

**BHARAT HEAVY ELECTRICALS LIMITED, JHANSI**

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Specification No.	9715			
Item No.	SP/CAN//9715			
Location	Canteen			
Quantity	ONE NUMBER			
<b>DESIGN,SUPPLY, ERECTION&amp; COMMISSIONING &amp; PROVING OF BIOMASS GASIFIER</b>				
<b>NOTE :</b>				
1.0	VENDOR must submit complete information against clause No-11.0 (Qualifying Condition). The offer meeting this clause would only be processed			
2.0	The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non - compliance.			
3.0	The offer and all documents enclosed with offer should be in English language only.			
4.0	Vendor can visit the site before submitting the offer.			
<b>SPECIFICATION CUM COMPLIANCE CERTIFICATE OF BIOMASS GASIFIER</b>				
S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS IF ANY
<b>1.0 SCOPE</b>				
1.01	Design,Supply,Erection & Commissioning of Biomass Gasifier (40 kw)along with control panel & all its accessories with auxiliaries in ready to use condition Qty-01 No   including suitable wood cutter (01 NO.), & stoves with burner(06 No.) For Thermal Application (Cooking)	VENDER TO CONFIRM		
<b>2.0 Biomass gasifier</b>				
2.01	Biomass gasifier should have hopper ,reactor, vibrator,Ash removal system of reactor,cyclon, gas washing with water ventury(scrabur) & filtration feature	VENDER TO CONFIRM		
2.02	Capacity of gasifier- 40 kw (Min.)	VENDER TO CONFIRM		
2.03	Thermal Rating- 1,00,000 kilo cal./Hr. (Min.)	VENDER TO CONFIRM & SPECIFY		
2.04	Make of gasifier	VENDER TO SPECIFY		
2.05	Model of gasifier	VENDER TO SPECIFY		
2.06	Gas flow meter in out put line	VENDER TO CONFIRM		
2.07	Fuel -- scrap wood,Saw dust , Paper & leaves (as available at site)	VENDER TO CONFIRM		
2.08	Moisture content in fuel 20%	VENDER TO CONFIRM		
2.09	Fuel hooper capacity-- can store the fuel/wood for three Hrs. full load running (min)	VENDER TO CONFIRM		
2.10	Suitable fuel loading arragment including ladder etc.	VENDER TO CONFIRM		
2.11	Reactors for combustion with vibrator at top and Ash removal system at bottom - 02 no (min)	VENDER TO CONFIRM		
2.12	Venturi , scrubber, cyclone, should be made up by SS only	VENDER TO CONFIRM		
2.13	Vibrator motor rating & Qty	VENDER TO SPECIFY		
2.14	Gear motor rating & Qty	VENDER TO SPECIFY		
2.15	scrubber pump motor rating & Qty	VENDER TO SPECIFY		
2.16	Ash removal pump motor rating & Qty	VENDER TO SPECIFY		
2.17	Distance from gasifier to stove point 100 feet (Max.) Pipe work in the scope of supplier	VENDER TO CONFIRM		
2.18	Percentage of varieous gases available in out put of system	VENDER TO SPECIFY		
2.19	Presseur gauge in out put gas line	VENDER TO CONFIRM		
<b>3.0 Wood Cutter</b>				
3.01	Wood cutter Qty--01 No.	VENDER TO CONFIRM		
3.02	Suitable to cut the available wooden piece as per requirement of gasifier ( vendor can visit the site)	VENDER TO CONFIRM		
3.03	Tech Detail / literature of wood cutter	VENDER TO CONFIRM		
<b>4.0 Stove (Complete Assembly With Burner)</b>				
4.01	Total Qty--06 No.	VENDER TO CONFIRM		
4.02	<b>FOR DEEP FRYING</b> Stoves suitable for karahi (capacity 100 ltr. oil for deep frying) --Qty-- 02 No.( vendor can visit the site)	VENDER TO CONFIRM		
4.03	<b>FOR CHAPATI MAKING STATION</b> A. Stove suitable for CHAPATI making Tava (Approx. Size 750 mm x 500 mm)-- Qty -- 02 No. ( vendor can visit the site) B. CHAPATI Griller (Approx. Size 500 mm x 500 mm) -- Qty 02 No. (vendor can visit the site)	VENDER TO CONFIRM		
<b>5.0 Erection &amp; Commissioning</b>				
5.01	Supplied Biomass Gasifier should be complete with all its accessories and auxiliaries including wood cutter,suitable stoves and control panel in ready to use condition to be Erected & commissioned by supplies with his own labour and tools at canteen area of BHEL JHANSI	VENDER TO CONFIRM		
<b>6.0 SAFETY / PROTECTION</b>				
6.01	The equipment shall be fully safe in operation with all safety measure. Necessary guards and protection covers are to be provided to protect the equipment.	VENDER TO CONFIRM		
6.02	Details of safety feature incorporated	VENDER TO SPECIFY		
6.03	Provision of safety measures provided for harmful gases (leakage of carbon mono oxide)	VENDER TO SPECIFY		
<b>7.0 Guarantee</b>				

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**SPECIFICATION CUM COMPLIANCE CERTIFICATE OF BIOMASS GASIFIER**

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S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS IF ANY
7.01	Guarantee for plant shall be for 24 months from the date of commissioning	VENDER TO CONFIRM		
<b>8.0</b>	<b>Packing:</b>			
8.01	All components shall be suitably packed so that the material reaches bhel without any damage/loss in transit.	VENDER TO CONFIRM		
<b>9.0</b>	<b>Miscellaneous :</b>			
9.01	Notwith standing the details in this specification, if any thing else is required for its functioning the same shall be specifically brought out and included in the offer	VENDER TO CONFIRM		
9.02	Electric supply 230/415 v a.c and water supply will be provided by BHEL at single point only	VENDER TO CONFIRM		
9.03	All motor should be KIRLOSKAR /SIEMENS/BAHARAT BIJLEE / GEC	VENDER TO CONFIRM		
9.04	List of spares, required for two years of trouble free operation of the installation.	VENDER TO SPECIFY		
9.05	List of spares and cosumables to be supplied with plant	VENDER TO SPECIFY		
9.06	All civil work will be in the scope of BHEL JHANSI and carried out under the supervision of vendor's representative. How ever vendor shall provide installation/foundation drawing/ details of civil work.with in 15 day of issuing purched order.	VENDER TO CONFIRM		
9.07	Supplier can visit the site before submitting the offer	VENDER TO CONFIRM		
9.08	G.A Drawing/Lay Out of complete system including stove and wood cutter	VENDER TO SUBMIT		
9.09	Total space required for system	VENDER TO SPECIFY		
9.10	PAINT---Heat resistance /epoxy Apple Green	VENDER TO SPECIFY		
9.11	BHEL person should be traind after commissiiong of system at site for Min.one week.	VENDER TO CONFIRM		
9.12	The equipment is to be inspected & tested as per specification at supplier works by our representative before to dispatch.	VENDER TO CONFIRM		
9.13	Full capacity of the plant to be prove at site by vendor for the final acceptance of plant.	VENDER TO CONFIRM		
<b>10.0</b>	<b>Documentation :</b>			
10.01	Operation & maintenance manual with details of all spares, brought out items and cosumables & drawing shall be provided in 03 set of hard copy at the time of supply	VENDER TO CONFIRM		
<b>11.0</b>	<b>Qualifying condition</b>			
11.01	<b>To qualify for this tender, vendors shall submit the following detail and documents</b>  A.The supplier should be the manufacturer or authorized representative of the manufacturer .Authorisation / Manufacturer certificate must be submitted with offer.  B.The supplier/ manufacturer should have installed/supplied atleast 02 No's Biomass gasifier in last 05 years with same or higher capacity (from the date of opening of tender). purchase order copy and commissioning certificate /Despatch document for such Biomass gasifier shall be submitted by supplier.with offer.  C.The manufacturer should have Minimum five year of exp. in manufacturing of Biomass gasifier . Relevent document is required.  D. Performance certificate of 02 No. Biomass gasifiers running satisfactorly for minimum one year after commissioning & supplied in last 05 years	Vender to submit		
12.0	Bhel reserves the right to verify information submitted by vender. In case the information is found to be false/ incorrect, the offer shall be rejected.	Vender to confirm		

*[Signature]*  
Amit Goyal  
Sr. Eng. ( WEX)

*[Signature]*  
Y.K Dhingra  
Dy. Mgr (WEX)

*[Signature]*  
S.K.Bajpai  
Mgr.(WEX)

*[Signature]*  
S.R. Ratnaker  
Mgr. (CNT)

*[Signature]*  
Inder Mathur  
D.G.M.(WEX)

*[Signature]*  
R K Gautam  
Sr. D.G.M. (HR)

*[Signature]*  
Anurag Gupta  
Sr. D.G.M. (FMS)

*[Signature]*  
S.J. Chakraborty  
A.G.M.(WEX)