

Tender inviting Authority: Register of Nalanda University Rajgir

Name of Work: Tender for Design, Supply,Installation,Testing and Commissioning of CHP Engine and Bio-Gas Plant including operation of the Bio Digester plant and generation of gas for Nalanda University

Contract No: As per NIT

Name of the Bidder/Bidding Firm/Company:								
PRICE SCHEDULE		(This BOQ template must not be modified/replaced by the bidder and same should be uploaded after filling the relevent columns else the bidder is liable for this tender.bidders are allowed to enter the Bidder Name and Values only)						
NUMBER#	TEXT#	TEXT#	NUMBER#	TEXT#	NUMBER	NUMBER#		
S.NO.	Description of work UNDER EPCC MODE CONFIRMING TO THE BOQ AS PER THE SITE REQUIREMENT	item Code/ Make	Quantity	Units	Estimated Rate in Rs.	TOTAL AMOUNT With Taxes as per CPWD manual in Rs.	TOTAL AMOUNT in Words	
1	2	3	4	5	6	7		
1	Design, Supply, Installation, Testing and Commissioning of Biogas Plant including IOT automation in turnkey basis having per day capacity of 110 Ncum/h for 24 h of continuously suitable for running 200 KWe CHP unit with Heat recovery, including design, construction, installation, testing and commissioning of the plant as per the design till the stabilization period of 6 months providing required output as per the design. The design shall include the components of the biogas plant including, shredder, agitators, pumps, required tanks, Anaerobic digester - 5000 cum capacity, Biogas purification plant - 90 cum/h, required valves, pipings, flow meter for gas, ground mounted storage balloon - 5000 cum, air blowers, pressure guages, pressure relieve valves, flare system with safety arrangements, solid-liquid separator for dewatering slurry, drying and packing of the same, high pressure compressor - 45 cum, gas cascade system - 3000 L (2 Nos.40 cylinders)to store the gas in compressed form, all plumbing, electrical works, all automation works including integration with SCADA/BMS system of the campus to show the status of the plant. Fire alarm and fire fighting works, safety instruments as required. Spare parts support without any extra charge for five years.	MR1	1	No	787,40,000.00	787,40,000.00	Rupees Seven Crore Eighty Seven Lakh and Forty thousand only	
2	Supply, Installation, Testing and Commissioning of Biogas / PNG fuelled dual fuel CHP cogeneration engine capable of generating continuously 1000 Kwe of electrical energy including waste heat recovery unit with water jacketing for heat transfer and generation of hot water including hot water generator and heat exchanger of suitable size. Voltage - 415 v, Frequency - 50 Hz with H class insulation, housing of CHP, common base frame, anti-vibrating isolators, flexible coupling for alternators/engines and painting as per manufacturers specification. Starting battery / battery charger, automatic voltage regulator, panel, including control cubicle and associated auxilliary devices, earthing system, relay panel and CHP breaker. Step-up transformer (0.440/11kv) suitable for proposed gas genset, necessary heat exchanger to generate hot water, complete with fuel gas train, engine exhaust system, acoustical enclosure for CHP, Data acquisition system with SCADA/BMS compatibility, necessary cabling, trenching, refilling, hot water storage tanks and hydro pneumatic pump. A logic control panel shall be part of this item which shall be able to sense the availability of power from various sources(Grid, DG sets, solar etc-max., 4 sources)& also sense the load demand on down side & accordingly give command to all required breakes of the respective sources including CHP breaker based on load sharing relays and synchronising relays to manage the source optimization.All required sensors, sensor cables, transducers,control cables, relays, meters, accessories, hardware &software shall be provided in this item. Spare parts support without any extra charge for five years.	MR2	1	No	522,55,600.00	522,55,600.00	Rupees Five Crore Twenty Two Lakh Fifty Five thousand and Six hundred only	
3	Supply, Installation, Testing and Commissioning of Biogas fuel CHP cogeneration engine capable of generating continuously 200 Kwe of electrical energy including waste heat recovery unit with water jacketing for heat transfer and generation of hot water including hot water generator and heat exchanger of suitable size. Voltage - 415 v, Frequency - 50 Hz with H class insulation, housing of CHP, common base frame, anti-vibrating isolators, flexible coupling for alternators/engines and painting as per manufacturers specification. Starting battery / battery charger, automatic voltage regulator, panel, including control cubicle and associated auxilliary devices, earthing system, relay panel and CHP breaker. Step-up transformer (0.440/11kv) suitable for proposed gas genset including LT incomer, HT outgoing, required size breaker and related cablings, necessary heat exchanger to generate hot water, complete with fuel gas train, engine exhaust system, acoustical enclosure for CHP, Data acquisition system with SCADA/BMS compatibility, necessary cabling, trenching, refilling, hot water storage tanks and hydro pneumatic pump. A logic control panel shall be part of this item which shall be able to sense the availability of power from various sources(Grid, DG sets, solar etc-max., 4 sources)& also sense the load demand on down side & accordingly give command to all required breakes of the respective sources including CHP breaker based on load sharing relays and synchronising relays to manage the source optimization.All required sensors, sensor cables, transducers,control cables, relays, meters, accessories, hardware &software shall be provided in this item. Spare parts support without any extra charge for five years.	MR3	1	No	212,62,670.00	212,62,670.00	Rupees Two Crore Twelve Lakh Sixty Two thousand and Six Seventy only	
4	SS316 Piping with flow meter and connection between Biogas plant, purification units and CHP engines for supply of biogas having minimum methane content 55%, H2S content less than 1% and having minimum calorific value of 5000 kcal/m3 at minimum pressure required for the CHP Engine	MR4		Lumpsum	53,22,700	53,22,700	Rupees Fifty Three Lakh Twenty Two thousand and Seven hundred only	
5	Comprehensive AMC (Manpower support with spares part to undertake the operation of the Entire Plant, Digesters, CHP and related auxiliaries installed at site). Minimum 1 No. driver, 4 Nos. of labours for loading & unloading, 4 Nos. of certified technicians and 2 Nos. of helpers. More No. of manpower may be deployed by contractor for smooth functioning of the plant.	MRS	1	No	20,80,000.00	20,80,000.00	Rupees Twenty Lakh Eighty thousand only	
6	CAMC for 2nd Year	MR6	1	No	22,42,000.00	22,42,000.00	Rupees Twenty Two Lakh Forty Two thousand only	
7	CAMC for 3rd Year	MR7	1	No	23,40,720.00	23,40,720.00	Rupees Twenty Three Lakh Forty thousand Seven hundred and Twenty only	
8	CAMC for 4th Year	MR8	1	No	25,56,828.00	25,56,828.00	Rupees Twenty Five Lakh Fifty Six thousand Eight hundred and Twenty Eight only	
9	CAMC for 5th Year	MR9	1	No	26,05,352.00	26,05,352.00	Rupees Twenty Six Lakh Five thousand Three hundred and Fifty Two only	
	Total in Figures					1694,05,870.00	Rupees Sixteen Crore Ninety Four Lakh and Five thousand Eight hundred and Seventy only	