

Government eProcurement System Created By: B. NAGESWARA RAO Created Date/Time: 24-Feb-2020 05:48 PM Tender Title: ARMO of Electrical and Mechanical Installations 2020-22 at Visakhapatnam Airport Tender ID: 2020_AAI_40717_2

Tender Inviting Authority: Jt. GENERAL MANAGER (ENGG-ELECT), AIRPORTS AUTHORITY OF INDIA, VISAKHAPATNAM AIRPORT, VISAKHAPATNAM

Name of Work: ARMO of Electrical and Mechanical Installations 2020-22 at Visakhapatnam Airport.SH : Operation & Maintenance of Electrical and Mechanical Installations

Contract No: 2020_AAI_40717

SCHEDULE OF WORK / ITEM(S)

Sl.No	Description of Work / Item(s)	No.of Qty	Units	Estimated Rate	CHENNAI ENGINEERING SERVICES		ABHISHEK ASSOCIATES		DELite System Engineering (India) Pvt. Ltd.	
					Rate	Amount	Rate	Amount	Rate	Amount
1.00	Operation and Maintenance of E & M Installations at MSSR building and DVOR Building on Yarada Hills by carrying out preventive maintenance, attending to the complaints & maintaining records by providing qualified manpower, tools, cleaning materials etc., round the clock including sundays and holidays in three shifts as per enclosed Special conditions of contract and particular specifications and as per the instructions of the Engineer-in-Charge or his authorized representative from time to time complete as required. (Note: Rs. 1000/- extra to be paid to each employee in addition to the minimum wages towards conveyance charges being remote site).	24.00	Months		228829.00	5491896.00	274534.00	6588816.00	229007.00	5496168.00
2.00	Operation and Maintenance of E & M Installations at residential colony, WT station & new CISF barracks at new Karasa by carrying out preventive maintenance, attending to the complaints by providing qualified manpower, tools, cleaning materials etc., round the clock including sundays and holidays in three shifts as per enclosed Special conditions of contract and particular specifications and as per the instructions of the Engineer-in-Charge or his authorized representative from time to time complete as required.	24.00	Months		119649.00	2871576.00	104428.00	2506272.00	118300.00	2839200.00

3.00	Filtration of oil of the following equipments to the required di electric strength, testing the same for the break down voltage. Performing acidity test at site by arranging the oil filtration machine and other testing equipments at site, cleaning and drying out the brether etc including cleanbing the transformer completely and arresting the leak if any by providing gasket and tightening the bolts etc required. a) 200KVA Transformer Kirloskar make at SSI (250 litre capacity) (Location of Transformers is at Yarada Hills).	4.00	Job
4.00	Supply of transformer oil with test report for topping up the transformer including transportation as and when required.	80.00	ltr
5.00	Supply and replacement of Silica gel crystals for transformer breather including removing the deteriorated one and refilling the new crystal etc as required.	24.00	Kg
6.00	Transportation of HSD oil from Airport power house / petrol bunk to MSSR at yarada hills. Approx. quantity of oil to be transported upto 800 ltrs in a single trip up an down. Approx. distance from the starting point is 20 Km. (approx. 5 Km travelling is on hill). Excluding loading and unloading.	24.00	Job
7.00	Spray painting of LT panels / feeder pillars with one coat metal primer on rusted surface and two coats approved synthetic enamel paint i/c scraping the surface, lettering etc., as required upto the satisfaction of the Engineer-in-charge as and when required.	200.00	sqm
8.00	Painting of street light poles with one coat of metal primer on rusted surface and two coats of approved aluminum paint i/c dismantling, re-fixing of fittings and scraping the surface as required to the satisfaction of the Engineer-in-charge as and when required. (a) Poles of height from 3 mtrs to 9 mtrs	20.00	each
9.00	Re-winding of following rating sub-mersible pump motors including dismantling, cutting of burnt out wire, re-assembling, testing of motor, transportation of the submersible pump motor set to the site etc as and on when required. a) upto 5.0 HP	2.00	Job

3499.00	13996.00	4500.00	18000.00	12500.00	50000.00
199.00	15920.00	100.00	8000.00	600.00	48000.00
399.00	9576.00	550.00	13200.00	500.00	12000.00
3999.00	95976.00	4000.00	96000.00	7500.00	180000.00
399.00	79800.00	130.00	26000.00	400.00	80000.00
399.00	7980.00	550.00	11000.00	4500.00	90000.00
7999.00	15998.00	5000.00	10000.00	12000.00	24000.00

10.00	Lifting of following submersible pumps upto 200 feet from the existing bore well / open well along with GI / MS pipe lines, cable and reinstallation of the same after repair / rectification of the defects as and when required. (Charges for repair / rectification of the pump or motor is not included). a) upto 5.0 HP	2.00	Job
11.00	Lifting of following submersible pumps upto 200 feet from the existing bore well / open well along with GI / MS pipe lines, cable and reinstallation of the same after repair / rectification of the defects as and when required. (Charges for repair / rectification of the pump or motor is not included). b) above 5.0 HP and upto 7.5 HP	1.00	Job
12.00	Re-winding of following rating monoblock pump motors including dismantling, cutting of burnt out wire, re-assembling, testing of motor, transportation of the monoblock pump motor set to the site etc as and on when required. a) upto 5.0 HP	1.00	Job
13.00	Operation of Lifts & Escalators in Integrated Terminal building by providing trained manpower including keeping the machines in neat and tidy condition by cleaning, monitoring and co-ordinating with OEM service persons for ensuring serviceability/ satisfactory working, rescue of users in case of requirement, maintaining the records etc. in two shifts per day including Sundays & holidays etc. as per enclosed Special conditions of contract, Particular specifications, and as per the instructions of Engineer-in-Charge or his authorised representative from time to time complete as required.	24.00	Months
14.00	Operation and Maintenance of Sewage Treatment Plant System by carrying out preventive maintenance, attending to the complaints, maintaining records by providing qualified manpower, tools, cleaning materials etc., round the clock including sundays and holidays in three shifts as per enclosed Special conditions of contract and particular specifications and as per the instructions of the Engineer-in-Charge or his authorized representative from time to time complete as required.	24.00	Months

9999.00	19998.00	3000.00	6000.00	2500.00	5000.00
14999.00	14999.00	4000.00	4000.00	3000.00	3000.00
9999.00	9999.00	5000.00	5000.00	9000.00	9000.00
171049.00	4105176.00	178632.00	4287168.00	173078.40	4153881.60
76579.00	1837896.00	79276.00	1902624.00	76923.73	1846169.52

15.00	Supply of following Chemicals for day to day operation of Sewage Treatment Plant. a) Chlorine	1826.00	Ltrs
16.00	Supply of following Chemicals for day to day operation of Sewage Treatment Plant. b) Urea	6570.00	Kg
17.00	Supply of following Chemicals for day to day operation of Sewage Treatment Plant. c) DAP	1826.00	Kg
18.00	Supply of following Chemicals for day to day operation of Sewage Treatment Plant. d) Nutrients	3650.00	Kg
19.00	Carrying out of following tests of sewage Inlet & treated water sample in reputed testing lab and submitting of bimonthly report including to & fro transportation to the site., etc complete job as required. (a) PH (b) TDS (c) TSS (d) BOD (e) COD (f) Chlorides (g) Sulphates	24.00	Job
20.00	Replacement of sand and stone aggregate (20 mm) in the filter bed once in year by providing river sand stone aggregate and disposing of digged out sand / aggregate within a lead of 50 metre as direction of Engineer-In-Charge.	1.00	Job
21.00	Rewinding of 7.5KW, 415V, 3 Ph induction motor by dismantling, cutting of burnt out wire rewinding with new winding with suitable gauge enamelled copper wire, varnishing, baking, re-assembling of set including to and fro transportation to the site etc., complete job as on when required.	4.00	Job
22.00	Complete repair & overhauling of Twin lobe blower of capacity 230 cfm, 6 psi suitable to work on 7.5KW, 415V, 3 Ph induction motor by dismantling, replacement of necessary spares such as , shaft, blades, bushes, etc if required including lubricating on the parts wherever required and re-assembling of set including to and fro transportation to the site, removing & Refixing, testing, commissioning etc., complete job as on when required.	4.00	Job

19.00	34694.00	45.00	82170.00	200.00	365200.00
9.00	59130.00	60.00	394200.00	200.00	1314000.00
29.00	52954.00	50.00	91300.00	200.00	365200.00
59.00	215350.00	140.00	511000.00	300.00	1095000.00
1999.00	47976.00	6000.00	144000.00	9000.00	216000.00
20999.00	20999.00	150000.00	150000.00	75000.00	75000.00
14999.00	59996.00	15000.00	60000.00	17500.00	70000.00
29999.00	119996.00	15000.00	60000.00	40000.00	160000.00

23.00	Rewinding of following capacity submersible STP motors by dismantling, cutting of burnt out wire, rewinding with new suitable guage enamelled fine copper wire, varnishing, baking, re-assembling,complete overhauling of the motor including To & fro transportation to the site etc., complete job as on when required. a) 1 HP , 1- Phase Submersible motor	5.00	Job
24.00	Rewinding of following capacity submersible STP motors by dismantling, cutting of burnt out wire, rewinding with new suitable guage enamelled fine copper wire, varnishing, baking, re-assembling,complete overhauling of the motor including To & fro transportation to the site etc., complete job as on when required. b) 3 HP , 3-Phase submersible motor	5.00	Job
25.00	Rewinding of following capacity submersible STP motors by dismantling, cutting of burnt out wire, rewinding with new suitable guage enamelled fine copper wire, varnishing, baking, re-assembling,complete overhauling of the motor including To & fro transportation to the site etc., complete job as on when required. c) 5 HP , 3- Phase submersible motor	5.00	Job
26.00	Replacement of worn out / broken pully rubber belt of size B60 of blower motor etc., complete as on when required.	8.00	Job
27.00	Annual Maintenance contract of Solar Powered Obstruction lighting system at 11 different locations on hill tops around Visakhapatnam Airport by carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule, Special conditions of contract and Particular specifications etc. complete as required. (Spares shall be supplied by AAI).	24.00	Months
28.00	Supply of 12 V Flasher cards (Tech 31 model) for existing Solar Powered Obstruction lighting system Make : Avids Technovators Pvt. Ltd.	40.00	each
29.00	Supply of Battery Charger (Pro star 30) for existing Solar Powered Obstruction lighting system Make : Avids Technovators Pvt. Ltd.	11.00	each

3999.00	19995.00	1500.00	7500.00	7000.00	35000.00
4999.00	24995.00	3500.00	17500.00	9000.00	45000.00
5999.00	29995.00	5000.00	25000.00	12000.00	60000.00
4999.00	39992.00	1000.00	8000.00	3000.00	24000.00
44999.00	1079976.00	25000.00	600000.00	20000.00	480000.00
13999.00	559960.00	8000.00	320000.00	2000.00	80000.00
7999.00	87989.00	14000.00	154000.00	4000.00	44000.00

30.00	Supply of Medium intensity light Unit (AWL Model:TASS-MI-XLL) for existing Solar Powered Obstruction lighting system Make : Avids Technovators Pvt. Ltd. suitable for operating at 12V D.C.	11.00	each
31.00	Supply of 12V/300Ah battery bank (6 No. x 2V VRLA battery) for existing Solar Powered Obstruction lighting system	9.00	Set
32.00	Supply of 12V, 75 WP solar Modules for existing Solar Powered Obstruction lighting system Make : Avids Technovators Pvt. Ltd.	2.00	each
33.00	Annual Maintenance of Fire hydrant & sprinkler system of Terminal Building by carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule, Special conditions of contract and Particular specifications etc. complete as required. The contractor shall engage minimum man power per day as per the particular specifications.	24.00	Months
34.00	Comprehensive Maintenance contract of the intelligent addressable type Fire Detection and Alarm system alongwith all its associated accessories installed at MSSR building at yarada hills, by carrying out complete comprehensive maintenance, providing spares etc., & carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule & OEM recommendations, Special conditions of contract and Particular specifications etc. complete as required. i. Quick Start Fire alarm panel - 1 no. ii. Smoke detector - 40 nos. iii. Heat detector - 2 nos. iv. Manual call point - 5 nos. v. Hooter - 5 Nos. a) 1st year	1.00	Job

1999.00	21989.00	6500.00	71500.00	12500.00	137500.00
4499.00	40491.00	47000.00	423000.00	18000.00	162000.00
14999.00	29998.00	3000.00	6000.00	7500.00	15000.00
76579.00	1837896.00	79276.00	1902624.00	76923.73	1846169.52
75999.00	75999.00	130000.00	130000.00	90000.00	90000.00

35.00	Comprehensive Maintenance contract of the intelligent addressable type Fire Detection and Alarm system alongwith all its associated accessories installed at MSSR building at yarada hills, by carrying out complete comprehensive maintenance, providing spares etc., & carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule & OEM recommendations, Special conditions of contract and Particular specifications etc. complete as required. i. Quick Start Fire alarm panel - 1 no. ii. Smoke detector - 40 nos. iii. Heat detector - 2 nos. iv. Manual call point - 5 nos. v. Hooter - 5 Nos. b) 2nd year	1.00	Job
36.00	Comprehensive Maintenance contract of the conventional type panel with auto dialler, Fire Detection and Alarm system alongwith all its associated accessories installed at various locations viz., CNS equipment rooms, Power house locations by carrying out complete comprehensive maintenance, providing spares etc., & carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule & OEM recommendations, Special conditions of contract and Particular specifications etc. complete as required. No. of devices connected to each individual control panel are detailed in Particular Specifications. a) 1st year	6.00	Job

81999.00	81999.00	130000.00	130000.00	90000.00	90000.00
9999.00	59994.00	25000.00	150000.00	99000.00	594000.00

37.00	Comprehensive Maintenance contract of the conventional type panel with auto dialler, Fire Detection and Alarm system alongwith all its associated accessories installed at various locations viz., CNS equipment rooms, Power house locations by carrying out complete comprehensive maintenance, providing spares etc., & carrying out Preventive maintenance Inspections, attending to complaints / breakdowns, maintaining records by providing trained manpower, tools, consumables, cleaning materials etc. complete as required as per enclosed Preventive maintenance Schedule & OEM recommendations, Special conditions of contract and Particular specifications etc. complete as required. No. of devices connected to each individual control panel are detailed in Particular Specifications. b) 2nd year	6.00	Job
38.00	DSR 2018 item for Rs. 2,00,000/- per year. [Note : The rate may be quoted in the following manner - (i) If quoted rate is Rs. 1,78,580/- then the percentage will be considered as 0% above / below DSR 2018. (against Rs. 2,00,000/-) (ii) If quoted rate is Rs. 1,60,722/- then the percentage will be considered as 10% below DSR 2018.(against Rs. 2,00,000/-) (iii) If quoted rate is Rs. 1,96,438/- then the percentage will be considered as 10% above DSR 2018.(against Rs. 2,00,000/-) a) 1st year	1.00	LS
39.00	DSR 2018 item for Rs. 2,00,000/- per year. [Note : The rate may be quoted in the following manner - (i) If quoted rate is Rs. 1,78,580/- then the percentage will be considered as 0% above / below DSR 2018. (against Rs. 2,00,000/-) (ii) If quoted rate is Rs. 1,60,722/- then the percentage will be considered as 10% below DSR 2018. (against Rs. 2,00,000/-) (iii) If quoted rate is Rs. 1,96,438/- then the percentage will be considered as 10% above DSR 2018. (against Rs. 2,00,000/-) b) 2nd year	1.00	LS

10999.00	65994.00	25000.00	150000.00	99000.00	594000.00
200000.00	200000.00	180000.00	180000.00	210000.00	210000.00
200000.00	200000.00	180000.00	180000.00	210000.00	210000.00

Total in Figures

19659143.00

21429874.00

23213488.64

Lowest Amount Quoted BY: JAYRAM INDUSTRIES INDIA PRIVATE LIMITED(18599334.00)

JATINDER CONSTRUCTION COMPANY PRIVATE		PAN POLAR ENGINEERS PVT. LTD.		JAI ENTERPRISES		SHRADDHA ENGINEERING AND FACILITY SERVICES		VOLTAS LIMITED		JAYRAM INDUSTRIES INDIA PRIVATE LIMITED	
Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
250000.00	6000000.00	250000.00	6000000.00	235553.00	5653272.00	226079.00	5425896.00	304055.00	7297320.00	190622.00	4574928.00
125000.00	3000000.00	131000.00	3144000.00	139563.00	3349512.00	118003.00	2832072.00	128695.00	3088680.00	107378.00	2577072.00

3000.00	12000.00	3500.00	14000.00	10000.00	40000.00	5000.00	20000.00	17647.00	70588.00	8000.00	32000.00
200.00	16000.00	230.00	18400.00	125.00	10000.00	90.00	7200.00	153.00	12240.00	150.00	12000.00
500.00	12000.00	450.00	10800.00	250.00	6000.00	200.00	4800.00	518.00	12432.00	800.00	19200.00
1000.00	24000.00	2000.00	48000.00	4100.00	98400.00	2100.00	50400.00	2353.00	56472.00	1000.00	24000.00
200.00	40000.00	120.00	24000.00	220.00	44000.00	125.00	25000.00	565.00	113000.00	50.00	10000.00
50.00	1000.00	800.00	16000.00	650.00	13000.00	400.00	8000.00	2588.00	51760.00	880.00	17600.00
1000.00	2000.00	6500.00	13000.00	6700.00	13400.00	4000.00	8000.00	9059.00	18118.00	6000.00	12000.00

2000.00	4000.00	4000.00	8000.00	9500.00	19000.00	6500.00	13000.00	5824.00	11648.00	12000.00	24000.00
2000.00	2000.00	6000.00	6000.00	11000.00	11000.00	7000.00	7000.00	6471.00	6471.00	15000.00	15000.00
2000.00	2000.00	4000.00	4000.00	5000.00	5000.00	3500.00	3500.00	8235.00	8235.00	6000.00	6000.00
200000.00	4800000.00	190000.00	4560000.00	189089.00	4538136.00	165472.00	3971328.00	212794.00	5107056.00	153324.00	3679776.00
90000.00	2160000.00	85000.00	2040000.00	69934.00	1678416.00	78726.00	1889424.00	99406.00	2385744.00	68144.00	1635456.00

50.00	91300.00	20.00	36520.00	20.00	36520.00	8.00	14608.00	26.00	47476.00	20.00	36520.00
50.00	328500.00	30.00	197100.00	9.00	59130.00	4.50	29565.00	15.00	98550.00	25.00	164250.00
50.00	91300.00	30.00	54780.00	25.00	45650.00	10.00	18260.00	47.00	85822.00	40.00	73040.00
50.00	182500.00	30.00	109500.00	38.00	138700.00	10.00	36500.00	288.00	1051200.00	250.00	912500.00
2000.00	48000.00	8000.00	192000.00	1500.00	36000.00	500.00	12000.00	4235.00	101640.00	8000.00	192000.00
25000.00	25000.00	50000.00	50000.00	20000.00	20000.00	10000.00	10000.00	47059.00	47059.00	111000.00	111000.00
5000.00	20000.00	6000.00	24000.00	6900.00	27600.00	4500.00	18000.00	14118.00	56472.00	9000.00	36000.00
3000.00	12000.00	10000.00	40000.00	28000.00	112000.00	18500.00	74000.00	14118.00	56472.00	11000.00	44000.00

2000.00	10000.00	3000.00	15000.00	1500.00	7500.00	1200.00	6000.00	7059.00	35295.00	4000.00	20000.00
3000.00	15000.00	5000.00	25000.00	3500.00	17500.00	2250.00	11250.00	9412.00	47060.00	5000.00	25000.00
5000.00	25000.00	8000.00	40000.00	4900.00	24500.00	3850.00	19250.00	11765.00	58825.00	6000.00	30000.00
1000.00	8000.00	1000.00	8000.00	500.00	4000.00	400.00	3200.00	471.00	3768.00	500.00	4000.00
2000.00	48000.00	25000.00	600000.00	35787.00	858888.00	30000.00	720000.00	41176.00	988224.00	68144.00	1635456.00
200.00	8000.00	6000.00	240000.00	12000.00	480000.00	12000.00	480000.00	20000.00	800000.00	450.00	18000.00
1000.00	11000.00	9000.00	99000.00	16000.00	176000.00	12000.00	132000.00	21176.00	232936.00	8000.00	88000.00

1000.00	11000.00	11800.00	129800.00	20000.00	220000.00	29500.00	324500.00	29412.00	323532.00	4500.00	49500.00
2000.00	18000.00	11000.00	99000.00	50000.00	450000.00	27000.00	243000.00	56471.00	508239.00	35000.00	315000.00
5000.00	10000.00	5000.00	10000.00	14000.00	28000.00	3500.00	7000.00	17647.00	35294.00	15000.00	30000.00
90000.00	2160000.00	81750.00	1962000.00	86011.00	2064264.00	80107.00	1922568.00	99406.00	2385744.00	68144.00	1635456.00
12000.00	12000.00	250000.00	250000.00	73333.00	73333.00	12000.00	12000.00	352941.00	352941.00	20000.00	20000.00

12000.00	12000.00	250000.00	250000.00	82253.00	82253.00	25000.00	25000.00	411765.00	411765.00	25000.00	25000.00
5000.00	30000.00	12500.00	75000.00	9000.00	54000.00	9000.00	54000.00	41176.00	247056.00	12000.00	72000.00

5000.00	30000.00	12500.00	75000.00	9000.00	54000.00	9000.00	54000.00	41176.00	247056.00	12000.00	72000.00
170000.00	170000.00	142864.00	142864.00	175000.00	175000.00	160722.00	160722.00	232154.00	232154.00	173580.00	173580.00
170000.00	170000.00	142864.00	142864.00	175000.00	175000.00	160722.00	160722.00	232154.00	232154.00	178000.00	178000.00

19621600.00

20773628.00

20898974.00

18813765.00

26926498.00

18599334.00