



BIG BOSS CORPORATION LTD

APTECH INDUSTRIAL PARK

30 SARABO, KASHIMPUR, GAZIPUR

Ref.

Date: 06.02.2018

Ref: AIP/Big Boss/2018

Chairman

Cross-world power Ltd.
House 1/B, Road 90, Gulshan-2
Dhaka-1212

Attention: Mr. Sabbir Ahmed, AGM Project Sales Cross-world.

**Subject: Work Order for supply, installation, testing & commissioning of 5MVA
33/11KV sub-station equipment.**

Dear Sir,


With reference to your quotation No. CPL/AIP/25102017 Dated: 30.01.2018 attached herewith, and subsequent discussion with you, we are pleased to place an order for supply, installation, testing & commissioning of 5MVA, 33/11 KV sub-station equipment with other accessories at factory premises of Big Boss Corporation Ltd. Aptech industrial Park, 30, Sarabo, Kasimpur, Gazipur as per your offered Price of Tk. 1,02,00,000 (one crore two lac taka Only) under the following terms and condition:


Terms & condition:

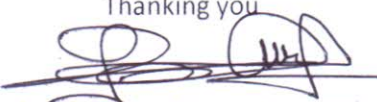
- 1) **Technical Specification** : The details Specification of materials will be as per approved offer submitted by the Cross world Power Ltd. on 30.01.2018
- 2) **Mode of Payment** : **Payment will be made as per following installment:**
 - (a) 1st Installment : 40% payment will be made as advance along with work order
 - (b) 2nd Installment : 40% after delivery of goods, installation and, ELB Approval
 - (c) Final Installment: Balance 20% will be made after Commissioning.
- 3) **Warranty** : 18 (Eighteen) months from the date of Commissioning.
- 4) **Completion Date** : Within 120 (one hundred twenty) days from the date of work order
- 5) Any Sabotage/subversive activities by your construction labour or employee will be liable to legal action as per the Law of The land. Cross-world Power Ltd. will be held responsible for any loss or damage of humen or properties during installation and commissioning
- 6) No accommodation for the Construction labour and other employee will be provided.
- 7) After sales service : 01 (one year) Free of cost

Delivery Site : Aptech industrial Park, 30 Sarabo, Kashimpur, Gazipur.

We hope all the terms & condition as mentioned above are acceptable to you. Please acknowledge receipt of this work order as a token of your acceptance.


Md. Anamul Hoque
Chief Engineer


Lt Col Fateh Alam Ibne Tabib (Retd)
Executive Director

Thanking you

Syed Rezaul Hossain Kazi
Managing Director

TECHNICAL SPECIFICATION OF 33KV, 5MVA SUB-STATION

PART-A: Substation Equipment

01) 33 KV ISOLATOR WITHOUT EARTH SWITCH: 01 Set

33KV, 1250A, TP Off Load & Outdoor Type Isolator.

Specification :

Standard-IEC129

Rated Voltage : 36 KV

Rated Current : 1250 A

Rated short circuit making : 25 KA

Rated Peak short circuit breaking : 62.5 KA

Power frequency withstand Voltage 50 Hz, 1 min

to earth wet : 70 KV

across isolating distance wet : 80 KV

Lightning impulse withstand Voltage 1.2/50 μ S

to earth wet : 170 KV

across isolating distance wet : 195 KV

Origin: LS Korea

02) 33 KV CURRENT TRANSFORMER, RATIO: 100/5/5A= 03 nos (For Protection)

Cast resin insulated dry type 33KV double core current transformer, ratio : 100/5/5A.

Core 1 : 10VA, class 0.5M5 for metering

Core 2 : 15VA, class 10P10 for protection

Origin: TS/Energypac, Bangladesh

03) 11 KV CURRENT TRANSFORMER, RATIO: 300/5/5A= 03 nos (For differential Protection)

Cast resin insulated dry type 11KV double core current transformer, ratio : 300/5/5A.

Core 1 : 10VA, class 0.5M5 for metering

Core 2 : 15VA, class 10P10 for protection

Origin: TS/Energypac, Bangladesh

04) 33 KV POTENTIAL TRANSFORMER= 03 nos (For Protection)

The potential transformer (PT) shall be tested in accordance with IEC-186/ANSI C57.13; unless otherwise specified in this specification.

Specification :

Potential Transformer, 1 phase, for outdoor installation.

Maximum system voltage

: 36KV

Rated primary voltage

: 33 KV

Rated secondary voltage

: 110/ $\sqrt{3}$ V

Ratio

: 33 KV/ $\sqrt{3}$ /110V/ $\sqrt{3}$ /110/ $\sqrt{3}$

Rated burden

: 50VA

Rated frequency

: 50 Hz

Accuracy class

: 0.2/3P

Insulation level

: 70/170KV

Polarity

: Subtractive

Voltage factor

: 1.2Vn/Continuous 1.9Vn/8hour

Origin: TS/Energypac, Bangladesh

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05) **33 KV LIGHTNING ARRESTOR: 01 Set**

33KV Outdoor Type Lightning Arrestor

Nominal Voltage	: 33 KV
Maximum system voltage	: 36 KV
System frequency	: 50 Hz
Number of phase	: 3
System fault level	: 16 KA
BILL	: 200 KV

Technical Specification

Rated Voltage (RMS)	: 36KV
Max Cont. operating Voltage	: 29 KV
Standard nominal discharge current (8/20 micro second)	: 10 KA
Lightning impulse (8/20 micro second) maximum residual voltage	: 110 KV
Impulse withstand level : on the arrester housing	
- Lightning impulse voltage	: 200 KV
- Power frequency voltage (dry)	: 95 KV
- Power frequency voltage (wet)	: 80 KV

Origin: LS Korea

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06) 33 KV HT SWITCHGEAR (VCB) Outdoor Type := 01 Set

1 No. 1250 A, 36 KV, breaking current 25 KA Outdoor Porcelain clad tripple pole, EDO, Plinth mountable, self-suuporting vermin proof vacuum circuit breaker comprising of :

- Base mounted lattice type support structure for braker mounting painted
- Circuit Breaker assembly comprising of vacuum interrupters in insert atmosphere, operating links within porcelain housing, top and bottom terminal pads arcing horns assembly
- LT Chamber for linkage (between breaker and mechanism) with access covers wherever necessary.
- Sheet steel cubicle, for outdoor use, housing the operating mechanism box and control accessories for breaker operation.
- Motor operated mechanism complete with motor suitable for 220V AC Shunt trip coil suitable for 110 V AC and ON/OFF indicator.
- Set of Aluminium alloy terminal connectors suitable for ACSR conductor (size to be furnished by you along with your order)
- Auxiliary Switch comprising of 6 NO + 6 NC contacts.
- Trip-neutral- close circuit breaker (local) control switch.
- Local/Remote selector switch
- Antipumping devise
- Mechanical operation counter
- Necessary LT Fuses for Control Circuit
- Necessary Terminals for Remote Control
- Illumination Lamp with door switch
- Set of fine wires, Fuses, Ferrules, etc.
- Set of Current Transformers as per the specification

GUARANTEED TECHNICAL PARTICULARS FOR OUTDOOR DRAWOUT VACUUM CIRCUIT BREAKER.

Installation	: Outdoor substation
Type of Breaker	: Vacuum Circuit Breaker
Operation	: Single breaker in service/pole
Rated Voltage	: 33KV
No of Phase	: 3 (Three)
Rated Frequency	: 50Hz
Maximum Nominal Current	: 36 KV
Rated Nominal Current	: 1250A
Rated Lightning Impulse Withstand Voltage	: 170KV
(1.2/50 micro-second wave)	
Single /Three phase fault current rating	
Symmetrical Breaking current	: 25 KA
Asymmetrical Breaking Current	: 27.5 KA
DC Component	: 32 %
Making Current	: 62.5 KA (Peak)
Short time current	: 25 KA (1Sec)
Transient recovery voltage	: As per IEC 56
Number of operations of Vacuum Interrupter	
At rated current	: 30,000
At 100% breaking current	: 50
At 50% breaking current	: 200
Number of operation of driving mechanism	: 10,000
Rated operating duty	: O-0.3 sec-CO-3 min-CO
Contact pressure	: 300 KG
Material of main contact	: Copper Chromium
Power Frequency withstand voltage	: 70KV, 50Hz, 1 min.
Opening time	: 0.05 sec
Breaking time	: 5 Cycle
Origin: ABB, India	

07) CONTROL PANEL (Indoor use): 01 Set

16 SWG Sheet steel fabricated, floor mounting, tropicalized design, indoor type, Control Panel for 3 phase, 4 wire, 50 Hz, 380/415V AC system & shall be supplied complete TP + N+ PE busbars suitably sized & properly insulated arrange to withstand & short current of 50KA for 1 sec.

The boards are designed & constructed in accordance with BS5486/IEC439.

Busbars and other live parts are spaced and insulated in accordance with European standards IEC158, UTE C 20 - 040, VDE - C 110 for 660V.

All units & panel boards shall fully comply regulations of the 15th edition IEE wiring regulation for isolation and switching.

The panel shall comprise of :

Protection, Measurement and control unit :

- 1 Microprocessor based IDMT Relay with Protection unit having :
- Overcurrent (ANSI code 50/51) protection.
 - Earth fault (50N/51N) protection .
 - Differential Protection
 - 16 Indications of different parameters.
 - 1 reset key to clear faults and to reset.

The tripping characteristics of the protection unit shall be of IDMT nature with a setting possibility to 16 IDMT tripping curves.

Type: Sepam T 80

Origin: Schneider Electric, EU

- 1 Set control Control Circuit Breaker, Schneider Electric
- 2 ON/OFF Push Button, Schneider Electric
- 3 Phase Indicating Lamp, Schneider Electric
- 3 (0-1000A) Digital Ameter , Frank, Indonesia
- 1 (0-36KV) Digital Voltmeter , Frank, Indonesia

PM710, with RS-485

- 1 Digital power meter with display of operational measurement for :
- # Amperes with phase selection.
 - # Voltages with phase selection.
 - # Kwh
 - # Kvarh
 - # Kw with MDI
 - # Kvar
 - # p.f
- Origin: Schneider Electric, EU

08) 11KV HT SWITCHGEAR (VCB) Panel INCOMING : 01 Set. (without VCB)

14 & 16SWG Sheet steel fabricated 11KV indoor metal enclosed switchgear. This medium voltage switchgear panel shall be used for secondary distribution sub-station upto 12KV & suitable for an ambient temperature of 45 deg.C and rated rupture capacity of 350MVA complete with all accessories, diagrams, levels, wirings & terminals.

Technical Data :

Service voltage : 12KV
Rated voltage : 11KV

Insulation level :

Impulse withstand voltage 1.2/50 micro-sec. : 75KV (Peak)
Power frequency withstand voltage/1 min. : 28KV rms.

The equipment proposed under this offer has been designed, manufactured & tested in accordance with the following applicable IEC standards.

- common clause for high voltage switchgear standards	: IEC 694
- high voltage switchgear in metallic enclosure	: IEC 298
- high voltage ac circuit breakers	: IEC 56
- ac switches and earthing switches	: IEC 129
- high voltage switches	: IEC 265
- high voltage combined switch/fuse for ac current	: IEC 420
- current transformers	: IEC 185
- voltage transformers	: IEC 186
- high voltage fuses	: IEC 282
- control monitoring	: IEC 801

The switchgear panels shall comprise of :

1 x 1250A, 12KV, 20KA, rated triple pole 50Hz, Fixed type Vacuum Circuit Breaker with manual operated mechanism, tripping coil & auxiliary contacts. (Supplied By the Client)
Origin: ABB, Italy

3 x Cast resin insulated dry type 11KV double core current transformer, ratio : 400/5/5A.

Core 1 : 5VA, class 0.5M5 for metering

Core 2 : 5VA, class 5P10 for protection

2 x Dry type cast resin insulated potential transformer for open delta connection.

Ratio : 11000/110V

Burden : 50VA, Class : 0.5

1 x 6A TP MCB for PT secondary protection.

Protection, Measurement and control unit :

1 x Microprocessor based Protection unit having :

- Overcurrent (ANSI code 50/51) protection.
- Earth fault (50N/51N) protection .
- 11 Indications of different parameters.
- 1 reset key to clear faults and to reset.

The tripping characteristics of the protection unit shall be of IDMT nature with a setting possibility to 16 IDMT tripping curves.

1 x Digital power meter with display of operational measurement for :

- # Amperes with phase selection.
- # Voltages with phase selection.
- # Kwh
- # Kvarh
- # Kw with MDI
- # Kvar
- # p.f

3 x Phase Indicating lamp(R/Y/B)

3 x ON, OFF, TRIP Indicating lamp

2 x ON/OFF Push Button

Common Busbar

1 x Panel Enclosure (2000 x 850x 1500mm)

1 x Control Accessories

09) 11KV HT SWITCHGEAR (VCB) PANEL OUTGOING : 03 Set. (without VCB)

14 & 16SWG Sheet steel fabricated 11KV indoor metal enclosed switchgear. This medium voltage switchgear panel shall be used for secondary distribution sub-station upto 12KV & suitable for an ambient temperature of 45 deg.C and rated rupture capacity of 350MVA complete with all accessories, diagrams, levels, wirings & terminals.

Technical Data :

Service voltage : 12KV
Rated voltage : 11KV

Insulation level :

Impulse withstand voltage 1.2/50 micro-sec. : 75KV (Peak)
Power frequency withstand voltage/1 min. : 28KV rms.

The equipment proposed under this offer has been designed, manufactured & tested in accordance with the following applicable IEC standards.

- common clause for high voltage switchgear standards : IEC 694
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- current transformers : IEC 185
- voltage transformers : IEC 186
- high voltage fuses : IEC 282
- control monitoring : IEC 801

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The switchgear panels shall comprise of :

1 x 630A, 12KV, 20KA, rated triple pole 50Hz, Fixed type
Vacuum Circuit Breaker with manual operated
mechanism, tripping coil & auxiliary contacts. (Supplied By the Client)
Origin: ABB, Italy

3 x Cast resin insulated dry type 11KV double core current
transformer, ratio : 400/5/5A

Core 1 : 5VA, class 0.5M5 for metering

Core 2 : 5VA, class 5P10 for protection

2 x Dry type cast resin insulated potential transformer
for open delta connection.

Ratio : 11000/110V

Burden : 50VA, Class : 0.5

1 x 6A TP MCB for PT secondary protection.

Protection, Measurement and control unit :

1 x Microprocessor based Protection unit
having :

- Overcurrent (ANSI code 50/51) protection.
- Earth fault (50N/51N) protection .
- 11 Indications of different parameters.
- 1 reset key to clear faults and to reset.

The tripping characteristics of the protection unit shall be
of IDMT nature with a setting possibility to 16 IDMT
tripping curves.

1 x Digital power meter with display of operational
measurement for :

- # Amperes with phase selection.
- # Voltages with phase selection.
- # Kwh
- # Kvarh
- # Kw with MDI
- # Kvar
- # p.f

3 x Phase Indicating lamp(R/Y/B)

3 x ON, OFF, TRIP Indicating lamp

2 x ON/OFF Push Button

1 x Panel Enclosure (2000 x 850x 1500mm)

1 x Control Accessories

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Ensuring Power Since 1982

10) BY PASS SWITCH: 01 Set=3 Nos (Siemens)

Sheet steel clad, powder coated, dust & vermin proof,
free standing, floor mounting, indoor type 11KV By pass
Switch panel boards having self quenching, single phase
two position device LBS type with 20KA(1 Sec) and
isolating or de-energizing of Auto Voltage regulator as
per following technical data/specification: 1 Set= 3 Nos.)
and Surge Arrester.

Maximum design voltage : 15.5KV

Basic Insulation Level (BIL): 95KV

Rated Continuous current : 630A

Momentary ratings: Disconnect blades 40KA

By Pass blade 30KA

IP Rating : 23

Brand: CWPL

11) 4000A LT SWITCHGEAR WITH BUSCOUPLER : 01 SET.

Sheet steel fabricated, floor mounting, tropicalized design, indoor type, low tension switchgear for 3 phase, 4 wire, 50 Hz, 380/415V AC system & shall be supplied complete TP + N busbars suitably sized & properly insulated arrange to withstand & short current of 50KA for 1 sec.

The boards are designed & constructed in accordance with BS 5486/IEC439.

Busbars & other live parts are spaced & insulated in accordance with European standards IEC 158, UTE C 20 - 040, VDE - C 110 for 660V.

All ACB/MCCB units & panel boards shall fully comply regulation of the 15th edition IEE wiring regulation for isolation & switching.

The panel shall comprise of :

Incoming:

1 x 4000A, 100KA, TP Fixed type ACB with closing solenoid and store -energy spring
(Supply By Client)

1 Set Electrical Interlock by relay and timer

1 Auto/Manual Selector Switch by relay and timer

10 ON/OFF Push button

4000/5A Current Transformer, 10/5VA, Class-1- 3 Nos

Phase Indicating Lamp 22MM (Red, Yellow & Blue) Schneider - 3 Nos.

Digital Energy Meter, Schneider PM2130 - 1 Nos

ON & OFF push button schneider - 2 Nos

CB ON OFF TRIP Indication lamp, Schneider R Y G - 3 Nos

1 x Panel Fan with Dust filter & Luvour + 1x Dust filter & Luvour - 2 Set

Mini LCD Digital Panel Thermometer with auxiliary contact & Temperature Sensor - 1 Set

1x6A, TP MCB for the protection of control circuit

1 x 6300A, 100KA, TP Fixed type ACB with closing solenoid and store -energy spring (For Bus Coupler)
(Supply By Client)

Outgoing:

1 x 2500A, 65KA, TP Fixed type ACB with closing solenoid and store -energy spring (For PFI)
(Supply By Client)

1 x 2500A, 65KA, TP Fixed type ACB with closing solenoid and store -energy spring (LT-1 Swing Building)
(Supply By Client)

1 x 2000A, 65KA, TP Fixed type ACB with closing solenoid and store -energy spring (For LT-1 Finishing Building)
(Supply By Client)

2 x 630A, TP, 36KA, 415V, 50Hz, (MCCB) with adjustable (Supply By Client)

1 x 100A, TP, 25KA, 415V, 50Hz, (MCCB) with adjustable (Supply By Client)

BUSBAR Details

7000A Common Busbar

1x4000A CB Busbar

2x2500A CB Busbar

1x2000A CB Busbar

2x630A CB Busbar

ENCLOSURE as standard

General Accessories

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12) 3200A MDB PANEL FOR WASHING : 01 SET.

Sheet steel fabricated, floor mounting, tropicalized design, indoor type, Main Distribution Board for 3 phase, 4 wire, 50 Hz, 380/415V AC system & shall be supplied complete TP + N busbars suitably sized & properly insulated arrange to withstand & short current of 50KA for 1 sec.

The boards are designed & constructed in accordance with BS 5486/IEC439.

Busbars & other live parts are spaced & insulated in accordance with European standards IEC 158, UTE C 20 - 040, VDE - C 110 for 660V.

All ACB/MCCB units & panel boards shall fully comply regulation of the 15th edition IEE wiring regulation for isolation & switching.

The panel shall comprise of :

Incoming:

1 x 3200A, 100kA, TP Fixed type ACB with closing solenoid and store -energy spring
(Supply By Client)

3200/5A Current Transformer, 10/5VA, Class-1- 3 Nos

Phase Indicating Lamp 22MM (Red, Yellow & Blue) Schneider - 3 Nos.

Digital Energy Meter, Schneider PM2130 - 1 Nos

ON & OFF push button schneider - 4 Nos

CB ON OFF TRIP Indication lamp, Schneider R Y G - 3 Nos

1 x Panel Fan with Dust filter & Luvour + 1x Dust filter & Luvour - 2 Set

Mini LCD Digital Panel Thermometer with auxiliary contact & Temperature Sensor - 1 Set

1x6A, TP MCB for the protection of control circuit

Outgoing:

1 x 2500A, 65kA, TP Fixed type ACB with closing solenoid and store -energy spring (MDB Washing Building)
(Supply By Client)

1 x 630A, TP, 36KA, 415V, 50Hz, (MCCB) with adjustable (Supply By Client)

1 x 250A, TP, 36KA, 415V, 50Hz, (MCCB) with adjustable (Supply By Client)

1 x 40A, TP, 25KA, 415V, 50Hz, (MCCB) (Supply By Client)

1 x 32A, TP, 10KA, 415V, 50Hz, (MCB) (Supply By Client)

1 x 16A, SP, 6KA, 415V, 50Hz, (MCB) (Supply By Client)

BUSBAR Details

5000A Common Busbar

2500A CB Busbar

630A CB Busbar

ENCLOSURE as standard

General Accessories

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13) 1500kVAR auto/manual PFI plant : 01 No

Automatic power factor improvement plant of 1500kVAR in 12 steps.
Sheet steel fabricated, floor mounting, tropicalized design, indoor type, low tension switchgear for 3 phase, 4 wire, 50 Hz, 380/ 415V AC system & shall be supplied complete TP+N busbars suitably sized & properly insulated arrange to withstand & short current of 50KA for 1 sec.

The boards are designed & constructed in accordance with BS 5486/IEC439.

Busbars & other live parts are spaced & insulated in accordance with European standards IEC158, UTE C20-040, VDE-C 110 for 660V.

All ACB/MCCB units & panel boards shall fully comply regulation of the 15th edition IEE wiring regulation for isolation & switching.

The panel shall comprising of :
of the 15th edition IEE wiring regulation for isolation & switching.

- 5 200(25X8) kVAR, 415V, 50 Hz, 3 Phase, dry type, self healing compact PF capacitors bank with discharge resistor.
Brand : Frako, Germany
- 4 100(25X4) kVAR, 415V, 50 Hz, 3 Phase, dry type, self healing compact PF capacitors bank with discharge resistor.
Brand : Frako, Germany
- 1 50 (25X2) kVAR, 415V, 50 Hz, 3 Phase, dry type, self healing compact PF capacitors bank with discharge resistor.
Brand : Frako, Germany
- 1 25kVAR, 415V, 50 Hz, 3 Phase, dry type, self healing compact PF capacitors bank with discharge resistor.
Brand : Frako, Germany
- 2 12.5kVAR, 415V, 50 Hz, 3 Phase, dry type, self healing .(Fixed) compact PF capacitors bank with discharge resistor.
Brand : Frako, Germany
- 24 80A(ith 125A), triple phase air contactor (Supply By Client)
- 24 125A, TP, MCCB.(LS) (Supply By Client)
- 12 Start pushbutton.
- 12 Stop pushbutton.
- 12 Indicating lamp.
- 1 Auto manual selector switch with adder block.
- 4 Control relay with base.
- 3 Fuse carrier with fuse for control circuit.
- 1 12 Steps reactive power regulator which performs the switching of capacitor bank in automatic power factor correction equipments depending on charges of reactive power complete with p.f. luminiscent indicators & digital power factor meter.
Origin: Mikra, Malaysia
- 1 LT current transformer of adequate rating & burden.
- 1 Enclosure (H-2000, W-700, D-1000)
- 1 Busbar (2500A, 80mm x 20mm x 23mtr.)
- 1 Wiring Access.

14) Battery, Charger & AC, DC Panel: 01 Set

TECHNICAL DATA SHEET FOR BATTERY

Type: Sealed maintenance free battery.

Voltage, DC (V) : 108~110 V

Capacity at the discharge: 9 x 80 AH
rate (AH)

Number of Cells: 9
Voltage per Cell: 12 Volt

TECHNICAL DATA SHEET FOR BATTERY CHARGER

Type: 3 Phase full wave full control
thyristor bridge rectifier
Current adjustment range (A) : As per IEC
Maximum quick-charge current: 25 A +15A
Frequency: 50Hz., 3 Phase
AC Input: 415V + 10%, 12.3A
DC Output: 110, 25A
Alternative Capacity: 120Max.
Ambient Temp: 50 deg C
Standard applied: IEC 60146

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Ref: CPL/AIP/25102017 ®

Dated: 30/01/2018

The Managing Director
Aptech Industrial Park
Sarabo, Kashimpur
Gazipur

Sub : Revised Offer for supply, installation, testing & commissioning of 5MVA 33/11 Sub-Station

SL #	Descriptions	Qty.	Unit	Unit price in Taka	Total price in Taka
	<u>Part-A.</u>				
01)	<u>33KV CT(OUT DOOR) FOR PROTECTION:</u> TS/Energypac, Bangladesh ✓	1	Set	271,083.76	271,083.76
02)	<u>33KV PT(OUT DOOR) FOR PROTECTION:</u> TS/Energypac, Bangladesh	1	Set	271,083.76	271,083.76
03)	<u>33KV CT, PT CRS Testing & Laboratory Fee:</u> From REB, Savar, Dhaka. (6Nos.)	1	Job	124,500.00	130,500.00
04)	<u>33KV ABS Bangladesh :</u> LS, Korea	1	Lot	256,410.26	256,410.26
05)	<u>33KV (ACR) OUTDOOR:</u> Entec, Korea	1	Set	1,730,769.23	1,730,769.23
06)	<u>33KV Lightning Arrestor:</u> LS, Korea as per attached technical specification.	1	Set	72,288.00	72,288.00
07)	<u>33 KV HT SWG (VCB) Outdoor (1250A) :</u> -Cost of complete 33KV VCB (ABB, India) as per attached technical specification.	1	Set	1,381,579.00	1,381,579.00
08)	<u>33KV CT(OUT DOOR) FOR METERING</u> TS/Energypac, Bangladesh	1	Set	271,083.00	271,083.00
09)	<u>33KV PT(OUT DOOR) FOR METERING</u> TS/Energypac, Bangladesh	1	Set	271,083.00	271,083.00
10)	<u>33KV Metering & Control Panel:</u> -Cost of complete Control Panel. Included 87T	1	Set	331,325.20	331,325.20
11)	<u>33KV GANG ISOLATOR WITH Earth Switch:</u> LS, Korea/ Rockwell as per attached technical specification.	1	Set	180,722.51	180,722.51

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12)	<u>11KV Bypass Switch (LBS) 1 Set = 3 Nos):</u> Siemens/ F & G, Germany/Equivalent as per attached technical specification.	1	Set	662,650.60	662,650.60
13)	<u>11KV HT SWITCHGEAR (VCB) INCOMING:</u> -Cost of complete VCB panel without VCB component	1	Set	421,686.75	421687
14)	<u>11KV HT SWITCHGEAR (VCB) OUTGOING:</u> -Cost of complete VCB panel without VCB component	3	Set	421,686.75	1265060
15)	<u>110V Battery, Charger & AC, DC Panel:</u> -Cost of complete Charger & Panel as per attached technical specification.	1	Set	512,048.19	512,048.19
16)	<u>Delivery, Installation & Testing :</u>	1	Job	300,000.00	300,000.00
17)	<u>STEEL STRUCTURE WITH ALL : CONNECTION ACCESSORIES</u> without any wire/cable	1	Lot	1,144,578.31	1,144,578.31
18)	<u>Earthing for mess:</u>	12	Sets	60,000.00	720,000.00
19)	<u>ELB Complete (without Govt. Fee):</u>	1	Job	300,000.00	300,000.00
20)	<u>11kV Heat Sinkable Kit:</u>	10	Sets	3,192.77	31,927.71
21)	<u>4000A LT SWITCHGEAR PANEL :</u> With 6300A Bus Coupler Panel as per attached technical specification.	1	Set	1,338,667.58	1,338,667.58
22)	<u>1500KVAR, PFI Plant:</u> -Cost of complete PFI Panel. as per attached technical specification.	1	Set	1,103,809.78	1,103,809.78
23)	<u>3200A LT/MDB PANEL FOR WASHING:</u> -Cost of complete MDB Panel as per attached technical specification.	1	Set	555,191.17	555,191.17

Total Amount in Taka: **13,523,548.06**

Special Discount: **3,323,548.06**

Total Amount in Taka (Excluding VAT & AIT): **10,200,000.00**

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Terms & Conditions :

- 01) Validity : Our offer will remain valid for a period of 30 days from the date of this offer.
- 02) Delivery: Within 120 days after receipt of confirmed order & payment as per clause # 3.
- 03) Payment : 40% as advance along with order & remaining
40% after delivery.
20% after commissioning.
- 04) Fabrication
& assembly: Fabrication & assembly will be done at our Dhaka factory.
- 05) Warranty : One year if any manufacturing defects
- 06) After-sales
service : One year free of Cost.

Thanking you.

Yours very truly,
Cross-world Power Ltd

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Handwritten signature
10.02.18