixed Type ACB ,1 No. Neutral Contactor DG 1 No. 3P electrically operated fixed Type ACB ,1 No. Neutral Contactor <u>Control & Metering Circuit</u> 1 No. Microprocessor based AMF logic controller.1 No. Line Voltage Monitor L&T make. 1 Set of Control Fuses, 1 No. Static Battery charger circuit with on / off switch. Battery charger "ON" indicationReverse Polarity indication 1 No. DC battery charging ammeter</p>					
E	Planning, Designing, Supplying, Installation, Testing And Commissioning of Ultra Filtration system, Ozonisation, Mechanical Screen and related necessary accessories for 900KLD STP having specification as given belowand have 5 years warranty					
1	Planning, Designing, Supplying, Installation, Testing And Commissioning of Mechanical screen for 900 KLD STP having following specifications and have 5 years warranty Inlet flow 40-50 m³/h Peak Factor 1.5 Design flow 60-70 m³/h Type Rotating Drum Mechanical Screen Clear Spacing 2 mm spacing mm Drum Construction Perforated Type Top Casing, Bottom Casing, Drum, Perforated Sheet, Fastener SS 304 Brush PP + SS 304 Drum Speed App. 24 rpm Inlet Flange 150 mm Outlet Flange150 mm Overflow Flange 65 mm Backwash Flowrate 2.5 m³/h Flange Plate Flange-10mm THK, drilled as per ANSI	set				

	B16.5-FF Motor 0.75 KW of reputed approved make Motor Specification IF2/415VAC - 50Hz reputed approved make					
2	Planning, Designing, Supplying, Installation, Testing And Commissioning of UF System for 900 KLD STP having following specifications and have 5 years warranty Type Pressurized UF Skid Mounted Inlet Feed 40-50 m ³ /h Membrane -Dupont/ Equivalent Membrane MOC- PVDF Skid MOC -MSEP Membrane Area -75-80 m ² Membrane – IntegraTec XP 77 IG UF Feed Pump 40-50 m ³ /h Capacity 30 m or above Head (1 W + 1 SB) Quantity CI MOC Reputed Make UF Backwash Pump Capacity 60-70 m ³ /h Capacity 30 m or above Head (1 W + 1 SB)Quantity CI MOC Reputed Make Pneumatic Motorized Valves 4 Nos.Quantity CI MOC 80 mm Size reputed Make CIP Pump Capacity 15 m ³ /h and above Head30 m and above Quantity(1 W + 1 SB) Nos. MOC SS 316 Reputed Make Dosing System Hypo Dosing System - 0-200 lph Capacity Acid Dosing System - 0-100 lph Capacity Caustic Dosing System - 0-100 lph Capacity PP/FRP MOC E Dose/Milton Roy Make Compressor 3 HP Power Frank , 1 W No.Quantity ABB/Siemens PLC with 7" HMI Screen additional Instrument 2 No.Rotameter 1No.Pressure Trasmitter Accessories Piping with UF area, cabling within UF area, earthing, PLC programming Control Panel+PLC SEAMAK make MCC Panel +PLC customized for UF System Skid of reputed make	set				
3	Supplying, Installation, Testing And Commissioning of Ozonator for 900 KLD STP having following specifications and have 5 years warranty Capacity 40-50 m ³ /h Ozone Concentration 90 to 100 gm/m3	set				

	Feed Gas Oxygen Feed Gas Purity 85-90% Cabinet Enclosure IP 55 Ventox Oxygen Concentration Quantity 3 No. Capacity 10 LPM Circulation Pump Type Submersible MOC SS 304 Power 1 HP Reputed Make Reputed Make					
4	Supplying, Installation, Testing And Commissioning of Online Monitoring System for 900 KLD STP having following specifications and have 5 years warranty Online Monitoring System. Type Online Continuous monitoring Parameters pH, BOD, COD and TSS COD (0-5000 ppm), BOD (0-5000 ppm), TSS (0-5000 ppm), * Range can be easily customized as per requirement Power 230 VAC Measuring Principle UV-Spectroscopy (Multi Spectrum – 254 nm) Sensor Cleaning Automatic Cleaning with Wiper Connectivity to MPCB/CPCB 4 Parameters with 1 year data recording Measuring Range pH 0-14 BOD 0-300 mg/L BOD 0-1000 mg/L TSS 0-500 mg/L Solution calibration (calibration solution inserted in ampule) via zero solution, span solution (single touch calibration) Analog outputs: 3 outputs (standard) Type: Up to 3 can be chosen from UV absorbance, VIS absorbance, UV-VIS absorbance, Converted COD & BOD level, and Converted TSS level outputs Specification: DC 4-20 mA, or DC 0-16 mA, isolated output (no installation between each channel), maximum resistance load: 600Ω Analog and status output - No. of outputs: 6 outputs (standard) Type: Up to 4 can be chosen from power failure, maintenance (standard and fixed), batch alarm, COD / BOD maximum limit alarm, TSS / TURB limit alarm (standard), light source error, sample failure, cleaning motor error, and analyzer error outputs Details: Power failure...occurs when power fails Total alarm...cleaning motor error, light source error, analyzer error Maintenance...occurs when entering maintenance or correction mode, or when the maintenance switch has been turned on Specification: Dry contact output, NO contact Contact rating: AC 125 V 0.3 A, DC 30V 1 A (with resistance load) Each output has an independent COM interface Reputed make, It should have 5 years warranty	set				

For any queries contact below officers:


Vinod Gaikwad, Dy. Engg, Electrical division :-

9886562020/022-66405269

Detailed requirement, advertisement, terms and conditions can be downloaded from our website
www.mhada.gov.in --> tenders

Terms and Conditions:-

7. Interested agencies shall contact above mentioned office for any clarification and collect the detailed expected sample estimation proforma from this office during working hours from 11 am to 3:00 pm in order to get standardized quotations.
8. Agency shall provide estimate for complete PDSITC job for all the items mentioned above. In this regards, agency shall visit the site located at BDD Naigaon scheme and meet the L&T CBL site engineer for providing accurate quotation based on plan
9. Agency has to quote the rate without GST & With applicable percentage GST for this work.
10. Agency has to submit the duly filled quotation along with required documents in sealed envelope accompanied with a forwarding letter.
11. Executive Engineer / Electrical Division / Mumbai Housing & Area Development Board reserves the right to accept or reject any or all quotation without assigning any reason.
12. The quotations are invited for obtaining rates of item for estimation purpose.


Executive Engineer, Electrical
Division, Mumbai Board