

BUDGETORY OFFER

जा.क्र./टेंसिंयांविप/तांशा-१ /जाहिरात/
कार्यकारी अभियंता,
टेंभु उपसा सिंचन यांत्रिकी व विद्युत पथक,
ओगलेवाडी, कराड यांचे कार्यालय
E-Mail – tembhumeunit@gmail.com
Phone – (02164) 271142
दिनांक:- १८/११/२०२१

प्रति,

मा. जिल्हा माहिती अधिकारी.
जिल्हा माहिती कार्यालय,
नविन प्रशासकीय इमारत,
सातारा.

विषय :- जाहिरात प्रसिद्धीस देणबाबत.

महोदय,

सोबत जोडलेली जाहिरात प्रादेशिक स्तरावर प्रसिद्ध होणा-या वृत्तपत्रामध्ये एक वेळा प्रसिद्धीस द्यावी ही विनंती. कृपया ती नेमून दिलेल्या तारखेला किंवा तत्पूर्वी प्रसिद्धीस द्यावी, ही विनंती.

१) कार्यालयाचे नाव, पत्ता व दुरध्वनी क्रमांक

: कार्यकारी अभियंता, टेंभु उपसा सिंचन यांत्रिकी व विद्युत पथक, ओगलेवाडी, कराड पिन :- ४१५१०५, फोन नं : (०२१६४) २७११४२.

२) जाहिरात प्रसिद्ध होण्याचा अंतिम दिनांक

: दिनांक:- २५/११/२०२१ अथवा तत्पूर्वी

३) प्रसिद्धी कोणत्या स्तरावर आवश्यक
(प्रादेशिक/जिल्हा पातळीवर)

: जिल्हा स्तरावर (सातारा Region)

४) जाहिरातीचे बील कोणाच्या नावे पाठवावयाचे
व किती वेळा.

: कार्यकारी अभियंता, टेंभु उपसा सिंचन यांत्रिकी व विद्युत पथक, ओगलेवाडी, कराड

५) जाहिरात किती वृत्तपत्रात प्रसिद्ध करावयाची
व किती वेळा.

: क वर्ग दैनिक मराठी , साप्ताहिक वृत्तपत्रात^{एकाचवेळी फक्त एकवेळा.}
(कमीत कमी जागेत.)

६) किती वेळा जाहिरात प्रसिद्ध करावयाची आहे.

: एक वेळा.

आपला विश्वासू

सोबत :- जाहिरातीच्या ४ प्रती.

कार्यकारी अभियंता,
टेंभु उपसा सिंचन यांत्रिकी व विद्युत पथक,
ओगलेवाडी, कराड

प्रत :- मा.अधीक्षक अभियंता, यांत्रिकी मंडळ, कोल्हापूर यांना माहीतीसाठी व वेबसाईट प्रसिद्धीसाठी सविनय सादर.

जलसंपदा विभाग (यांत्रिकी)
दरपत्रके - कामाचे अंदाजपत्रक तयार करणेकरीता

कार्यकारी अभियंता टेंभू उपसा सिंचन यांत्रिकी व विद्युत पथक, कोयना सायरडींग, ओगलेवाडी, कराड, ४१५१०५ (दुरध्वनी क्र.२७११४२) खालील कामांकरीता अंदाजपत्रकीय कार्यवाहीसाठी सर्व कर समावेशक अंदाजपत्रकीय दरपत्रके मागविण्यात येत आहेत. संबंधीतांनी हि जाहिरात प्रसिद्ध झाल्यापासून अंदाजपत्रकीय दरपत्रके **दि. २५/११/२०२१** पासून **०१/१२/२०२१** पर्यंत कार्यालयीन वेळेत सादर करावीत. सदर कामाच्या बाबीचा सविस्तर तपशील www.mahayantri.org या वेबसाईट वर उपलब्ध आहे.

अ.क्र	तपशील	परिमाण	दर	रुपये
1	टेंभू उपसा सिंचन योजना टप्पा १ ते ५ येथील यांत्रिकी व विद्युत घटकभागांचे Energy Audit करणे.	यादी मध्ये नमुद केलेप्रमाणे		

उपरोक्त नमूद दरपत्रके ही फक्त अंदाजपत्रकीय कार्यवाहीसाठी मागविण्यात येत आहेत. तसेच वरील दर हे वस्तु व सेवा कर वगळून देण्यात यावेत.

कार्यकारी अभियंता,
टेंभू उपसा सिंचन यांत्रिकी व विद्युत पथक,
ओगलेवाडी, कराड.

BUDGETORY OFFER

NO.EE/TLIMEU/T1/

Office of the Executive Engineer,
Tembhu L.I.Mech. & Elect Unit,
Ogalewadi, Tal.Karad,
Dist.Satara
Dated :-

To,

- 1)
- 2)
- 3)

Sub :- Regarding Budgetary Offers

Dear Sir,

In connection with the above, we are in Water Resources Department working under Govt. of Maharashtra and are entrusted with the work of Lift Irrigation Schemes to supply water for drought area.

Sealed & Super scribed budgetary offers are invited here with for the works listed below

Name of work: Providing consultancy services for energy audit, healthiness of electromechanical component and recommendation for plant improvement of Tembhу L.I.S. Project

Sr. No •	Description	Qty	Rate	Amount
	<p>carrying out detailed energy audit of Tembhу Lift irrigation Scheme (which include pumps , motors, transformer and other electrical accessories) including collection and study of data of existing pumping machineries, energy bills, repairs done so far, carrying out measurements of various electrical parameters like voltage, frequency, power factor, kWh, Flow, pressure, electrical wiring , with calibrated ultra sonic / electromagnetic flow meter , Power analyser, calibrated pressure gauge etc.</p> <p>Taking reading for analysis , preparing report including remedial measures to reduce the energy cost by reducing energy consumption for improving energy efficiency including testing of illumination system and cable laid in entire system etc. complete as per detailed specification.</p>			

	<p>The work generally covers the scope as below</p> <p>1. Study of existing set up- collection of details of pumping machinery including no. of pumping stations , no of pump sets, electric billing, Power factor penalty if any, repairs carried out so far, design capacity and set up, including maximum demand required and sanctioned.</p> <p>2. Study of energy tariff levied as per norms of MSEDCCL</p> <p>3. Study of Pumping System including 'L' Section, type of pumping system main , determination of frictional losses , apparatuses installed on raising main.</p> <p>4. Carrying of measurement of various electrical/ Mechanical parameter , like Voltage, current,kWh, frequency, M.D. power factor , flow ,Pressure etc.</p> <p>5 Preparing data base on the basis of above measurements in specific.</p> <p>6. plotting graphs / curves of above tabulated results and comparison with ideal conditions.</p> <p>7. Collecting data off raw/ pure water lifted and Energy Consumed for last three years (individual pumping stations and total for all pumping stations.)</p> <p>8. Evaluating performance and healthiness of electro mechanical components.</p> <p>*HT/LT panel</p> <ul style="list-style-type: none"> * Temperature Scanner Panel . * remote Control Panel * DCDB/Battery Charger * Internal & external illumination System and suggestions if any as per norms <p>9. Evaluating individual /parallel operation of Pumping Sets suggesting suitable combination of pump sets based on power consumption.</p> <p>10. Determine the pumping station efficiency i.e. Specific energy consumption (S.E.C.) and entire System efficiency</p> <p>11 Giving suitable suggestion remedial measures to reduce the total energy consumption for the same quantity of water produced.</p> <p>12. Estimating approximate cost of work required to be carried out as per suggested improvement considering the normal life of the machinery.</p>	
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	<p>13. Submitting detail report / analysis of finding as per scope specified duly signed by BEE registered energy auditor.</p> <p>14. Study of Surge Protection System and its recommendation.</p>		
Note :- Necessary Information attached separately.			

TERMS AND CONDITIONS:-

- 1) The rates should be quoted separately for one pump considering complete scheme.
- 2) specific energy consumption for each pump shall be derived based on test data received using parameters as mentioned in scope of work
- 3) Equipment for measurement of various parameters should be provided by consultant
- 4) Rate should be exclusive of GST
- 5) This budgetary offer is called for estimation purpose only.

Hence you are requested to furnish the lowest budgetary prices at the earliest.

Thanking you,

Yours faithfully,

Executive Engineer,
Tembhu L.I.Mech. & Elect Unit,
Ogalewadi, Tal.Karad

Copy submitted to the Superintending Engineer, Mechanical Circle (C.P.), Kolhapur, for information & necessary action please.

/-It is requested to upload this offer on official website of department.
Office Notice Board.

Pump Details
Pumping Parameters of Tembhoo Lift Irrigation Scheme.

S N	Particular	I A	1 B	II	III A	III B	IV	V
1	Working pumps	30	36	2	20	4	3	4
2	Standby pumps	3	3	1	2	1	1	1
3	Total pumps	33	39	3	22	5	4	5
4	Type of pumps	I Stage	Two stage	I Stage	I Stage	I Stage	I Stage	Two stage
5	Pump H.P.	1950	2200	1400	1940	1990	1075	1235
6	Column pipe dia in mm	1100	1100	1000	1100	1500	1100	900
7	Delivery pipe dia in mm	1100	1100	1000	1100	1500	1100	900
8	Line shaft diameter in mm	125	130	110	125	140	110	100
9	Motor K.W.	1505	1700	1080	1500	1535	830	955
10	R.P.M.	750	750	750	750	500	600	1000
11	No. of Rising mains	6	6	1	4	2	1	1
12	Diameter of RM in mm	2500	2500	1500	2500	2200	1800	1800
13	Length of RM in m	2050	230	1700	3740	1540	1290	2300
13	Length of RM in m	2050	230	1700	3740	1540	1290	3520
14	Max pumps conn/RM	6	7	3	6	3	4	5
15	Max working pumps in parallel	5	6	2	5	2	3	4
16	Frictional Head in m	4.17	1.39	4.02	6.33	3.33	3.53	4.66
17	Static Head @ POL	60.83	86.61	57.98	63.67	30.67	37.47	88.34
18	Duty Head @ POL	65	88	62	70	34	41	73
19	Total discharge m3/s	57.37	57.37	2.88	35.316	14.906	5	3.22
20	Discharge/pump m3/s	1.9123	1.5936	1.44	1.7658	3.7265	1.6667	0.805
21	Discharge pt. R.L.m.	617	701.84	748.65	740	707	772	858
22	H. F. L.	563	-	-	-	-	-	-
23	F. R. L.	558	617	692	677	677	735	770
24	P. O. L.	556.17	615.33	690.67	676.33	676.33	734.53	769.66
25	M. D. D. L.	552.5	612	688	675	675	731.6	766
26	Sump Bottom R. L.	544.75	604.75	683	668.5	667.5	728.1	762
27	Valve Floor R.L.	561	617.5	692.5	677.5	677.5	736.5	770.5
28	Motor Floor R.L.	565.5	622	696.03	682.5	682.5	743.5	775
29	Head Range in mtr.	48 to 72	66 to 97	46 to 69	52 to 77	25 to 38	30 to 45	54 to 93
30	Specific speed (Nq)	2347	2870	2164	2135	3550	2478	2157
31	Suction sp. Speed (Ns)	7524	7051	7604	7774	7529	7423	7757
32	Thoma available	0.2007	0.2886	0.1745	0.1743	0.3519	0.2152	0.1789
33	Thoma critical	0.1975	0.2583	0.1708	0.1741	0.3342	0.2112	0.1751

Details of Anti surge System

Sr. No.	Name of project	Type of pump	Pump HP	Total Number of pumps	Discharge per pump (m ³ /s)	Surge protection system
1	2	3	4	5	6	7
1	Tembhu Stage-1A	VT Pumps	1940	33	1.91	Air Vessel: Capacity- 156 m ³ Working Pressure- 16 bar Quantity- 1 Nos per Rising mains
2	Tembhu Stage-1B	VT Pumps	2200	33	1.59	Air Vessel: Capacity- 46 m ³ Working Pressure- 16 bar Quantity- 1 Nos per Rising mains
3	Tembhu Stage-1B to Arphal	VT Pumps	561	2	2.01	Bladder Vessel: Quantity- 1 Nos Capacity- m ³ Working Pressure- Bar
4	Tembhu Stage-2	VT Pumps	1400	3	1.44	Zero Velocity Valves: Size- 1000 mm
5	Tembhu Stage-3A	VT Pumps	1940	20+2	1.766	Air Vessel: Quantity- 8 Nos Capacity- 137.5 m ³ Working Pressure- 10 Bar
6	Tembhu Stage-3B	VT Pumps	1990	4+1	3.727	Air Vessel: Quantity- 2 Nos Capacity- 140 m ³ Working Pressure- 10 Bar
7	Tembhu Stage-4	VT Pumps	1075	3+1	1.667	Bladder Vessel: Quantity- 1 Nos Capacity- 20 m ³ Working Pressure- 10 Bar
8	Tembhu Stage-5	VT Pumps	1235	4+1	0.805	Bladder Vessel: Quantity- 1 Nos Capacity- 20 m ³ Working Pressure- 16 Bar

Tembhu LIS stage 1A		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-3150A VCB	4 Nos
	ii) Motor Feeder-800A VCB/400AVC	35 Nos
	iii) Capacitor Feeder-800A VCB/400AVC	2 Nos
	iii) Transformer Feeder-800A VCB/630AVC	2 Nos
2	HT Induction Motor- 1500kW, 6.6kV	33 Nos
3	Soft Starter Panel for HT Induction Motor- 1500kW, 6.6kV	33 Nos
4	Capacitor Panel- 6.6 kV, 113x3 kVAR	33 Nos
5	Temperature Scanner Panel for 33 motors	2 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	2 Nos
7	Battery Charger Dual FCB 30A, 220V	1 No
8	Batteries, 2V, 300AH	110 Nos
9	DCDB comprising 2 incoming feeder	1 No
10	Auxillary Transformer, 315 kVA, 6.6/0.415 kV	2 Nos
11	Remote Control Panels for 33 Motors	2 Nos
12	Panels of EOT crane for Power & Control	1 set

Tembhu LIS stage 1B		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-3150A VCB	4 Nos
	ii) Motor Feeder-800A VCB/400AVC	37 Nos
	iii) Capacitor Feeder-400AVC	2 Nos
	iii) Transformer Feeder-800A VCB/630VC	2 Nos
2	HT Induction Motor- 1700kW, 6.6kV	35 Nos
3	Soft Starter Panel for HT Induction Motor- 1700kW, 6.6kV	35 Nos
4	Capacitor Panel- 6.6 kV, 128x3 kVAR	35 Nos
5	Temperature Scanner Panel for 35 motors	2 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	2 Nos
7	Battery Charger FCB 30A, 220V	2 No
8	Batteries, 2V, 300AH	110 Nos
9	DCDB comprising 2 incoming feeder	1 No

10	Auxillary Transformer, 315 kVA, 6.6/0.415 kV	2 Nos
11	Remote Control Panel for 33 Motors	2 Nos
12	Panels of EOT crane for Power & Control	1 set

Tembhu LIS stage 2		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-800A VCB	1 Nos
	ii) Motor Feeder-400AVC	3 Nos
	iii) Transformer Feeder-400A VC	2 Nos
2	HT Induction Motor-1080kW, 6.6kV	3 Nos
3	Soft Starter Panel for HT Induction Motor- 1080kW, 6.6kV	3 Nos
4	Capacitor Panel- 6.6 kV, 82x3 kVAR	3 Nos
5	Temperature Scanner Panel for 3 motors	1 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	1 Nos
7	Battery Charger FCB 30A, 110V	2 No
8	Batteries, 2V, 150AH	55 Nos
9	DCDB comprising 2 incoming feeder	1 No
10	Auxillary Transformer,100 kVA, 6.6/0.415 kV	1 Nos
11	Remote Control Panel for 3 Motors	1 Nos
12	Panels of EOT crane for Power & Control	1 set

Tembhu LIS stage 3		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-3150A VCB	4 Nos
	ii) Motor Feeder-400VC	29 Nos
	iii) Transformer Feeder-400 VC	2 Nos
	iv) capacitor Feeder-400 VC	2 Nos
2	HT Induction Motor-1505/ 1535 kW, 6.6kV	27 Nos
3	Soft Starter Panel for HT Induction Motor- 1505/1535kW, 6.6kV	27 Nos
4	Capacitor Panel- 6.6 kV, 113x3 kVAR	27 Nos

5	Temperature Scanner Panel for 27 motors	2 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	1 Nos
7	Battery Charger Dual FCB 30A, 220V	1 No
8	Batteries, 2V, 300AH	110 Nos
9	DCDB comprising 2 incoming feeder	1 No
10	Auxillary Transformer,315 kVA, 6.6/0.415 kV	2 Nos
11	Remote Control Panel for 27 Motors	2 Nos
12	Panels of EOT crane for Power & Control	1 set

Tembhu LIS stage4		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-1250A VCB	2 Nos
	ii) Motor Feeder-800 A VCB	5 Nos
	iii) Transformer Feeder-800 A VCB	2 Nos
2	HT Induction Motor- 830kW, 6.6kV	4 Nos
3	Soft Starter Panel for HT Induction Motor- 830kW, 6.6kV	4 Nos
4	Capacitor Panel- 6.6 kV, 63 x 3 kVAR	4 Nos
5	Temperature Scanner Panel for 4 motors	1 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	1 Nos
7	Battery Charger Dual FCB 30A, 110V	1 No
8	Batteries, 2V, 150AH	55 Nos
9	DCDB comprising 2 incoming feeder	1 No
10	Auxillary Transformer,315 kVA, 6.6/0.415 kV	1 Nos
11	Remote Control Panel for 4 Motors	1 Nos
12	Panels of EOT crane for Power & Control	1 set

Tembhu LIS stage5		
Sr.No.	Equipment Description	Quantity
1	HT Panel, 6.6 kV	
	i) Incomer Feeder-1250A VCB	2 Nos
	ii) Motor Feeder-800 A VCB	6 Nos
	iii) Transformer Feeder-800 A VCB	2 Nos
	iv) BC Feeder-1250 A VCB	1 No
2	HT Induction Motor-955kW, 6.6kV	5 Nos
3	Soft Starter Panel for HT Induction Motor- 955kW, 6.6kV	5 Nos
4	Capacitor Panel- 6.6 kV, 73 x 3 kVAR	5 Nos
5	Temperature Scanner Panel for 5 motors	1 Nos
6	L.T.Panels 415 V to provide LT supply for auxillaries of pump house	1 Nos
7	Battery Charger Dual FCB 30A, 110V	1 No
8	Batteries, 2V, 150AH	55 Nos
9	DCDB comprising 2 incoming feeder	1 No
10	Auxillary Transformer, 315 kVA, 6.6/0.415 kV	1 Nos
11	Remote Control Panel for 5 Motors	1 Nos
12	Panels of EOT crane for Power & Control	1 set