



Ref: AAI/TUT/E-E/TUT-85/2021-22/520

दि:/Date:08.03.2022

सेवा में /To

M/s. ESSENN POWER CONTROLS PRIVATE LTD,
ESSENN KUDIL,
No. 46, 1st Street, Sivananda Nagar,
Kolathur, Chennai-600 099.

विषय /Sub: Replacement of Non-Essential panel at Power House.

Ref : Your e-tender (Financial bid-2021_AAI_98933_1) Opened on 13.01.2022

महोदय /Dear sir(s),

- 1) Your e-tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rates quoted by you totalling to **Rs.29,38,474.00 (Rupees Twenty Nine Lakhs Thirty Eight Thousand Four Hundred and Seventy Four Only)** plus applicable GST which is 18.09% below the estimated cost put to tender of Rs.35,87,338.00 (Excluding GST).
- 2) Asst. General Manager (Engg-Elect.), Airports Authority of India, Tuticorin Airport, Tuticorin – 628 103, shall be the Engineer-in-charge of the work. You are requested to attend the office of the Asst. General Manager (Engg-Elect.), AAI, Tuticorin Airport by **15.03.2022** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value Rs. 100.00 (Rupees Hundred Only) and cost of the stamp paper shall be borne by you.
- 3) As per clause no. 1A on page no 16 of GCC 2017 of contract document. Please deposit Rs.2,93,847.00 (Rupees Two Lakhs Ninety Three Thousand Eight Hundred and Forty Seven Only) towards security deposit within 10 days from the date of issue of this letter failing which, the same will be deducted as per condition of clause no. 1 A at page no 16 of GCC 2017 contract document.

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विमानपत्तन निदेशक का कार्यालय भारतीय विमानपत्तन प्राधिकरण, तूत्तिकोरिन हवाई अड्डा,
तूत्तिकोरिन-628103

O/o The Airport Director, Airports Authority of India, Tuticorin Airport, Tuticorin – 628103
दूरभाष/TEL: 0461-2271863 फैक्स/FAX:0461-2271110 ई-मेल/E-mail: apd-tuticorin@aai.aero

वैबसाइट/Website: www.aai.aero

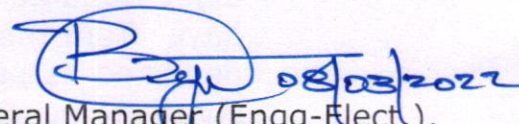


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- 4) You are requested to comply with the provisions of Contract Labour (Regulation and abolition) Act of 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971, Child Labour (Prohibition and Regulation) and Act 1986, construction workers (Regulation of employment and condition of service) Act 1996, Building and other construction workers welfare cess Act 1996 as specified in Clause-19 on Page No:-50 of GCC of tender and rules of Central and State Governments.
- 5) You are also directed to contact Jr. Executive/ Asst. Manager/ Manager (Engg-Elect), AAI, Tuticorin Airport, immediately who will arrange to hand over the site to you.
- 6) Please note that the time allowed for carrying out the work shall be **04 Months** and the same shall be reckoned from the 10th day after issue of this letter (i.e, 18.03.2022).
- 7) Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-charge.
- 8) Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.
- 9) This work order is allotted the number **TUT-85** which shall be quoted by you for all future correspondence in connection with this work order.

Encl: Schedule of Quantities

भवदिय /Yours faithfully,


Asst. General Manager (Engg-Elect),
For and on behalf of the Chairman,
Airports Authority of India
वहायक महामाबंधक (इंजीनियरिंग-विद्युत)
Assistant General Manager (Engg-Elect)
भारतीय विमानपत्तन प्राधिकरण
Airports Authority of India
तूत्तिकोरिन एयरपोर्ट / Tuticorin Airport
तूत्तिकोरिन / Tuticorin-628 103

विमानपत्तन निदेशक का कार्यालय भारतीय विमानपत्तन प्राधिकरण, तूत्तिकोरिन हवाई अड्डा,
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AIRPORTS AUTHORITY OF INDIA
TUTICORIN AIRPORT
TUTICORIN 628 103
Schedule of Quantities

Name of work : Replacement of Non-Essential panel at Power House.

Sl.No.	DESCRIPTION	Qty	Unit	Rate	Amount
1	Design, Supply, Installation, Testing and Commissioning of indoor type totally enclosed and extensible type MV LT panel, degree of enclosure protection shall be IP 42 as per IS 13947 ([part-I), with front and back openable arrangement completely made up of i/c internal partitions of 14 SWG CRCA sheet steel, i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, dust tight, vermin proof totally enclosed, cubicle type floor mounting, free standing including providing and fixing of extensible type 2000 A Aluminium bus bar with all accessories suitable for operation at 415V, 3 phase, 4 wire, 50 Hz, A.C power supply system complete with all accessories, interconnection with solid Aluminium strip neutral links, earthing, painting, grouting, providing cable entry provision, cable chamber control wiring with 1.5 sq.mm PVC insulated FRLS copper conductor single core multistrand cables, cable gland plates, danger notice plates etc. as required and mounted with the following switch gears as per technical specification. Entire panel shall have a common suitable size aluminium earth bar with 2 Nos earth stud, detachable gland plate at the bottom and rubber gasket mechanical interlocking for doors with locking arrangement etc complete with MS iron base frame fabricated from 75 mm x 35 mm x 5 mm MS channel With all necessary accessories etc, complete as required. Necessary channels shall be provided for fixing of panels above the cable trenches. The LV panel shall be complete design verified assembly as per IEC 61439. The LV panels shall be modular, extendable and shall have maintenance friendly construction. The LV panel shall have compartmentalized bolted construction. LV panel shall be manufactured by authorized Franchisee of OEM based on design given by OEM. INCOMER: 2 Nos 1600 A (at 50 degree celcius) each four pole ACB, horizontal draw out type air circuit breaker with LSING protection of fault break capacity 50 kA (Icu=Ics=Icw for 1 Second) up to 440 V, Electrically operated, electrical interlock shall be provided between breaker operating mechanism & the arc chutes, with in-built safety shutter, inbuilt Electrical anti-pumping, contact wear indication, mechanical ON/OFF and service/test/Isolated position indicators and frame earthing contact, ROHS compliance, conforming to IS 1397-2-1933 as amended up-to-date complete with following accessories for each ACB. a) Release shall annunciate each fault in its chassis through LED. ACB releases shall be self powered, have O-LED Display showing Current, Energy, Power Parameters & Harmonic Metering, with minimum Last 10 Trip data & 10 Event Data Recording for analysis. Release shall have Soft rating Plug for accurate protection and also shall have password protection. If required in future, release shall have optional feature for adding RS 485 communication module in the same unit. b) multifunction meter with RS 485 (for V, A, kWh, kW, PF,HZ, kVA & THD - L&T WL 5010 or equivalent); CT 2500/5 CL 1,15 VA CT 2500/5 CI 0.5,15VA PUSH BUTTON ON/OFF (R&G) AUX.CONTACTOR 2 NO+2NC 230 V AC 4A CONTROL FUSE. c)suitable rating CT 3 Nos phase indication LED IA- R,Y,B, ON,OFF,TRIP,SPRING CHARGE indication light with HRC fuse test terminal block set, etc,. push button ON/OFF auxiliary contact for positive interlocking of the breakers as required. d) Suitable rating of surge protection device	1	Job	2020510.00	2020510.00

Sl.No.	DESCRIPTION	Qty	Unit	Rate	Amount
	BUS COUPLER: a) 1 No. 1600 A horizontal draw out type air circuit breakers without protection release of fault breaking capacity 50 kA (Icu=Ics=Icw for 1 Second) up to 440 V, Electrically operated, interlock shall be provided between breaker operating mechanism & the arc chutes, with in-built safety shutter, inbuilt Electrical anti-pumping, contact wear indication, mechanical ON/OFF and service/test/Isolated position indicators and frame earthing contact, conforming to IS 13947-2-1993 as amended up-to-date complete with following accessories for each ACB. b) indication LED IA- R,Y,B, ON,OFF,TRIP,SPRING CHARGE with HRC fuses, auxiliary contactor (2NO+2NC), push button ON & OFF, interlocking of breakers ,etc.as required-1 set BUSBAR TPN Aluminium busbar of minimum 2000 A capacity with heat shrinkable coloured sleeves and supports etc as required. INTERLOCKING: Electrical through advance contacts in ACB's (incomers & bus couplers) and mechanical interlocking should be provided to ensure that only one supply is available at a time on each section of bus and to eliminate any possibility of accidentally approaching two supplies at one bus section. OUTGOING: a) 1250 A, FP horizontal draw out type air circuit breaker with LSING protection of fault break capacity 50 kA (Icu=Ics=Icw for 1 Second) up to 440 V, Electrically operated, interlock shall be provided between breaker operating mechanism & the arc chutes, with in-built safety shutter, inbuilt Electrical anti-pumping, contact wear indication, mechanical ON/OFF and service/test/Isolated position indicators and frame earthing contact, ROHS complience, conforming to IS 1397-2-1933 as amended up-to-date complete with all accessories same as the incomer (a,b,c, d under subhead of Incomer) for each ACB. - 3 sets (2 no's 625 kVA DG set + 1 spare (the spare shall be suitable for the existing ACBs) b) 2nos. 400 A, '50 kA'(Load Spare) (Ics= 100% Icu) FP MCCB with microprocessor based trip units for O/L, S/C, and inbuilt earth fault protection, with extended handle, spreader links, on/off indication lamp for MCCB. c) 2nos. 250 A, '36 kA'(Load Spare) (Ics= 100% Icu) FP MCCB with microprocessor based trip units for O/L, S/C, and inbuilt earth fault protection, with extended handle, spreader links, on/off indication lamp for MCCB.				
2	Supplying and making end termination with brass single compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 kV grade as required. 3.5 core x 150 sq.mm	4	Set	1455.00	5820.00
3	Supplying and making end termination with brass single compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 kV grade as required. 3.5 core x 400 sq.mm	4	Set	1940.00	7760.00
4	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required. 2 x 10 Sq.mm	14	Set	485.00	6790.00
5	Supplying of following sizes of 1.1 kV grade, XLPE insulated, Aluminium conductor armoured Power Cable conforming to IS 7098 Part-I 1985 with up to date amendments complete as required as per specifications. 2 core, 10 sq.mm	130	Metre	169.00	21970.00
6	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc.direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc. , complete as required. 50 mm OD and 38 mm ID	50	Metre	350.00	17500.00

Sl.No.	DESCRIPTION	Qty	Unit	Rate	Amount
7	Laying of one number armoured XLPE insulated and PVC sheathed power cable of 1.1 kV grade of following size in the existing RCC/ HDPE / HUME / METAL pipe as required. Up to 35 sq.mm	90	Metre	39.00	3510.00
8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size in the existing masonry open duct as required. Up to 35 sq.mm	20	Metre	39.00	780.00
9	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Upto 35 sq.mm	20	Metre	68.00	1360.00
10	Dismantling of existing Non-essential panel and relocating the same to electrical store outside power house as per direction of Engineer-in-charge, disconnecting the cables from the existing Non-essential panel, terminating the cables to the new panel without affecting airport operations etc complete as required.	1	Job	14550.00	14550.00
11	Supplying and fixing following way, three pole and neutral, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper busbars, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc.as required (but without MCB/RCCB/Isolator). 8 way (8+24), single door, vertical type.	1	Job	9600.00	9600.00
12	Supplying and fixing 63 A FP MCB rating, 415 volts, 'C' curve, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc. as reqd.	1	Job	1950.00	1950.00
13	Supplying and fixing 20 A TP MCB rating, 415 volts, 'C' curve, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc. as reqd.	2	Job	1165.00	2330.00
14	Supplying and fixing 6 to 32 A SP MCB rating, 415 volts, 'C' curve, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc. as reqd.	18	Job	235.00	4230.00
15	Supply of 450 mm dia,900 rpm, single phase 240 Volts exhaust fan complete with all accessories such as, motor, blade, louvers, capacitor etc. including all accessories as required.	5	Each	6015.00	30075.00
16	Installation of exhaust fan up to 450 mm sweep including making the hole on the existing wall to suit the size of the above fan, making good the damage, plastering, connections, testing, commissioning etc. as required.	4	Job	585.00	2340.00
17	Supply of 30 W LED street Light fitting suitable to operate on 240V, 50Hz, AC Supply housed in pressure Die-Cast/Extruded Aluminium Alloy with toughned glass, IP 66 protection, of lumen efficacy not less than 110 lm/W, with suitable CRI, THD <10 %etc. complete as required. The Fitting shall have separate compartment for LEDs & electronic driver, operating voltage 140-270 V with minimum Surge Protection of 4kV, OEM warranty of 5 years on luminaire, driver, LED,shall be provided. etc. complete as required.	15	Each	3590.00	53850.00

Sl.No.	DESCRIPTION	Qty	Unit	Rate	Amount
18	Supply of 5 mtr height hot dip galvanised octagonal lighting pole of 3 mm thickness including providing of 4 nos. of M20 x 600 mm foundation bolts, base plate for anchoring on the concrete foundation, single arm light bracket of 135 deg of 1 meter length suitable for mounting the LED street light fixtures, connector for incoming loop cables, Bakelite sheet, 1no 6A MCB etc.complete as required.	5	Each	17460.00	87300.00
19	Construction of shallow foundation with cement concrete of 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including reinforcement and of dimension of 35 x 35 x 100 cm for the 5 mtr GI lighting pole including fixing of the foundation bolts, and the base plate, with proper alignment and providing HDPE DWC pipe of suitable size and length for cable entry, including excavation for foundation in soft soil including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposal of surplus excavated soil after refilling the sides of the foundation after construction and curing of the same, as directed, within a lead of 50 metres.	5	Job	3400.00	17000.00
20	Installation, testing and commissioning of GI poles of 5 mtr height on the foundation and fixing of departmentally supplied LED lights on the light bracket, and providing 3 core 1.5 Sq.mm PVC insulated PVC sheathed multicore copper cable, nuts and bolts for termination with the light fittings and the connector and 6A C curve SP MCB etc. complete as required.	5	Job	1455.00	7275.00
21	SITC of LED aviation light with Die-cast aluminum housing with Red polycarbonate dome for better illumination, Integral driver suitable for outdoor applications, complete as per technical specifications on suitable GI pipe on the DG exhaust piping etc. complete as required.	1	Job	3700.00	3700.00
22	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	30	Metre	145.00	4350.00
23	Supplying and fixing of PVC box of 6 module on surface including providing suitable size of phenolic laminated sheet cover in front including painting etc as required.	4	Job	155.00	620.00
24	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required. 15/16 A switch	4	Job	175.00	700.00
25	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required. 6 pin 15/16 amp socket outlet	4	Job	175.00	700.00
26	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in-charge:Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).	2	Cum	10670.00	21340.00
27	Excavation for foundation in soft soil including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 metres.	5	Cum	2425.00	12125.00
28	Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of 100 mm thickness.	2	Cum	7275.00	14550.00
29	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand).	2	Cum	7275.00	14550.00
30	20 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : 1:3 (1 cement: 3 fine sand).	20	Sq.mtr	580.00	11600.00

