Validate Print Help

**Percentage BoQ**

**Tender Inviting Authority:**

**Name of Work:**

**Contract No:**

| **Name of the Bidder/ Bidding Firm / Company :** | |
|---|---|

**PRICE SCHEDULE**

**(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )**

| NUMBER # | TEXT # | TEXT # | NUMBER # | TEXT # | NUMBER | NUMBER # | TEXT # |
|---|---|---|---|---|---|---|---|
| Sl. No. | Item Description | Item Code / Make | Quantity | Units | Estimated Rate in Rs. P | TOTAL AMOUNT With Taxes in Rs. P | TOTAL AMOUNT In Words |
| 1 | 2 | 3 | 4 | 5 | 6 | 53 | 55 |
| 1 | **Biogas plant , CHP, FEED COLLECTION & OPERATION & MAINTENANCE** | 000101 | | | | | |
| 1.01 | Design, Supply, Installation, Testing and Commissioning of Bio Gas plant in turn key basis having per day capacity of 190 NCum per Hour for 24 Hours Continuously suitable for running 330 KWe CHP unit (or as and when required basis -as per the University requirement) with heat recovery ,including designing of the plant, construction of plant, installation of required equipments as per design, testing and commissioning of the plant and running of the same till stabilisation period of 6 months providing required output of gas as per the requirement. The Design shall include all the components of the Bio Gas PLant including shredder, Agitators, Pumps, required tanks, Anaerobic Digestor, H2S Scrubber to get cleaner biogas, Required valves, Piping, Inlet gas blower to maintain suitaible pressure/1bar at the inlet of the gas train of genset, Flow meters for Gas, Storage for Bio Gas, Gas Compressure with minimum rate 25QM/H, Double layer ballon cover, Pressure Guages, Pressure Release valves, Bio Gas Flaring system with Safety Arrangements, Filter press for dewatering slurry and making manure and packing of the same, all plumbing works, all electrical works, all automation works, Safety and Directional Signages, etc... complete as required. The technology should be suitable adaptable to local tropical conditions, The suitable precautionary design to maintain the thermal comfort/ suitable temperarure for better grow of batecria and good fermentation, with lowest operating cost, least possible land use for the processing and disposal of the organic waste as directed by the Engineer-In Charge. The process design has to be submitted by the vendor which shall be vetted by Third part vetting agency and on approval of the same the actual work can be started at site. (REQUIREMENT AND ALL ALLIEWD WORK CONFIRMING TO THE NIT, CPWD & TS) | MR1 | 1.000 | Nos | 45450000.00 | **45450000.00** | INR Four Crore Fifty Four Lakh Fifty Thousand Only |
| 2 | Supply, Installation, Testing and Commissioning of Biogas fueled cogeneration (CHP) engine capable of generating 330KWe electrical energy on continuous basis including Waste Heat Recovery Unit & Exhaust arrangement with water jacketing for heat transfer, Voltage- 415 V, Frequency - 50 Hz with H class insulation & including Housing of CHP, Common base frame, anti-vibrating isolators, flexible coupling for engine/alternator & painting as per manufacturers standard, starting battery & battery charger, Automatic voltage regulator,Panel, including control cubicle and associated auxiliary devices, Earthing system, relay panel and CHP breaker,including necessary heat exchanger to generate hot water, complete with Fuel Gas Train, Engine Exhaust systems, data acquisition system with SCADA/ BMS compatibility. Thi is minumum requirement the supplier may offer the higher rating for which no price advantage shall be given. This is including syncronization panel capable to sync 4 inputs at a time, breakers, panels, Control Panel, LT Panels, Cable, earthing (REQUIREMENT AND ALL ALLIEWD WORK CONFIRMING TO THE NIT & TS)<br><br>Battery Limits:<br>Power Evacuation at the CHP breaker and will be feed in the Substation at a distance of 150 meters from CHP unit or as per Drawing.<br>Hot water at distance of 150 meters from CHP Unit or as per drawing. Piping work for hot water upto tyhe chiller room -distance upto 150 Meter, Power and Control Cable with Trench and Panles Upto 150 Meters or as per drawing/design. | MR2 | 1.000 | Nos | 30878649.00 | **30878649.00** | INR Three Crore Eight Lakh Seventy Eight Thousand Six Hundred & Forty Nine Only |
| 3 | Design, Supplying, fixing acoustic lining on wall and ceiling of CHP Plant room and other areas with 50 mm thick, density 32 kg/cu.m resin bonded glass fiber insulation friction fixed in 610 mm x 610 mm frame work made of 25X50X50X50X25 mm made out of 0.6mm thick GI sheet U shaped channel and covered with reinforced fiber glass tissue and finished with 0.80 mm perforated aluminium sheet etc. complete as required and as per specifications, (REQUIREMENT AND ALL ALLIEWD WORK CONFIRMING TO THE NIT & TS & CPWD) | DSR 16.22 | 1706.000 | SQM | 1049.00 | **1789594.00** | INR Seventeen Lakh Eighty Nine Thousand Five Hundred & Ninety Four Only |
| 4 | Design, Manufactuting and supplying of Gas cascade system of 4500 litres (water) capacity connected together having approximately 60 nos if high pressure cylinders having capacity to withstand 250 bar pressure of compressed bio gas. The cylinders shall be as per IS 7285 Part 2 (Latest revision) and shall be epoxy coated on the external surface to avoid corrosion. All the cylinders in the cascade shall be interconnected using high pressure piping and connectors in SS 316 or Brass material and the Cascade frame shall be in Hot dip Galvenised MS structure with Lifting arrangement on the top and bottom considering crane/fork lift. The assembly shall be complete with required pressure guages, isolation velves, SS manifold for inlet and outlet and necessary releif valves. The complete cascade should have all the necessary arrangement for filling and extraction of gas as and when required complete to the satisfaction of Engineering in Charge. (REQUIREMENT AND ALL ALLIEWD WORK CONFIRMING TO THE NIT & TS) | MR3 | 1.000 | Nos | 2263688.00 | **2263688.00** | INR Twenty Two Lakh Sixty Three Thousand Six Hundred & Eighty Eight Only |
| 5 | Providing and supplying of Bio- gas after purification of gas having minimum methane content of 55% and H2s content less than 1% and having minimum calorific value of 5000 Kcal/ m3 at minimum pressure as required for the CHP engine including required piping and sourcing of waste required as feed for the Bio gas plant including cow dung, Poultry Waste, kitchen waste, Agriculture waste or any other waste capable of generating the required quality of Bio Gas, to be collected from the nearby villages, vegetable markets, agricultural lands, dairys etc in the radius of 150 Kms around the campus for a period of 60 months from the date of commissioning and handing over of the Bio Gas plant including operation and maintenance of the plant with required manpower, vehicle maintenance, Feed Transportation to site, safety equipments for plant and for workers, project staff, CHP engine running and maintenance etc complete as directed by the Engineer In Charge. The University may required gas volume/quantity upto 190NCUM X 24 Hours X 365, however, since the campus is in developing stage therefore the required forecasted gas qunatity has indicated considering 12 Hours of operation @ 75% load at initial. The contrctor has to supply gas per the University requirement upto to rating capacity of the plant. The University will inform one day in advance before to the supplier for the gas requirement upto the maximum rated capacity of plant and for 24 Hours or part thereof. (REQUIREMENT AND ALL ALLIEWD WORK CONFIRMING TO THE NIT & TS), MINIMUM 55% METHANE<br>1st year O&M after commissioning. I) The gas quantity forecasted in the BOQ may vary upto the full capacity utilization of design i.e. in such case the contractor has to supply gas 190NCUM per Hours for 24 Hours of operation for entire O&M period. However, at this stage the lower quantity is indicated just for the Unit Rate of gas and considering office building requirement. | MR4 | 600600.000 | NCUM | 11.00 | **6606600.00** | INR Sixty Six Lakh Six Thousand Six Hundred Only |
| 6 | 2nd year O&M after commissioning (Total requirement may increase upto the plant capacity or may decrese as per the requirement as per SLA) | MR5 | 600600.000 | NCUM | 11.00 | **6606600.00** | INR Sixty Six Lakh Six Thousand Six Hundred Only |
| 7 | 3rd year O&M after commissioning (Total requirement may increase upto the plant capacity or may decrese as per the requirement as per SLA) | MR6 | 832200.000 | NCUM | 11.00 | **9154200.00** | INR Ninety One Lakh Fifty Four Thousand Two Hundred |
| 8 | 4th year O&M after commissioning (Total requirement may increase upto the plant capacity or may decrese as per the requirement as per SLA) | MR7 | 832200.000 | NCUM | 11.00 | **9154200.00** | INR Ninety One Lakh Fifty Four Thousand Two Hundred |
| 9 | 5th year O&M after commissioning | MR8 | 832200.000 | NCUM | 11.00 | **9154200.00** | INR Ninety One Lakh Fifty Four Thousand Two Hundred |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | AMC and onsite support (Manpower Support to undertake the operation of the CHP and related accessories installed at site)<br>Providing following manpower support to undertake the operation and maintenance of the machinaries installed at site :<br>Min 1 Nos. certified Technician and 1 Nos. helper. However contractor may deploy more man power to ensure the smooth operation and pro rata calculation shall be performed on the basis of 1 No. Technician and 1 No. helper. The contractor has to maintain the service level agreement as stipulated in NIT.<br>AMC for 1st year during O&M | MR9 | 400000.000 | JOB | 1.00 | **400000.00** | INR Four Lakh Only |
| 11 | AMC and onsite support for 2nd year during O&M | MR10 | 400000.000 | JOB | 1.00 | **400000.00** | INR Four Lakh Only |
| 12 | AMC and onsite support for 3rd year during O&M | MR11 | 400000.000 | JOB | 1.00 | **400000.00** | INR Four Lakh Only |
| 13 | AMC and onsite support for 4th year during O&M | MR12 | 400000.000 | JOB | 1.00 | **400000.00** | INR Four Lakh Only |
| 14 | AMC and onsite support for 4th year during O&M | MR13 | 400000.000 | JOB | 1.00 | **400000.00** | INR Four Lakh Only |
| **Total in Figures** | | | | | | **123057731.00** | INR Twelve Crore Thirty Lakh Fifty Seven Thousand Seven Hundred & Thirty One Only |
| **Quoted Rate in Figures** | | | | **Select** | | **0.00** | INR Zero Only |
| **Quoted Rate in Words** | | | | | | **INR Zero Only** | |