



ENAM HATCHERY & FEEDS LTD.

Head Office:

House # 35, Flat # A/3
Sonargaon Janapath Road
Sector # 7, Uttara
Dhaka-1230

+880 2 58953092

REF: EHFL/CWPL/PROC/2019/

Date: 26/12/2019

Eng.Mr. Harunor Rashid
(Chief Operating Officer)
Cross World Power Limited
Plot # 1/B,Road # 90, Gulshan-2,Dhaka-1207

Subject: Work-order for Complete 630 KVA Substation Installation,testing and commissioning at our EHFFL, factory Chawkpura,Mawna,Sreepur,Gazipur.

Dear Sir,

With reference to your submitted offer on 22/12/2019 in respect of Complete 630 KVA Substation Installation, testing and commissioning at our EHFFL, factory Chawkpura,Mawna,Sreepur,Gazipur, and subsequent discussion we had with you and we are pleased to place work order for the above work at the total cost of Tk. 19,00,000/- (Taka-Nineteen lac) only as offered by you, under the following terms and conditions :

Description of works

: Complete 630 KVA Substation Installation, testing and commissioning.

Capacity 630 KVA Substation:

1. 11 KV HT SWITCHGEAR (VCB) INCOMING 1 SET
2. 11/0.415 KV,630 KVA OIL TYPE TRANSFORMER 1 NOS.
3. LT SWITCHGEAR PANEL 1 SET.
4. 380 KVAR AUTO PFI 1 SET.
5. EARTHING 4 SETS.
6. 11 KV HEAT SINKABLE KIT 4 SETS.
7. ELB COMPLETE 1 JOB[WITHOUT GOV. FEE]
8. INSTALLATION, TESTING,COMMISSIONING,LOADING UNLOADING, TRANSPORTATION COST & COST OF INSTALLATION & TESTING OF THE ABOVE WITHOUT ANY POWER CABLE & CIVIL WORKS.

NOTE:

- 01) HT & LT Cable STAND for 630 KVA Transformer will be arranged by CWPL.
- 02) Cross arm channel for dropout fuse and LA will be arranged by CWPL
- 03) All civil works for Installation of substation equipment are excluded.
- 04) Cable bottom entry, cable gland excluded.
- 05) Installation materials (Cable, cable tray, cable lugs, glands & connection accessories like nut bolts, awl plug etc) excluded)
- 06) Installation, supervision & Commission will be done by CWPL.

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Factory:

Chawkpura (Gazipur Road), Mawna, Sreepur, Gazipur @ enamhatcheryandfeedsltd@gmail.com | www.enamfeed.com



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Name of the party/Firm

: Cross World Power Limited.

Duration to complete

The Job

: **Within 30 working days (Thirty Days)** days from the acceptance of work order by you.

Defect Liability Period/Warranty Period : 18 (Eighteen Months) Months.

Project Manager

: Plant Manager/Engineer of Enam Hatchery & Feeds Ltd
(EHFL) factory at Chawpara, Mawna, Sreepur.

Works Schedule

: Party/Firm shall provide a time chart (schedule of works) monitoring all details of work and required time. Penalty will be imposed for per day delaying the completion of the work. If any unexpected circumstance arrived, party/firm shall explain to the authority for delaying or other mishap. You shall start work within 7 days from the date of receiving the work order.

Completion certificate

: **Installation** Completion certificate will be issued to the party/firm within 15(fifteen) days after satisfactory completion of the work in all respect by Plant Manager/Project Manager.

Supervision of works

: Entire work in respect of **Installation, testing and commissioning** of Substation will be supervised and monitoring under guidance of CROSS WORLD POWER LIMITED (The seller) engineer/technicians in consultation with Plant Manager of EHFL.

Changes of work and materials

: The supervising committee has authority to add or deduct any materials/items of the works.

Security Deposit

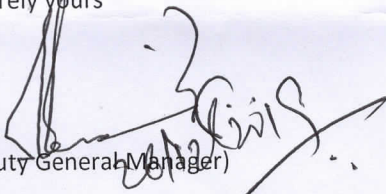
: 20% (Twenty percent) of gross bill amount shall be paid after certified from Plant Manager/Plant Engineer.

Mode of Payment

: 30% advance payment of total quoted amount and 30% before delivery 20% at time of Installation and remaining 20% of total bill may be paid upon due certifications of works phase by phase and recommendation of Project Manager/Plant Manager.

As a token of your acceptance please sign duplicate copy of the work order and return to us.

Thanking you,
Sincerely yours


(Deputy General Manager)

For MANAGING DIRECTOR

CC, to (1) Plant Manager (2) QC Dept. (3) Store Dept (4) Accounts Dept



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DEED OF AGREEMENT

This agreement is made on December 23, 2019 of Christian era for supply, installation, testing and commissioning of 630 KVA Substation at Chawkpara (Gazipur Road), Mawna, Sreepur, Gazipur..

BETWEEN

Enam Hatchery & Feeds Ltd., House # 35, Flat # A/3, Sonargaon Janapath Road, Sector # 07, Uttara, Dhaka-1230. Represented by its Managing Director, Md. Anamul Haque Mollah, Address: House # 35, Flat # A/3, Sonargaon Janapath Road, Sector # 07, Uttara, Dhaka-1230. Hereinafter referred to as the 'Buyer' also called the 'FIRST PARTY', which expression, where the context so admits shall include its successors in interest and assigns of the 'FIRST PARTY'.

AND

Cross World Power Ltd. Address: Plot # 1/B, Road # 90, Gulshan-2, Dhaka, Bangladesh, hereinafter referred to as the 'Contractor' / 'Supplier' also called the 'SECOND PARTY', which expression, where the context so admits shall include its successors in interest and assigns of the 'SECOND PARTY'.

WHEREAS, the SECOND PARTY submitted quotation no **CWPL/SS/IA/17122019** dated 17th December 2019 for supply, installation, testing and commissioning of 630 KVA Substation, to the FIRST PARTY.

AND WHEREAS the FIRST PARTY accepted the quotation of the SECOND PARTY as mentioned above.

BOTH the parties mutually agreed to work together under the Terms and Conditions stated herein under:

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Terms and Conditions:

1. **Work Scope:** The SECOND PARTY agreed to carry out supply, installation, testing and commissioning of 630 KVA Substation Commercial Offer at Chawkpara (Gazipur Road) Mawna, Sreepur, Gazipur project site.
2. **Details:** Scope of work and specification as per quotation, shall be treated as integral part of this Deed of Agreement.

A. Substation					
Sl. No	Description	Unit	Rate	Qty	Price
01	Supply, installation, testing and commissioning of 630 KVA Substation Equipment's.	Set	BDT 19,00,000.00	1	BDT 19,00,000.00
Total Price (Excluding VAT & TAX)					BDT 19,00,000.00
In Word (Excluding VAT & AIT): BDT Nineteen Lakhs only					

TECHNICAL SPECIFICATIONS

i) **11KV HT SWITCHGEAR (VCB) INCOMING**

Nos

This specification cover the supply of 11KV indoor metal Vermin proof enclosed switchgear according to IEC 298 The 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 350 MVA complete with all accessories, diagrams, levels, wirings & terminals.

The 11 KV, 350 MVA rated switchboard would comply compulsory electricity regulations by standards. All cubicles are fitted with security interlocks and earthing switch.

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The erection of the panel can be done directly on the levelled floor. Cable trenches are necessary. Cables can

Easily installed from the bottom side of the panel.

The design is done to allow safe operation in extremely tropical climate conditions :

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

Enclosure 2100x1500x800mm (HxDxW)

630 A, 12 kV, 20 kA VCB **Hyundai**

11 kV CT 50/5/5A

Core 1 : 5 VA, Class 0.5M5 for Metering

Core 2 : 5 VA, Class 10P10 for Protection

11 kV PT 11000/ $\sqrt{3}$: 110/ $\sqrt{3}$

100 VA, Class 0.5

Protection Relay, ABB REJ 601 (IDMT RELAY)

Ameter

Ameter Selector Switch

Volt meter

Volt meter Selector Switch

No's

No's

Set

Set

No's

No's

No's

No's

No's

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Reshid

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Technical Data :

Service voltage : 12KV
Rated voltage : 11KV

Insulation level :

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- current transformers : IEC 185
- voltage transformers : IEC 186
- high voltage fuses : IEC 282
- control monitoring : IEC 801

Enclosure 2100x1500x800mm (HxDxW)

630 A, 12 kV, 20 kA VCB **Hyundai**

11 kV CT 50/5/5A

Core 1 : 5 VA, Class 0.5M5 for Metering

Core 2 : 5 VA, Class 10P10 for Protection

11 kV PT 11000/√3 : 110/√3

100 VA, Class 0.5

Protection Relay, ABB REJ 601 (IDMT RELAY)

Ameter

Ameter Selector Switch

Volt meter

Volt meter Selector Switch

No's

No's

Set

Set

No's

No's

No's

No's

No's

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ii) **630 kVA OIL IMMERSED TRANSFORMER**

Set

3 Phase oil immersed, naturally air cooled transformer according to IEC-76 standard with 3 HT bushings and 4LT Bushings, arching horn, conservator, oil level indicator, plugs for oil filling, sampling and draining, lifting lugs & with first filling of oil in Transformer as per Standard fittings : 4 flat bi-directional rollers.

Technical Data :

Rated Capacity	: 630 KVA
Rated Frequency	: 50 Hz.
Rated Voltage,	
-Primary	: 11000 V
-Secondary	: 415 V/240V at no load
BIL	
-Primary	: 75 KV
-Secondary	: 2.5 KV
Vector Group	: DYn11
Off-load tap changer	: +1x2.5%, 0, -3x2.5%
Tap changing	: On HV side off-load manually from outside.
Interphase connection	: Delta
Dielectric strength	: 28 KV (for 1 min)
LV winding	
-Rated Voltage	: 415/240V
Interphase connection	: Star
Neutral	: Fully insulated & brought out
Dielectric strength	: 3 KV (for 1 min)
Ambient Temp.	: 40° C
Temperature rise	
-in oil	: 60° C
-in coil	: 65° C

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No Load Loss
: 1102 W

Full Load Loss

Impedance

Installation

Cooling

Conductor

: 6634 W

: 4%

: Indoor/Outdoor

: ONAN

: Copper

Brand: CPL (Shakti)

Core: Silicon steel sheet

Coil : HV/LV wires BRB Bangladesh.

Oil: Sabita, India

LV insulated copper bar , **BRB.**

Other insulated materials and fittings, Italy.

iii) LT SWITCHGEAR PANEL

Set 1

Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type LT Panel with 1250A Hard Drawn Copper Busbar.

Set of components required for the manufacture of LT Panel comprising :-

INCOMING:

1000A,TP,50KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection.

Origin: Hyundai

Pcs 1

1000/5A Current Transformer 10/5VA, Class-1

Pcs 3

Ammeter & Voltmeter

Pcs 2

CB ON TRIP Indication lamp

Pcs 3

1x6A,TP MCB for the protection of control circuit

Pcs 1

1x2A,SP MCB for the protection of control circuit

Pcs 3

OUTGOING :

630A,TP,50KA,415V,50Hz, MCCB with having Fixed overcurrent & magnetic short circuit protection.

Origin: Hyundai (For PFI)

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400A,TP,50KA,415V,50Hz, MCCB with having Fixed overcurrent & magnetic short circuit protection.

Origin: Hyundai

Pcs 2

BUSBAR Details

1000A TPN + 1/2E Common Busbar
1x1000A TP Terminal Busbar
1x630A TP Terminal Busbar
2x400A TP Terminal Busbar

ENCLOSURE As Standard.

Connection Accessories .

iv) **380kVAR auto/manual PFI plant** Nos 1

Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type PFI Panel with 630A hard drawn copper busbar.

Set of components required for the manufacture of PFI Panel comprising :-

2X100 (2x4X 25kVAR),415V,50 Hz, 3 Phase, normal duty type, self healing
compact PF capacitors bank with discharge resistor. Nos. 8
Brand : Epcos, India

2X50 (6 X 2 X 25kVAR),415V,50 Hz, 3 Phase, normal duty type, self healing
compact PF capacitors bank with discharge resistor. Nos. 4
Brand : Epcos, India

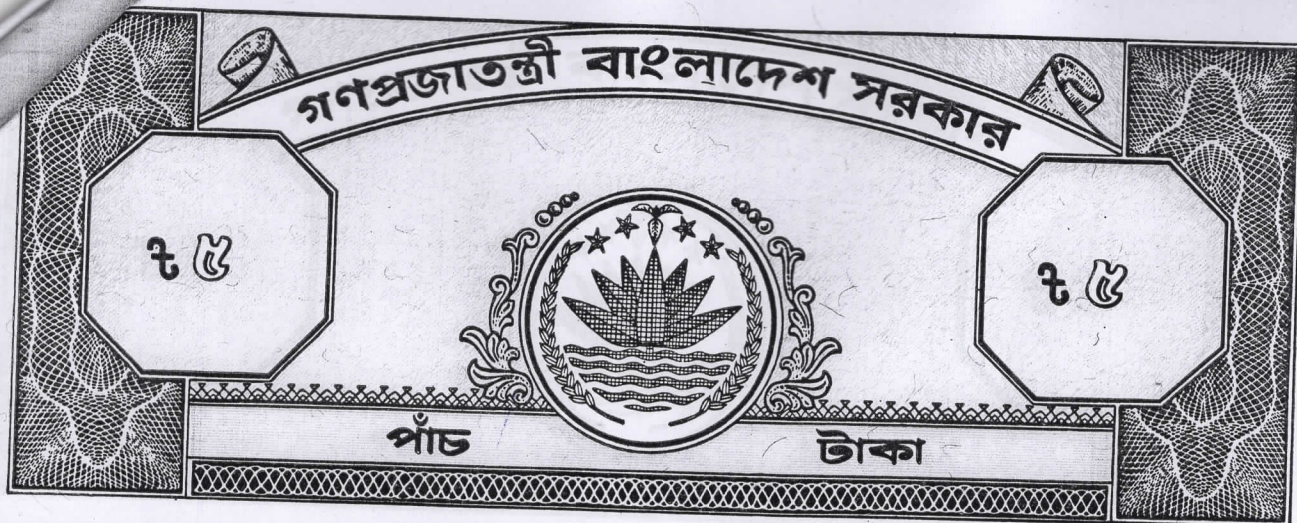
1X 25(1 X 25 kVAR),415V,50 Hz, 3 Phase, normal duty type, self healing .
compact PF capacitors bank with discharge resistor. Nos. 1
Brand : Epcos, India

2X 12.5 kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing .
compact PF capacitors bank with discharge resistor. Nos. 2
Brand : Epcos, India

5X 5 kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing .
compact PF capacitors bank with discharge resistor. Nos. 5
Brand : Epcos, India

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1X 5 kVAR, 415V, 50 Hz, 3 Phase, normal duty type, self healing . compact PF capacitors bank with discharge resistor. (Fixed) Brand : Epcos, India	Nos.	1
100A ,triple phase magnetic contactor for 50Kvar capacitor. Origin: Hyundai	Nos	6
65A ,triple phase magnetic contactor for 25Kvar capacitor. Origin: Hyundai	Nos	1
32A ,triple phase magnetic contactor for 12.5 Kvar capacitor. Origin: Hyundai	Nos	2
12A ,triple phase magnetic contactor for 5 Kvar capacitor. Origin: Hyundai	Nos	5
125A TP MCCB	No	6
63A TP MCCB	No	1
32A TP MCB	No	2
20A TP MCB	No	6
Indicating lamp	Nos	12
Auto manual selector switch with adder block.	No	1
2A 6KA SP MCB,	No	12
10A TP MCB	No	1
1x12 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.lumini- escent indicators & digital power factor meter. Origin: Micro, Malaysia	No	1
1x630A TP Busbar	meter	5
Enclosure As Standard.	Set	1
General Accessories	Job	1

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v) **Substation Earthing**

Earthing Boring:

Earthing of electrical installation with 38.5 mm (1.5" dia) GI pipe throughly (2 swg earth electrode) having 6.35mm dia holes across dia at 305mm interval securedly bonded with washer, nuts bolts etc. sunk upto a depth of 150 ft with GIP pipe(10+10)ft to attain earth resistance <1ohm including blind socket for water pouring facility.

Earthing Copper Lead:

Installation of solid copper wire earthing lead 2 swg in 38.1 mm dia GI pipe & termination of connection at both end- 150ft

Earthing Block:

Dimension LXWXD- 250mm X 40mm X 10mm with connection facility.

Copper Lead Laying:

Copper lead through 20mm (3/4") dia PVC flexible pipe including fitting, fixing the PVC pipe in wall, floor, earth or column completely as required- 10meter

3. **Schedule of Payment:** The payments will be made as,

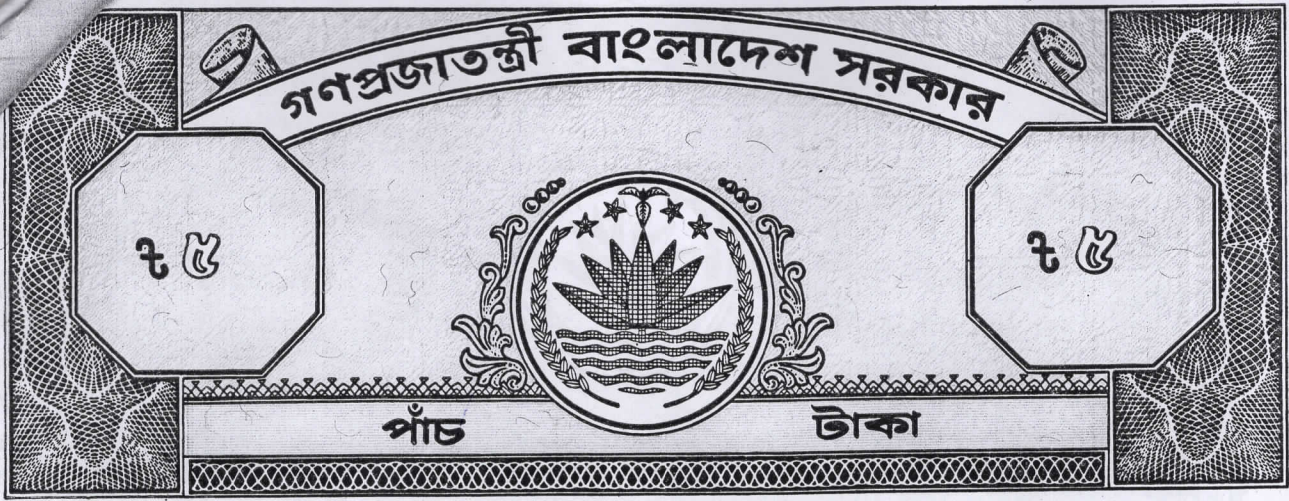
- 30% as advance along with work order
- 30% before delivery at the site
- 20% at the time of installation
- 20% after installation.

4. **Delivery:** Within 45 days from received date of advance payment.

5. **Installation:** SECOND PARTY will carry out the installation works as per standard practice.

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Warranty:

Sub-station: The SECOND PARTY will provide warranty against any defects in materials & workmanship during manufacturing for a period of 18 months from the date of commissioning, subject to no repairing/dismantling by others without written permission from SECOND PARTY.

In Witness whereof:

Both the Buyer & Supplier have conceded in this Agreement to be executed with their seal & signature as of the day & year first above written.

On behalf of
FIRST PARTY (Buyer)

Md. Anamul Haque Mollah
Managing Director
Enam Hatchery & Feeds Ltd.

On behalf of
SECOND PARTY (Supplier)

Engr. Md. Harunor Rashid
Chief Operating Officer
Cross World Power Ltd.

Witness

1. Md. Shariful Hameed Cheluyan.
- 2.

Witness

1. Md. Doston Hossain
2. Md. Shamim Min

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