গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

৳১০০ ৳১০০

একশত টাকা

খঘ ৪১৭৪৮১০

This Contract Agreement is made and entered on this the **03rd day of May 2021.**

By and Between

Aga Khan Education Service, Bangladesh a company incorporated under the laws of Bangladesh, having its registered office at House No. 10/C (3rd Floor), Road No. 90, Gulshan 2, Dhaka - 1212, Bangladesh (hereinafter referred to as the "Employer", which expression, unless excluded by or repugnant to the context herein, shall mean and include its affiliates, subsidiaries, successors-in-interest and assigns)

And

Aga Khan Foundation, a company incorporated under the laws of Bangladesh, having its registered office at House No. 10/C (4th Floor), Road No. 90, Gulshan - 2, Dhaka - 1212, Bangladesh (hereinafter referred to as the "Owner", which expression, unless excluded by or repugnant to the context herein, shall mean and include its affiliates, subsidiaries, successors-in-interest and assigns)

And

M/S. Cross World Power Ltd, a company incorporated under the laws of Bangladesh, having its registered office at *House-6, Road-92, Gulshan-02, Dhaka -1212, Bangladesh* (hereinafter referred to as the "Contractor", which expression, unless excluded by or repugnant to the context herein, shall mean and include its affiliates, subsidiaries, successors-in-interest and assigns)

WHEREAS, the Employer and the Owner express their intention to execute the Works known as Design, Supply, Installation, Testing and Commissioning of Substation for The Aga Khan Academy Dhaka by appointing a contractor; and

WHEREAS, the Contractor expresses its desire to undertake the Works known as Design, Supply, Installation, Testing and Commissioning of Substation for The Aga Khan Academy Dhaka by submitting a Tender to the Employer and the Owner; and

WHEREAS, the Employer and the Owner accept the Tender submitted by the Contractor for the execution and completion of these Works as fully described in the Contract Documents and the remedying of any defects therein and agree to appoint the Contractor as an independent contractor for the purpose of executing the Works and agree to appoint and authorize the Engineer to fulfil its obligations or exercise its powers under the Contract and agree to enter into this Contract Agreement.

"দেশপ্রেমের শপথ নিন, দুর্নীতিকে বিদায় দিন"

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

৳১০০ ৳১০০

একশত টাকা

খঘ ৪১৭৪৮১১

Contract Price: BDT 16,696,132.00/- (Taka Sixteen Million Six Hundred Ninety-Six Thousand One Hundred Thirty-Two Only) exclusive of VAT, inclusive of AIT and all applicable government charges.

The Employer, the Owner and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein, in conformity with the provisions of the Contract.

3. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price at the times and in the manner prescribed by the Contract.

4. In the event any article or clause, or any part or portion of any article or clause of the Contract Documents shall be held to be invalid, void or otherwise unenforceable, such holding shall not affect the remaining part or portions of that article or clause, or any other article or clause, of the Contract Documents.

5. Employer's or Engineer's failure to insist on performance of any term, condition, or instruction, or to exercise any right or privilege included in this Contract, or its waiver of any breach, shall not thereafter waive any other such term, condition, instruction, or any right or privilege. No asserted waiver of any right or benefit by Employer or Employer's Representative shall be valid unless such waiver is in writing, signed by Employer and specifies the extent and nature of the rights or benefits being waived.

6. The rights and remedies of the Employer provided for in the Contract Documents shall not be exclusive and are in addition to any other rights and remedies provided by Law.

CROSS WORLD POWER LIMITED Dhaka

AGA KHAN FOUNDATION DHAKA BANGLADESH

AGA KHAN EDUCATION SERVICE BANGLADESH

"দেশপ্রেমের শপথ নিন, দুর্নীতিকে বিদায় দিন"

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

৳১০০ ৳১০০

একশত টাকা

খঘ ৪১৭৪৮১২

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with their respective laws.

SIGNED by:

Malik Mahemood
Administration Manager

AGA KHAN EDUCATION SERVICE BANGLADESH

for and on behalf of the Employer in the presence of

WITNESS:

Name: H.M. Shahidullah

Address:

Date:

SIGNED by:

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

for and on behalf of the Contractor in the presence of

WITNESS:
Name: Tanmoy Sarker

Address:

Date:

SIGNED by:

Motilal Hazra
Head of Finance, HR and Administration

for and on behalf of the Owner in the presence of

WITNESS:
Name:

Address:

Date:

"দেশপ্রেমের শপথ নিন, দুর্নীতিকে বিদায় দিন"

Item	Sub-Clause	Data
Documents forming the Contract listed in the order of priority	1.1.1	
Document		**Document Identification**
(a) The Agreement (including this Appendix to Agreement) (b) Particular Conditions (c) General Conditions (d) The Specifications (e) Technical Specifications (f) The Drawings (g) Programme (h) Contractor's Offer (i) Forms of Performance Security and Advance Payment Security		
Commencement Date	1.1.7	shall be the date of Contract Signing
Time for Completion	1.1.9	Works shall be completed within 180 days of the Commencement Date
Law of the Contract	1.4	Law of Bangladesh
Language	1.5	English
Provision of Site	2.1	On the Commencement Date
Authorised Person	3.1	Rafiqul Anam Client's Representative Aga Khan Academy, Dhaka Aga Khan Foundation
Name and Address of Employer's Representative	3.2	M/s Deltadesh Pvt Ltd Dhaka, Bangladesh
Advance Payment:		
Amount		30% of the Local part as stated in the Schedule of Payment Item-B against Bank Guarantee
Recovery of Advance Payment:		100% recovery from the first stage payment
Advance Payment Guarantee		Text of Advance Payment Guarantee is attached to the Contract Documents. Acceptable financial institutions are Habib Bank, Standard Chartered Bank, HSBC, IFIC, UCBL and BRAC Bank.
Performance Security:		
Amount	4.4	10% of the Contract Price stated in the Agreement
Form	4.4	Text of Performance Security is attached to the Contract Documents. Acceptable financial institutions are Habib Bank, Standard Chartered Bank, HSBC, IFIC, UCBL and BRAC Bank. Performance Security shall be valid from commencement date and up to Defect Notification Period (24 Calendar months) + 90 days and needs to be submitted within 07 days from Contract signing.
Programme:		
Time for submission	7.2	Within 7 days of the Commencement Date
Form of Programme	7.2	As described in the Specifications

Item	Sub-Clause	Data
Amount Payable due to Failure to Complete	7.4	0.1% of Contract Price per day. but maximum 10% of Contract sum subject to site readiness from Employer
Period for Notifying Defects	9.1 & 11.5	24 calendar months calculated from the date stated in the notice under Sub-Clause 8.2
Variation Procedure		
Daywork Rates	10.2b	Not Applicable
Valuation of the Works		
Contract Price	11.1	**BDT 16,696,132.00/-** (Taka Sixteen Million Six Hundred Ninety-Six Thousand One Hundred Thirty-Two Only) exclusive of VAT, inclusive of AIT and all applicable government charges.
Schedule of Payment	11.2/11.3/11.4/11.5	Following percentages of the sum stated in the Agreement shall be released on completion of the stages listed below: <u>Foreign Part:</u> L/C Value (Lump sum Fixed Price): **€ 16,300.00/-** CFR Chattogram Sea Port Bangladesh, and **$ 71,259.35/-** CFR Chattogram Sea Port Bangladesh. 100% irrevocable L/C shall be opened by the Employer, Aga Khan Education Service, Bangladesh (AKES,B). The Contractor shall submit Pro-forma Invoice address to the name of Aga Khan Education Service, Bangladesh along with the necessary documents required for the purpose of opening of L/Cs and custom clearance. <u>Local Part: (BDT 8,210,747.00 including AIT excluding VAT)</u> 40% of the local part upon supply of local materials at site subject to Engineer's acceptance and Employer's approval, less; recovery of full advance payment. 50% of the local part upon completion of Installation, Testing & Commissioning and Taking Over Certificate being issued by the Employer. 10% retention of Local Part shall be paid by the Employer to the Contractor within 14 days after the expiry of Defect Liability Period of 24 months. <u>Miscellaneous Cost: (Provisional Amount of BDT 500,000 including AIT excluding VAT)</u> Bank Charges for Advance Payment Guarantee, Performance Guarantee, Marine Insurance and insurance covered under clause 14.1 (except Workers and Automobile insurances), All Government charges such as Telex, Stamp & Postage, FCC, Global Tax, all Port Charges, Port Clearance, C&F Agent commission, Loading and Unloading, Transport from Port to site, etc..

Item	Sub-Clause	Data
		shall be reimbursed at actual against proof of payment if required to be paid by the Contractor upon prior approvals from the employer. Custom Duty, AT, AIT/ Surcharges/ DF VAT/Re-sale VAT etc shall be reimbursed at actual against proof of payment if required to be paid by the Contractor upon prior approvals from the employer. Government Approval Part: (Provisional Amount of BDT 500,000 including AIT excluding VAT) shall be reimbursed at actual against proof of payment if required to be paid by the Contractor upon prior approvals from the employer. All payments shall be made within 35 days of the submission of the invoice corresponding to the completion of the above-mentioned stages along with the supporting documents.
Percentage of Retention	11.3	10% of Local part of BDT 8,210,747.00
Currency of Payment	11.7	Bangladeshi Takas
Rate of Interest	11.8	The Contractor shall be entitled to claim interest as per Bangladesh Bank rate on the date for each day the Employer fails to pay beyond the prescribed payment period of 35 days of submission of the corresponding Invoice
Insurances	14.1	
Type of Cover		**Amount of Cover**
The Works, Materials, Plant and Fees		The insurance shall be a Constructors' All Risks (CAR) issued from an organization approved by the Employer, and with a form and contents acceptable to the Employer to cover Contract Sum+15% and the related cost shall be reimbursed at actual subjected to provide the proof of payments. *(The approved Insurance Companies: Green Delta Insurance, Pioneer Insurance, Reliance Insurance, Pragoti Insurance and East Land Insurance).* Insurance shall be valid from the commencement date and up to Defect Notification Period (24 Calendar months) + 90 days and needs to be submitted within 07 days from Contract signing.
Contractor's Equipment		Not Applicable
Third party Injury to Persons and Damage to Property		Minimum amount of third-party insurance: BDT One Million for any one incident but unlimited for any number of incidents. Insurance shall be valid from the commencement date and up to Defect Notification Period (24 Calendar months) + 90 days and needs to be submitted within 07 days from Contract signing.
Workers		Applicable - Copy of the Valid Insurance to be provided subject to acceptance of Employer
Employer's Personnel		Shall be covered under 'Third party Injury to Persons and Damage to Property'
Automobile Insurance		Applicable - Copy of the Valid Insurance to be provided subject to acceptance of Employer

Item	Sub-Clause	Data
Arbitration		
Rules	15.3	Rules applicable under the Law of Bangladesh
Place of Arbitration	15.3	Bangladesh

1.1.20 **"Contract Price"** means the sum stated in the Agreement plus or minus any variations resulting out of the contract. The sum stated in the Agreement as well as the **Contract Price** exclusive of VAT, but includes AIT and all other inherent taxes, duties, levies or payments due to be paid to any government or other agency within or without the Country, by the Contractor, for goods and services provided under the Contract.

4.1 General Obligations

Add the following text at the end:

"The Contractor confirms that it has reviewed the Contract Documents, has visited the Site and has satisfied himself with the extent and requirement of the Works under the Contract, including all specifications applicable to the Works by Any relevant government agencies or any other relevant government agency, prior to the signing of the Agreement."

"The Contractors should be satisfied himself with the Contract drawings, specifications, site condition, site measurement, working space, storage and other available site facilities etc.. and all related cost shall be included within the Contract price."

6.1 Employer's Liabilities

Add the following text:

q) Inclement weather conditions which were not reasonably foreseeable by the Contractor and has not been experienced within 10 years, as per the official records, preceding the date of the Agreement".

9.3 Duration of Liability

The Contractor will remain liable for the Works for a period of two (2) years from the date of Taking Over after completion of testing and commissioning.

11.2 Schedule of payment

Replace the text of this clause with the following:

"The Contractor shall be entitled to be paid at the stages (milestones) shown in the Appendix subject to any additions or deductions which may be due. For this purpose, the Contractor shall submit a statement to the Employer, along with an invoice, showing the amounts to which, he considers himself entitled.

The Employer shall be entitled to withhold a part or whole of the invoiced amount in case the Employer determines that the pre-requisite activities for the particular stage payment have not been completed to the satisfaction of the Employer.

The first payment under the Agreement shall not be released till the time the Advance Payment Security and Performance Security under Sub-Clause 4.4 have been received to the satisfaction of the Employer. Along with a copy of the insurances required under the Contract.

All local taxes payable in connection with the works are included in the Contract price.

12.5 Limitation of Liability

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under any indemnities under the Contract, any violation of copyrights and except in cases of fraud, deliberate default and reckless misconduct shall remain limited to the Contract Price.

15.1 Adjudication

Delete this sub-clause

15.2 Notice of Dissatisfaction

Delete this sub-clause

15.3 Arbitration

Delete this sub-clause

Sub-Clauses 15.1 to 15.3 are deleted in entirety and replaced with the following:

15.1 Dispute Resolution

If a dispute arises between the Parties in connection with or arising out of this Contract or breach thereof and upon which a written notice is issued by one party to the other, the Parties shall attempt to settle such dispute by discussions among their senior management and try to reach a mutually amicable settlement. However, all disputes occurring during the course of the project and on which a mutually acceptable resolution was not reached shall not be allowed by the Contractor to impede or hamper the progress of Works which shall continue as per Programme and can only be referred to arbitration after the issue of the Taking Over Certificate by the Employer.

However, if the dispute is not settled amicably within twenty-one (21) Days of the issuance of Taking Over Certificate, (or such further period as the parties may agree), the same shall be settled by arbitration without resorting to courts. Following points should be noted about the arbitration process:

a) The dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce, Paris,
b) The dispute shall be settled by three arbitrators appointed in accordance with the Rules, and
c) The arbitration shall be conducted in English language
d) Arbitration venue shall be Dhaka, Bangladesh.
e) All legal and associated costs of the arbitration process, irrespective of which party wins the case, shall be borne by each party itself.
f) The arbitral award shall be final and binding upon the Parties and subject to no appeal to the extent permitted by the governing law.
g) The proceedings of the arbitration process shall be private and confidential

General Conditions of Contract from the FIDIC Green Book, 1999 included here by reference.

Employer's Requirements

1. Definition and Purpose of the Works

The purpose of the Works is to Design, Supply, Installation, Testing and Commissioning of Substation for Aga Khan Academy Dhaka to be constructed by others. The contractor is deemed to have conducted its own survey to determine final quantities to carry out the aforementioned work and extent of all other associated works, at its own risk and cost.

2. Scope, Design and other Technical Criteria

The scope, design and other technical criteria shall be as per the Contractor's offer of Substation on 15th April 2021 unless superseded by these Contract Documents.

The contractor will be required to engage with the related local government agency and ensure conformity of the Works with the tests and specifications required for the Works. Both Employer and related local government agency/independent agency will be required to accept the Works before the contract is considered complete. Acceptance of works shall be subject to any independent agency nominated by Employer or required by law.

The Contractor shall be responsible for arranging all kind of associated Government agency approvals like ELB approval, Fire approval, Environmental approval, etc. All connection fees (if any) as required by related local government agency and other related entities are to be allowed for by the contractor. Employer will pay fees (if any) at actual against payment proof basis.

3. Required Contractor's Documents

Detailed shop drawings shall be submitted within 07 calendar days from signing of Agreement.

As built drawings for the Works and O&M manuals shall be submitted prior to Taking Over.

4. Proposed Programme

The Programme are given in the program section includes the dates on which various activities required under the contract shall be carried out.

5. Applicable Technical Standards, Codes and Regulations

All materials and workmanship shall meet the specifications of the local relevant government agency. In addition, Technical Specifications for the Substation shall also meet the requirement of the Contract Technical Specification and subject to approval from the Employer's appointed Consultant. The contractor's proposed system should ensure conformance with the specified design specification and design parameters.

6. L/C and Customs

The Employer shall procure the Plant and the Materials required for the Works on behalf of the Contractor as per the drawings, technical data, cost information, Supplier's details and all other information required for opening and execution of L/Cs and to import the Plant and Materials in a legally sound, efficient and coordinated manner in conformance with national laws and regulations. The Contractor shall remain responsible for the correctness of all the information supplied and shall remain responsible under the Contract for conformance of the imported Plant and Materials within the Specifications and as necessary for the execution and completion of the Works. The Plant and Materials once procured shall be handed over to the Contractor at Chittagong Port after customs clearance who shall then be responsible for its safekeeping, installation, testing and commissioning as per the Contract.

7. Access Constraints

The Contractor is deemed to have visited the place of Works, the present and anticipated conditions of the place of Works and has accounted for any and all access restraints and any permits and approvals required for carrying out the works and any required interactions with any public or private entity.

8. Working Days and Time Constraints

Working hours: 8 am to 7 pm daily

Contractor to provide a safety hoarding around working space and ensure that the required safety procedures/measures are maintained all the time.

9. Electricity, Water, Gas and other Services Available on the Site

The contractor will be solely responsible for necessary arrangement (pipe/cable/generator/ etc) and utility consumption cost required for execution purpose.

10. Health & Safety

The Contractor should ensure that all necessary measures and precautions are taken to make certain the safety of the workers, staff, the general public and Works.

Technical Specification is included here by reference

1. Technical Specification [Refer attached Annexure-A]

Drawings is included here by reference

1. Tender Drawings [Refer attached Annexure-B]

Program is included here by reference:

a. Supply of both Foreign and Local Materials: 150 days from the commencement date

b. Installation: 30 days (180 days from the commencement date)

Following documents are included here by reference

1. Contractor's offer for Substation of 15th April 2021 [Refer attached Annexure-C]

CROSS WORLD POWER LTD.

Cross-world
Ensuring Power Since 1983

Aga Khan Academy, Dhaka
Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments
Details - Non Type Tested

PART A: FOREIGN PART

Sl	Description of item	Unit	Qty	Rate (EURO)	Amount (EURO)	Rate (USD)	Amount (USD)
1	Supply of 11KV Single phase (150A) AVR with BY-PASS switch [1 Set = 3 Nos] as per Technical Specification and Drawings.	1	SET		-	42,800.00	42,800.00
2	Supply of 1250 KVA 11/0.415KV Transformer as per Technical Specification and Drawings.	1	SET	16,300.00	16,300.00		-
3	Supply of Bus-bar Trunking System-BBT (Non Type Tested) as per Technical Specification and Drawings.	38.3	M		-	400.00	15,320.00
4	Any Other required Items to be imported [Contractor to list down below]				-		
	a) Supply of Feed Unit	8	Pc		-	428.30	3,426.40
	b) Supply of Elbow	17	Pc		-	571.35	9,712.95
	Subtotal-A				16,300.00		71,259.35
	Subtotal-A [BDT] [1 USD = 84 BDT, 1 EURO = 92 BDT, 1 GBP=109 BDT]						7,485,385.40
	Subtotal-A [in USD						$ 89,111.73

PART B: LOCAL PART

Sl	Description of item	Unit	Qty	Rate (BDT)	Amount (BDT)	Rate (BDT)	Amount (BDT)
1	Supply of 11 KV H.T Switch Gear with 630A NonType Tested VCB (withdraw able type) as per Technical Specification and Drawings.	1	SET			630,000.00	630,000.00
2	Supply of 11 KV H.T Switch Gear with 630A Non Type Tested VCB (withdraw able type) as per Technical Specification and Drawings.	2	SET			630,000.00	1,260,000.00
3	Supply of 2500A LT-1 Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,424,990.00	1,424,990.00
4	Supply of 2500A ELT Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,140,659.00	1,140,659.00
5	Supply of Automatic Power Factor Improvement Plant-PFI (Non Type Tested) as per Technical Specification and Drawings.	1	SET		-	727,236.00	727,236.00
6	Supply of ATS (Auto Transfer Switch): 2500A as per Technical Specification and Drawings.	1	SET		-	859,007.00	859,007.00
7	Supply of Dropout Fuse (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
8	Supply of Lighting Arrestor (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
9	Supply of Earthing including boring, copper, pit, etc for Sub-Station as per Technical Specification and Drawings.	4	Set		-	45,000.00	180,000.00
10	Supply of Heat shrink kit (11 KV) with 3Cx185rm (4 sets) as per Technical Specification and Drawings.	4	Set		-	1,500.00	6,000.00
11	Supply of HT Meter as per Technical Specification and Drawings.	1	Set		-	230,000.00	230,000.00
12	Supply of HT and LT Cables	1	Job		-	Employer's Scope	-
13	Installation, testing & commissioning of full system including laying of Employer's supplied cables	1	LS		-	963,855.00	963,855.00
14	Training period [Contractor to provide minimum 1 technical person to be based at site for 8 hours/each day for Training and Maintenance purpose]	1	Month			19,000.00	19,000.00
15	Supply of BY Pass switch	1	LS		-	400,000.00	400,000.00
16	Pre-shipment Visit by 3rd Party	1	LS		-	360,000.00	360,000.00
	Subtotal-B (BDT)				-		8,210,747.00
	Subtotal-B (USD)						$ 97,746.99

CROSS WORLD POWER LIMITED Dhaka

Plot - 1/B, Road - 90, Gulshan -2, Dhaka-1212, Bangladesh | Phone: (880 2) 58811858, 9891442 | Fax: (880 2) 58815160 | E-mail: info@cross-world.com

DHAKA BANGLADESH

AGA KHAN EDUCATION SERVICE BANGLADESH

CROSS WORLD POWER LIMITED Dhaka

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Ensuring Power Since 1983

Aga Khan Academy, Dhaka

Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

PART C: Miscellaneous Cost							
1	Provisional Cost for Loading from Port, Transport and unloading at Site	1	LS		-	100,000.00	100,000.00
2	Provisional Cost for Bank Charges for L/C, Marine Insurance, All Government charges such as Telex, Stamp & Postage, FCC, Global Tax, all Port Charges, Port Clearance and C&F Agent commission.	1	LS		-	150,000.00	150,000.00
3	Provisional Cost for Advance Payment Gurantee (APG)	1	LS		-	50,000.00	50,000.00
4	Provisional Cost for Performance Security Gurantee (PG)	1	LS		-	50,000.00	50,000.00
5	Provisional Cost for Insurances	1	LS		-	150,000.00	150,000.00
	Subtotal-C (BDT)				-		**500,000.00**
	Subtotal-C (USD)						**$ 5,952.38**

PART D: GOVERNMENT APPROVAL							
Sl	**Description of Item**	**Unit**	**Qty**	**Rate (BDT)**	**Amount (BDT)**	**Rate (BDT)**	**Amount (BDT)**
1	ELB Certificate and HT meter approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
2	Solar Permission from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
3	Micelleneous Govt. Approval (If required)	1	LS		-	Ref to proposed PS	Ref to proposed PS
4	HT Meter test and final approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
	PS for Authority Approvals						500,000.00
	Subtotal-D (BDT)				-		500,000.00
	Subtotal-D (USD)						**$ 5,952.38**
	Total Cost Including AIT in BDT						**16,696,132.40**
	Total Cost Including AIT in USD						**$ 198,763.48**

CROSS WORLD POWER LIMITED Dhaka

Plot - 1/B, Road - 90, Gulshan -2, Dhaka-1212, Bangladesh | Phone: (880 2) 58811858, 9891442 | Fax: (880 2) 58815160 | E-mail: info@cross-world.com

AGA KHAN EDUCATION SERVICE BANGLADESH

DHAKA BANGLADESH

Example Form of Performance Security
Issued to:

Name and address of Beneficiary

(whom the Contract defines as the Owner).

Dear Sirs

1. In consideration of ..... Aga Khan Foundation (hereinafter referred to as the "Owner") has signed a Contract Agreement on .....with ..... (hereinafter referred to as the "Contractor") for execution of the contracted Works [Name of Project] (hereinafter called "the Agreement") and it is a condition under Sub-Clause 4.2 of the Agreement that the Contractor shall furnish a Performance Security, for due performance by the Contractor in accordance with the terms and conditions set out in the said agreement, in the form of a bank guarantee for BDT..... (Taka ..... only), which is equivalent to 10% of the Contract Price (hereinafter referred to as "Guarantee").

2. We ..... Bank .... (hereinafter called the "Bank") having our Head Office at ..... at the request of the Contractor, hereby agree to provide an irrevocable bank guarantee and undertake to pay to the Owner an amount not exceeding BDT ..... (Taka..... only), which is equivalent to 10% of the Contract Price on demand by the Owner.

3. We ..... Bank do hereby undertake to pay the amounts payable under this Guarantee without reference to and/or contestation on behalf of the Contractor, unconditionally and irrevocably, without any demur, merely on the first written demand from the Owner. Any such demand made on the Bank shall be conclusive as regards the amount payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding BDT..... (BDT ..... only).

4. We undertake to pay the Owner, the amount due under this Guarantee, notwithstanding any dispute or disputes raised by the Contractor in any suit or proceeding pending before any Court or tribunal relating thereto, or liability under this present being absolute and unequivocal. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder.

5. We ..... Bank further agree the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till the dues of the Owner under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till the Engineer in charge on behalf of the Owner certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor and issues Performance Certificate , accordingly discharging this Guarantee.

6. We ..... Bank further agree with the Owner, that the Owner shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend from time to time any powers exercisable by the Owner against the said Contractor and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor or for any forbearance act or omission on the part of the Owner or any indulgence by the Owner to the said Contractor or by any such matter or thing whatsoever which under the Laws of Bangladesh would but for this provision have effect of so relieving us.

7. This Guarantee will not be discharged due to a change in the constitution of the Bank or the Contractor.

8. This Guarantee shall be governed by and construed under the Laws of Bangladesh.

9. We ..... Bank lastly undertake not to revoke this Guarantee except with the previous consent of the Owner in writing.

10. This Guarantee shall be valid up to the issuance of the Performance Certificate under this Agreement unless expressly extended in writing by ..... Bank on demand by the Owner. Notwithstanding anything contained hereinbefore, our liability against this Guarantee is restricted to BDT..... (Taka ..... only), which is equivalent to 10% of the Contract Price and it will remain in force till the date of issuance of the Performance Certificate. Unless a claim or demand in writing

is made against us under this Guarantee before the issuance of Performance Certificate in accordance with Sub-clause 11.9 of the Agreement, all your rights under the said Guarantee shall be forfeited and we shall be relieved and discharged from all liability hereunder, irrespective of whether or not this guarantee is returned to us on the date of the issuance of the Performance Certificate by the Engineer.

11. The provisions of this Guarantee shall not impart rights enforceable by any person, firm or organization not a party to this Guarantee or a permitted successor or assignee of a party.

(Authorized Signatory)

Example Form of Advance Payment Guarantee

We, [Please insert the name of the Bank] (hereinafter referred to as the "Bank") have been informed that [Please insert the name of the Contractor] (hereinafter called "the Contractor") has entered into an agreement dated [insert: date] with Aga Khan Foundation (hereinafter referred to as the "Owner"), for the provision of Design, Supply, Installation, Testing and Commissioning of Substation (hereinafter referred to as the "Contract").

Furthermore, the Bank understands that, according to Sub-Clause 14.2 the conditions of the Contract, an advance payment in the sum of [amount in words] ([amount in figures]) is to be made by the Owner against an advance payment guarantee.

At the request of the Contractor, the Bank has agreed to provide a bank guarantee in the amount of BDT..... (Taka ..... only), equivalent to .....% of the Contract Price on behalf of the Contractor favouring the Owner for the reimbursement of the advance payment made to the Contractor in accordance with the Contract (hereinafter referred to as the "Guarantee").

The Bank hereby unconditionally and irrevocably guarantees to pay to the Owner at its first written demand any amount(s) not exceeding in total the amount above mentioned BDT ..... (Taka..... only), equivalent to .....% of the Contract Price and the bank shall not object to the payment for any reason.

The Bank unconditionally and irrevocably acknowledges and covenants that the first written demand for payment submitted by the Owner will be sufficient and conclusive evidence of the obligation of the Bank to make the payment of the amount(s) requested.

<u>The following terms and conditions will also apply to the Guarantee</u>:

1. The Guarantee shall come into force from the date of receipt of the advance payment by the Contractor.
2. The Bank shall pay any amount(s) to the Owner, within five days after receiving the demand for payment.
3. The Bank shall not transfer to any third party its rights and obligations with respect to this Guarantee without prior consent by the Owner.
4. The Guarantee will be regulated and interpreted in accordance with the Laws of Bangladesh.
5. The Guarantee amount shall be reduced by the repayment amount stated in the progressive payment certificates certified by the Engineer.
6. This Guarantee will not be discharged due to a change in the constitution of the Bank or the Contractor.
7. The provisions of this Guarantee shall not impart rights enforceable by any person, firm or organization not a party to this Guarantee or a permitted successor or assignee of a party.

<u>This Guarantee shall be effective and shall in no way be affected by</u>:

1. Any alteration to the nature or extent of the Works as defined in the Contract; or;
2. Any allowance of time, forbearance, indulgence or other concession granted to the Contractor under the Contract or any other compromise or settlement of any dispute between the parties to the Contract.
3. Any dispute or disputes raised by the Contractor in any suit or proceeding pending before any Court or tribunal relating thereto, the Bank's liability under this present being absolute and unequivocal.

This Guarantee shall be valid up to the full amortization or repayment of the advance payment or upon its full reimbursement by the Bank at the Owner's request, and shall thereafter be returned to the Bank. Unless a claim or demand is received by the Bank from the Owner on or before the full repayment of the advance payment, it shall be presumed that you have no claim against the Bank under this Guarantee and accordingly, we shall be deemed to be released and discharged from all liabilities hereunder irrespective whether or not the Guarantee is returned to us.

Authorized Signatory

The Aga Khan Academy Dhaka
Bashundhara, Dhaka
Schedule of Item of works & Technical Specification for Supply, Installation, Testing & Commissioning of (01 Unit) 1250 kVA Sub-Station:

1. Dropout Fuse (3 Nos.)- 1 Set

Supply and installation of best quality concern load supply authority approved standard type outdoor 11 KV, 50 Hz, 20 KA drop out fuse complete with mounting accessories etc. It will finally be approved by DESCO.

Rated Voltage (Nominal)	: 11 KV
Rated Maximum Voltage	: 15 KV
Rated Frequency	: 50 Hz.
Rated Current RMS	: 100 A
Interrupting Current RMS	: 10 KA
Dry 1 Minute	: 28 KV
Wet 10 Second	: 24 KV
Origin	: Pakistan/Brazil standard

2. Lightning Arrestor (3 Nos.)- 1 Set

Supply and installation of best quality concern load supply authority approved standard outdoor type 11 KV 50 Hz. 100 A (10 KA) 75 KV BIL Lighting Arrestor complete with mounting accessories etc. (3 Nos. in a set). It will finally be approved by DESCO.

Rated Voltage (RMS)	: 9 KV
Rated System Voltage	: 12 KV
Minimum Spark Over (RMS)	: 14 KV
Maximum Spark Over (RMS)	: 40 KV
Maximum Impulse Spark (Crest)	: 45 KV
Withstand Voltage	: 9 KV
Dry 1 Minute	: 28 KV
Wet 10 Second	: 24 KV
Discharge 33 KV (Crest)	: 5 KA
Impulse Current Withstand	: 55 KA
Origin	: Pakistan/Brazil standard

3. 11KV SINGLE PHASE (150A) AUTOMATIC VOLTAGE REGULATOR (AVR) WITH BY-PASS SWITCH: 1 Set = 3 Nos

Supply of the Voltage Regulator furnished under the specification shall be designed and manufactured under the latest NEMA and ANSI C57.12.31 standards covering the complete unit or any part thereof. The Automatic Voltage Regulator (AVR) shall be **Type Tested** 150A, 11KV 3-phase/ 6.35KV, single phase, in sealed tank design with Control M-6200A Controller, Sub-base, Ground clamps and standard accessories and as per following technical data/specification as (Origin / Make : EU/UK/USA).

1. Manufacturer	: Cooper/Siemens/Howard
2. Model	: To be mention
3. Type & No of Phase	: Automatic step type, single phase
4. Rated Current	: 150A

5. Rated Voltage & Frequency : 6.35KV single phase/11KV 3-phase, 50Hz
6. Rated Range of Regulation : ±10% in 32 steps or 0.625% each
7. Rated Output : 96 KVA
8. External Control Voltage Test Input : 240 Volts AC
9. Cooling : Self
10. Sealed Tank Design : Yes
11. BIL : 95KV
12. Colour of the Voltage regulator : ANSI-70, Gray
13.Provision for 240V, 50Hz test input voltage for testing of the voltage regulator with external power supply : Yes
14. Micro processor based control panel : Yes
15. Welded sub-base for the voltage regulator : Yes
16. Non-PCB oil for the Voltage regulator : Yes
17. Accuracy Class of regulator control panel : Cass 1
18. Installation : Indoor/Outdoor

Spares for above Voltage Regulator Consisting of :
6 Nos- Fuses
2 Nos- Position Indicator Glass
2 Nos- Oil Sight Gauge Glass
1 No- 208KVA, 6.35 KV, 1-Phase, 50Hz, Voltage Regulator
1 No- Digital control panel.
Surge protective device : 10KA, 9KV of MOV-type surge arrester complete.

Brand: Cooper/Siemens/Howard
Origin: EU/USA/UK or equivalent.

4. 11 KV H.T Switch Gear with 630A Type Tested VCB (withdrawable type)- 1 Set

Supply and installation of following 11 KV 3 Phase 50 Hz. Indoor type high tension switchgear complete with VCB and **630** Amps hard drawn electrolytic copper busbars 1 no. voltmeter & 1 no. Ammeter of adequate ranges both with selector switch, 1 No. of panel heater with auto thermostat control switch, manual ON/OFF push button switch ON/OFF and TRIP indicators including following components in 14 SWG sheet steel clad dust and vermin proof, free standing floor mounting, epoxy resin powder coat painted cabinet. Components must comply with NEMA/VDE/JIS/BSS standard. Withdrawable type VCB shall be type tested. **This panel should be suitable for BBT/ XLPE cable Connection.**

- 1 Set manually operated 11 KV 1000 A earth switch.
- 1 Set 11 KV 3-Phase, 50 Hz. Trolley mounted fully withdrawable type Vacuum complete with motor operated spring charged stored energy mechanism for auto tripping 12/24/48/110 volts D.C (with & without battery)
- 2 Nos. of 11 KV cast resin insulated, dry type, double pole PT having ratio 11/0.11 burden 50 VA class 0.5 M5 for metering & second core for protection.
- 3 Nos. of 11 KV cast resin insulated, dry type, double pole CT (150/5/5A) of adequate ratio. (Compatible with the transformer capacity) burden 10-15 VA first core class 0.5 M5 for metering & second core of class 10P10 for protection.
- 1 No. Triple pole solid state microprocessor control IDMT relay with 2 elements one for over current & short circuit protection & one for earth fault protection.

- 1 No. 415 V, 6A (10KA) TP MCB for PT secondary protection.

The switchgear panel shall have to be furnished with audible alarm and auxiliary relays for sensing signals from operation of H.T switchgear.

Brand: Legrand, ABB, Schneider or equivalent.
Origin: EU/USA/UK or equivalent.

5. 11 KV H.T Switch Gear with 630A Type Tested VCB (withdrawable type) -2 Sets

Supply and installation of following 11 KV 3 Phase 50 Hz. Indoor type high tension switchgear complete with VCB and **630** Amps hard drawn electrolytic copper busbars 1 no. voltmeter & 1 no. Ammeter of adequate ranges both with selector switch, 1 No. of panel heater with auto thermostat control switch, manual ON/OFF push button switch ON/OFF and TRIP indicators including following components in 14 SWG sheet steel clad dust and vermin proof, free standing floor mounting, epoxy resin powder coat painted cabinet. Components must comply with NEMA/VDE/JIS/BSS standard. Withdrawable type VCB shall be type tested. **This panel should be suitable for BBT/ XLPE cable Connection.**

- 1 Set manually operated 11 KV 1000 A earth switch.
- 1 Set 11 KV 3-Phase, 50 Hz. Trolley mounted fully withdrawable type Vacuum complete with motor operated spring charged stored energy mechanism for auto tripping 12/24/48/110 volts D.C (with & without battery)
- 2 Nos. of 11 KV cast resin insulated, dry type, double pole PT having ratio 11/0.11 burden 50 VA class 0.5 M5 for metering & second core for protection.
- 3 Nos. of 11 KV cast resin insulated, dry type, double pole CT (80/5/5A) of adequate ratio. (Compatible with the transformer capacity) burden 10-15 VA first core class 0.5 M5 for metering & second core of class 10P10 for protection.
- 1 No. Triple pole solid state microprocessor control IDMT relay with 2 elements one for over current & short circuit protection & one for earth fault protection.
- 1 No. 415 V, 6A (10KA) TP MCB for PT secondary protection.

The switchgear panel shall have to be furnished with audible alarm and auxiliary relays for sensing signals from operation of H.T switchgear.

Brand: Legrand, ABB, Schneider or equivalent.
Origin: EU/USA/UK or equivalent.

6. 1250 KVA 11/0.415KV Transformer- 1 Set

Supply of 1250 KVA ,50Hz, 3-P dry type cast resin insulated power distribution Transformer shall be Type Tested according to IEC 726, VDE 0532 etc. and of following specifications:

Technical Data:

Insulation Class	: Cast Resin
Cooling System	: ONAN
Ambient Temperature	: 40˚C
Climatic Condition	: Normal
Nominal Power	: 1250KVA
Number of Phases	: 3

Frequency : 50 Hz
Primary Voltage : 11000V
Tapping Adjustment : ±2x2.5%
No Load Secondary Voltage (V): 415 + n
Vector Group : Dyn11
No Load Losses : 2600 W (Maximum)
Load Losses (75 ôC) : 10200 W (Maximum)
Load Losses (120 ôC) : 11500 W (Maximum)
No Load Current : 0.9%
Impedance Voltage : 6.0%
Efficiency: 4/4 cosfi 1 : 98.99%
4/4 cosfi 0.8: 98.74%
Voltage Drop: 4/4 cosfi 1 : 0.993%
4/4 cosfi 0.8: 4.310%
Thermal Insulation Class : F / F
Primary Insulation Level (KV) : 12-28-75
Secondary Insulation Level (KV) : 1.1-3
Winding Material (HV/LV) : AL / AL
Core Temperature Rise : 100 ô C
Windings Temperature Rise : 100 / 100 ô C
Sound Pressure Level : 61 dBA (Maximum)
Sound Power Level : 76 dBA (Maximum)
Amb./ Climatic / Fire beh. Classes : E3-C2-F1
Partial discharge : <=10 PC
Accessories included in the offer:
3 Nos-HV bushings with screw of connection and M12 nut
4 Nos-LV terminals with drilled bars, positioned in the upper part of transformer
1 No- Rating Plate
2 Nos- Stainless steel earthing terminals (UNEL 06131 - 71)
3 Nos- PT100 Thermo resistance, placed on LV windings
1 No. Digital Temperature monitoring device
1 No- Thermo resistance terminal Box
Brand: Schneider / Siemens or equivalent.
Origin: EU/USA/UK or equivalent.

7. 2500A LT-1 Switch Gear (Type Tested)- 1 Set

Supply & installation of 415 V, 3 Phase 50 Hz. indoor type normal and emergency 2500A low tension (LT) switchgear of following specification complete with one voltmeter 0-600V with selector switch & three nos. ammeter of adequate rating indicator lamps and following components assembled in 14 SWG sheet steel clad, dust & vermin proof, free standing floor mounting epoxy resin powder coat painted cabinet. Suitable for cable/BBT connection at breaker top and bottom entry and exit as per SLD. (ACB/MCCB's in LT panel shall be Type Tested Assembly cubical type switchgear according to NEMA/VDE/IEC/BSS standard. **This panel should be suitable for BBT/ XLPE / PVC cable Connection.**

Incoming:

- 1 No. 2500A TP, 65 KA, withdrawable Type, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit releases.
- 1 Set 415 V 4000 Amp TPN & PE hard drawn electrolytic copper busbars.

- 3 Nos. Current Transformer, ratio: 2500/5A with suitable accuracy and burden
- 1 Nos. digital Multifunction meter, 0-2500A
- 3 Nos. Phase Indicating Lamp (ON/OFF /Trip)

Outgoing:

- 1 Nos. 2500 A TP, 65 KA, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit releases for ATS.
- 1 Nos. 1600 A TP, 65 KA, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit releases for MDB.
- 1 Nos. 1250 A TP, 50 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for PFI.
- 1 Nos. 80 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for SPD.
- 1 Nos. 80 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for spare.
- 1 Nos. 2500 A TP, 65 KA, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit protection and inter-locking facilities of Bus-coupler & Incomer ACB of Tr-1 & Tr.2(Future extn.) etc. complete in all respect as per technical specification & instruction of the Engineer-in-charge.
- 1 Nos. 125 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for space.
- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for space.

Brand: Legrand, ABB, Schneider, Siemens or equivalent.
Origin: EU/USA/UK or equivalent.

8. 2500A ELT Switch Gear (Type Tested)- 1 Set

Supply & installation of 415 V, 3 Phase 50 Hz. indoor type normal and emergency 2500A low tension (ELT) switchgear of following specification complete with one voltmeter 0-600V with selector switch & three nos. ammeter of adequate rating indicator lamps and following components assembled in 14 SWG sheet steel clad, dust & vermin proof, free standing floor mounting epoxy resin powder coat painted cabinet. Suitable for cable/BBT connection at breaker top and bottom entry and exit as per SLD. (ACB/MCCB's in ELT panel shall be Type Tested Assembly cubical type switchgear according to NEMA/VDE/IEC/BSS standard. **This panel should be suitable for BBT/ XLPE cable Connection.**

Incoming:

- 1 No. 2500A TP, 65 KA, withdrawable Type, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit releases.
- 1 Set 415 V 3000 Amp TPN & PE hard drawn electrolytic copper busbars.
- 3 Nos. Current Transformer, ratio: 2500/5A with suitable accuracy and burden
- 1 Nos. digital multi-function meter, 0-2500A
- 3 Nos. Phase Indicating Lamp (ON/OFF /Trip)

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Outgoing:

- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for facility & maintenance
- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for common & sports.
- 1 Nos. 1600 A TP, 66 KA, TP ACB with adjustable thermal overload and adjustable magnetic short-circuit releases for academy school & nursery.
- 1 Nos. 400 A TP, 50 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for MYP Residential-01.
- 1 Nos. 400 A TP, 50 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for MYP Residential-02.
- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for MYP Residential-03.
- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for MYP Residential-04.
- 1 Nos. 160 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for DP Residential-01.
- 1 Nos. 160 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for DP Residential-02.
- 1 Nos. 200 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for External lighting.
- 1 Nos. 320 A TP, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for solar panel.
- 1 Nos. 125 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for space.
- 1 Nos. 80 A TP, 25 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases for space.

Brand: Legrand, ABB, Schneider, Siemens or equivalent.
Origin: EU/USA/UK or equivalent

9. Automatic Power Factor Improvement Plant (PFI)Type Tested:

Supply & installation of 750 KVAR 415V, 3 Phase, 50 Hz. Power factor improvement (PFI) plant complete with following TP busbars and earth blocks microprocessor controlled Auto power factor correction relay with digital PF reading display, capacitor bank, contractor, fuse, ON indicators for every stage of capacitor bank except directly connected one. Type Tested Assembly in with 14 SWG sheet steel clad dust & vermin proof, free standing, floor mounting, epoxy resin powder coat painted, magnetic contractors, capacitor bank, relays, discharge resister, fuse etc. shall comply NEMA/VDE/IEC/BSS standard and shall be manufactured tested.

PFI Capacity : 750 KVAR

- 3 Nos. 415V 1250A hard drawn electrolytic copper busbar.
- 5 Nos. 100 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.
- 3 Nos. 50 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.
- 3 Nos. 25 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.
- 1 Nos. 12.5 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.
- 1 Nos. 12.5 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister (Direct)

- 1 No. Automatic Power Factor Correction Relay. (12 Steps)

Origin: EU/USA/UK or equivalent.

- 12 Nos. TP Magnetic Contactors of adequate rating.

Origin: EU/USA/UK or equivalent.

- 13 Nos. MCCB with base of adequate rating
- 1 No. AUTO/MANUAL selector switch
- 8 Nos. Indicating Lamps
- 1 Set of Control fuses.

10. ATS (Auto Transfer Switch): 2500A

Supply, installation, testing and commissioning of Type Tested **2500A (Auto Transfer Switch)** having the following protection **Phase Failure, Phase Sequence, Over and Under Voltage.** The Contractor must inspect the site and technical specification and supply everything accordingly to complete the system the bidder must submit drawing along with the offer otherwise the offer will be rejected. The rate should be quoted inclusive of all required material for this item as per specification, drawing and instruction of the Engineer-in-charge. The brand shall be Siemens/Schneider/renowned brand from EU countries, KEMA/ASTA/ASEFA Certified. **This panel should be suitable for BBT/ XLPE cable Connection.**

11. HT Cable: (Client's scope)

Sl. No.	Type	Quantity
1	3c×185 mm^2 HT XLPE	As per site measurement

Providing and laying of three core H.T underground cable of the following sizes (PVC insulated with field limiting conducting layers over each individual conductor and core, copper shields also over each individual core, PVC inner sheath over common covering of cores, flat steel wire armoring, helical steel laming type XLPE of BSB/BRB/SQ cables In underground trench (914mm D × 457mm W) on 152 mm sand bed and covering the cables with necessary brick with plaster and neat cement finish protection mending the damaged good by refilling trench with proper compaction as per direction of the Engineer-in-charge.
Manufacturer: BSB/BRB /SQ Cables.

12. Earthing for Sub-Station (04 Sets): (Equivalent resistance should be below 01 ohm)

EARTHING BLOCK

Supply, installation, testing and commissioning of **04 Nos. copper earthing** block with required nos. of ¼" hole for ECC connection. Size-254mm × 10mm. One for transformer neutral and another for all substation equipment's ECC connections.

EARTH ELECTRODE

Supply and installation of 120 rft length 1 ½'' dia GI Pipe buried up to the depth of 120 rft as required in the damp soil including 1 SWG copper wire from bottom of GI Pipe up to ground.

EARTHING LEAD

Supply and laying of earthing lead, 1 SWG copper wire through 1″ dia PVC pipe (if required) from earthing block to earth electrode.

EARTH CONTINUITY CONDUCTOR

Installation of 1 SWG copper earth continuity conductor running from the bodies of substation equipment to the earthing block.

13. Bus-bar Trunking System (BBT) Type Tested:

Supply, installation, testing and commissioning of **Type Tested** 2500A TPN Copper / Aluminum bus bar trunking system with Bi Metal contact confirming to IEC-439 & ISO:9001 of the following the technical specification, drawings and instruction of the Engineer-in-charge. The Contractor must inspect the site for determining the BBT route, check the guideline enclosed drawing, technical specification and supply everything accordingly to complete the bus bar trunking system to make the system complete. The bidder must submit drawing along with the offer otherwise the offer will be rejected. The rate should be quoted inclusive of all required material for this item as per specification, drawing and instruction of the Engineer-in-charge. The brand of BBT shall be Siemens/Schneider/renowned brand from EU countries., KEMA/ASTA/ASEFA Certified.

- 2500A TPN - Transformer-1 secondary terminals to LT-1 panel (BBT-1).
- 2500A TPN LT-1 to ATS (BBT-3),
- 2500A TPN ATS to Main ELT (BBT-4)
- 2500A TPN Gen. Synch. panel to ATS (BBT-5)

All BBT numbering as per Single Line Diagram & length will be finalized as per site measurement.

13. HEAT SHRINKABLE KIT (11 KV) WITH 3Cx185rm (4 sets):

Supply & installation of Heat Shrinkable Kit for HT terminal protection.

TECHNICAL SPECIFICATION

1 11 KV HT SWITCHGEAR (VCB) : (INCOMING) Set 1

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

Technical Data :

Service voltage	: 12KV
Rated voltage	: 11KV
Rated current of circuit breaker	: 630A

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 :

630A,12KV,20KA ,50Hz triple pole , Withdrawable type vaccum circuit breaker with motor/manually operated spring charged mechanism with tripping coil & auxiliary contacts. — Set 1

Brand : ABB

Cast resin insulated dry type 11KV double core current transformer, ratio : 150/5/5A. — Set 3

Core 1 : 10VA, class 0.5M5 for metering
Core 2 : 15VA, class 10P10 for protection

Dry type cast resin insulated potential transformer for open delta connection. — Set 3

Ratio : 11000/110V
Burden : 50VA, Class : 0.5

Protection,Measurement and control unit :

Microprocessor based Protection unit having — Set 1
- Overcurrent (ANSI code 50/51) &
- Earth fault (50N/51N) protection

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

Brand : ABB

Ampere Meter (0-150A) with Selector Switch	Set	1
Voltmeter (0-15)KV with Selector Switch	Set	1
6A TP MCB for PT secondary protection.	Set	1
ON/OFF Push button.	Set	1
Indicating Lamp	Pcs	5
Panel Heater with thermostat	Set	1

2 **11 KV HT SWITCHGEAR (VCB) (OUTGOING) :** Set 1

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

Technical Data :

Service voltage	: 12KV
Rated voltage	: 11KV
Rated current of circuit breaker	: 630A

Insulation level :

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

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

The switchgear panels shall comprise of :

630A,12KV,20KA ,50Hz triple pole , withdrwable type vaccum circuit breaker with motor/manually operated spring charged mechanism with tripping coil & auxiliary contacts. Set 1

Brand : ABB

Cast resin insulated dry type 11KV double core current transformer, ratio : 150/5/5A. Set 3

Core 1 : 10VA, class 0.5M5 for metering
Core 2 : 15VA, class 10P10 for protection

Dry type cast resin insulated potential transformer for open delta connection. Set 3

Ratio : 11000/110V
Burden : 50VA, Class : 0.5

Protection,Measurement and control unit :

Microprocessor based Protection unit having Set 1
- Overcurrent (ANSI code 50/51) &
- Earth fault (50N/51N) protection

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

Brand : ABB

Ampere Meter (0-150A) with Selector Switch	Set	1
Voltmeter (0-15)KV with Selector Switch	Set	1
6A TP MCB for PT secondary protection.	Set	1
ON/OFF Push button.	Set	1
Indicating Lamp	Pcs	5
Panel Heater with thermostat	Set	1

3	**2500A LT-1 Switch Gear**	Set	1

Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type LT Switchgear Panel with 4000A Hard Drawn Cu Busbar.
Set of components required for the manufacture of Panel comprising :-

INCOMING :

2500A, 65kA, TP DO type ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge, Under Voltage release.	Pcs	1
2500/5A Current Transformer 10/5VA, Class-1	Pcs	3
Phase Indicating Lamp (Red, Yellow & Blue)	Pcs	3
Digital Multifunction meter	Pcs	1
ON & OFF Push button	Pcs	2
CB ON OFF TRIP Indication lamp	Pcs	3
1x6A,TP MCB for the protection of control circuit	Pcs	1

OUTGOING :

2500A, 65kA, TP ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge for ATS	Pcs	1
1600A, 65kA, TP ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge for MDB	Pcs	1
1250A,TP,50KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection for PFI	Pcs	1
80A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for SPD	Pcs	1
80A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for Spare.	Pcs	1
125A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for Spare.	Pcs	1
200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for Spare.	Pcs	1
2500A, 65kA, TP Fixed type ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge, Under Voltage release.	Pcs	1

BUSBAR Details
4000A TPN+1/2E Common Busbar
3x2500A Terminal Busbar
1x1600A Terminal Busbar
1x1250A Terminal Busbar
1x200A Terminal Busbar
ENCLOSURE As Standard.
Connection Accessories .

Breaker Brand : Schneider Electric
Ameter & Voltmeter Brand : MultiSpan

4	**2500A ELT Switch Gear**	Set	1
	Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type ELT Switchgear Panel with 3000A Hard Drawn Cu Busbar. Set of components required for the manufacture of Panel comprising :- **INCOMING :** 2500A, 65kA, TP DO type ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge, Under Voltage release.	Pcs	1
	2500/5A Current Transformer 10/5VA, Class-1	Pcs	3
	Phase Indicating Lamp (Red, Yellow & Blue)	Pcs	3
	Digital Multifunction meter	Pcs	1
	ON & OFF Push button	Pcs	2
	CB ON OFF TRIP Indication lamp	Pcs	3
	1x6A,TP MCB for the protection of control circuit	Pcs	1
	OUTGOING : 1600A, 65kA, TP Fixed type ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge, Under Voltage release for academy school & nursery.	Pcs	1
	200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection for facility & maintenance.	Pcs	1
	200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for common & sports.	Pcs	1
	400A,TP,50KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for MYP Residential-01.	Pcs	1
	400A,TP,50KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for MYP Residential-02.	Pcs	1
	200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for MYP Residential-03.	Pcs	1
	200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for MYP Residential-04.	Pcs	1
	160A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for DP Residential-01.	Pcs	1
	160A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for DP Residential-02.	Pcs	1
	200A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for External lighting.	Pcs	1
	320A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for solar panel.	Pcs	1
	125A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for **SPACE.**	Pcs	1
	80A,TP,36KA,415V,50Hz, MCCB with having adjustable overcurrent & magnetic short circuit protection, for **SPACE.**	Pcs	1

BUSBAR Details
3000A TPN+1/2E Common Busbar
1x2500A Terminal Busbar
1x1600A Terminal Busbar
1x1250A Terminal Busbar
2x400A Terminal Busbar
1x320A Terminal Busbar
5x200A Terminal Busbar
ENCLOSURE As Standard.
Connection Accessories .

Breaker Brand : Schneider Electric
Ameter & Voltmeter Brand : MultiSpan

5	**750kVAR auto/manual PFI plant**	Set	1
	Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type PFI Panel with 1250A Hard Drawn Copper Busbar.		
	Set of components required for the manufacture of PFI Panel comprising :-		
	5X100(25X4) kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing compact PF capacitors bank with discharge resistor.	Nos.	20
	3X50(25X2)kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing . compact PF capacitors bank with discharge resistor.	Nos.	6
	3X25(25X1)kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing . compact PF capacitors bank with discharge resistor.	Nos.	3
	1X12.5kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing compact PF capacitors bank with discharge resistor.	Nos.	1
	1X 12.5kVAR,415V,50 Hz, 3 Phase, normal duty type, self healing . compact PF capacitors bank with discharge resistor.(Direct)	Nos.	1
	Magnetic Contactor for 50Kvar capacitor.	Nos	13
	Magnetic Contactor for 25Kvar capacitor.	Nos	3
	Magnetic Contactor for 12.5Kvar capacitor.	Nos	1
	100A,TP, MCCB	Nos	13
	63A,TP, MCCB	Nos	3
	32A,TP, MCB	Nos	2
	Inidication Lamp	Nos	14
	10A TP MCB	Nos	2
	2A SP MCB	Nos	14
	14 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	No	1
	2000A TP Common Busbar		
	Enclosure As Standard.		
	General Accessories.		

Brand
Capacitor Bank: Epcos
Magnetic Contactor : Hyundai
Circuit Breaker; Brand : Schneider
12 Steps Reactive Power Regulator : Mikro

6	**ATS Panel**	Set	1

Sheet steel clad powder coated (14 & 16SWG), dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, Indoor type ATS Panel with 2500A Hard Drawn Cu Busbar.
Set of components required for the manufacture of Panel comprising :-

INCOMING :

2500A, 65kA, TP Fixed type ACB with closing solenoid and store -energy spring charged operating mechanism and solid state microprocessor controlled adjustable thermal overload and short-circuit releases with auxiliary contacts,closing coil, Gear motor for Spring Charge, Under Voltage release.	Pcs	2
2500/5A Current Transformer 10/5VA, Class-1	Pcs	6
Phase Indicating Lamp (Red, Yellow & Blue)	Pcs	6
Digital Multifunction meter	Pcs	2
ON & OFF Push button	Pcs	2
CB ON OFF TRIP Indication lamp	Pcs	6
1x6A,TP MCB for the protection of control circuit	Pcs	3
Electrical Interlock	Job	1

BUSBAR Details
2500A TPN+1/2E Common Busbar
3x2500A Terminal Busbar
ENCLOSURE As Standard.
Connection Accessories .

Breaker Brand : Schneider Electric

Aga Khan Academy, Dhaka
Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments
Technical Specification

Sl.	Particulars	Agreed Specification
1.0	**Section 1 : 11KV Lightning Arrester**	
1.0	**11KV Lightning Arrester**	
1.1	Brand:	Energy/ETC/Equivalent.
1.2	Country of Origin:	Global standard .
1.3	Country of Manufacturing:	Global.
2.0	**Section 2 : 11KV Drop Out Fuse**	
	Drop out Fuse (DOF) having capacity of adequate rating (3 nos in 1 set). Rated voltage (nominal) : 11kV Rated max.voltage : 12kV Bill: 75kV	
2.1	Brand:	Energy/ETC/Equivalent.
2.2	Country of Origin	Global standard .
2.3	Country of Manufacturing	Global.
3.0	**Section 3 : 11KV Type Tested (TTA) Automatic Voltage Regulator (AVR) with Bypass**	
	150 Amps, 50Hz, 11kV each phase oil immersed Type Tested (TTA) AVR having voltage regulation ± 15% in 32 steps of 5/8% each, basic insulation level 95 KV, (3 nos in 1 set).	
3.1	Type Tested Certification	Yes
3.2	Brand:	Howard
3.3	Country of Origin:	USA
3.4	Country of Manufacturing:	USA
4.0	**Section 4 : 11 kV Non - Type Tested (NTTA) H.T. Switchgear Panel**	
	11 KV, 3-phase, 50 Hz high tension switchgear. 630A Vacuum Circuit Breaker. 630 Amps hard-drawn electrolytic copper bus-bars. 1 No 0 - 15 KV range voltmeter. 1 no. ammeter of adequate range both with selector switch.	
4.1	Type Tested Certification	Yes
4.2	Brand:	ABB
4.3	Country of Origin:	Italy
4.4	Country of Manufacturer:	Italy
5.0	**Section 5 : 11 kV Dry Type Cast Resin Type Tested (TTA) Transformer**	
5.1	**Capacity: 1250 KVA**	
5.2	No load loss: 2600 watts (Maximum)	2350 W
5.3	Full load loss (for 75°): 10200 watts (Maximum)	11500 W
5.4	Full load loss (for 120°): 11500 watts (Maximum)	13200 W
5.5	Brand:	SEA
5.6	Country of Manufacturer:	ITALY
5.7	Country of Origin:	ITALY
5.8	Type Tested Certification	Yes
6.0	**Section 6 : Non - Type Tested (NTTA) LT Switchgear 1**	
6.1	Type Tested Assembly with 14 SWG sheet steel clad dust & vermin proof .Panel shall be NEMA/VDE/IEC/BSS standard and shall be manufacturer tested.	Comply
6.2	3B Panel Construction Type Tested for whole panel.	Bangladesh Standard
6.3	Type Tested Certification	No
6.4	2500A LT Switchgear-1 (All ACB & MCCB will TP Adjustable). Incoming ACB 2500A TP ,65KA Withdraw able Type.	Comply
6.5	Brand:	Schneider Electric
6.6	Country of Manufacturer:	Global
6.7	Country of Origin:	France
6.8	**Bus Coupler**	
	2500A (65KA), TP ACB Adjustable Type	Schneider Electric
7.0	**Section 7 : Non - Type Tested (NTTA) Power Factor Improvement (PFI) Plant**	
7.1	Type Tested Assembly with 14 SWG sheet steel clad dust & vermin proof .Panel shall be NEMA/VDE/IEC/BSS standard and shall be manufacturer tested.	Non Type Tested
7.2	Country of Manufacturer:	Bangladesh
7.3	Country of Origin:	Bangladesh
7.4	Type Tested Certification	No
8.0	Relay	
8.1	Brand:	Mikro
8.2	Country of Origin:	Malaysia
9.0	**Capacitor Bank**	
	Brand:	EPCOS
	Country of Origin:	INDIA
10.0	**Magnetic Conductor**	
	Brand:	Hyundai
	Country of Origin:	Korea

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CROSS WORLD POWER LIMITED Dhaka

AGA KHAN FOUNDATION DHAKA BANGLADESH

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Ensuring Power Since 1983

Aga Khan Academy, Dhaka

Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

Details - Non Type Tested

PART A: FOREIGN PART

Sl	Description of item	Unit	Qty	Rate (EURO)	Amount (EURO)	Rate (USD)	Amount (USD)
1	Supply of 11KV Single phase (150A) AVR with BY-PASS switch [1 Set = 3 Nos] as per Technical Specification and Drawings.	1	SET		-	42,800.00	42,800.00
2	Supply of 1250 KVA 11/0.415KV Transformer as per Technical Specification and Drawings.	1	SET	16,300.00	16,300.00		-
3	Supply of Bus-bar Trunking System-BBT (Non Type Tested) as per Technical Specification and Drawings.	38.3	M		-	400.00	15,320.00
4	Any Other required Items to be imported [Contractor to list down below]				-		
	a) Supply of Feed Unit	8	Pc		-	428.30	3,426.40
	b) Supply of Elbow	17	Pc		-	571.35	9,712.95
			Subtotal-A		16,300.00		71,259.35
	Subtotal-A (BDT) [1 USD = 84 BDT, 1 EURO = 92 BDT, 1 GBP=109 BDT]						7,485,385.40
	Subtotal-A (in USD						$ 89,111.73

PART B: LOCAL PART

Sl	Description of item	Unit	Qty	Rate (BDT)	Amount (BDT)	Rate (BDT)	Amount (BDT)
1	Supply of 11 KV H.T Switch Gear with 630A NonType Tested VCB (withdraw able type) as per Technical Specification and Drawings.	1	SET			630,000.00	630,000.00
2	Supply of 11 KV H.T Switch Gear with 630A Non Type Tested VCB (withdraw able type) as per Technical Specification and Drawings.	2	SET			630,000.00	1,260,000.00
3	Supply of 2500A LT-1 Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,424,990.00	1,424,990.00
4	Supply of 2500A ELT Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,140,659.00	1,140,659.00
5	Supply of Automatic Power Factor Improvement Plant-PFI (Non Type Tested) as per Technical Specification and Drawings.	1	SET		-	727,236.00	727,236.00
6	Supply of ATS (Auto Transfer Switch): 2500A as per Technical Specification and Drawings.	1	SET		-	859,007.00	859,007.00
7	Supply of Dropout Fuse (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
8	Supply of Lighting Arrestor (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
9	Supply of Earthing including boring, copper, pit, etc for Sub-Station as per Technical Specification and Drawings.	4	Set		-	45,000.00	180,000.00
10	Supply of Heat shrink kit (11 KV) with 3Cx185rm (4 sets) as per Technical Specification and Drawings.	4	Set		-	1,500.00	6,000.00
11	Supply of HT Meter as per Technical Specification and Drawings.	1	Set		-	230,000.00	230,000.00
12	Supply of HT and LT Cables	1	Job		-	Employer's Scope	-
13	Installation, testing & commissioning of full system including laying of Employer's supplied cables	1	LS		-	963,855.00	963,855.00
14	Training period [Contractor to provide minimum 1 technical person to be based at site for 8 hours/each day for Training and Maintenance purpose]	1	Month			19,000.00	19,000.00
15	Supply of BY Pass switch	1	LS		-	400,000.00	400,000.00
16	Pre-shipment Visit by 3rd Party	1	LS		-	360,000.00	360,000.00
			Subtotal-B (BDT)		-		8,210,747.00
			Subtotal-B (USD)				$ 97,746.99

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Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

PART C: Miscellaneous Cost

1	Provisional Cost for Loading from Port, Transport and unloading at Site	1	LS		-	100,000.00	100,000.00
2	Provisional Cost for Bank Charges for L/C, Marine Insurance, All Government charges such as Telex, Stamp & Postage, FCC, Global Tax, all Port Charges, Port Clearance and C&F Agent commission.	1	LS		-	150,000.00	150,000.00
3	Provisional Cost for Advance Payment Gurantee (APG)	1	LS		-	50,000.00	50,000.00
4	Provisional Cost for Performance Security Gurantee (PG)	1	LS		-	50,000.00	50,000.00
5	Provisional Cost for Insurances	1	LS		-	150,000.00	150,000.00
			Subtotal-C (BDT)		-		500,000.00
			Subtotal-C (USD)				$ 5,952.38

PART D: GOVERNMENT APPROVAL

Sl	Description of item	Unit	Qty	Rate (BDT)	Amount (BDT)	Rate (BDT)	Amount (BDT)
1	ELB Certificate and HT meter approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
2	Solar Permission from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
3	Micelleneous Govt. Approval (If required)	1	LS		-	Ref to proposed PS	Ref to proposed PS
4	HT Meter test and final approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
	PS for Authority Approvals						500,000.00
			Subtotal-D (BDT)		-		500,000.00
			Subtotal-D (USD)				$ 5,952.38
			Total Cost Including AIT in BDT				16,696,132.40
			Total Cost Including AIT in USD				$ 198,763.48

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Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

Summary - Non Type Tested

Sl	Description of item	Amount (USD)	Amount (BDT)
A	Supply of Materials under LC	$ 89,112	7,485,385
B	Supply of Local Materials & Installation cost inc Pre-Shipment Inspection Cost	$ 97,747	8,210,747
C	PS for L/C, Loading-Unloading, Transportation, APG, PG, Insurance, etc.	$ 5,952	500,000
D	PS for Authority Approvals	$ 5,952	500,000
	Total Amount for Non Type Tested	**$ 198,763**	**16,696,132**
	Lead Time	a. Supply of both Foreign and Local Materials: 150 days from the commencement date b. Installation: 30 days (180 days from the commencement date)	
	Warranty Period	24 months from the date of commissioning.	
	After Sales Service	24 months free after sales service from the date of commissioning.	
	Payment Terms	Foreign Part: 100% by LC Local Part a. 30% Advance against BG b. 40% of local part upon supply of local materials at site subject to Engineer's acceptance, less; 100% recovery of advance payment. c. 50% of local part after completion of Installation, Testing, Commissioning, connection and Taking Over Certificate being issued by the Employer. d. 10% retention of Local Part shall be paid by the Employer to the Contractor within 14 days after the expiry of Defect Liability Period (24 months)	

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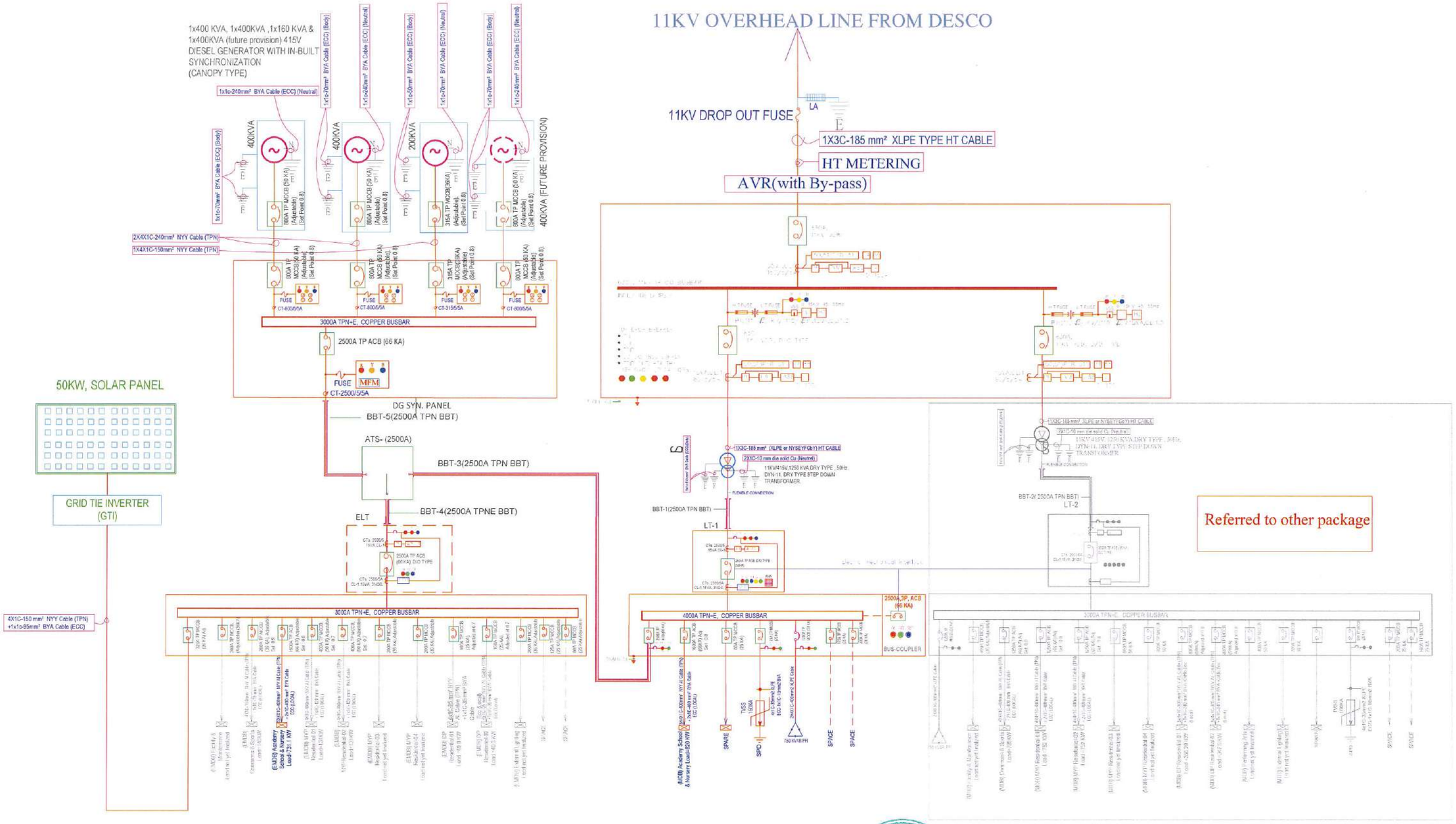

ELECTRICAL SINGLE LINE DIAGRAM (SLD)

NOTE:
1. Architectural Layout should be confirmed by Architect or Site Engineer prior to work.
2. MEP Layout to be reviewed by Architect and foreign MEP Consultant.
3. Contractor/ Vendors to submit the site installation/shop drawings & get approval from Owner/ Consultant prior to any site installation.

0m 10m

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Design & Checked By
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B.Sc. Electrical
Reg. 35741
Design Team
TASNOVA EHSAN BIPASHA
MAMATA RANI BARMAN

Amendment	Date
A-Draft CD Submission	
B-1st CD Submission	
C-Final CD Submission	
D-New Update For Final	30-01-2020

Job/Drawing No: 1743-MEP-01 — Package 0 — Amendment: D

AKA-SLD

ELECTRICAL SINGLE LINE DIAGRAM (SLD) FOR AGA KHAN

Date: 15/05/2018
Drawn: eMcS

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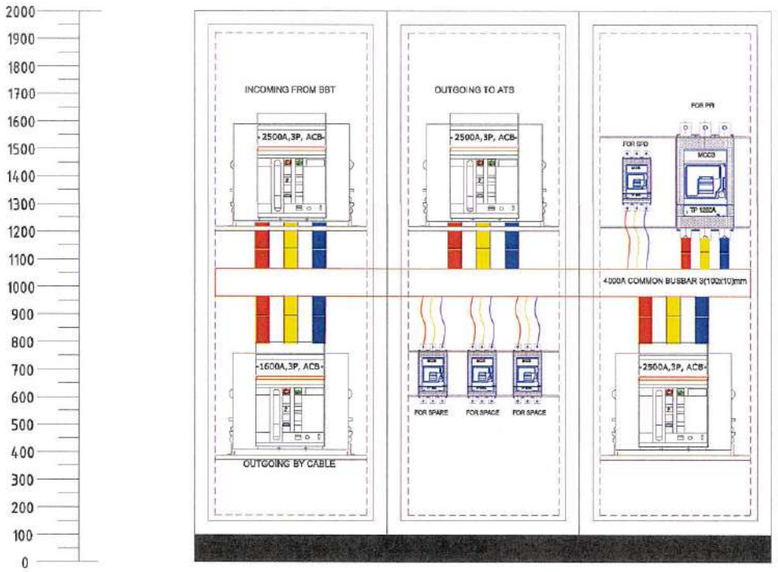

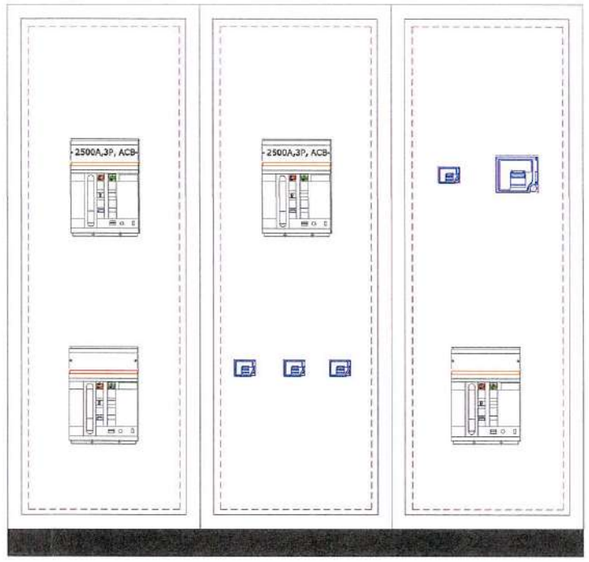

FRONT VIEW

SIDE VIEW

BREAKER:
2500A TP ACB-3
1600A TP ACB-1
1250A TP MCCB-1
80A TP MCCB-1(SPD)
80A TP MCCB-1(SPARE)
200A TP MCCB-1(SPACE)
125A TP MCCB-1(SPACE)

MCB	MINIATURE CIRCUIT BREAKER	REVISION NO. 1:	01.10.2020	APPROVED BY:		PAPER SIZE:	A3	TITLE:	LT PANEL GA DRAWING
MCCB	MOULDED CASE CIRCUIT BREAKER	REVISION NO. 2:		CHECKED BY:	TAZ UDDIN	DWG NO:	01		
ACB	AIR CIRCUIT BREAKER	REVISION NO. 3:		DESIGN BY:	SHAWRIN TRISHA	SCALE:	NTS	CLIENT:	AGA KHAN
RCCB	RESIDUAL CURRENT CIRCUIT BREAKER								

Cross-world
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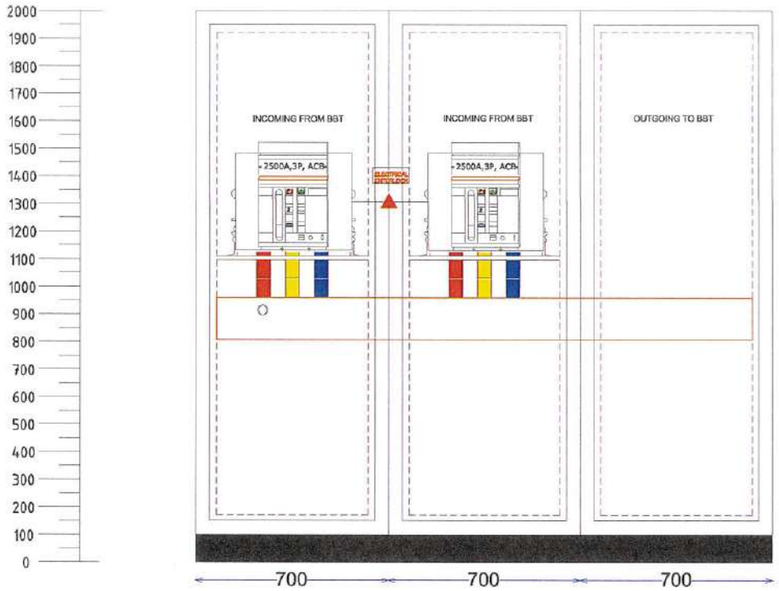
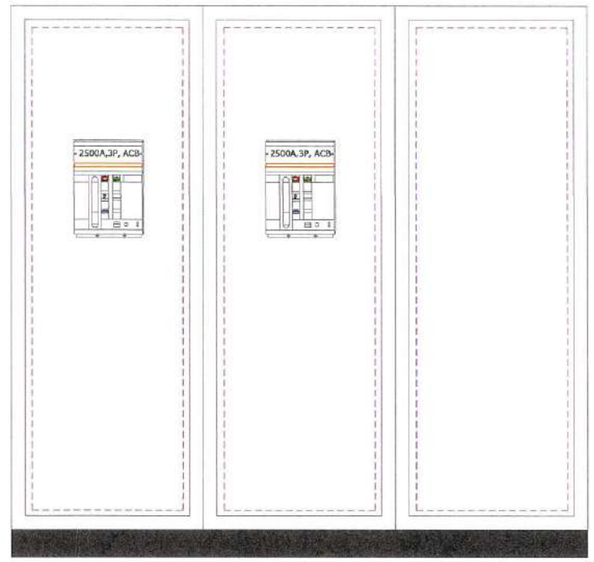
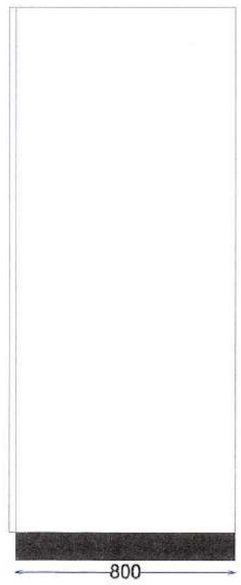


INNER FRONT VIEW



FALSE PLATE VIEW

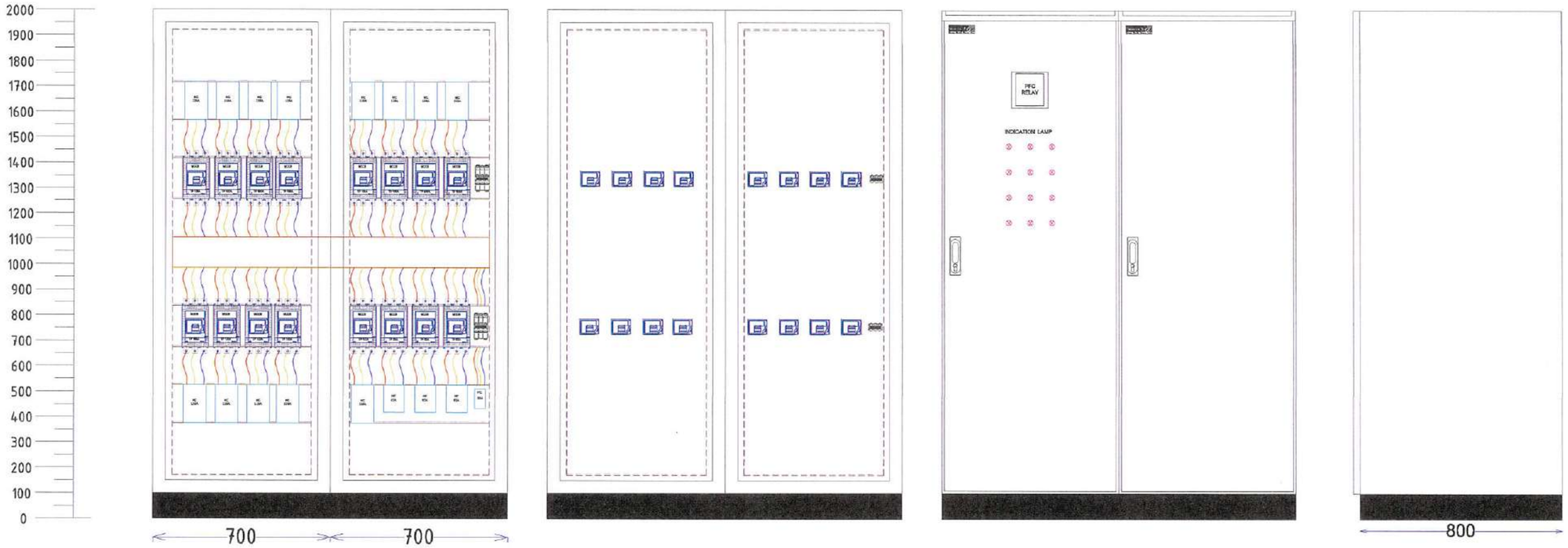
FRONT VIEW



SIDE VIEW

BREAKER:
2500A TP ACB-2

MCB	MINIATURE CIRCUIT BREAKER	REVISION NO. 1:	01.10.2020	APPROVED BY:		PAPER SIZE:	A3	TITLE:	ATS PANEL GA DRAWING	Cross-world	
MCCB	MOULDED CASE CIRCUIT BREAKER	REVISION NO. 2:		CHECKED BY:	TAZ UDDIN	DWG NO:	01			Cross World Power Ltd. Plot 1/B, Road 90,Gulshan2, Dhaka 1212, Bangladesh Tel:(+8802)8811858, 9891442 Fax:(+8802)5881 5160 Web Site: www.cross-world.com	
ACB	AIR CIRCUIT BREAKER							CLIENT:	AGA KHAN		
RCCB	RESIDUAL CURRENT CIRCUIT BREAKER	REVISION NO. 3:		DESIGN BY:	SHAWRIN TRISHA	SCALE:	NTS				



INNER FRONT VIEW

FALSE PLATE VIEW

FRONT VIEW

SIDE VIEW

BREAKER:	
100A TP MCCB-13	50KVAR MC-13
63A TP MCCB-3	25KVAR MC-3
32A TP MCB-2	12.5KVAR MC-1

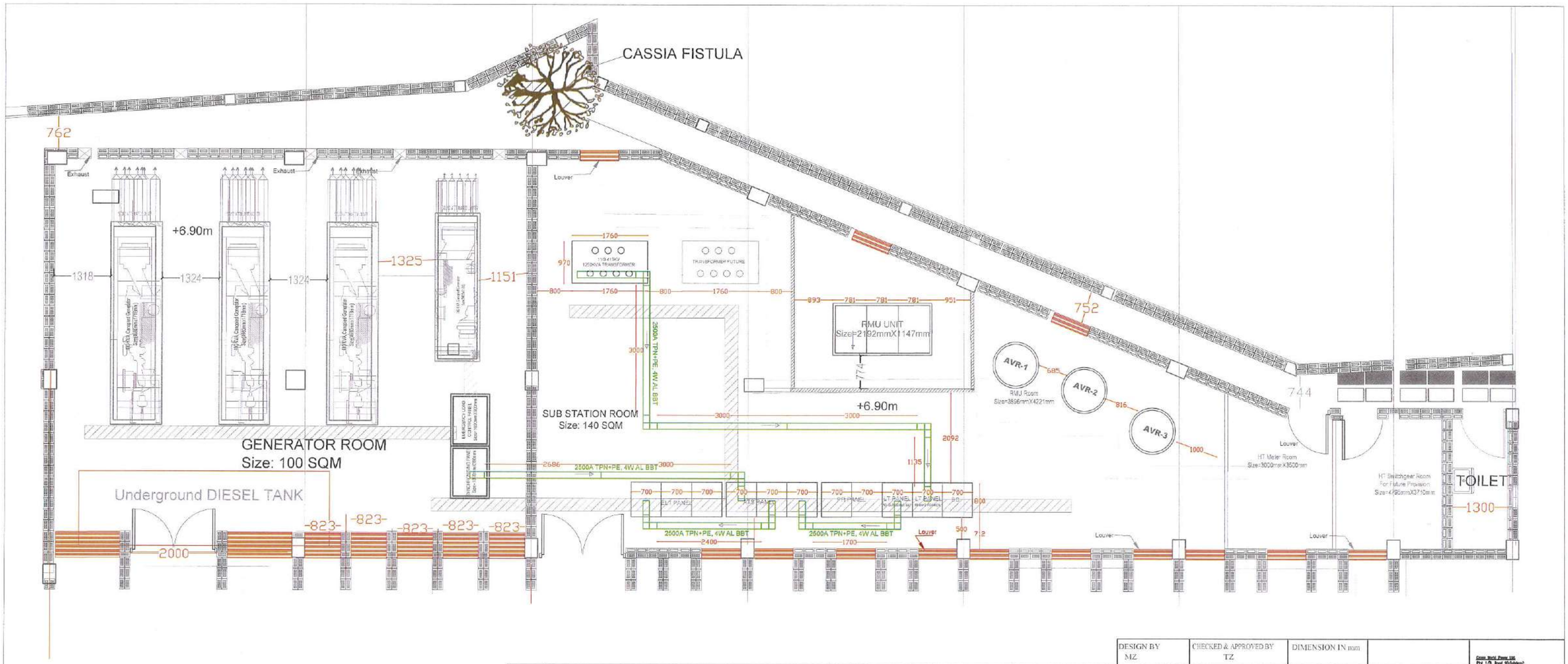
MCB	MINIATURE CIRCUIT BREAKER
MCCB	MOULDED CASE CIRCUIT BREAKER
ACB	AIR CIRCUIT BREAKER
RCCB	RESIDUAL CURRENT CIRCUIT BREAKER

REVISION NO. 1:	01.10.2020	APPROVED BY:		PAPER SIZE:	A3
REVISION NO. 2:		CHECKED BY:	TAZ UDDIN	DWG NO:	01
REVISION NO. 3:		DESIGN BY:	SHAWRIN TRISHA	SCALE:	NTS

TITLE: 750KVAR AUTO/MANUAL PFI PLANT

CLIENT: AGA KHAN

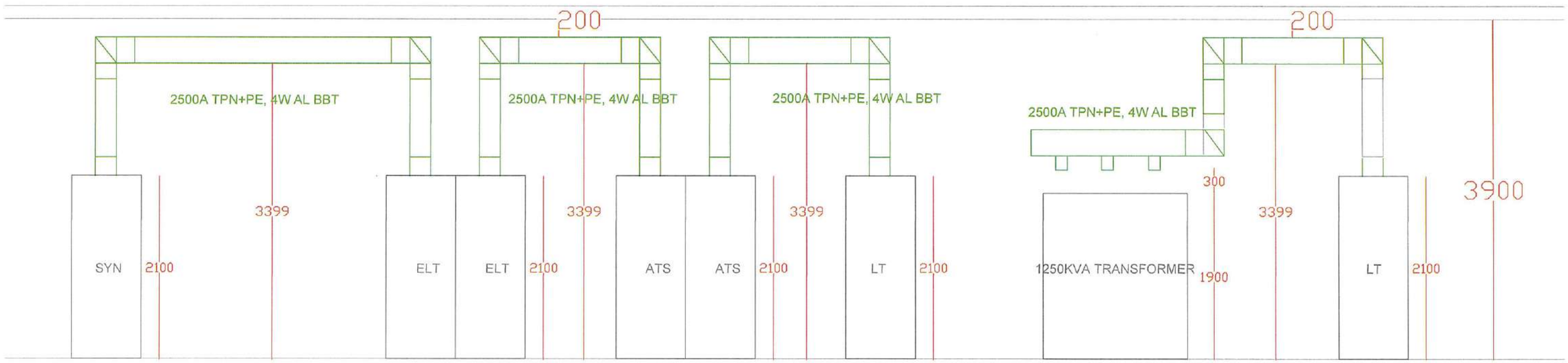
Cross world
Cross World Power Ltd.
Plot 1/B, Road 90,Gulshan2,
Dhaka 1212, Bangladesh
Tel:(+8802)8811858, 9891442
Fax:(+8802)5881 5160
Web Site: www.cross-world.com



					DESIGN BY MZ	CHECKED & APPROVED BY TZ	DIMENSION IN mm		Cross World Power Ltd. Plot 1/B, Road 90,Gulshan2, Dhaka 1212, Bangladesh Tel:(+8802)8811804, 8801442 Fax:(+8802)8818205 Web Site: www.cross-world.com
		EGL	EXISTING GROUND LEVEL		TITLE: SUBSTATION LAYOUT PLAN				
	-	FL	FLOOR LEVEL						
	-	NCF	NET CONCRETE FINISH		PAPER SIZE A3	SCALE NTS	CLIENT -AGA KHAN		DWG NO-
ISSUE	ALTERATION DESCRIPTION	RCC	REINFORCEMENT CEMENT CONCRETE	DATE-05.10.2020					

AGA KHAN EDUCATION SERVICE BANGLADESH

CROSS WORLD POWER LIMITED



VERTICAL VIEW OF BBT

					DESIGN BY MZ	CHECKED & APPROVED BY TZ	DIMENSION IN mm		Cross World Power Ltd. Plot 1/7L Road 90,Gulshan2, Dhaka 1212, Bangladesh Tel:(+8802)8811858, 9891442 Fax:(+8802)8816205 Web Site: www.cross-world.com
		EGL	EXISTING GROUND LEVEL		TITLE: VERTICAL VIEW OF 2500A BBT .				
	-	FL	FLOOR LEVEL						
	-	NCF	NET CONCRETE FINISH		PAPER SIZE A3	SCALE NTS	CLIENT -AGA KHAN.		DWG NO-
ISSUE	ALTERATION DESCRIPTION	RCC	REINFORCEMENT CEMENT CONCRETE	DATE-05.10.2020					

AGA KHAN EDUCATION SERVICE BANGLADESH

CROSS WORLD POWER LIMITED

Tanmoy Sakar

From:	H.M. Shahidullah | Deltadesh (Pvt.) Ltd. <shahidullah@deltadesh.com>
Sent:	Monday, April 19, 2021 2:05 PM
To:	Tanmoy Sakar; Harunor Rashid
Cc:	ANAM, Rafiqul; DON, Tenison; Md. Habibur Rahman | Deltadesh (Pvt.) Ltd.
Subject:	Re: Revised Price_Aga Khan Academy_Cross-World Power Ltd._18062020@27820
Attachments:	Contract Agreement.zip

Dear Tanmoy Bhai,

Refers to trail mail, we have got final go ahead signal from our client to proceed this issue further.

Please see the attached draft full set of Contract documents and confirm your acceptance in the return mail.

Also, please print the price offer file (both tabs) in your letter head pad and send the signed scanned copy by the same return mail.

Should you have any query, please feel free to contact us.

Best Regards

H.M. Shahidullah | Manager-Project Coordination

Deltadesh (Pvt.) Ltd.

Road-79, House-1A. Apt-1C, Gulshan-2, Dhaka -1212, Bangladesh
Web: www.deltadesh.com
Mobile: +88-01717-746809

On Sun, Oct 11, 2020 at 10:43 AM Tanmoy Sakar <tanmoy@cross-world.com> wrote:

Dear Sir

Greetings from Cross World Power Limited !!!!

Thank you for your email. We are highly interested to work with your Project. So we will try to meet your target price. In attachment offer file we give a better price.

I am available to elaborate on any queries that you may have.

Thanks & regards,

CROSS WORLD POWER LTD.

Cross-world
Ensuring Power Since 1983

Aga Khan Academy, Dhaka
Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments
Details - Non Type Tested

PART A: FOREIGN PART

Sl	Description of item	Unit	Qty	Rate (EURO)	Amount (EURO)	Rate (USD)	Amount (USD)
1	Supply of 11KV Single phase (150A) AVR with BY-PASS switch [1 Set = 3 Nos] as per Technical Specification and Drawings.	1	SET		-	42,800.00	42,800.00
2	Supply of 1250 KVA 11/0.415KV Transformer as per Technical Specification and Drawings.	1	SET	16,300.00	16,300.00		-
3	Supply of Bus-bar Trunking System-BBT (Non Type Tested) as per Technical Specification and Drawings.	38.3	M		-	400.00	15,320.00
4	Any Other required Items to be imported [Contractor to list down below]				-		
	a) Supply of Feed Unit	8	Pc		-	428.30	3,426.40
	b) Supply of Elbow	17	Pc		-	571.35	9,712.95
			Subtotal-A		16,300.00		71,259.35
	Subtotal-A (BDT) [1 USD = 84 BDT, 1 EURO = 92 BDT, 1 GBP=109 BDT]						**7,485,385.40**
	Subtotal-A (in USD						**$ 89,111.73**

PART B: LOCAL PART

Sl	Description of item	Unit	Qty	Rate (BDT)	Amount (BDT)	Rate (BDT)	Amount (BDT)
1	Supply of 11 KV H.T Switch Gear with 630A NonType Tested VCB (withdraw able type) as per Technical Specification and Drawings.	1	SET			630,000.00	630,000.00
2	Supply of 11 KV H.T Switch Gear with 630A Non Type Tested VCB (withdraw able type) as per Technical Specification and Drawings.	2	SET			630,000.00	1,260,000.00
3	Supply of 2500A LT-1 Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,424,990.00	1,424,990.00
4	Supply of 2500A ELT Switch Gear (Non Type Tested) as per Technical Specification and Drawings.	1	SET			1,140,659.00	1,140,659.00
5	Supply of Automatic Power Factor Improvement Plant-PFI (Non Type Tested) as per Technical Specification and Drawings.	1	SET		-	727,236.00	727,236.00
6	Supply of ATS (Auto Transfer Switch): 2500A as per Technical Specification and Drawings.	1	SET		-	859,007.00	859,007.00
7	Supply of Dropout Fuse (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
8	Supply of Lighting Arrestor (3 Nos.) as per Technical Specification and Drawings.	1	Set		-	5,000.00	5,000.00
9	Supply of Earthing including boring, copper, pit, etc for Sub-Station as per Technical Specification and Drawings.	4	Set		-	45,000.00	180,000.00
10	Supply of Heat shrink kit (11 KV) with 3Cx185rm (4 sets) as per Technical Specification and Drawings.	4	Set		-	1,500.00	6,000.00
11	Supply of HT Meter as per Technical Specification and Drawings.	1	Set		-	230,000.00	230,000.00
12	Supply of HT and LT Cables	1	Job		-	Employer's Scope	-
13	Installation, testing & commissioning of full system including laying of Employer's supplied cables	1	LS		-	963,855.00	963,855.00
14	Training period [Contractor to provide minimum 1 technical person to be based at site for 8 hours/each day for Training and Maintenance purpose]	1	Month			19,000.00	19,000.00
15	Supply of BY Pass switch	1	LS		-	400,000.00	400,000.00
16	Pre-shipment Visit by 3rd Party	1	LS		-	360,000.00	360,000.00
			Subtotal-B (BDT)		-		**8,210,747.00**
			Subtotal-B (USD)				**$ 97,746.99**

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Plot - 1/B, Road - 90, Gulshan -2, Dhaka-1212, Bangladesh | Phone: (880 2) 58811858, 9891442 | Fax: (880 2) 58815160 | E-mail: info@cross-world.com

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Cross-world
Ensuring Power Since 1983

Aga Khan Academy, Dhaka

Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

PART C: Miscellaneous Cost							
1	Provisional Cost for Loading from Port, Transport and unloading at Site	1	LS		-	100,000.00	100,000.00
2	Provisional Cost for Bank Charges for L/C, Marine Insurance, All Government charges such as Telex, Stamp & Postage, FCC, Global Tax, all Port Charges, Port Clearance and C&F Agent commission.	1	LS		-	150,000.00	150,000.00
3	Provisional Cost for Advance Payment Gurantee (APG)	1	LS		-	50,000.00	50,000.00
4	Provisional Cost for Performance Security Gurantee (PG)	1	LS		-	50,000.00	50,000.00
5	Provisional Cost for Insurances	1	LS		-	150,000.00	150,000.00
	Subtotal-C (BDT)				-		**500,000.00**
	Subtotal-C (USD)						**$ 5,952.38**
PART D: GOVERNMENT APPROVAL							
Sl	**Description of item**	**Unit**	**Qty**	**Rate (BDT)**	**Amount (BDT)**	**Rate (BDT)**	**Amount (BDT)**
1	ELB Certificate and HT meter approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
2	Solar Permission from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
3	Micelleneous Govt. Approval (If required)	1	LS		-	Ref to proposed PS	Ref to proposed PS
4	HT Meter test and final approval from DESCO	1	LS		-	Ref to proposed PS	Ref to proposed PS
	PS for Authority Approvals						500,000.00
	Subtotal-D (BDT)				-		**500,000.00**
	Subtotal-D (USD)						**$ 5,952.38**
	Total Cost Including AIT in BDT						**16,696,132.40**
	Total Cost Including AIT in USD						**$ 198,763.48**

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Aga Khan Academy, Dhaka

Design, Supply, Installation, Testing & Commissioning of 1250 KVA substation Equipments

Summary - Non Type Tested

Sl	Description of item	Amount (USD)	Amount (BDT)
A	Supply of Materials under LC	$ 89,112	7,485,385
B	Supply of Local Materials & Installation cost inc Pre-Shipment Inspection Cost	$ 97,747	8,210,747
C	PS for L/C, Loading-Unloading, Transportation, APG, PG, Insurance, etc.	$ 5,952	500,000
D	PS for Authority Approvals	$ 5,952	500,000
	Total Amount for Non Type Tested	**$ 198,763**	**16,696,132**
	Lead Time	a. Supply of both Foreign and Local Materials: 150 days from the commencement date b. Installation: 30 days (180 days from the commencement date)	
	Warranty Period	24 months from the date of commissioning.	
	After Sales Service	24 months free after sales service from the date of commissioning.	
	Payment Terms	Foreign Part: 100% by LC Local Part a. 30% Advance against BG b. 40% of local part upon supply of local materials at site subject to Engineer's acceptance, less; 100% recovery of advance payment. c. 50% of local part after completion of Installation, Testing, Commissioning, connection and Taking Over Certificate being issued by the Employer. d. 10% retention of Local Part shall be paid by the Employer to the Contractor within 14 days after the expiry of Defect Liability Period (24 months)	

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TECHNICAL SPECIFICATION OF BUSBAR TRUNKING SYSTEM:

Low impedance, low reactance, factory assembled, type tested, totally enclosed, non-ventilated Contacts of plug-in tap off box shall be plated by Silver bus way system conforming to following data:

Brand	**: EAE**
Origin	:Turkey
Standard	:IEC 61439-6 & EN 60439-2 KEMA/DEKRA, UL, Siesmic Tested ISO 9001
Rated current	:2500A
Max. ambient temperature	:40° Deg.C
Degree of protection	:IP 55
Colour	:Approved Colour (as IEC)
Rated insulation voltage	:1000V
Max. Rated Operating voltage	:1000V
Frequency	:50Hz
Max. ambient temperature	:40° Deg.C
Busbar Material	:AL Conductors are with Bimetallic coated at joints by Silver
Conductors Insulation 130 deg C	:Epoxy Coated +Mylar (Class-B, 130 deg C)
Enclosure Material	:Aluminium
Earthing	:As Enclosure
Neutral	:100%(4W)
No of live conductors	:TPN
Special features	:Single bolt clamping & sandwich principle
Circuir Breaker	:Proposed ABB brand, Italy

SL NO	PRODUCT DESCRIPTION	QTY	UNIT
A	**TR-1 SECONDARY TERMINALS TO LT-1 PANEL (BBT-1)**		
1	KXA 27504-B-TR71-2500 A-BOLT-ON-TRANSFORMER CONNECTION-4W	1.0	PCS
2	KXA 27504-B-R-2500 A-BOLT-ON-RIGHT ELBOW-4W	1.0	PCS
3	KXA 27504-B-L-2500 A-BOLT-ON-LEFT ELBOW-4W	1.0	PCS
4	KXA 27504-B-STD-2500 A-BOLT-ON-STANDARD LENGTH-4W	9.0	M
5	KXA 27504-B-X-2500 A-BOLT-ON-SPECIAL LENGTH-4W	4.0	M
	(X=2000, Quantity=2)		
6	KXA 27504-B-P10-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
B	**LT-1 TO ATS PANEL (BBT-3)**		
1	KXA 27504-B-P11-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
2	KXA 27504-B-R-2500 A-BOLT-ON-RIGHT ELBOW-4W	2.0	PCS
3	KXA 27504-B-L-2500 A-BOLT-ON-LEFT ELBOW-4W	2.0	PCS
4	KXA 27504-B-STD-2500 A-BOLT-ON-STANDARD LENGTH-4W	15.0	M
5	KXA 27504-B-X-2500 A-BOLT-ON-SPECIAL LENGTH-4W	6.0	M
	(X=2000, Quantity=3)		
6	KXA 27504-B-P10-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
C	**ATS TO MAIN ELT (BBT-4)**		
1	KXA 27504-B-P11-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
2	KXA 27504-B-R-2500 A-BOLT-ON-RIGHT ELBOW-4W	2.0	PCS
3	KXA 27504-B-L-2500 A-BOLT-ON-LEFT ELBOW-4W	2.0	PCS
4	KXA 27504-B-STD-2500 A-BOLT-ON-STANDARD LENGTH-4W	27.0	M
5	KXA 27504-B-X-2500 A-BOLT-ON-SPECIAL LENGTH-4W	10.0	M
	(X=2500, Quantity=4)		
6	KXA 27504-B-P10-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
D	**GEN. SYNCH. PANEL TO ATS (BBT-5)**		
1	KXA 27504-B-P11-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS
2	KXA 27504-B-R-2500 A-BOLT-ON-RIGHT ELBOW-4W	2.0	PCS
3	KXA 27504-B-L-2500 A-BOLT-ON-LEFT ELBOW-4W	2.0	PCS
4	KXA 27504-B-STD-2500 A-BOLT-ON-STANDARD LENGTH-4W	21.0	M
5	KXA 27504-B-X-2500 A-BOLT-ON-SPECIAL LENGTH-4W	8.0	M
	(X=2000, Quantity=4)		
6	KXA 27504-B-P10-2500 A-BOLT-ON-PANEL CONNECTION-4W	1.0	PCS