

तात्काळ

जा.क्र. 638 /उसियाविक्र.१भं/तांगा-१/बजेटरी ऑफर/२०१९.	कार्यालय कार्यकारी अभियंता उपसा सिंचन यांत्रिकी विभाग क्र.१ भंडारा-४४१ ९०४
☎: (०७१८४) २५२१९९	
ई मेल - lismech1@gmail.com	दिनांक :- 23 APR 2019

प्रति,

मा. अधीक्षक अभियंता  
यांत्रिकी मंडळ  
नागपुर

विषय :- बजेटरी ऑफर महायांत्रिकी संकेतस्थळावर [www.mahayantriki](http://www.mahayantriki) प्रसिध्द करणेबाबत.  
बजेटरी ऑफर क्रमांक ०१ सन २०१९-२०

महोदय,

या पत्रासोबत पाठविण्यात येत असलेली बजेटरी ऑफर महायांत्रिकी संकेतस्थळावर प्रसिध्दीस देण्यात यावी ही

विनंती.

१	कार्यालयाचे नांव	कार्यकारी अभियंता, उपसा सिंचन यांत्रिकी विभाग क्र.१, एस.टी. चकशाप समोर, नागपुर रोड, भंडारा.
२	बजेटरी ऑफर महायांत्रिकी संकेतस्थळावर प्रसिध्दीची अंतीम तारीख	२५/०४/२०१९

सहपत्र :-बजेटरी ऑफर - प्रत्येकी १ प्रती.

( स. सु. हाणो )  
कार्यकारी अभियंता,  
उपसा सिंचन यांत्रिकी विभाग क्र.१  
भंडारा.

प्रतिलिपि :- १) उप अभियंता, उपसा सिंचन यांत्रिकी उपविभाग क्र. १ आंबाडी यांना माहितीस्तव अग्रेषित.

२) उप अभियंता, उपसा सिंचन यांत्रिकी उपविभाग क्र. २ गोंदिया यांना माहितीस्तव अग्रेषित.

३) उप अभियंता, उपसा सिंचन यांत्रिकी च विद्युत उपविभाग क्र.१, भंडारा यांना माहितीस्तव अग्रेषित.

सहपत्र :-बजेटरी ऑफर - प्रत्येकी १ प्रती.

४) उप अभियंता, यांत्रिकी अभियांत्रिकी कर्मशाळा उपविभाग क्र.१, भंडारा यांना माहितीस्तव अग्रेषित.

सहपत्र :-बजेटरी ऑफर - प्रत्येकी १ प्रती.

५) कार्यकारी अभियंता, उपसा सिंचन यांत्रिकी विभाग क्र.१ भंडारा यांचे कार्यालयातील नोटीस बोर्डावर लावण्यासाठी.

सहपत्र :-बजेटरी ऑफर - १ प्रती.

६) मा. अधीक्षक अभियंता यांत्रिकी मंडळ नागपुर यांचे कार्यालयातील नोटीस बोर्डावर लावण्यासाठी.

सहपत्र :-बजेटरी ऑफर - १ प्रती.

**RATE PROFORMA**  
**GOVERNMENT OF MAHARASHTRA**  
**WATER RESOURCES DEPARTMENT**  
**Budgetary Offer No. 01 of 2019-20**

Issue Date - 25/04/2019, Closing Date - 09/05/2019, Opening date - 10/05/2019

Executive Engineer, Lift Irrigation Mechanical Division No.1, Bhandara

Sealed rates (excluding GST) are invited from contractor by the Executive Engineer, Lift Irrigation Mechanical Division No.1, Bhandara. (Phone No.07184 - 252166) for the purpose of estimation of the following works.

Name of work - Design, manufacturing, supplying, erection, testing & commissioning with quality assurance plan at each stage of 04 Nos of force water lubricated type vertical turbine pump with allied equipments at Bhandara Flood Protection Scheme, Tah- Bhandara, Dist. Bhandara.


Est Qty. may be More or less.	Unit	Description of work	Rate per unit	Amount
4	Nos	<b>Item No.1 – Vertical Turbine Pumps.</b>		
		Providing, installing at site of works and giving test to full Capacity, vertical turbine pumps non-pull out type, complete with strainer, suction bowl, column assembly, Discharge head, Flexible coupling, sole Plates, base frame foundation, etc. suitable for following duties, Specification and conforming to the detailed specification as given below.		
		a) Duty point discharge 4120 LPS		
		b) Duty point head 8.1 m		
		c) Maximum rpm synchronous 500		
		d) Efficiency		
		1. Bowl efficiency 89 %(minimum)		
		2. Pump efficiency 88 % (minimum)		
		3. Overall efficiency 84 % (minimum)		
		e) Head range 6.09 to 8.93 m		
		f) Lubrication system Self water Lubrication		
		g) Discharge type Surface Level		
		h) No. of maximum stages Max. One Stage Only		
		i) Column pipe dia. Minimum (ID) 1650 mm		
		j) Column pipe thickness minimum 10 mm		
		k) Line shaft dia. Minimum 90 mm		
		l) Maximum no. of pumps working in parallel Upto 4 Nos.		
		m) Capacity - 543 Hp		
4	Nos.	<b>Item No.2 - Non Return Valve 1500 mm Dia.</b>		
		Providing, installing at site of works and testing cast iron, non slam, double flanged type non return valve with by pass arrangement complete, suitable for following duties specification and confirming to detailed specification, as given below.		
		a) Diameter 1500 mm		
4	Nos.	b) P.N. rating 1		
		<b>Item No.3 - Butterfly Valve 1500 mm Dia.</b>		
		Providing, installing at site of works and testing double flanged butterfly valves conforming to relevant IS/BS 5155 with electrical actuators with 415 volts A.C. Motors D.O.L. starter etc. complete, suitable for following duties, specifications and conforming to detailed specification underas given below.		
4	Nos.	a) Diameter 1500mm		
		b) P.N. rating 1		
4	Nos.	<b>Item No.4 - Kinetic Air Valve 300 mm Dia.</b>		
		Providing, installing at site of works and testing kinetic air valves of 300 mm dia. For releasing air from the delivery pipes, etc. complete as per detailed specification.		

320	Mtr.	<b>Item No.5 - Delivery pipe 1500 mm Dia.</b>		
		Providing and joining at site of works and testing delivery pipe lines including jointing of all in between valves and up to rising main/manifold complete and with quarter circular end with flap valve. Suitable for following duties, specification and conforming to detailed Item no.6 of detail item wise specification as given below:		
		(a) Diameter (NB) 1500 mm		
		(b) Wall thickness 10 mm		
4	Nos.	(c) Hydraulic test Pressure 15.0 kg/sq.cm		
		<b>Item No.6 - Rubber Expansion Joint 1500 mm</b>		
		Providing, installing at site of works and testing of rubber expansion joints in pump delivery pipe line complete, suitable for following duties, specification and conforming to detailed specification under Item No. 7 of detailed itemwise specification as given below.		
		(a) Diameter (NB) 1500 mm		
4	Nos.	(b) Internal test pressure 15.0 Kg/sq.cm		
		(c) Vacuum test pressure in mm of Hg - 700mm		
		<b>Item No.7 - Providing, installing at site of works and testing Diesel Engine of required capacity.</b>		
		Rated speed: 1500-2100 rpm		
4	Nos.	Rated Power : 720 HP (536 KW)		
		Aspiration Method: Turbocharged/Aftercooled		
		Fuel Consumption: ≤ 155 litres/hour		
		suitable industrial silencer exhaust system, conforming to relevant ISO:7403		
4	Nos.	<b>Item No.8 - Battery set.</b>		
		Providing, installing at site of works lead acid battery of 24 V, 200 Ah		
4	Nos.	<b>Item No.9 - Suitable transmission system for driving above 500 rpm VT Pump by above diesel engine.</b>		
		Gear box should be double bevel gear type ( Right angle pump drive)		
		Gear Box output Power = 543 HP		
		Output Speed ( VT Pump Speed) = 500 r.p.m.		
		Input Speed ( Engine Speed)= 1500-2100 rpm		
		Max. permissible Noise level at site ≤ 85 dB at distance of 1 m		
		Required cooling system		
		All required rotating shaft assembly ,non-reverse coupling,top cover etc., conforming to relevant IS:7403-1974		
4	Nos.	<b>Item No.10 - Fuel tank</b>		
		Providing, installing at site fuel tank suitable for above individual diesel engines along with necessary safety valves and inlet outlet pipelines to the engine, ( 12 hrs of continuous working).		
1	No	<b>Item No.11 - Battery Charging Unit</b>		
		Providing, installing at site of works Battery Charging Unit suitable for charging 4 nos. of batteries of 24 V, 10 Amp.		
1	No.	<b>Item No.12 - Inverter</b>		
		(i) Supplying, installing, testing and commissioning of 2500 VA Digital pure sine wave inverter based on Insulated Gate Bipolar Transistor (IGBT) technology single phase 230V,50 Hz complete as per specification no. AP-INV (Without batteries).		
		(ii) Supplying and erecting 12 V/200Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete.		
1	Job	<b>Item No.13 - Fuel Storage Tank</b>		
		Providing, installing at site of work a fuel storage tank of 24000 litres capacity with safety equipments, input output to the engine with required pumping machineries along with all approval, NOC and license work from Petroleum and Explosives safety Department.		

		<b>Item No.14 - Preparation of cable schedule &amp; accessories.</b>		
200	mtr	(i) Supplying, erecting & terminating PVC armoured cable 3½ core 70 sq mm aluminium conductor with continuous 8.35 sq mm (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/pipe as per specification no. CB-LT/AL.		
300	mtr	(ii)Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU.		
50	kg	(iii) Supplying and erecting Iron, sheet metal workconsisting of CRCA Sheets, Various sections of iron, Plates, Chequered Plates, Rods, Bars, MS pipes, etc. for panel board or any other purposes complete with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.		
		<b>Item No.15 - LT Panel</b>		
1	No	(i) Providing & erecting Incoming and Outgoing Cable Alleys suitable for MCCB panel board of 250A incoming and 8 way outgoing or 400A incoming and 6 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and basic DB.		
1	No	(ii) Supplying & erecting on load type Four pole Iron clad/metal clad ON LOAD change over switch 63A., 415/500 Volts erected on angle iron frame approved make.		
2	No	(iii) Providing & erecting Floor / Wall mounting, MCCB Panel board suitable for Four Pole Incoming 100A, 4 ways Four pole outgoing on provided iron frame, as per Specification No SW-SWR/MCCBPB. (Excluding MCCB'S).		
2	No	(iv)Providing & erecting 4 Pole MCCB of 100A,415V capacity with S.C. rating 36 kA (Ics=100% of Icu),thermal and magnetic setting with provided leads on iron /G.I.frame as per specification No. SW-SWR/MCCB.		
5	No	(v) Providing & erecting 4 Pole MCCB upto 32A, 415V capacity with S.C. rating 25 kA (Ics=100% of Icu), thermal setting with provided leads on iron frame/wooden board as per specification No. SW-SWR/MCCB.		
1	No	(vi) Supplying and erecting LT/CT multifunction DLMS compliance energy meter of accuracy of class 0.5 , 3x240V,50 Hzwith optical & RS 232 port, backlit LCD,measures & Displays Trivector Energy, load survey, TOD,tamper detection & logging, power ON /OFF events,instantaneous parameters of Rating -/5 Awith display in absence of power complete with zero adjustment & test certificate from manufacturer erected on provided M.S. box and connected to CTs.		
3	No	(vii) Providing and erecting <b>L.T. Current Transformer with bar primary 50/5 to 1000/5 ratio with 15VA burden</b> erected in provided CRCA box duly secured with insulating materials connected to the meter with test certificates.		
1	No	(viii) <b>Phase Failure Relay</b> CurrentsensingPhaseFailureRelaywithoverloadprotection (without CTs).		

		<b>Item No.16 - Earthing</b>		
6	No	(i) Supply, Installation, Testing and commissioning of ULCertified / CPRI Tested Maintenance Free Earthing comprising of Electrode of 17.2 mm diameter Low Carbon Steel with 250 micron Molecular Copper Bonded Earthing Rod of Length 3m along with 25 kg Carbon Based environment friendly back fill Ground Enhancing compound required to fill up the excavated earth with required quantity as per specification no EA-MOBI.		
100	kg	(ii) Supplying and erecting GI strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification No EA-EP.		
		<b>Item No.17 - Diesel Generator Set and AMF Panel.</b>		
1	each	(i) Supplying, erecting and commissioning of diesel generating set with alternator of 40 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multicylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite. Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. as per specification no. GEN-DG.		
1	each	(ii) Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 35 kVA upto 40 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.		
1	set	<b>Item No.18 - Water Level Indicator.</b> Providing, installing at site of works & testing of water level indicator, operating on 230 volts, 50C/s, AC supply as per detailed specification.		
1	Lot	<b>Item No.19 - Spares &amp; tools</b> Providing at site of works tools and spares complete. Confirming to specification.		
1	Job	<b>Item No.20 - Testing, Commissioning, Trials &amp; operations for one year after performance guarantee test.</b> Testing, Commissioning, Trial & operation of the complete equipment and performance tests and training to department staff & confirming to specification.		

Note - The above rates are excluding of GST.

  
 (S. S. Dani)  
 Executive Engineer  
 Lift Irrigation Mechanical Division No.1  
 Bhandara