



संख्या / No: AAI/BD/AGM(E-E)/CW-06/2022-23/128

दिनांक / Date: 15-12-2022

सेवा मे / To,

M/s. Youngmen Traders,
P-27/1, Rastraguru Avenue,
Dum Dum, Kolkata - 700028
E-Mail: boseranjan@hotmail.com

विषय/Subject: Provision of 2x750KVA DG Set with AMF Panel and Reorientation of Power Supply at Bagdogra Airport.(SH: II – Supply & Laying of LT Cables, SITC of LT Panels and allied jobs.).
संदर्भ / Ref : 1) E-Tender ID No.: 2022_AAI_134221_1

प्रिय महोदय / Dear Sir(s),

1. उपर्युक्त कार्य हेतु आपका निविदा अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है, आपके द्वारा बताए गए मद मूल्यों पर आपकी उद्धृत राशि कुल रु. 1,35,93,195.00 जी.एस.टी. के सिवा, जो कि टेंडर की न्यायोचित राशि रु. 1,81,41,747.00 से 25.07% नीचे है।

Your tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India at the item rates quoted by you totaling to **Rs. 1,35,93,195.00** (Rupees One Crore Thirty Five Lakhs Ninety Three Thousand One Hundred and Ninety Five only) excluding GST, which is 25.07% (Twenty Four point Zero Seven percent) below the Justified Cost of Rs. 1,81,41,747.00 (excluding GST).

2. सहायक महाप्रबंधक (अभि.-विद्युत), भा.वि.प्रा., बागडोगरा हवाईअड्डा, बागडोगरा-734421, इस कार्य के लिए प्रभारी इंजीनियर होंगे। आपसे निवेदन है कि आपकी ओर से आप अथवा आपके द्वारा अधीकृत प्रतिनिधि नियुक्त करें जो करारनामे पर हस्ताक्षर करने के लिए अधिकृत हो तथा वह दिनांक 26.12.2022 तक सहायक महाप्रबंधक (अभि.-विद्युत) के कार्यालय में करार पर हस्ताक्षर करने एवं उसको पूरा करने हेतु उपस्थित हो। ठेके का करारनामा रु. 100/- (रुपया एक सौ मात्र) के नॉन ज्युडिशियल स्टाम्प पेपर पर निष्पादित किया जाएगा तथा स्टाम्प पेपर का खर्च आपके द्वारा वहन किया जाएगा।

Assistant General Manager (Engg. -Elect.), AAI, Bagdogra Airport, Bagdogra-734421 shall be the Engineer-in – Charge of the work. You are requested to attend the office of Assistant General Manager (Engg. -Elect.), AAI, Bagdogra Airport, Bagdogra – 734421 by **26.12.2022** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value Rs. 100/- (Rupees One Hundred only) and the cost of the stamp paper shall be borne by you.

3. आपके निविदा से साथ प्राप्त बयाना राशि रु. 3,62,835/- को संविदा दस्तावेज के पृष्ठ 16 | GCC पर दी गई क्लॉज जी.सी.सी. 1(ए) के अनुसार सुरक्षा जमा के हिस्से के रूप में परिवर्तित कर दिया गया है। कृपा इस पत्र के 10 दिन में सुरक्षा जमा के लिए रु. 9,96,485/- जमा करवा दें, ऐसा नहीं करने पर संविदा दस्तावेज के पृष्ठ 16 | GCC पर दी गई क्लॉज जी.सी.सी. 1(ए) के अनुसार आपके रनिंग बिल से काट ली जाएगी।

The earnest money amount of Rs. 3,62,835/- (Rupees Three Lakhs Sixty Two Thousand Eight Hundred and Thirty Five only) received along with your tender has been converted as part of security deposit as per GCC clause 1(A) on page 16 | GCC of the contract document. Please deposit Rs. 9,96,485 /- (Rupees Nine Lakhs Ninety Six Thousand Four Hundred and Eighty Five only) towards Security Deposit within 10 days from issue of this letter, failing which, the same will be deducted from your running bills as per GCC clause 1(A) on page 16 | GCC of the contract document.

4. आपसे निवेदन है कि आप केन्द्रीय और राज्य सरकारों 1970 के अधिनियम श्रम अनुबंध नियम तथा 1971 के केन्द्रीय नियम (नियमन तथा उन्मूलन) एवं केन्द्र तथा राज्य सरकार के न्यूनतम वेतन अधिनियम और नियमों के प्रावधानों का अनुपालन अवश्य करें।

You are requested to comply with the provision of Contract Labour (Regulation & Abolition) Act 1970 and Contract Labour (Regulation & Abolition) Central Rules 1971 and minimum wages act and rules thereof Central and State Governments.

5. कृपया ध्यान दें कि कार्य को पूरा करने के लिए अनुमानित समय 06(छह) महीने होगा और इसकी गणना इस पत्र के जारी होने के 10वें दिन के बाद से गिना जाएगी।

Please note that the time allowed for carrying out the work shall be 06 (Six) months and same shall be reckoned from the 10th day after issue of this letter.

6. आपको निर्देश दिया जाता है कि आप तुरंत सहायक महा प्रबंधक (अभि.-विद्युत), भा.वि.प्रा., बागडोगरा हवाईअड्डा, बागडोगरा-734421 से मिले वह आपको साईट सौंपने की व्यवस्था करेंगे।

You are directed to contact with the Assistant General Manager (Engg. -Elect.), AAI, Bagdogra Airport, Bagdogra-734421 who will arrange to hand over the site to you.

7. इस ठेके के संबंध में आगे का कोई भी पत्राचार इंजीनियर-इन-चार्ज को किया जाएगा।

Any further correspondence in connection with the contract should normally be addressed to the Engineering-in-Charge.

8. कृपया पावती भेजे और स्वीकृति प्रतिलिपि के तौर पर संलग्नित पत्र की हस्ताक्षरित प्रति इस कार्यालय को अवश्य भेजे।

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. यदि अंग्रेजी और हिन्दी पाठ में कोई असंगति पाया जाता है तो अंग्रेजी पाठ को सही माना जाएगा।

If there is any discrepancy between English and Hindi then meaning derived in English will be given precedence.

संलग्न/Encl : i) Schedule of work.

 15/12/22

(शुभ्र शान्त घोष /Subhra Santa Ghosh)

सहायक महा प्रबंधक (अभि.-विद्युत),

Assistant General Manager (Engg. -Elect.),

ए.ए.आई./बागडोगरा विमानतल

AAI, Bagdogra Airport.

सिलिगुड़ी-734421/Siliguri-73421

AIRPORTS AUTHORITY OF INDIA
ENGINEERING ELECTRICAL WING
BAGDOGRA AIRPORT

SCHEDULE OF QUANTITY

Name of Work: Provision of 2x750KVA DG Set with AMF Panel and Reorientation of Power Supply at Bagdogra Airport.(SH:II – Supply & Laying of LT Cables, SITC of LT Panels and allied jobs.).

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
1	SITC of LT Panel conforming to IEC 61439 TTA type & shall be of Form-4b construction with following mentioned and complete in all respect and as per technical specifications. ELECTRICAL PANELS (Main Essential Panel) Supply, Installation, Testing and Commissioning of cubicle type LT panel, IP42 for indoor panel, suitable for 415V+/-10%, 3 Phase, 4 wire 50 Hz AC supply system, fabricated in compartmentalized modular design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having TPN Aluminium alloy bus bars for high conductivity, SMC bus bar supports, with short circuit withstand capacity as per design subject to minimum 50 KA for 1 sec , bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common Copper earth bus bar of size as per IS 3043 subject to minimum 50 mm x 6 mm at the rear with 2 Nos. earth stud, solid /flexible connections from main earth bus bar to switchgears with required size of Cooper conductor and control wiring with 2.5 sqmm PVC insulated copper conductor cable (FRLS), cable alleys, cable gland plates in two half, including provision of SPD's. Surge Protection Devices (SPD'S) shall be provided at main LT cum synchronizing Panel Main LT Panel (Substation)(Panel shall conform to IEC 61439/1-2 & shall be IP-42 & of form IP-4b construction). INCOMER ACB a) 2 Nos. Incomer ACB, 1000 Amps, 50kA, 4 pole, Microprocessor release horizontal draw out type of fault breaking capacity 50KA (Ics=Icu=Icw for 1.0 secs) Electrical Draw Out Motorized operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, conforming to IS-60947-2 1993 as amended up-to-date complete with independent Electrical & manual spring closing mechanism, Microprocessor releae (EMI & EMC certified) for over current (phase & neutral), earth fault and short circuit protection, Shunt trip coil 24V D.C/ 220V A.C, Breaker Control Switch - 16A, Test terminal block set, circuits as per standard practice, auxiliary contractors with contacts (minimum 4NO+4NC) for positive interlocking of the breakers, necessary interlocking with PLC auto controls with all protection i.e., Earth fault, Under/Over Voltage, Under/Over frequency, Current & Voltage etc. and Real-time Clock, On-screen display of measurements, Current: phase/ neutral/ earth, average, max, % loading, seq components, Voltage : Phase, Line, Average. Power & Energy : active,reactive, total, frequency and Power Factor, Maximum Demand, and with communication port facility etc. All ACBs shall be provided with Mechanical Operation Counter, Door interlock with panel door. Each Incomer shall have one set of the following items: Intelligent multi function digital meter to read V, A, kVA, KW, kVAR, PF, Hz etc with communication facility (RS485 port), THD and individual order harmonics upto 31st Order. LED display with required Nos CTs 2000/5, 15 VA, class 1.0 and control circuit wiring with 2 Amp MCB for controlling. 1 set of indication lamp, LED type, R,Y,B Phase indicating lamp with 2 Amp MCB for controlling. 1 set of indication Lamp, LED type of breaker 'ON' , 'OFF' , 'TRIP' & spring charged lamps with 2 Amp MCB for controlling. 1 set of 24V DC/240 V AC Shunt trip coil. Accessories for Electrical interlocking. PLC based arrangement required for electrical interlocking.	1	Job	26,25,000.00	26,25,000.00
	b) Incomer: 1 No MCCB(Ics=100% Icu), 300 Amps, 4 Pole, min 50 kA with adjustable setting, Microprocessor Based with adjustable Overload, Short Circuit and In-Built Earth Fault Protection, including connections etc as required. 3(Three)Nos. LED type, R,Y,B Phase indicating lamp with 2 Amp MCB for controlling. Intelligent multi function digital meter to read V,A,kVA, KW, kVAR, PF, Hz etc , LED display with required Nos CTs, 300/ 5,15 VA, class 1.0 and control circuit wiring with 2 Amp MCB for controlling. Bus Coupler				

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
	2 No.1000 Amps, 50 kA, 4 pole, (EDO) Air Circuit Breaker Horizontal draw out type (without release) of fault breaking capacity 50KVA ($I_{cs}=I_{cu}=I_{cw}=50$ KA at 440V) Electrical Draw Out Motorized, electrically operated, Independent Electrical/ manual spring closing mechanism fitted with interlocked door, automatic safety shutters, mechanical ON/OFF, service, test, isolated position indicators and frame earthing contact, conforming to IEC 60947/IS-13947-2 1993 as amended up-to-date complete with necessary Auxiliary contact & MCB. Test terminal block set circuits as per standard practice, auxiliary contractors with contacts (minimum 4NO+4NC) for positive interlocking of the breakers, necessary interlocking with PLC auto controls.				
	3 sets Indication Lamps, LED type, for RYB with 2 Amp control MCB & breaker 'ON' , 'OFF' , 'TRIP' & spring charged lamps with 2 Amp MCB for controlling.				
	Bus Bars				
	TPN aluminium extensible type main bus bars of minimum 1250 Amps capacity with heat shrinkable coloured sleeves having 100% neutral bus as that of phase i/c DMC/ SMC bus bars supports at required intervals complete for cross section, size supports & having spacing etc. for withstanding fault level of 50kA capacity for 1 sec.				
	Outgoings				
	2 Nos.MCCB, 250Amps, 4 pole, 35 kA with adjustable setting, microprocessor release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	4 Nos.MCCB, 200 Amps, 4 pole, 35 kA with adjustable setting, thermal magnetic release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of CT including connections etc as required				
	18 Nos.MCCB, 125 Amps, 4 pole, 35 kA with adjustable setting, thermal magnetic release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	9 Nos.MCCB, 63 Amps, 4 pole, 35 kA with adjustable setting, thermal magnetic release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	2 Nos Blank compartment for future use.				
	Note: All Incomer and bus coupler breaker should be interlocking using PLC based arrangement. 1 No. ON, OFF & TRIP indication lamp (LED type) with 2 Amp SP MCB for each outgoing. All ACBs shall be provided with Operation Counter, Door interlock with Panel door. 1 No. intelligent multi function digital meter to read V, A, kVA, kVAR, PF, HZ etc. with communication facility (RS485 port)%, THD and Individual order harmonics upto 31st order. LED display with required Nos CTs,____(5/15) VA, 0.5 and control circuit wiring with 2 Amp protection MCB with all Incoming and outgoing ACB's. 1 set Rotary mechanism and terminal extension spreaders for all the ACBs / MCCBs. Space heater with thermostat and MCB.				

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
2	SITC of LT Panel conforming to IEC 61439 TTA type & shall be of Form-4b construction with following mentioned and complete in all respect and as per technical specifications. ELECTRICAL PANELS (Main Non-Essential Panel) Supply, Installation, Testing and Commissioning of cubicle type LT panel, IP42 for indoor panel, suitable for 415V+/-10%, 3 Phase, 4 wire 50 Hz AC supply system, fabricated in compartmentalized modular design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having TPN Aluminium alloy bus bars for high conductivity, SMC bus bar supports, with short circuit withstand capacity as per design subject to minimum 50 KA for 1 sec , bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common Copper earth bus bar of size as per IS 3043 subject to minimum 50 mm x 6 mm at the rear with 2 Nos. earth stud, solid /flexible connections from main earth bus bar to switchgears with required size of Cooper conductor and control wiring with 2.5 sqmm PVC insulated copper conductor cable (FRLS), cable alleys, cable gland plates in two half, including provision of SPD's. Surge Protection Devices (SPD'S) shall be provided at main LT cum synchronizing Panel incoming feeders (Type 1+2 / Class B) & Sub Distribution LT Panel (Type 2 / Class C) i/c providing following switchgears / accessories as per specifications. Main LT Panel (Substation)(Panel shall conform to IEC 61439/1-2 & shall be IP-42 & of form IP-4b construction). INCOMER 2 Nos. Incomer ACB, 2000 Amps, 50kA, 4 pole, Microprocessor release Vertical draw out type of fault breaking capacity 50KA (Ics=Icu=Icw for 1.0 secs) Electrical Draw Out Motorized operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, conforming to IS-60947-2 1993 as amended up-to-date complete with independent Electrical & manual spring closing mechanism, Microprocessor release (EMI & EMC certified) for over current (phase & neutral), earth fault and short circuit protection, Shunt trip coil 24V D.C/ 220V A.C, Breaker Control Switch - 16A, Test terminal block set, circuits as per standard practice, auxiliary contractors with contacts (minimum 4NO+4NC) for positive interlocking of the breakers, necessary interlocking with PLC auto controls with all protection i.e., Earth fault, Under/Over Voltage, Under/Over frequency, Current & Voltage etc. and Real-time Clock, On-screen display of measurements, Current: phase/ All ACBs shall be provided with Mechanical Operation Counter, Door interlock with panel door. Each Incomer shall have one set of the following items: Intelligent multi function digital meter to read V, A, kVA, KW, kVAR, PF, Hz etc with communication facility (RS485 port), THD and individual order harmonics upto 31st Order. LED display with required Nos CTs 2000/5, 15 VA, class 1.0 and control circuit wiring with 2 Amp MCB for controlling. 1 set of indication lamp, LED type, R,Y,B Phase indicating lamp with 2 Amp MCB for controlling. 1 set of indication Lamp, LED type of breaker 'ON' , 'OFF' , 'TRIP' & spring charged lamps with 2 Amp MCB for controlling. 1 set of 24V DC/240 V AC Shunt trip coil. Accessories for Electrical interlocking. PLC based arrangement required for electrical interlocking. 3Nos. additional CTs of class-0.5 in each transformer Incoming bus section for 3 Phase 3 CT capacitor panel/hybrid panel. Single phase preventer, Phase Reversal relay, Under voltage, Over voltage, for each transformer with indicator for trip and hooter for alarm. 2 Sets (same nos. as incomer) Surge protection device type 1+2 (Class B) including with inbuilt fuse and all necessary accessories and wire connections as per Bus Coupler	1	Job	27,50,000.00	27,50,000.00
	1 No.2000 Amps, 50 kA, 4 pole, (EDO) Air Circuit Breaker Horizontal draw out type (without release) of fault breaking capacity 50KVA (Ics=Icu=Icw=50 KA at 440V) Electrical Draw Out Motorized, electrically operated, Independent Electrical/ manual spring closing mechanism fitted with interlocked door, automatic safety shutters, mechanical ON/OFF, service, test, isolated position indicators and frame earthing contact, conforming to IEC 60947/IS-13947-2 1993 as amended up-to-date complete with necessary Auxiliary contact & MCB. Test terminal block set circuits as per standard practice, auxiliary contractors with contacts (minimum 4NO+4NC) for positive interlocking of the breakers, necessary interlocking with PLC auto controls. 3 sets Indication Lamps, LED type, for RYB with 2 Amp control MCB & breaker 'ON' , 'OFF' , 'TRIP' & spring charged lamps with 2 Amp MCB for controlling. Bus Bars				

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
	TPN aluminium extensible type main bus bars of minimum 2500 Amps capacity with heat shrinkable coloured sleeves having 100% neutral bus as that of phase i/c DMC/ SMC bus bars supports at required intervals complete for cross section, size supports & having spacing etc. for withstanding fault level of 50kA capacity for 1 sec.				
	Outgoings				
	2 Nos., 1000 Amps, 4 Pole, Horizontal draw out type ACB of fault breaking capacity 50KA (Ics=Icu=Icw=50KA for 1 secs at 440V), Electrical Draw Out Motorized and electrically operated, fitted with interlocked door, automatic safety shutters, mechanical ON / OFF, service, test, isolated position indicators and frame earthing contact, conforming to IEC 60947 / IS-13947-2 1993 as amended up-to-date complete with Independent Electrical & manual spring closing mechanism, Microprocessor release (EMI & EMC certified) for over current (Phase & neutral), earth fault & short circuit protection, Shunt trip coil operated at 24V D.C / 220V A.C, Breaker Control Switch - 16A, Test terminal block set circuits as per standard practice, auxiliary contactors with contacts (minimum 4NO+4NC) for positive interlocking of the breakers, necessary interlocking with PLC auto controls with all protection i/e Earth fault, Under/Over Voltage, Under/Over Frequency, Current & Voltage Unbalance, etc. and Real-time Clock, On-screen display of measurement of Current , max % loading, Voltage , Power and Energy : active, reactive, total, Frequency and Power Factor, Maximum Demand, and with communication port				
	1 Nos.MCCB, 300 Amps, 4 pole, 35 kA with adjustable setting, microprocessor release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	1 Nos.MCCB, 150 Amps, 4 pole, 35 kA with adjustable setting, thermal magnetic release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of CT including connections etc as required				
	5 Nos.MCCB, 125 Amps, 4 pole, 35 kA with adjustable setting, thermal magnetic release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	2 Nos.MCCB, 630 Amps, 4 pole, 35 kA with adjustable setting, microprocessor release with O/C & S/C protection. Digital KWH Meter with maximum demand load and current display RS485 module of class-0.5 accuracy with suitable range of cast resin CT including connections etc as required				
	1 Nos Blank compartment for future use.				
	Note: All Incomer and bus coupler breaker should be intrlocking using PLC based arrangement. 1 No. ON, OFF & TRIP indication lamp (LED type) with 2 Amp SP MCB for each outgoing. All ACBs shall be provided with Operation Counter, Door interlock with Panel door. 1 No. intelligent multi function digital meter to read V, A, kVA, kVAR, PF, HZ etc. with communication facility (RS485 port)%, THD and Individual order harmonics upto 31st order. LED display with required Nos CTs,____(5/15) VA, 0.5 and control circuit wiring with 2 Amp protection MCB with all Incoming and outgoing ACB's. 1 set Rotary mechnaism and terminal extension spreaders for all the ACBs / MCCBs. Space heater with thermostat and MCB.				
2.2	APFC Panel 400 KVAR (800 Amps) (Automatic Power Factor Correction) Design, fabrication, assembly, wiring, supply, erection, testing and commissioning of APFC Panel to achieve 0.99 Lag Power Factor.The APFC panel should have an incomer of 800 Amps,4 Pole MCCB, 50 kA(Ics=Icu =50kA for 1 secs at 415V) Microprocessor Based , adjustable Overload setting .The APFC Panel should be certified as per IEC 61921.The capacitor bank shall comprise of capacitor units rated at 525 volts, 14% de tuning reactors, 10 stage automatic PF controllers, circuit breakers etc. The Panel shall be fitted with a temperature sensitive switch to trip circuits in case of high operating temperature (Panel shall be of Form 3b compartmentalization).The Passive section shall be microprocessor based and shall be able to sense the reactive current requirement of the network and shall switch ON / OFF the required stages of a capacitor bank. The 14% de-tuned capacitor bank with capacitor duty contactor suitable for following step ratings:(2 nos. x 100 KVAR + 2 nos. x 50 KVAR+ 4 nos. x 25 KVAR) having auto-manual selector switch, start stop push button for manual operation including on/off indicating lamps in each of compartment/stage.100 KVAR- 2 No. MCCB, 250 Amps, TP, (Ics = Icu = 35 KA) with thermal magnetic release.50 KVAR- 2 No. MCCB, 125 Amps, TP, (Ics = Icu = 35 KA) with thermal magnetic release.25 KVAR- 4 No. MCCB, 63 Amps, TP, (Ics = Icu = 35 KA) with thermal magnetic release.	2	Job	9,25,000.00	18,50,000.00

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
	Heavy duty Capacitor shall be rated at 525 V, MPP and Box type, low loss as per standards.- Each stage of the capacitor bank should have suitable rating fuse protection.- The Solution should have surge arrestors (SPDs of Type 1+2) and over temperature protection.The system should be with compatible with Grid Power.The Incoming Switchgears shall comply followings specifications. LED indication lamps for RYB, breaker 'ON/ OFF/ TRIP with 2 Amp control MCBs Set of Digital flush type calibrated Intelligent multifunction meters suitable range of display, class 0.5 accuracy, showing V, A, PF, Hz, KW, KWH, KVAR, Total harmonic distortion with 3 Nos. cast resin current transformers of dual core CT's of 800 / 5 Amp ratio, 15 VA Class 0.5 metering.Bus Bar1000 Amps with heat shrinkable coloured sleeves 100% neutral bus as that of phase i/c DMC /SMC bus bars supports at required intervals complete as required.				
3	Supply of following size XLPE insulated and PVC sheathed aluminium conductor armoured Power Cable of 1.1KV grade, confirming to IS 7098, Part-I 1988 with up to date amendments and confirming to technical specifications.(The outer sheath shall be FRLS.)				
3.1	4C x 25 sq.mm.	1700	Metre	160.00	2,72,000.00
3.2	3.5C x 70 sq.mm.	1700	Metre	315.00	5,35,500.00
3.3	3.5C x 150 sq.mm.	350	Metre	575.00	2,01,250.00
3.4	3.5C x 185 sq.mm.	150	Metre	735.00	1,10,250.00
3.5	3.5C x 240 sq.mm.	300	Metre	930.00	2,79,000.00
4	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
4.1	Above 35 sq. mm and upto 95 sq. mm	90	Metre	250.00	22,500.00
5	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
5.1	Above 35 sq. mm and upto 95 sq. mm	180	Metre	175.00	31,500.00
6	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
6.1	Upto 35 sq. mm	270	Metre	25.00	6,750.00
6.2	Above 35 sq. mm and upto 95 sq. mm	130	Metre	28.00	3,640.00
6.3	Above 95 sq. mm and upto 185 sq. mm	50	Metre	35.00	1,750.00
6.4	Above 185 sq. mm and upto 400 sq. mm	50	Metre	45.00	2,250.00
7	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.				
7.1	Upto 35 sq. mm	700	Metre	20.00	14,000.00
7.2	Above 35 sq. mm and upto 95 sq. mm	400	Metre	28.00	11,200.00
7.3	Above 95 sq. mm and upto 185 sq. mm	100	Metre	30.00	3,000.00
7.4	Above 185 sq. mm and upto 400 sq. mm	50	Metre	40.00	2,000.00
8	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.				
8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	600	Metre	35.00	21,000.00
8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	700	Metre	55.00	38,500.00
8.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	240	Metre	75.00	18,000.00
8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	200	Metre	125.00	25,000.00
9	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
9.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	40	Metre	30.00	1,200.00
9.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	100	Metre	55.00	5,500.00
9.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	50	Metre	75.00	3,750.00
9.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	50	Metre	105.00	5,250.00
10	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.				
10.1	4C x 25 sq.mm.	20	Each	175.00	3,500.00
10.2	3.5C x 70 sq.mm.	36	Each	225.00	8,100.00
10.3	3.5C x 150 sq.mm.	4	Each	350.00	1,400.00
10.4	3.5C x 185 sq.mm.	8	Each	550.00	4,400.00
10.5	3.5C x 240 sq.mm.	4	Each	675.00	2,700.00
11	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
11.1	4C x 25 sq.mm.	4	Each	2,200.00	8,800.00
11.2	3.5C x 70 sq.mm.	4	Each	2,400.00	9,600.00

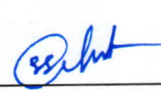
Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
11.3	3.5C x 150 sq.mm.	4	Each	2,800.00	11,200.00
11.4	3.5C x 185 sq.mm.	8	Each	2,800.00	22,400.00
11.5	3.5C x 240 sq.mm.	4	Each	3,000.00	12,000.00
12	Supplying and installing 450 mm width X 62.5 mm depth X 2.0 mm thickness of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.	200	Metre	1,050.00	2,10,000.00
13	Supplying and installing 450 mm width X 62.5 mm depth X 2.0 mm thickness of perforated painted with powder coating M.S. cable tray bends with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nut painting suspenders etc as required.	50	Each	2,200.00	1,10,000.00
14.1	SITC of pre-fabricated sandwiched type , TPN (100% Neutral Rating) bus trunking suitable for 3 Phase 4 wire, 415V, 50 Hz AC supply system of aluminium bus bars having (minimum)Class F insulation of rating 2000 Amps,(65 kA for 1 sec) ,complete with bends, expansion joints, end flange with enclosure, horizontal supports & copper flexible connections at both ends/as applicable. The Entire Bus trunking system shall be complying IP-65 and made out of (Minimum) 1.6 mm thick GI sheet enclosure. Bus trunking shall be provided with 2 runs of continuous copper earth bus of min size 25x5 mm including necessary hanging arrangement(for indoor area) ,channel supports,etc as required as per site conditions .	90	Metre	22,250.00	20,02,500.00
14.2	Structural support for outdoor type busducts made out of vertical "H" iron column section of 120mm x 120 mm (02 Nos. of each height 4.5Mtr.) and horizontal "C" channel iron section of 75 mm x 40mm (01 Nos. of length 01 Mtr.) including all types of ancillary works like jointing/welding/fixing and necessary PCC foundation work of 02 Nos. (each of 100mm thick bottom bedding x 500mm x 500mm ; foundation block of 400mm (L)x 400mm (W) x 500 mm (D) with 1:2:4 PCC) below ground level as required as per site condition.	10	Job	15,000.00	1,50,000.00
14.3	Supply and Fixing of Rain Canopy on existing structure for protecting rain ingress made out of profile sheet of minimum width (2 nos of 1 Mtr width each section slanted at both side forming inverted 'V' Shaped) and minimum thickness 1.5mm including all types of ancillary work as required in site as per site conditions.	20	Metre	4,000.00	80,000.00
15	SITC of pre-fabricated sandwiched type TPN (100% Neutral Rating) bus trunking system suitable for 3 Phase 4 wire, 415V, 50 Hz AC supply system of aluminium bus bars having (minimum)Class F insulation ,of rating 1250 Amps complete with bends, expansion joints, end flange with enclosure, horizontal supports & copper flexible connections at both ends/as applicable. The Entire Bus trunking system shall be complying IP-54 and made out of (Minimum) 1.6 mm thick GI sheet enclosure. Bus trunking shall be provided with 2 runs of continuous copper earth bus of size 25x5 mm(min) including necessary hanging arrangement ,channel supports,etc as required as per site conditions .	80	Metre	16,500.00	13,20,000.00
16	Supply of LED suspended type (minimum 50 watt) luminaire suitable to operate on 140-270 V, 50 Hz, AC supply having pressure die cast aluminium housing/ Extruded aluminium/CRCA/standard alloy housing ,with minimum IP-65 protection,having efficacy of min 110 lm/W,Suitable for surface/suspended mounting, complete with all types of accessories, mounting device and driver ready to be installed at site as per Technical Specifications attached.	20	Each	2,200.00	44,000.00
17	Supply of LED type street light (minimum 45 watt) luminaire suitable to operate on 140-270 V, 50 Hz, AC supply having pressure die cast aluminium housing Extruded aluminium/CRCA/standard alloy housing ,with minimum IP-65 protection,having efficacy of min 110 lm/W,Suitable for pole dia Ø 42 mm (max.), complete with all types of accessories, mounting device and driver ready to be installed at site as per Technical Specifications attached.	10	Each	1,800.00	18,000.00
18	Installation, testing and commissioning of pre-wired, LED street light of all types by supply and fixing of suitable dia pole arm in parapet, complete with all accessories etc. directly on wall, including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	10	Each	125.00	1,250.00
19	Installation, testing and commissioning of pre-wired, LED midbay light of all types by supply and fixing of suitable chains, complete with all accessories etc. suspended from ceiling, including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	20	Each	125.00	2,500.00
20	Supply of 3C x 4 sqmm XLPE insulated and PVC sheathed aluminium conductor armoured Power Cable of 1.1KV grade, confirming to IS 7098, Part-I 1988 with up to date amendments and confirming to technical specifications.	75	Metre	65.00	4,875.00
21	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	12	Each	125.00	1,500.00

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
22	Supplying and fixing extra down rod of 10 cm length G.I. pipe ,15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	48	Each	25.00	1,200.00
23	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required. Group C	24	Point	1,050.00	25,200.00
24	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc as required. Group C	14	Point	725.00	10,150.00
25	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
25.1	3 x 2.5 sq. mm	90	Metre	90.00	8,100.00
25.2	3 x 4 sq. mm	300	Metre	105.00	31,500.00
26	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
26.1	20 mm	90	Metre	105.00	9,450.00
26.2	25 mm	300	Metre	115.00	34,500.00
27	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
27.1	200 mm X 150 mm X 75 mm	5	Each	175.00	875.00
27.2	200 mm X 300 mm X 100 mm	5	Each	225.00	1,125.00
28	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
28.1	Telephone socket outlet	4	Each	75.00	300.00
29	Supplying and fixing 1 or 2 Module (75mmX75mm), GI box alongwith modular base & cover plate for modular switches in recess etc as required.	4	Each	125.00	500.00
30	Supplying and fixing suitable size GI box with modular plate and cover in Front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	16	Each	325.00	5,200.00
31	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB/MCCB) as required .				
31.1	8 way (4 + 24), Double door, suitable for MCCB Incoming	2	Each	6,000.00	12,000.00
32	Supplying and fixing following rating, 240/415 volts, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
32.1	Single pole (5 amps to 32 amps)	24	Each	175.00	4,200.00
32.2	Triple pole (5 amps to 32 amps)	8	Each	450.00	3,600.00
32.3	Triple pole and neutral (63 Amps)	2	Each	850.00	1,700.00
33	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	4	Each	10.00	40.00
34	Supply and fixing of following types of high voltage Synthetic Insulating Mat made out of synthetic Elastomer conforming to IS 15652:2006 with minimum width of 1 Metre. Insulating mat should be flexible, anti-skid, fire retardant, water and moisture proof with no adverse effect of acids, alkalis and transformer oil. Insulating mat should be fixed with suitable adhesive/Chem bound resin, water proofing compound and other sealing materials as per specifications. Insulating mats should be ISI marked along- with CM/L nos at every meter. Insulating mats should be ERDA and CPRI tested. (a) Class- A type, Up-to 3.3 KV (Thickness: 2 mm)	250	Sq. Mtr	1,200.00	3,00,000.00
35	Supply , Installation, Testing & Commisssing of CPRI tested, fully autonomous Early Streamer Emission Lightning Conductor (ESEL) having 't (gain in triggering time) of minimum 30µs and radius of protection 29 meters in Level 1 protection zone when installed 3meter above the highest point with all other accessories for installation of ESEL complete as per site requirement.	1	JOB	22,000.00	22,000.00
36	Supply & erection of 3mtrs Mast made with Class B pipe along with required guying kit arrangement as required & water seepage proof fundataion with base plate etc as required for installing ESE lightning arrestor for the protection of buliding	1	JOB	4,500.00	4,500.00

Sl.No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
37	Supply & Laying of 70 sq. mm copper flexible cable for down conductor including suitable clamps and other accessories from air terminal to the earth bus bar.	30	Metre	650.00	19,500.00
38	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	6	Set	5,500.00	33,000.00
39	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	51	Metre	390.00	19,890.00
40	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	70	Metre	145.00	10,150.00
41	Providing and fixing earth bus of 50 mm X 5 mm GI strip on surface for connections etc. as required.	2	Metre	225.00	450.00
42	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
42.1	Upto 450 mm sweep	6	Each	200.00	1,200.00
43	Supply of single phase 950 RPM (nominal), Heavy Duty Exhaust fan of following sizes with Louver and shutter / Wire mesh Guard etc. complete as required.				
43.1	450 MM	6	Each	3,600.00	21,600.00
44	Supply and laying of 80 mm dia (medium class) GI Pipe in all kind of soil /concrete (Viz. road crossing /PCC foundation crossing etc.)by manual boring method complete as per site requirement.	20	Metre	1,800.00	36,000.00
45	Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for foundation /platform work etc as per site requirement.	2	Cum	5,000.00	10,000.00
46	Installation, Testing & commissioning of intelligent addressable multi criteria detector.	16	Each	300.00	4,800.00
47	Installation, Testing & commissioning of intelligent addressable Manual call station.	2	Each	300.00	600.00
48	Installation, testing and commissioning of Hooter-cumstrobe.	2	Each	300.00	600.00
49	Installation, testing and commissioning of isolator module.	1	Each	250.00	250.00
50	laying of 2 x 1.5 sqmm armoured cable on wall surface by saddle	200	Metre	45.00	9,000.00
51	Supply and installation of CO2 type Fire Extinguisher of capacity 4.5 kg (6.8 Liter) confirms to IS 15683, bearing ISI marked, consisting of High Pressure seamless steel cylinder.	2	Each	6,000.00	12,000.00
52	Supply and installation of ABC Dry Chemical Powder type Fire Extinguisher of Capacity 6 kg Confirms to IS 15683.	3	Each	3,000.00	9,000.00
53	Supply and installation of Mech. /Foam (AFFF) Type Fire Extinguisher 45 Ltr capacity Conforming to IS: 16018 mounted on Trolley Wheel with G.M. Cap, 3 Mtr. Long Hose.	2	Each	10,500.00	21,000.00
54	Supply and installation of FIRE BUCKET containing minimum 4 Buckets in suitable structure for hanging buckets along with Rain canopy , finished with Red paint etc complete in all respect.	1	Set	4,500.00	4,500.00
55	Charges for monitoring Graphics software modification for inclusion of new devices, adress marking layout modification , nomenclature addition etc complete as required.	1	Job	35,000.00	35,000.00
Total Amount Rs.					135,93,195.00

(Total Amount: Rupees One Crore Thirty Five Lakhs Ninety Three Thousand One Hundred and Ninety Five Only)

* Note: GST will be paid on production of actual tax invoice as per prevailing rates Govt. Of India

 15/12/22
 Asstt. Gen. Manager (Engg-Elect)
 AAI, Bagdogra Airport
 Bagdogra-734421