

“শেখ হাসিনার উদ্যোগ, ঘরে ঘরে বিদ্যুৎ”



**ASHUGANJ POWER STATION COMPANY LTD.**

**TENDER DOCUMENT**

**FOR**

**CONSTRUCTION OF ASHUGANJ 100MW  
HFO POWER PLANT PROJECT.**

**VOLUME 1 OF 2**

**Tender Reference No. APSCL/100MWHFO/PD/IFT/2017/01**

**23 NOVEMBER-2017**

INSTRUCTION TO TENDERERS,  
GENERAL CONDITIONS &  
SPECIAL CONDITIONS

# **Ashuganj Power Station Company Ltd.**

## **CONSTRUCTION OF ASHUGANJ 100 MW HFO POWER PLANT PROJECT.**

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NOT FOR SUBMISSION

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# Chapter I

## Instructions to Tenderers

# Conditions of Rejection of a Tender

The Tender Shall be rejected and shall not be considered for evaluation if the Tenderers do not submit/comply/fulfil any one of the followings and among other terms & conditions as mentioned in this tender document:

- a) (i) Compliance of Tender submission of proposal as stated in clause 2.0, Instruction of Tenderers, Vol. 1 of 2 of Tender document.  
  
(ii) Authorization letter for the authorized signatory person to sign the Tender as stated in clause 2.0, Instruction to Tenderers, Vol. 1 of 2 of Tender document.
- b) The Tender shall be irrevocable and valid for a period of 180 calendar days from the next day of the set date of submission of tenders.
- c) (i) Certificate from the end user for Tenderer's experience (As stated in clause 5.1, Instruction to Tenderers Vol. 1 of 2 of tender document).  
  
(ii) Certificates of satisfactory operation of at least two years from the end user of offered Engine generating set; step-up Transformers and HV & MV circuit breakers. The end user must be an electric generation utility of total at least 50 MW capacity of offered type of engine generating set, step-up Transformers and HV & MV circuit breakers. The End user must not be from the Manufacturer's country.  
  
(iii) Compliance of Tenderer's financial qualification as stated in clause 5.3, Vol. 1 of 2, Instruction to Tenderers of Tender document.  
  
(iv) Compliance of joint venture agreement (As stated in clause 5.4, Instruction to Tenderers, Vol. 1 of 2 of Tender Document).
- d) The duration of the initial commercial operation from the Effective Date of Contract must be less than or equal to 270 (Two hundred seventy) days.
- e) The Tender security must be of US Dollar **1,650,000 (USD One Million six hundred fifty thousand)** or BDT **135,000,000 (BDT One hundred thirty five million)** and the tender security will remain valid for 208 (180+28) days.
- f) The tenderer must completely fill up for each item of the price schedule 1 to 4 of Appendix 3 of Instruction of Tenderers, volume 1 of 2 of this tender document without deviating the price schedule format.
- g) The Tenderer must offer a power plant having net output at high voltage site not less than 90 MW at following site conditions:
  - a. Ambient temperature : 35°C (35 Degree Centigrade)
  - b. Relative humidity : 98%
  - c. Barometric pressure : 1.013 bar
  - d. Generation voltage : 11,000 V
  - e. Power factor : 0.8 lagging at alternator terminal
  - f. Frequency : 50 Hz
  - g. Operating fuel : Heavy Fuel Oil (HFO)

- h) The Tenderer must furnish all data through filling up Guarantee schedule-A of volume 2 of 2 (Part-B) of this tender document.
- i) The tenderer must submit the authorization letters from the manufacturer stating the commitment of the manufacturer to supply engine generating sets, step up transformer, HV and LV circuit breakers of the project.

The offered engine generating sets, HV and LV circuit breakers must be manufactured in European Union or G-8 countries.

- j) The rated output capacity of an individual engine generating set must not be less than 14 (Fourteen) MW. All the supply sets must of the same capacity and identical.
- k) The tenderer must fill up for each item of schedule B-16 (Environmental Impact) of volume 2 of 2 (Part-B) of this tender document. It must comply the environmental standard (Emission standard, Noise level and Effluent standard etc.) as per Section 20.6 of volume 2 of 2 (Part-A).
- l) Heat rate (KJ/kWh) at alternator terminal of individual Engine at site condition must not be more than 8200 kJ/kWh. OEM heat rate curve and OEM declaration for corresponding Engine model must have to be submitted with the offer. After calculation, If it is found that the offered heat rate is unachievable then the respective Tender shall be rejected for further evaluation.
- m) Compliance of Terms and procedures of payment as stated in GCC Clause 61.0, Vol. 1 of 2 of Tender Document.
- n) Compliance of LD (Liquated Damages) provisions as stated in GCC clause 45.0, Instruction of Tenderers, Vol. 1 of 2 of Tender document.
- o) The Tenderer must accept correction of arithmetic errors.

## 1.0 INVITATION

In accordance with the Invitation for Tender, Ashuganj Power Station Company Ltd. (herein after called **APSCL**) will receive the sealed Proposals submitted as specified in Tender Documents for the design, manufacture, inspection, testing, delivery to the Site, installation, testing & commissioning, performance test and related civil and building works including necessary auxiliaries and ancillaries on Turnkey basis of "**Ashuganj 100 (±10%) MW HFO Power Plant Project**" consisting of identical units, each of not less than **14 MW** of engine generators (heavy duty, low/medium speed, 4 stroke, HFO FIRED engine) at Ashuganj, Brahmanbaria, Bangladesh having net output of 100 (±10%) MW at Site conditions of 35°C, 1.013 bar, 98% R.H. and 2 (two) years warranty period.

## 2.0 SUBMISSION OF PROPOSAL

This Tender is invited as International Open Tender following Single Stage Two Envelope procedures. The Tenderer shall have to submit the Technical proposal and financial proposal in two envelopes single stage in accordance with the requirements of the Tender document including addenda (If any).

The Tenderer shall enclose the original and each copy of the Technical Proposal in separate sealed envelopes, duly marking the envelopes as "TECHNICAL PROPOSAL" and "ORIGINAL" and "COPY", as appropriate. These envelopes containing the original and the copies shall then be enclosed in one single envelope duly marking the envelope as "TECHNICAL PROPOSAL".

The Tenderer shall enclose the original of the Financial Proposal in one single separate sealed envelope, duly marking the envelope as "FINANCIAL PROPOSAL" and with a warning "DO NOT OPEN WITH THE TECHNICAL PROPOSAL."

The two envelopes shall then be enclosed in one single outer envelope. The inner and outer envelopes shall:

- (a) bear the name and address of the Tenderer;
- (b) bear the name of the Proposal "**Ashuganj 100 MW HFO Power Plant**" and bear a statement "**DO NOT OPEN BEFORE ...**" **The date for opening as specified in the Tender Notice and as well as amendment.**

The original and six copies of the Technical Proposal and the original Financial Proposal shall be submitted within the date and time as mentioned in the tender notice and as well as amendment in the following manner:

Specimen form of the Proposals [Form of Tender] is furnished in Appendix- 2A & 2B.

The Proposals shall be addressed and submitted to:

**Project Director**  
**Ashuganj 100 MW HFO Power Plant**  
**Ashuganj, Brahmanbaria, Bangladesh.**

The Proposals shall be submitted preferably by hand on or before the closing date and time. The Proposals shall be submitted in sealed envelopes bearing the above address and clearly labeled to show the name of the Tenderer. Any Tender received by the APSCL after the deadline for submission of Tenders in accordance with Tender document with any addendum shall be declared late, will be rejected, and returned unopened to the Tenderer.

The original and all copies of the Tender shall be typed or written in indelible ink and shall be sealed & signed by the Tenderer or a person or persons duly authorised to bind the Tenderer to the Contract. ***The letter of authorisation shall be indicated by the written Power-of-Attorney accompanying the Tender.*** The person or persons signing the Tender shall initial all pages of the Tender. The Tender shall contain no inter-lineation, erasures or overwriting except as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialled by the person or persons signing the Tender.

The Tender Document comprises of the following parts:

- a) Volume 1 of 2      Chapter 1 : Instruction to Tenderers  
                                 Chapter 2 : General Conditions  
                                 Chapter 3 : Special Conditions
- b) Volume 2 of 2      (Part A) : Technical Requirements  
                                 (Part B) : Technical Particulars [Schedules & Data Sheets]

***The Tenderer shall also submit one set of Tender Documents sealed & signed by the authorised person.***

The Tenderer shall bear all costs associated with the preparation and submission of its Tender and site visit. Ashuganj Power Station Company Ltd. will in no case be responsible or liable for those costs.

A Tenderer may withdraw, modify or substitute its Tender after it has been submitted by sending a written notice, duly signed by the original authorised representative, in accordance (except that no copies of the withdrawal notice are required). The written notice must be:

- (a) In the case of a WITHDRAWAL, be submitted in a sealed envelope, clearly identifying the relevant Tender and marked WITHDRAWAL;
- (b) In the case of a MODIFICATION or SUBSTITUTION, be submitted in a sealed envelope, with the relevant modified or substituted documents, clearly identifying the relevant Tender and marked MODIFICATION or SUBSTITUTION as applicable; and

Be received by the APSCL prior to the deadline prescribed for submission of Tenders. Tenders requested to be withdrawn in accordance with above shall be returned unopened to the Tenderers, only after the Tender opening. No Tender shall be modified, substituted or withdrawn after the deadline for submission of Tenders.

The APSCL will reject any Tender submission if the Tender Document was not purchased directly from the APSCL, or through its authorised office.

### **3.0 TENDER VALIDITY**

Each Proposal shall be irrevocable and cannot be altered, withdrawn, or resubmitted for a period of 180 calendar days after the date set for submission of Proposals.

In exceptional circumstances, prior to the expiration of the Tender validity period, Ashuganj Power Station Company Ltd. may solicit the Tenderers' consent to an extension of the period of validity of their Tenders. The request and the responses shall be made in writing. The Tender Security provided under ITT Clause 27.0 shall also be suitably extended promptly. If a Tenderer does not respond or refuses the request it shall not forfeit its Tender Security, but its Tender shall no longer be considered in the evaluation

proceedings. A Tenderer agreeing to the request will not be required or permitted to modify its Tender.

#### **4.0 ACCEPTANCE OF PROPOSAL**

The APSCL reserves the right to waive minor irregularities and informalities in any Proposals submitted, reject any or all Proposals without assigning any reason and award the Contract to one which, in its judgement, is the best.

#### **5.0 REQUIRMENTS FOR TENDERERS**

Tender will only be considered from international/local reputed firms or JV, who are actually engaged and experienced in the lines of work described herein, and who are capable of undertaking the design, manufacture, inspection, testing, delivery to the Site, installations, testing & commissioning, performance test, related civil and building work and overall management of the project on turnkey basis. Evidence of experience in the line of work described herein shall be furnished with the Tender.

A Tenderer who is not a manufacturer for Engine Generating set, Step-up Transformers, HV and LV circuit breakers shall provide "Letter of Authorization" from the manufacturer.

##### **5.1 Experience of Project Implementation:**

###### ***In case of Foreign firm:***

The tenderer shall have the experience of engineering, supply, erection, installation, testing and commissioning on Turnkey basis of at least 2 (two) HFO Power Plant Projects each having capacity of minimum 50 MW (each unit capacity not less than 5 (Five) MW) during last 10 (Ten) years in renowned Electric generation utility. One of these projects has to be in outside the tenderers' country. In case of JVCA, the experience of Lead Partner and Partners will be considered if any one of them performed alone or in JVCA as lead partner but for this project the Lead Partner must have the experience of constructing 1 (one) 50 MW HFO Power Plant project as stated above.

In support of experiences, the Tenderer shall submit with his Tender for all work performed by him, detailed evidence that he himself and / or Lead partner of JVCA have carried out the design, manufacture, supply, construction, erection, testing, commissioning and put into commercial operation of power plants as mentioned above. Such power plants should have been in continuous commercial operation for minimum two (02) years. It is noted that Partners other than Lead Partner of JVCA experience will not be taken in to consideration for qualifying criteria. Subcontractor's experience and resources will not be taken into account in determining the Tenderer's compliance with the qualifying criteria. The Tenderer shall include at least two (02) certificates from the end users on two (02) years satisfactory performance of the Power plants as mentioned above, which were designed, supplied, constructed, tested & commissioned by the Tenderer to establish the Tenderer's minimum required experience to Tender. The certificates shall mention the name of power plant, plant capacity, number of Engine, Engine capacity and commissioning date of the power plant (make, model) supplied by the Tenderer; issue date, name and address (Telephone/Fax/e-mail) of the end user duly signed in the official pad. Without such certificates or where the certificates are un-satisfactory to APSCL, the Tender shall be considered technically non-responsive.



These certificates must be notarized and have authentication from the Chamber of Commerce of the Tenderer's country or the Embassy/High commission of the end user's country situated in Dhaka. In absence of that, authentication from Tenderer's country's Embassy/High Commission in Dhaka.

The successful Tenderer shall arrange site visit of 03 (three) personnel of the Employer to the Premises of the Power Plants as mentioned in Experience Certificates. All living, accommodation, food, transport expenses of the personnel during the period of visit including air-fares, incidental expenses, medical expenses, medical insurance etc. will be covered by the Tenderer (selected for contract signing) including pocket allowance of USD 150/day/person including travel time. The visit shall be arranged before signing of the Contract.

***In case of local firm:***

The tenderer himself or as a lead partner in JVCA shall have the experience of engineering, supply, erection, installation, testing and commissioning on Turnkey basis of at least 1 (one) HFO Power Plant Projects each having capacity of minimum 50 MW (each unit capacity not less than 5 (Five) MW) during last 10 (Ten) years in any government owned power generation entity of Bangladesh.

In support of his experiences, the Tenderer shall submit with his Tender for all work performed by him, detailed evidence that he himself and / or Lead partner of JVCA have carried out the design, manufacture, supply, construction, erection, testing, commissioning and put into commercial operation of power plant as mentioned above. Such power plant should have been in continuous commercial operation for minimum two (02) years. It is noted that Partners other than Lead Partner of JVCA experience will not be taken in to consideration for qualifying criteria. Subcontractors' experience and resources will not be taken into account in determining the Tenderer's compliance with the qualifying criteria.

The Tenderer shall submit certificate from the end users on two (02) years satisfactory performance of the plant to establish the Tenderer's minimum required experience to Tender. This certificate shall mention the name of power plant, plant capacity, number of Engines, Engine capacity and commissioning date of the power plant (make, model) supplied by the Tenderer, issue date, name and address (telephone/fax/email) of the end user duly signed in the official pad. Certificates furnished by the Tenderer in the Tender proposal shall have the information as stated above. Without such certificate, the Tender shall be considered technically non-responsive. These certificates must be notarized or have authentication from the Chamber of Commerce.

**5.2 Manufacturer Experience:**

Concern manufacturer shall have at least two years satisfactory operation record from the end user for offered Engine generating set; step-up Transformers and HV & MV circuit breakers. The end user must be an electric generation utility of total at least 50 MW capacity of offered type of engine generating set, step-up Transformers and HV & MV circuit breakers. The utility must not be from the Manufacturer's country.

**5.3 Financial Qualification**

***In case of Foreign firm:***

The Tenderer must have average annual turnover of at least US\$ 70 million or equivalent BDT as total certified payments received for contracts or work in progress or completed works within the last 5 (five) years. In case of JVCA, Lead Partner shall have minimum 40% and each partner shall have minimum 25% of total turnover.

Payment Certificate or audited financial accounts (balance sheet, profit & loss account and cash flow statement) shall have to be submitted in this regard. Audited financial accounts should be duly certified by the Auditor and original certified copy should be submitted with tender. The payment certificate must be notarized/have authentication from the Chamber of Commerce of the Tenderer's country or the Embassy/High commission of the certificate issuing authority's country situated in Dhaka. In absence of that, authentication is required from the Embassy/High Commission of tenderer's country in Dhaka. Without such payment certificate or audited financial accounts, the Tender shall be considered technically non-responsive. All documents should be in English language.

***In case of local firm:***

The Tenderer must demonstrate average annual turnover of at least US\$ 50 million or equivalent BDT as total certified payments received for contracts or work in progress or completed works within the last five (5) years. In case of JVCA, Lead Partner shall have minimum 40% and each partner shall have minimum 25% of total turnover.

Payment Certificate or audited financial accounts (balance sheet, profit & loss account and cash flow statement) shall have to be submitted in this regard. Audited financial accounts should be duly certified by the Auditor and original certified copy should be submitted with tender. The payment certificate must be notarized/have authentication from the Federation of Bangladesh Chamber of Commerce and Industry (FBCCI). Without such payment certificate or audited financial accounts, the Tender shall be considered technically non-responsive.

**5.4 JVCA requirement**

If the Tenderer is a JVCA, it must submit the JVCA Agreement on a nonjudicial stamp of value BDT 300.00. The respective document shall be signed by all legally authorized signatories of all the parties to the JVCA. Tenders submitted by a JVCA shall comply with the following requirements:

- (a) In case of joint venture (i) one of the partners will be nominated as being Lead partner (having not less than 40% stake in the JVCA), authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture;
- (ii) each member of JVCA having not less than 25% stake in JVCA shall have necessary experience as stated and all the partners shall be jointly and severally liable for execution of the Contract.
- (b) the Tender shall be signed so as to be legally binding on all partners;
- (c) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
- (d) the composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the APSCL.

- (e) the Tender security of a JVCA shall be in the name of JVCA that submit the Tender.

## **6.0 REQUEST FOR INFORMATION**

If any party contemplating the submission of the Proposal for the Work be in doubt as to the true meaning of any part of the Drawings, Technical Requirements or any other part of the Tender Documents shall be made by letter, Fax or Internet and to be received not later than 7 (seven) days before Tender closing and addressed as follows:

**Project Director**  
**Ashuganj 100 MW HFO Power Plant**  
**Ashuganj, Brahmanbaria, Bangladesh.**  
**Email: [pd100mwhfo@apscl.com](mailto:pd100mwhfo@apscl.com)**  
**Website: [www.apscl.com](http://www.apscl.com)**

## **7.0 INTERPRETATION OF SPECIFICATION AND ADDENDA**

The Project Director/Engineer, on behalf of the 'Ashuganj Power Station Company Ltd.', will explain the true meaning of the Tender Documents. Any interpretation of, or change in, the Tender Documents prior to the closing date set forth herein will be made only by an addendum issued by the Project Director to each Tenderer and which shall become part of the Tender Documents. No other interpretation or explanation shall be valid. The Tenderer submitting the request shall be responsible for its prompt delivery. The Project Director/Engineer will not be responsible for any other explanation or interpretation of the Tender Documents.

## **8.0 SITE VISIT**

Each Tenderer before submitting tender shall carefully examine the Tender Documents and shall visit the Site to acquaint himself with, and determine the existing conditions and limitations. The Tenderer shall thoroughly inform himself of all conditions and factors which would affect the prosecution and completion of the Work including, but not limited to, condition of the land, soil condition, soil improvement requirement, water quality, the availability and cost of labour, applicable laws and regulations and facilities for transportation, carrying, handling of heavy equipment from the sea port to project site and storage of materials and equipment. Each tenderer must also gather the history of environment so that they can estimate the limitations of working hours due to monsoon and other environmental condition. Bidder shall examine the 230kV power evacuation system (underground cable) from project site to existing APSCL 230 kV grid substation.

It must be understood and agreed that such factors have been properly investigated and considered in the preparation of the Proposal submitted. NO CLAIMS for financial and time adjustment to the Contract awarded for the Work under these Specifications and Documents will be permitted by the APSCL/Engineer which are based on the lack of such prior information or its effect on the cost of the work and its completion time.

## **9.0 DEPARTURES FROM SPECIFICATIONS**

Tenderers shall base their Proposals on the Tender requirement. However, if they so desire, they may also submit alternate Proposals on equipment which departs from these requirements and which would, in the opinion of the Tenderer, be of benefit to the APSCL. The Tenderer shall state in detail the departures which he deems advisable, and how they will be of benefit to the APSCL. Alternate Proposals shall be accompanied by

drawings showing the suggested layout and arrangements. Alternative proposal shall be a separate complete proposal with complete set of drawings, catalogues, manual, etc. without any reference to the main Proposal. Alternate proposal of only technically responsive lowest evaluated Tenderer shall be considered.

## **10.0 INFORMATION TO BE SUPPLIED WITH THE PROPOSALS**

Tenderers shall supply sufficient details to permit complete evaluation of all aspects of the Proposals. Tenderers are requested not to put any clause of their own i.e. anything outside this Tender Document.

The drawing showing the location and the layout recommended by the Tenderer shall also be submitted along with the Proposal. Proposals shall be in English and executed on the Tender Forms, annexed hereto, for that purpose. All the Tender Forms shall be completely and legibly filled in and all information asked for in the Tender Documents shall be furnished.

## **11.0 TIME SCHEDULE**

The completion time of the whole project is 270 days from the Effective Date of Contract (EDOC) to Commercial Operation Date. The Tenderer is requested to fill-up the updated time schedule as per appendix-4 of volume 1 of 2 (ITT) of Tender documents.

The time schedule should show the period in calendar days for completion of the Power Plant as desired by the APSCL and the estimated equipment delivery and erection, Testing and commissioning time that will be required to meet this period for completion.

The Tenderer shall furnish with his Proposal, Time Schedule showing the respective time for manufacture, shipment from shop to the Site, erection, preliminary testing, trial operation and performance testing for complete Power Plant included in his Proposal.

## **12.0 TECHNICAL PROPOSAL**

Tenderer must give complete documents, information and performance data of the equipment offered, including the followings, but not limited to:

- i. Tender security (Appendix-1), Technical proposal Submission Sheet (Appendix-2A); Time schedule (Appendix-4); Manufacturer's authorization letter (Appendix-7), Tenderer information (Appendix-8); JVCA partner information, if applicable (Appendix-9); Subcontractor's information, if applicable (Appendix-10); Personnel and Resume of proposed personnel (Appendix-11), Pending Litigation (Appendix-12), Recommended spare parts (Appendix-15) Financial situation (Appendix-16), Experience (Appendix-17) and **All schedules** (Vol. 2 of 2, Part-B of Tender document).
- ii. Technical requirements, Technical Particulars and scope of work
- iii. Documentary evidence establishing the Tenderer's eligibility and requirement to Tender.
- iv. Project schedule in bar chart form as well as Critical Path Method (CPM).
- v. A list and description of similar projects which the Tenderer has successfully completed.
- vi. The Tenderer shall submit End User Certificates as per ITT Clause-5 of Volume 1 of 2.
- vii. A detail list of supplies, works and services without price in accordance with Appendix-3.

- viii. Manufacturer's information of all equipment including construction details, materials and special features.
- ix. Drawings in plan and elevation of the complete power station, fuel tanks, switchyard, underground power cable route and supporting equipment showing arrangement of equipment, overall dimensions and details of construction.
- x. Design criteria for structures and foundations.
- xi. Schematic diagrams of the following systems (among others) showing design flows, pressures, temperatures, line sizes, valves, strainers, controls and equipment etc.:
- Auxiliary Modules
  - Fuel supply system (HFO and LFO) including unloading, storage, treatment, cleaning and heating.
  - Air intake and Exhaust system.
  - Charge air system
  - Steam Generating System.
  - Cooling system and radiator arrangement.
  - Water treatment & supply.
  - Station support system
  - Firefighting system.
  - Lube oil system.
  - Compressed air system
  - Effluent Treatment System
- xii. Electrical schematic diagrams of the following:
- Generator protection system
  - Transformer, HV & LV protection system
  - 230 kV underground cable protection system
  - Fuel control systems.
  - Generator excitation system.
  - All HV, MV and LV System
  - All instruments and controls system of the plant.
- xiii. Electrical single line diagram showing all equipment, ratings, current and potential transformer ratios, metering and relaying.
- xiv. Description of training program including curriculum and training aids.

- xv. List of recommended spare parts including description, part number, quantity, manufacturer name & contact address, unit cost, total cost for each item, and total cost for all items.
- xvi. Description of expatriate camp facilities (if any).
- xvii. Capacities, numbers and mobilization schedule of construction equipment.
- xviii. Manpower mobilization schedule.
- xix. List of sources, quantities and unit costs of construction materials.
- xx. Local material delivery schedule.
- xxi. Description of Site Laboratory facilities during construction.
- xxii. Description of proposed method of transportation and unloading of equipment at the Site.
- xxiii. De-rating curves and correction curves of power output and fuel consumption VS ambient temperature, ambient pressure, humidity etc.
- xxiv. A list of plant equipment, material etc. which the contractor intend to re-export or sale in Bangladesh after the completion of the contract.
- xxv. A list of special tools and equipment for maintenance and overhauling of the machine/equipment to be handed over to APSCL.
- xxvi. Authorization Certificates from the manufacturers and type test report of main equipment, viz. Engine Generating Set, step up Transformers, HV & MV Circuit Breakers etc. that they will supply through the tenderer for this project.
- xxvii. Schedule Maintenance Plan and minor overhauling schedule for warranty period as per Machine manufacturer
- xxviii. Original Tender security as per ITT clause 27, volume 1 of 2.
- xxix. A list of spare parts with OEM Part No., equipment, materials and all consumables (Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.) mentioning manufacturer name and contact address for use in the Warranty period of 24 months along with Manufacturer recommendation.

### **13.0 TENDER CURRENCIES**

The prices shall be quoted in the following currencies:

- a) The prices for the Goods and Services which the Tenderer will supply from outside Bangladesh shall be quoted in U.S. Dollars or Euro.
- b) The prices for the Goods and Services which the Tenderer will supply from within Bangladesh shall be quoted in Bangladesh Taka (BDT).

### **14.0 FINANCIAL PROPOSAL**

The Tender prepared by the Tenderer shall comprise the following, but not limited to:

- (a) The Tender Submission Sheet (Appendix-2B);
- (b) The Price Schedule (As per Appendix-3);
- (c) Written confirmation authorising the signatory of the Tender to commit the Tenderer;
- (d) Any other document as specified in the Tender Document.

The Tenderer shall fill up the Price Schedule and shall quote a firm turnkey contract price for the Power Plant as described in the Technical Requirements including all required spare parts, equipment and consumables during Warranty period. NO ADDITIONAL COST will be considered for any items or works of the Tender documents which the Tenderer or Contractor has overlooked but the essential for the full completion of the project in every respect. Prices quoted shall be firm for a period of 180 Calendar days from the closing date for receipt of Proposals and be valid for the entire period of the Contract execution. The total prices shall be quoted both in figures and words.

**Contractor cannot claim any additional price beyond the contract price and also no price escalation will be allowed for this contract.**

Price Proposals determined to be substantially responsive will be checked by Tender Evaluation Committee (TEC)/ Ashuganj Power Station Company Ltd. for any arithmetic errors. Arithmetic errors will be rectified on the following basis. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected. If there is a discrepancy between the total Tender amount and the sum of total costs, the sum of the total costs shall prevail and the total Tender amount will be corrected. If there is a discrepancy between word and figure, the amount quoted in word will prevail.

The Tenderer shall quote a price against each item in the Price Schedule (Annexure-3). Unit prices furnished by the Tenderers in the Price Schedule will be used in determining the value of Variation Orders, if any.

The APSCL will be under no obligation to the Contractor for and will not be liable to pay to the Contractor any additional sums other than as expressly provided for under the Contract.

The prices submitted by the Tenderer in the Price Schedule shall include all the works to be performed under the Contract and without limitation shall include the cost of design, manufacture, factory testing, export packing, transportation from manufacturers shop to the port of loading, freight, heavy lift charges incurred by the vessel, fees etc., port charges, inland transportation including loading and unloading at the port of destination and to the project site, warehouse to warehouse insurance, accommodation, transporting of all construction equipment, men, materials and supplies to, from and at the Site.

**Proposal of pricing to be made by the Tenderers shall be made in foreign currency with respect to the equipment, machinery, materials and services to be acquired from all eligible countries other than Bangladesh and in Bangladesh Taka with respect to the equipment and services to be acquired/hired from sources in Bangladesh.**

The Tenderers shall furnish the break-up of the price in the following manner for effecting progress payments.

- i) Prices on job-site basis for the equipment and materials furnished for the Works shall consist of design, manufacture, factory testing, export packing, transportation from manufacturer's shop to the port of loading, ocean freight, heavy lift charges incurred by the vessel, fees, charges etc., inland transportation Including unloading at the port of destination and movement to the project

storage area, warehouse to warehouse insurance, checking and verifying all shipments received against shipping documents, issuing, receiving and damage reports. Customs duty and other charges levied by Bangladesh Customs for the permanent materials/ goods of the Project will be paid by the APSCL.

- ii) Prices for installation and commissioning of the equipment and materials at the Site. Such prices shall include handling from site storage to point final installation, construction, erection and installation including insurance, local purchased materials, inspection, initial start-up, trial operation and training of the APSCL's personnel in operation, performance test and responsibility for operation and maintenance of equipment/ machinery until acceptance by the APSCL. The cost of local purchase and transportation of any Bangladesh manufactured equipment/ machinery and materials shall also be included under this category.
- iii) Prices of essential spare parts, equipment, tools & consumables shall be quoted in accordance with ITT Clause 24.0.
- iv) Prices for the training, design review meeting and factory witness test of the Ashuganj Power Station Company Ltd.'s personnel in all respect.
- v) Prices for operation and maintenance services during warranty period.

#### **15.0 DEVIATION IN PAYMENT SCHEDULE**

Tenderer must follow the payment schedule outlined in the General Conditions of Contract, clause-61 of volume 1 of 2. Deviation in payment schedule will not be acceptable.

#### **16.0 CONDITIONS OF CONTRACT**

The Contractor shall follow the ITT, General Conditions, Special Conditions and Technical requirements as stipulated in the Tender Document which will be part of the Contract Documents.

#### **17.0 SOURCE OF FINANCE**

Source of Fund is APSCL's own Fund and Bank Loan.

#### **18.0 CURRENCY OF PAYMENTS**

Currency of payments to be made to the Contractor shall be in US dollar, Euro and BDT as described in the General Conditions of the Contract Document on the basis of final price schedule.

#### **19.0 LANGUAGE, UNITS AND DIMENSIONS**

The Proposal and data shall be in English, and all dimensions in SI unit and/or metric unit system.

#### **20.0 VOLUNTARY CLARIFICATION / AMENDMENT AFTER CLOSING OF TENDER**

The Tenderer must note that voluntary clarification or amendment or correction of any sort, after closing of Tender, shall not be entertained by the APSCL. Any such communication, if received by the APSCL / Engineer, will be completely ignored.

#### **21.0 BANGLADESH LAWS, RULES AND REGULATIONS**

The contract shall be governed by and interpreted in accordance with the laws, rules and regulations of People's Republic of Bangladesh.



## **22.0 QUALITY ASSURANCE**

The Proposal shall include copies of the Tenderer's "Quality Certification Manual" and a comprehensive statement of the "Scope of Quality Verification" exercised in executing existing contracts.

Sufficient information shall be provided in the Proposal to give assurance that the requirements of quality as described in the Special Conditions are fully understood.

## **23.0 USE OF BANGLADESH MATERIALS**

The Tenderers are required to use, wherever possible, equipment, tools, materials and products manufactured in Bangladesh when available, provided that such items shall conform to the applicable specifications.

## **24.0 SPARE PARTS AND CONSUMABLES**

### **24.1 Spare parts after warranty period**

The contractor shall submit mandatory spare parts and consumables list with their price schedule form (according to the manufacture's recommendation & guide line) for day to day operation and maintenance of the generating set (Engine & Generator) for plant life time 20 (Twenty) years which will not be included in contract price schedule.

### **24.2 SPARE PARTS AND CONSUMABLES DURING WARRANTY PERIOD**

The Tenderer shall submit a list of spare parts with OEM Part No., equipment, materials and all consumables (Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.) to be necessary for day to day operation and maintenance of the generating units and other plant equipment inclusive of emergency use that takes place in the course of operation (according to the Manufacture's recommendation and guideline) during the Warranty period. The tenderer shall submit the list of spares and consumables that mentioned above with the proposal along with Manufacturer recommendation.

During the warranty period, the Contractor shall supply all (whether it is listed or not in their list) necessary equipment, spare parts, materials, consumables (Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.) to be necessary for day to day operation and maintenance of the generating units and other plant equipment inclusive of emergency use that takes place in the course of operation at his own cost and. The operation of the plant should be such that plant factor should be minimum 80%.

After completion of warranty period and before handover the plant, the contractor shall hand over all remaining spare parts, tools, equipment and consumables etc. to the APSCL.

## **25.0 OPENING, EXAMINATION & EVALUATION OF PROPOSAL:**

### **25.1 Opening of Proposal:**

APSCL shall open the Technical proposal in public, including modifications or substitutions if any, at the time, on the date, and at the one place specified in the Tender Notice. Tenders for which an acceptable notice of withdrawal has been

submitted shall not be opened. Tenderer or their authorised representatives shall be allowed to attend and witness the opening of Tenders, and shall sign a register evidencing their attendance.

**APSCL shall not open the Financial Proposals at this stage and shall keep these sealed.**

Financial proposal will be opened only the technically responsive tenderer. APSCL shall conduct the financial proposal opening in the presence of Bidder's designated representatives who choose to attend, and at the address, date and time specified in the Letter of Invitation.

## **25.2 Tender (Technical) Preliminary Examination:**

The APSCL shall firstly examine the Tenders to confirm that all documentation requested in the Tender document has been provided, and to determine the completeness of each document submitted. The technical qualifications and overall capability of the Bidder for carrying out the work as specified as well as the specifications of the equipment/materials offered and fulfilment of the key dates shall be the essence for selection of technically qualified Bidders. The technical qualifications and overall capability of the Tenderer for carrying out the Works as specified as well as the Specifications of the equipment/materials offered and fulfilment of key dates shall be the essence for selection of qualified tenderers.

In the process of evaluation, tender may be considered as responsive only if it is submitted in compliance with the mandatory requirement set out in the tender document, without material deviation or reservation.

A material deviation or reservation is one:

- a) Which affects in any substantial way the scope, quality or performance of the works,
- b) Which limits in any substantial way, inconsistent with the tender document, the procuring entity's rights or the tenderer's obligations under the contract
- c) Whose rectification would affect unfairly the competitive position of other tenderers presenting responsive tenders.

The APSCL shall assess whether the Tenderer's Qualifications are met substantially. Any negative determination by the APSCL will result in rejecting the Tender as non-responsive without the need for further evaluation.

## **25.3 Technical proposal Evaluation:**

APSCL shall secondly examine the Tender to confirm that all terms and conditions specified in the General Condition & Tender document have been accepted by the Tenderer without any material deviation or reservation.

APSCL shall evaluate the Technical requirements, Guarantee schedule and Scope of Work of the Tender submitted in accordance with requirements, to confirm that all requirements specified in, have been met without any material deviation or reservation.

Proposal which offers less than 90 MW capacity (Net output at site condition) of Power Plant as specified in Technical Requirements will not be accepted. Excess

Net output more than 110 MW at site conditions shall not be considered for evaluation of per KW cost stated hereunder.

If, after the examination of the terms and conditions and the technical aspects of the Tender, the APSCL determines that the Tender is not substantially responsive in accordance with requirements, tender shall be rejected.

The APSCL shall notify those Tenderer whose Technical Proposals do not meet the technical requirements and are considered non-responsive in respect of the Tender document, indicating that their Financial Proposals will be returned unopened after issuing notification of award to evaluated lowest bidder.

#### **25.4 Tender Financial Evaluation:**

APSCL shall evaluate each Tender that has been determined, up to this stage of the evaluation, to be technically substantially responsive.

Data given by the Tenderer which significantly affect the result of evaluation shall be included in the Contract as requirements to be guaranteed and will be subject to verification at the cost of the Tenderer and to the satisfaction of the APSCL.

The evaluation will take into account both Tender Price and annual operating & maintenance cost. Initial cost of the proposals shall be determined by bringing the scope of works of all the proposals to a common basis. APSCL reserves the right to judge the reasonableness of the cost components quoted by the Tenderer with regard to maintenance cost per year and overhaul cost as enumerated below:

If the Tenderer's Technical Proposal does not fulfil the following specified time schedule with regard to completion of initial commercial operation from Contract Effective date, the Tenderer's Proposal will be summarily rejected and no evaluation will be made on his Tender.

The Scope of supply/works of the proposals will be worked out to a common platform in order to determine the First cost in the financial evaluation.

The Ashuganj Power Station Company Ltd. reserves the right to judge the reasonableness of the cost components quoted by the Tenderers with regard to maintenance cost per year and overhaul cost as enumerated below:

#### **Financial Analysis:**

- i. The evaluation of the proposal would be done by financial analysis method taking into account the following.
  - a) First/ Initial cost.
  - b) Annual operating and maintenance cost of the plant
  - c) Fuel cost

For the purpose of evaluation all costs shall be based on current prices as of the date of the Tender closing.

#### **ii. Monetization for early or late commissioning: Not applicable**

#### **iii. Basis of Financial analysis:**

For the purpose of financial analysis, the following data would be considered:

- a. Plant life - 15 years will be considered for evaluation
- b. Plant will operate on HFO
- c. Plant will operate at 80% Plant factor
- d. Cost of HFO = Tk. 42.00 per Litter
- e. Heat rate to be used for weighted average of 50%, 75% and 100 % load under Site Condition

$$\text{So, } H = H_{100\%} \times 0.3 + H_{75\%} \times 0.4 + H_{50\%} \times 0.3 \text{ KJ per Kwh}$$

- f. Operation and Maintenance cost,  $O_p =$

For 4 stroke Engine = Tk. 0.50 per kWh + Lube oil consumption cost per kWh

(Cost of 1lit. of Lube Oil = Tk. 320.00)

- g. Discount rate on capital investment = 12%
- h. Sp. density of lube oil = 0.9

#### iv. Example of Financial Analysis:

- (1)  $P_o =$  Total Net generated output at high voltage side of step-up transformer at Site Condition in kW

$EP_o =$  Annual generated energy at high voltage side of step-up transformer in Kwh

$$= P_o \times 24 \times 365 \times 0.8 \text{ Kwh}$$

$H =$  Average weighted heat rate of generating unit

(100%, 75% and 50% load at Site Condition) in KJ/KWH

$$= (H_{100\%} \times 0.3 + H_{75\%} \times 0.4 + H_{50\%} \times 0.3) \text{ KJ per Kwh}$$

$H_c =$  Annual heat consumption

$$= H \times EP_o \text{ in KJ}$$

Fuel Calorific Value (LHV) of HFO,  $f_c = 40,000 \text{ kJ/Kg}$ ,

i.e,  $40,000 \times 0.97 = 38,800 \text{ KJ/Lit.}$

(Specific density of Fuel (HFO) will be considered 0.97)

Annual fuel consumption,  $F_a = H_c / f_c \text{ Litre}$

$$F_{ac} = \text{Annual fuel cost} = \text{Tk. } 42.00 \times F_a$$

$$C_a = \text{Annual operating and maintenance cost} = O_p \times EP_o$$

- (2) A = First cost including the cost of essential spares as described in the Tender Documents, converted into Taka by applying the Exchange Rate as specified.
- (3) d = Discount rate  
= 12% per annum
- (4) D = Estimated weighted days for completion of the power plant  
= 270 days
- (5) Am = First cost in Taka  
= A

The evaluated total cost of the power plant, Te is calculated as shown in Table:1 below.

**Finally, the evaluated cost of the power plant in Taka/kW will be found out by dividing Te by the net plant capacity, Po in kW at Site conditions. The tenderer whose 'Te' value is the lowest will be adjudged the lowest tenderer.**

**Table.1 :**

Year	First Cost In BDT	Energy Generated In kwh	Fuel Cost In BDT	O&M Cost per year In BDT	Discounted Total cost per Year In BDT
1.	Am	EP <sub>0</sub>	Fac	Ca	(Am+Fac+Ca)/(1+d) <sup>1</sup>
2.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>2</sup>
3.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>3</sup>
4.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>4</sup>
5.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>5</sup>
6.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>6</sup>
7.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>7</sup>
8.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>8</sup>
9.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>9</sup>
10.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>10</sup>
11.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>11</sup>
12.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>12</sup>
13.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>13</sup>
14.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>14</sup>
15.		EP <sub>0</sub>	Fac	Ca	(Fac+Ca)/(1+d) <sup>15</sup>
<b>Total : Te =</b>					

## 26.0 EXCHANGE RATE

For comparison of Proposals, the Ashuganj Power Station Company Ltd. shall convert all the currencies excepting Bangladesh currency quoted by the Tenderers into Bangladesh Taka. Such conversions shall be made on the basis of the selling rates for the relevant currencies quoted by the Bangladesh Bank on the date of Tender closing and applicable to similar transactions.

## 27.0 TENDER SECURITY

- 27.1 The Tenderer shall furnish as part of its Tender, a Tender Security in original form in the amount US Dollar 1,650,000 (USD One Million six hundred fifty thousand) or BDT 135,000,000 (BDT One hundred thirty five million).
- 27.2 The Tender Security shall:
- a) at the Tenderer's option be either;
    - i. in the form of an irrevocable and unconditional bank guarantee (Form Appendix-1) issued by a Scheduled Bank of Bangladesh on 300 Tk. non-judicial Stamp or
    - ii. in the form of an irrevocable bank guarantee (Form Appendix-1) issued by an internationally reputable bank and shall require to be endorsed by its any correspondent bank located in Bangladesh, at the same format of Bank Guarantee stipulated in tender document on 300 Tk non-judicial Stamp to make it enforceable.
  - b) be payable promptly upon written demand by the Purchaser in the case of the conditions listed in ITT Sub-Clause 27.5 being invoked; and
  - c) remain valid for a period of twenty-eight (28) days beyond the original validity period of Tender, or beyond any period of extension subsequently requested.
- 27.3 A tender not accompanied by a valid Tender Security in accordance with ITT Sub-Clause 27.2, shall be rejected as non-responsive.
- 27.4 Unsuccessful Tenderer's Tender Security will be discharged or returned within twenty-eight (28) days of the end of the Tender validity period. The Tender Security of the successful Tenderer will be discharged upon the successful Tenderer's furnishing of the Performance Security and signing the Contract Agreement.
- 27.5 The Tender Security may be forfeited:
- (a) if a Tenderer withdraws its tender during the period of Tender validity specified by the Tenderer on the Tender Submission Letter;; or
  - (b) if the successful Tenderer fails to:
    - (i) accept the correction of its Tender Price or
    - (ii) furnish a Performance Security in accordance with ITT Clause 28 or sign the Contract in accordance with ITT Clause 30.

## **28.0 PERFORMANCE SECURITY**

Within 14 (Fourteen) days from the issuing of Notification of Award from the APSCL, the successful Tenderer shall furnish Performance Security for signing of the Contract.

The Contract shall be accompanied by a Performance Security in the form of an irrevocable & unconditional Bank Guarantee issued by a Scheduled Bank in Bangladesh.

**The Performance Security shall be in a penal sum not less than ten percent (10%) of the Contract price,** conditioned for the complete and faithful performance of the Contract according to its tenor and effect and the satisfaction of obligations for the materials used and labour employed in the same, and shall insure the payment of any

obligations, damages, liquidated damages or expenses for which the Contractor may become liable to the APSCL. The Contractor's Performance Security under these specifications shall remain in full force and effect until the Contractor has fully performed the Contract including the warranty periods set forth in the scope of works of the Technical Requirements. The specimen of Performance Security is furnished at Annexure-5.

The Performance Security shall remain valid until completion of warranty period plus 28 days.

The proceeds of the Performance Security shall be payable to the Employer unconditionally upon first written demand as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Contract.

The Employer shall notify the Contractor of any claim made against the Bank issuing the Performance Security.

The Employer may forfeit the performance security at any time if any of the following events occurs.

The Employer may claim against the security if any of the following events occurs for fourteen (14) days or more.

- (a) The Contractor is in breach of the Contract and the Employer has notified him that he is; and
- (b) The Contractor has not paid an amount due, to the Employer.

In the event the Contractor is liable to pay compensation under the Contract amounting to the full value of the Performance Security or more, the Employer may forfeit the full amount of the Performance Security.

If there is no reason to call the Performance Security, the Performance Security shall be discharged by the Employer and returned to the Contractor not later than twenty-eight (28) days following the date of completion of warranty period.

The Employer may increase the amount of the Performance Security above the amounts but not exceeding twenty five (25) percent of the Contract price, if it is found that the Tender is unbalanced as a result of front loading as stated below:

If the lowest Evaluated Tender is significantly unbalanced as a result of front loading in the opinion of the TEC, the TEC may require the Tenderer to produce detailed breakdown of unit price or rates for any or all items of the BOQ, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the breakdown of the unit price or rates, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the Performance Security be increased at the expenses of the Tenderer to a level as stated under sufficient to protect the Employer against financial loss in the event of default by such Tenderer during Contract implementation, if awarded the Contract.

If the Tenderer does not agree with APSCL proposal to increase the performance security their tender shall be rejected.

## **29.0 NOTIFICATION OF AWARD**

Following the evaluation of the Proposals, the Ashuganj Power Station Company Ltd. will issue a Notification of Award to enter into discussion with the successful Tenderer for the

execution of the Works. Upon issuance of such Notification of Award by the APSCL, the successful Tenderer shall submit ten (10) copies of draft Contract and be deemed to be ready to start immediately the discussion with the APSCL so as to enter into the Contract. The successful Tenderer has to submit an acceptance of Notification of Award in writing within seven (7) days of issuance of Notification of Award.

### **30.0 CONTRACT AGREEMENT**

- 30.1 Within twenty one (21) days from the issuing of the Notification of Award the successful Tenderer shall sign the Contract Agreement. The successful Tenderer shall, when called upon to do so, enter into and execute a Contract Agreement in the form furnished in Annexure-6, with such modifications as may be necessary. The signing of the Contract by the Ashuganj Power Station Company Ltd. and the successful Tenderer shall be made in Bangladesh.

Five (5) originals of the Contract Agreement complete in all respects shall be prepared by the successful Tenderer on successful completion of discussion. These will be handed over to the Project Director for final scrutiny together with Performance Security and Power of Attorney. Upon clearance by the Project Director, the successful Tenderer shall submit the Contract Documents to the Ashuganj Power Station Company Ltd. for signing.

After signing of the Contract, two (2) original Contract Documents will be forwarded to the Contractor. The Contractor shall thereafter, but not later than twenty one (21) days, prepare Fifteen (15) conformed copies of the final Contract Document and shall deliver to the Ashuganj Power Station Company Ltd.

- 30.2 Failure of the successful Tenderer to submit the Performance Security pursuant to ITT Clause 28 or sign the Contract pursuant to ITT Sub-Clause 30.1, In that event, the APSCL may award the Contract to the next lowest evaluated responsive Tenderer at their quoted price (corrected for arithmetical errors), who is assessed by the APSCL to be qualified to perform the Contract satisfactorily.

### **31.0 Corrupt, Fraudulent, Collusive or Coercive Practices:**

- (1) The Government requires that Purchasers, as well as Tenderers and Suppliers shall observe the highest standard of ethics during the implementation of procurement proceedings and the execution of contracts under public funds.
- (2) In pursuance of this requirement, the Purchaser shall:
  - (a) exclude the Tenderer from participation in the procurement proceedings concerned or reject a proposal for award; and
  - (b) declare a Tenderer ineligible, either indefinitely or for a stated period of time, from participation in procurement proceedings under public funds;

if it, at any time, determines that the Tenderer has engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a contract under public funds.
- (3) Should any corrupt, fraudulent, collusive or coercive practice of any kind come to the knowledge of the Purchaser, it shall, in the first place, allow the Tenderer to provide an explanation and shall, take actions only when a satisfactory explanation is not received. Such exclusion and the reasons thereof, shall be recorded in the record of the procurement proceedings and promptly communicated to the



Tenderer concerned. Any communications between the Tenderer and the Purchaser related to matters of alleged fraud or corruption shall be in writing.

- (4) The Government defines, for the purposes of this provision, the terms set forth below as follows:
- (a) "*corrupt practice*" means offering, giving, or promising to give, directly or indirectly, to any officer or employee of a Procuring Entity or other governmental/private authority or individual, a gratuity in any form, an employment, or any other thing or service of value, as an inducement with respect to an act or decision of, or method followed by, a Procuring Entity in connection with the procurement proceeding;
  - (b) "*fraudulent practice*" means a misrepresentation or omission of facts in order to influence a procurement proceeding or the execution of a contract to the detriment of the Purchaser;
  - (c) "*collusive practice*" means a scheme or arrangement among two or more Tenderers, with or without the knowledge of the Purchaser (prior to or after Tender submission), designed to establish Tender prices at artificial, non-competitive levels and to deprive the Purchaser of the benefits of free, open and genuine competition; and "*coercive practice*" means harming or threatening to harm, directly or indirectly, persons or their property to influence the procurement proceedings, or affect the execution of a contract.

### **32.0 Tenderer: Contacting the Purchaser:**

- (1) Following the opening of the Tenders and until the Contract is signed no Tenderer shall make any unsolicited communication to the Purchaser or try in any way to influence the Purchaser's examination and evaluation of the Tenders.
- (2) Any effort by a Tenderer to influence the Purchaser in its decisions on the examination, evaluation, comparison, and post-qualification of the Tenders or Contract award may result in the rejection of its Tender.

## Bank Guarantee for Tender Security

(SPECIMEN)

*[This is the format for the Tender Security to be issued by a scheduled bank  
in Bangladesh in accordance with ITT Clause 27]*

**Invitation for Tender No:**

**Date:**

To:

Bank Guarantee No.

**Ashuganj Power Station Company Ltd.**

Issuing Date:

Ashuganj, Brahmanbaria-3402

Amount:

Bangladesh

Expiry Date:

Issued on Request of :

Attention: **Project Director**, Ashuganj 100 MW (Tenderer Name & Address)  
HFO Power Plant

### TENDER GUARANTEE NO:

We have been informed that *[name of Tenderer]* (hereinafter called "the Tenderer") to you its Tender dated *[date of Tender]* (hereinafter called "the Tender") for .....under the above Invitation for Tenders.

Furthermore, we understand that, according to your conditions Tenders must be supported by a Tender guarantee.

At the request of the Tenderer, we *[name of bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total sum of *[Insert amount in figure and in word]* upon receipt by us of your first written demand accompanied by a written statement that the Tenderer is in breach of its obligation(s) under the Tender conditions, because the Tenderer:

- (a) has withdrawn its Tender during the period of Tender validity specified by the Tenderer in the Form of Tender; or
- (b) does not accept the correction of errors in accordance with the Instructions to Tenderers of the Invitation for tender; or

- (c) having been notified of the acceptance of the Tender by the Purchaser during the period of Tender validity, (i) fails or refuses to furnish the Performance Security in accordance or (ii) fails or refuses to execute the Contract Form,

This guarantee will expire if:

- (a) the Tenderer is the successful Tenderer, upon our receipt of a copy of the Performance Security and a copy of the Contract signed by the Tenderer as issued by you; or
- (b) if the Tenderer is not the successful Tenderer, twenty eight days after the expiration of the Tenderer's Tender, being *[date of expiration of the Tender]*.

Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

(Official Seal and Full Address, Phone No. of the Bank)

## **Technical Proposal**

*[This letter should be completed and containing relevant information's signed by the Authorised Signatory*

*Preferably on the Letter-Head Notepaper of the Tenderer].*

### **SHORT DESCRIPTION OF WORKS:**

Engineering, Design, Manufacture/Procurement, Inspection, Testing, Delivery to site, Installation, construction of related civil works, testing and commissioning and performance test on turnkey basis of Ashuganj 100 MW HFO Power Plant having net output of 100 ( $\pm 10\%$ ) MW at site conditions of 35°C 1.013 bar, 98% RH and 2 years warrantee.

To:

Date:

Ashuganj Power Station company Ltd.

Ashuganj, Brahmanbaria, Bangladesh

Attention: Project Director, Ashuganj 100 MW HFO Power Plant

Invitation for Tender No:

*[indicate IFT No]*

GENTLEMEN,

We, the undersigned offer to design, manufacture, test, deliver, install, pre-commission and commission in conformity with the Tender Document the following Plant and Services: . . . . .but shall not be limited to said works in conformity with the said Conditions of Contract, Specifications, Bill of Quantities and Drawings etc. in accordance with Tender Document in order to execute contract.

In signing this letter, and in submitting our Tender, we also confirm that:

- (a) our Tender shall be valid for the period of 180 days stated in the Tender ITT clause 03 and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) a Tender Security is attached in the form of a *[ bank guarantee]* in the amount stated in the Tender Notice (ITT clause 27) and valid for a period of 28 days beyond the Tender validity date;

- (c) if our Tender is accepted, we commit to furnishing a Performance Security in the amount stated in the ITT clause 28 in the format shown in Form Appendix-5 and valid for a period of 28 days beyond the date of completion of our performance obligations (warranty period);
- (d) We have examined and have no reservations to the Tender Document, issued by you on *[insert date]*; including Amendment(s) No(s) *[state numbers]* , issued in accordance with the Instructions to Tenderer (ITT Clause 20). *[insert the number and issuing date of each amendment; or delete this sentence if no Amendments have been issued]*;
- (e) We, including as applicable, any JVCA partner or specialist subcontractor for any part of the contract resulting from this Tender process, have nationalities from eligible countries.
- (f) *[insert either "we are submitting this Tender as a sole Tenderer" or "we are submitting this Tender as the partner-in-charge of a JVCA, comprising the following other partners, in accordance with ITT clause 5.]*;

Name of Partner	Location & District of Partner
1	
2	
3	
4	

- (g) We, including as applicable any JVCA partner, declare that we are not associated, nor have been associated in the past, directly or indirectly, with a consultant or any other entity that has prepared the design, specifications and other documents.
- (h) We, including as applicable any JVCA partner or specialist subcontractor for any part of the contract resulting from this Tender process, have not been declared ineligible by the Government of Bangladesh on charges of engaging in corrupt, fraudulent, collusive or coercive practices.
- (i) We intend to subcontract an activity or part of the Works to the following Specialist Subcontractor(s);

Nature of the works and services	Name of Specialist Subcontractor, Location and District
----------------------------------	--

- (j) We, including as applicable any JVCA partner, confirm that we do not have a record of poor performance, such as abandoning the works, not properly completing contracts, inordinate delays, or financial failure as and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information ;

- (k) We are not participating as Tenderer in more than one Tender in this Tendering process. We understand that your written Notification of Award shall constitute the acceptance of our Tender and shall become a binding Contract between us, until a formal Contract is prepared and executed;
- (l) We undertake if our Tender is accepted to commence the works from the date of L/C opening and completion time shall be of within (*insert days*) days from the date of L/C opening in accordance with contract.
- (m) Unless and until a formal agreement is prepared and executed, this Tender, together with your written acceptance thereof, shall constitute a binding Contract between us.
- (n) We understand that you are not bound to accept the lowest or any tender you may receive and that you will not defray any expense incurred by us in tendering.
- (o) We understand that all the Appendices attached hereto and those furnished with the Technical proposal including data, information and Tender document submitted herewith form part of this Tender.
- (p) We understand that you reserve the right to accept or reject any Tender, to cancel the Tender proceedings, or to reject all Tenders, without incurring any liability to Tenderer.

Signature:

*[insert signature of authorised representative of the Tenderer]*

Name:

*[insert full name of signatory]*

In the capacity of:

*[insert capacity of signatory]*

Duly authorised to sign the Tender for and on behalf of the Tenderer

*[If there is more than (1) signatory, or in the case of a JVCA, add other boxes and sign accordingly].*

Attachment 1: Written confirmation authorising the above signatory(ies) to commit the Tenderer.

## Financial Proposal

[Tenderer's Letterhead]

Date: .....

Invitation for Bid No.: .....

To:.....

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Tender Document, including Addenda issued in accordance with Instructions to Tenderer (ITT) 20;
- (b) We offer to design, manufacture, test, deliver to site, install, pre-commission and commission and two years warranty in conformity with the Tender Document the following Plant and Services: .....;
- (c) The total price of our Tender, excluding any discounts offered in item (d) below is the sum of **(firm turnkey price)**:
- (d) The discounts offered and the methodology for their application are:
- (e) Our tender shall be valid for a period of 180 days from the date fixed for the submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our Tender is accepted, we commit to obtain a performance security in accordance with the Bidding Document;
- (g) We understand that this tender, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (h) We understand that you are not bound to accept the lowest evaluated tender or any other tender that you may receive.

Name

In the capacity of .....

Signed .....

Duly authorized to sign the Bid for and on behalf of .....

Date .....

**Bill of Materials/Quantities & Price Schedule**

NOT FOR SUBMISSION



**The Tenderer shall fill-up the following table of prices and shall include the same in the financial proposal**

### **Schedule-1: Supply of Equipment:**

**(Quantity of the lot as stated bellow will be dictated by the offered no. of units by the tenderer and shall have to be adequate for the Gen Sets offered. Tenderer shall have to furnish a complete list of supplies in accordance with technical requirements (Volume 2 of 2, Part A). But it is to be taken into consideration that individual generating unit capacity will not be less than 14MW.)**

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
<b>A</b>	<b>POWER GENERATION</b>					
A1	<b>GENERATING SET</b>					
A1.1	ENGINES	1 (one) lot.				
A1.2	GENERATORS	1 (one) lot				
A1.3	BASE FRAME Including the following, but not limited to: Common base frame engine part Common base frame generator part Fastening Equipment (Set)	1 (one) lot				
A1.4	ELASTIC MOUNTING Steel springs (set)	1 (one) lot				
A1.5	COUPLING Flexible coupling	1 (one) lot				
A1.6	CONNECTIONS Flexible connections between engine and external piping - Flexible hoses and gaskets (set) - Cooling water bellows (set) - Exhaust gas bellows	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	- Charge air bellows compensator					
A1.7	PLATFORMS Engine and its auxiliaries' maintenance platform pre-fabricated	1 (one) lot				
<b>Sub Total of A1:</b>						
A2	<b>MECHANICAL AUXILIARY SYSTEMS</b>					
A2.0	<b>AUXILIARY MODULES</b> Engine auxiliary module with integrated compact booster including following list, but not limited to: <ul style="list-style-type: none"> <li>- Fuel oil filter</li> <li>- Fuel booster pump</li> <li>- Return fuel pump</li> <li>- Fuel oil cooler</li> <li>- Return fuel tank</li> <li>- Sludge tank</li> <li>- Lubricating oil automatic filter</li> <li>- Lubricating oil cooler</li> <li>- Pre lubricating oil pump</li> <li>- Pre heating unit</li> <li>- Thermostatic valve lubricating oil back-up cooler</li> <li>- Thermostatic valve high temperature water system</li> <li>- Thermostatic valve low temperature water system</li> <li>- Pressure increasing pump</li> <li>- Steam heater</li> <li>- Piping and insulation</li> <li>- Valves and gauges</li> <li>- Module control panel</li> <li>- Exhaust gas module</li> <li>(a) Exhaust stack</li> <li>(b) Rupture disk</li> </ul>	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	<ul style="list-style-type: none"> <li>- Low temperature expansion tank</li> <li>- Charge air silencer, 45 dB attenuation</li> <li>- Exhaust gas branch pipe</li> <li>- Piping and insulation</li> <li>- Oil mist separator</li> <li>- Pipe rack</li> <li>-Auxiliary module platform</li> <li>-Others, as requirement</li> </ul>					
A2.1	<b>FUEL SYSTEM</b>					
A2.1.1	<b>LIGHT FUEL OIL SYSTEM</b> including following list, but not limited to: <ul style="list-style-type: none"> <li>-Light fuel oil unloading pump unit</li> <li>-Light fuel oil unloading measuring unit (Digital flow meter)</li> <li>-Light fuel oil storage tank</li> <li>-Light fuel oil tank equipment</li> <li>-Light fuel oil day tank</li> <li>-Light fuel oil day tank equipment</li> <li>-Light fuel oil transfer pump unit</li> <li>-Light fuel oil feeder unit</li> <li>-Light fuel oil feeder pump (with redundancy) with Variable Frequency Driver (VFD) for steady supply pressure to Engine</li> <li>- Automatic filter with redundancy</li> <li>- Manual by-pass filter with redundancy</li> <li>- Viscosity control system</li> <li>-Piping and valves light fuel oil system inside engine hall</li> <li>-Piping and valves light fuel oil system outside engine hall</li> <li>-Others, as requirement</li> </ul>	1 (one) lot				
A2.1.2	<b>HEAVY FUEL OIL SYSTEM</b> including following list, but not limited to: <ul style="list-style-type: none"> <li>Heavy fuel oil unloading pump unit</li> </ul>	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	Heavy fuel oil unloading measuring unit (Digital flow meter) Heavy fuel oil storage tank & equipment Heavy fuel oil heating equipment Heavy fuel oil transfer pump unit Heavy fuel oil storage tank suction header Heavy fuel oil buffer tank Heavy fuel oil buffer tank insulation Heavy fuel oil buffer tank equipment Heavy fuel oil separator unit-3 (three) nos. - Separator - Delivery pump - Strainer - Steam heater - Sludge tank - Sludge pump - Steel frame - Control panel - Interconnection pipes, flanges, seals and valves Two (2) Heavy fuel oil day tank Heavy fuel oil day tank insulation Heavy fuel oil day tank equipment Heavy fuel oil feeder unit - Heavy fuel oil feeder pump with Variable Frequency Driver(VFD) for steady supply pressure to Engine - Light fuel oil feeder pump - Automatic filter - Manual by-pass filter - Viscosity control system Heavy fuel oil digital flow meter for Engine consumption Piping and valves heavy fuel oil system inside engine hall					

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	Heavy fuel oil trace heating material inside engine hall Heavy fuel oil pipe insulation inside engine hall Piping and valves heavy fuel oil system outside engine hall Heavy fuel oil trace heating material outside engine hall Heavy fuel oil pipe insulation outside engine hall -Others, as requirement					
A2.2	<b>LUBRICATING OIL SYSTEM</b> including following list, but not limited to: Lubricating oil separator unit for each engine Oil mist separator module Separator Lubricating oil separator unit Separator cleaning device (mobile), cleaning unit & connection kit & cleaning liquid Lubricating oil unloading pump unit: fresh oil Lubricating oil storage tank: fresh oil Equipment for lubricating oil storage tank: fresh oil Lubricating oil service tank Lubricating oil service tank equipment Lubricating oil transfer pump unit (mobile) Lubricating oil transfer pump unit (stationary) Lubricating oil storage tank: used oil Lubricating oil unloading pump unit: used oil Equipment for lubricating oil storage tank: used oil Piping and valves lubricating oil system inside engine hall Lubricating oil system pipe insulation inside engine hall Piping and valves lubricating oil system outside engine hall Lubricating oil system pipe insulation outside engine hall -Others, as requirement	1 (one) lot				
A2.3	<b>COMPRESSED AIR SYSTEM</b> including following list, but not	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	limited to: Starting air bottle Starting air compressor unit – consists of two units each two stage type Starting air compressor unit – consists of one units each two stage type Instrument air compressor unit-two sets Instrument air bottle Piping and valves compressed air system (set) -Others, as requirement					
A2.4	<b>COOLING SYSTEM</b> following list, but not limited to: Cooling radiator/ tower, Ultra low noise, With VFD Cooling radiator/ tower legs (set) Cooling radiator/ tower ladder and railings Maintenance water tank units (fresh water) Expansion Tank Piping and valves maintenance water system (set) Piping and valves cooling system inside engine hall Piping and valves cooling system outside engine hall -Others, as requirement	1 (one) lot				
A2.5	<b>CHARGE AIR SYSTEM</b> including following list, but not limited to: Charge air filter-Wet type (Oil bath system) Weather hood Charge air silencer Ducting charge air system (set) -Others, as requirement	1 (one) lot				
A2.6	<b>EXHAUST SYSTEM</b> (with stack height not less than 55m) including following list, but not limited to: Exhaust gas silencer, 45 dB attenuation	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	Rupture disc Bellows for exhaust gas silencer Ducting exhaust gas system (set) Bellows for exhaust gas ducting Insulation exhaust gas ducting (set) Exhaust gas stack pipe with drain Exhaust gas sampling facility -Others, as requirement					
A2.7	<b>STATION SUPPORT SYSTEM</b>					
A2.7.1	<b>OILY WATER SYSTEM</b> including following list, but not limited to: Oily water transfer pump units Oily water buffer tank with heating and gravity separation compartments considering 1% sludge of the quantity of consumed fuel for 80% plant factor for 3 months Oily water feed pump unit Automatic oily water treatment unit (Emission breaking unit) Sludge tank with heating considering 1% sludge of the quantity of consumed fuel for 80% plant factor for 3 months Sludge loading pump unit Piping & valves oily water treatment system with heat tracing Sludge disposal with transfer facilities Effluent Treatment Plant (ETP) as per requirements of DoE -Others, as requirement	1 (one) lot				
A2.7.2	<b>WATER TREATMENT SYSTEM</b> including following list, but not limited to: A complete modern Water treatment plant with required facilities Treated water storage tank having capacity of 15 days plant usage water	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	Treated water storage tank equipment Water booster unit Piping and valves treated water system (set) with underground deep well pumps Drinking water system -Others, as requirement					
A2.7.3	<b>FIRE FIGHTING SYSTEM</b> associated with the Engines	1 (one) lot				
A2.7.4	<b>Water sourcing system</b> a. Deep well pumps system	1 (one) lot				
A2.8	<b>HEAT RECOVERY SYSTEM</b>					
A2.8.1	<b>STEAM GENERATION SYSTEM</b> FOR FUEL and ENGINE HEATING including following list, but not limited to: <ul style="list-style-type: none"> <li>- Exhaust gas boiler</li> <li>- Inlet and outlet hoods with inspection doors</li> <li>- Modulating exhaust gas by-pass damper with actuator</li> <li>- Manual steam soot blowing equipment</li> <li>- Shut-off valves</li> <li>- Blow-down drain</li> <li>- Safety valve</li> <li>- Relief valve</li> <li>- Pressure switches</li> <li>- Level switches</li> <li>- Level control device</li> <li>- Insulation and cladding</li> <li>- Counter flanges, bolts, nuts and gaskets</li> <li>- Mounting supports</li> <li>- Boiler service platform</li> </ul> Bellows for exhaust gas boiler Heat recovery container - Feed water tank	1 (one) lot				



Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	<ul style="list-style-type: none"> <li>- Feed water pump</li> <li>- Chemical dosing unit</li> <li>- Blow-down tank</li> <li>- Local control panel</li> <li>- Light fuel oil (LFO) fired boiler for steam generation (Auxiliary Boiler)</li> <li>- Oil detector</li> <li>Steam header</li> <li>Boiler washing water tank</li> <li>Boiler washing water pump</li> <li>Piping, valves and insulation for steam generation system for fuel heating (set)</li> <li>-Others, as requirement</li> </ul>					
A2.9	<b>FUEL UNLOADING SYSTEM (HFO &amp; LFO)</b> Fuel unloading system for both road & river way including following list, but not limited to: <ul style="list-style-type: none"> <li>- Fuel unloading house,</li> <li>- Fuel unloading jetty/pontoon</li> <li>- Fuel unloading pumps (2X100m3 for HFO and 2X30 m3 for LFO) for each unloading point (unloading point will be two)</li> <li>- Bunkering system with pumps and shed</li> <li>- Piping, valves and insulation</li> </ul>	1 (one) lot				
A2.10	<b>Other miscellaneous System</b> /equipment/materials for mechanical auxiliary system	1 (one) lot				
<b>Sub-total of A2</b>						
A3	<b>EMERGENCY DIESEL ENGINE GENERATOR (EDG)</b>					
A3.1	<b>EMERGENCY DIESEL ENGINE GENERATING SET</b> (not less than 500 kVA) complete in all respect including all auxiliaries and ancillary systems.	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	<b>Sub-total of A3</b>					
A4	<b>230 KV SWITCHGEAR, EQUIPMENT AND TRANSFORMERS</b>					
A4.1	<b>230 KV Switchgear Equipment</b> as per attached conceptual single line diagram, including the following list, but not limited to:					
A4.1.1	230 kV circuit breakers [3 phase trip]	1 (one) lot				
A4.1.2	230 KV Current Transformers	1 (one) lot				
A4.1.3	230 KV Capacitive Voltage Transformers (CVT)	1 (one) lot				
A4.1.4	230 KV Lightning Arresters	1 (one) lot				
A4.1.5	230 KV Isolators (Disconnecting Switch) and Earthing Switch	1 (one) lot				
A4.1.6	Steel structures for supporting the switchgear, equipment, posts, beams and gantry structures.	1 (one) lot				
A4.1.7	230 kV XLPE (Single-Core, 4 cables) underground cable with Two ends Termination through pot head with necessary hardware from unit transformers to APSCL existing 230/132 kV switchyard. Total Length of the cables approximately 9 km.	1 (one) lot				
A4.1.8	Suspension/post insulator string sets, tension insulator string sets and station post supporting insulator set with necessary hardware	1 (one) lot				
A4.1.9	Shield wire connectors and necessary hardware	1 (one) lot				
A4.1.10	All other equipment and materials for interconnection with grid	1 (one) lot				
A4.1.11	Tariff metering system (main & backup) and all necessary accessories	1 (one) lot				
A4.2	<b>Step-Up Transformers and Associated Equipment</b>					
A4.2.1	230/11 kV, 3 phase; step-up transformers and associated equipment -Common equipment -Transformer bay -Remote terminal unit	02 (two) sets				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	-Power line carrier					
<b>A4.2.2</b>	Short Circuit Current Limiting Device with necessary equipment & accessories at low tension side of step-up transformers	1 (one) lot				
A4.3	Station Auxiliary Transformers and Associated Equipment					
A4.3.1	11/.415 kV, 3 phase; Station auxiliary transformers and associated equipment	02 (two) sets				
A4.3.2	<b>Station service</b> system including following, but not limited to: Low voltage switch board Radiator panels Frequency converter (for heavy fuel oil feeder pump) Frequency converter (for light fuel oil feeder pump) Frequency converter (for cooling radiator) Filter for cooling radiator frequency converter Frequency converter (for engine hall inlet ventilation, auxiliary side) Frequency converter (for engine hall outlet ventilation) Station auxiliary transformer medium voltage cables Station auxiliary transformer low voltage cables Low voltage cables (set) Cable ladders Cable termination and cable fittings					
A4.3.3	<b>PLANT ELECTRIFICATION AND EARTHING</b> Safety earthing system (ground) Lighting and building electrification, but not limited to: - Electrification engine hall, materials - Electrification office building, control room, materials - Electrification electrical building, materials - Electrification fuel treatment house, materials - Electrification firefighting pump house, materials					

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	<ul style="list-style-type: none"> <li>- Electrification workshop &amp; warehouse, materials</li> <li>- Electrification fuel unloading station, materials</li> <li>- Electrification lubrication oil unloading station, materials</li> <li>- Other, as requirements</li> </ul> Lighting Protection system Fire detection system <ul style="list-style-type: none"> <li>- Fire detection engine hall, materials</li> <li>- Fire detection office building, control room, materials</li> <li>- Fire detection electrical building, materials</li> <li>- Fire detection fuel treatment house, materials</li> <li>- Fire detection firefighting pump house, materials</li> <li>- Fire detection workshop &amp; warehouse, materials</li> <li>- Other, as requirements</li> </ul>					
A4.4	<b>MAIN SWITCHGEAR (11 kV SYSTEM)</b>					
A4.4.1	Main Bus bar Generator cubical Neutral point cubical Outgoing feeder cubical Station auxiliary transformer feeder cubical Measuring cubical Generator cubical cable (set) Generator neutral point cable (set) Outgoing feeder cubical cable (set) Cable termination and cable fittings -Others, if required	1 (one) lot				
<b>Sub-total of A4</b>						
A5	<b>CONTROL &amp; PROTECTION SYSTEM AND AUTOMATION SYSTEM</b>					
A.5.1	<b>Control and Protection System</b> including following list, but not limited to:	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	-Unit control panels -Central control panel & desks -Protection panels -11kv switchgear control panels -synchronizing panels -auxiliary power supply panels -230 kV control and protection panels - any other required control & protection panels and desks etc.					
A.5.2	<b>AUTOMATION SYSTEM</b> with necessary hardware, software, interfacing based on complete DCS system control and operation of the plant, including following list, but not limited to: Operator's work station Engineering Workstation Manager Workstation Uninterrupted power supply (UPS)	1 (one) lot				
<b>Sub-total of A5</b>						
A6	<b>Other Mechanical System</b> (if not mentioned above) including following list, but not limited to:					
A6.1	All CONSUMSBLES for initial filling of the plant	1 (one) lot				
A6.1.1	First filling of chemicals for water treatment	1 (one) lot				
A6.1.2	Other Consumables (Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.)	1 (one) lot				
<b>Sub-total of A6</b>						
A7	<b>Other Electrical System</b> (if not mentioned above) including following list, but not limited to:	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	<ul style="list-style-type: none"> <li>- 415 V common power Centre of required capacity</li> <li>- 415 V unit motor control centre for each engine Genset</li> <li>- 11 kV XLPE power cables (copper) for connection to step up transformers and others of required quantity</li> <li>- Low Voltage power cables (copper) of required quantity</li> <li>- Control and instrument cables (copper) of required quantity</li> <li>- Race way materials</li> <li>- Grounding system.</li> <li>- Lighting and small power supply</li> <li>- Communication system including PLC, PABX System</li> <li>- DC power supply system including 2(two) banks of 110 V (Nominal) Battery and 2(two) sets of battery chargers (Thyristor type) and other associated facilities.</li> <li>- DC system switchyard control</li> <li>- UPS for unit control system in addition to Control &amp; Communication system.</li> <li>-SCADA &amp; communication system and equipment as per requirement of PGCB</li> <li>-CCTV for total plant coverage</li> </ul>					
<b>Sub-total of A7</b>						
<b>A8</b>	<b>MAINTENANCE FACILITY</b>					
A8.1	OVER-HEAD CRANES (one for Engine & Generator hall and one for auxiliary module) with all standard accessories	02 (two) Nos.				
A8.1.1	Hydraulic Mobile CRANE of minimum 50 ton capacity	1 (one) No.				
A8.2	LIFTING EQUIPMENT/rope/cable/soling	1 (one) lot				
A8.2.1	Fork lift (one 5 ton and one 10 ton capacity)	2 (Two) Nos.				
<b>Sub-total of A8</b>						

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
A9	<b>FIRE FIGHTING FACILITY</b>					
A9.1	Foam Based Fire-fighting facilities with all accessories	1 (one) lot				
A9.2	Complete Hydrant system including water main, hydrant stands, hoses, motor driven and engine driven fire fighting pumps, jockey pump etc.	1 (one) lot				
A9.3	Portable firefighting equipment as per requirement	1 (one) lot				
A9.4	Other fire fighting related equipment and accessories	1 (one) lot				
A9.5	Sprinkler type auto hydrant system for fire protection of step up transformers and auxiliary station transformers.	1 (one) lot				
Sub-total of A9						
A10	<b>SPARE PARTS AND CONSUMABLES FOR 2 YEARS WARRANTEE PERIOD considering 80% plant factor as per recommendation of manufacturer</b>					
A10.1	<b>CONSUMABLES</b> for warranty period operation and maintenance including following list, but not limited to: Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.	1 (one) lot				
A10.2	<b>All SPARE parts</b> that are necessary for warranty period operation and Maintenance of the plant	1 (one) lot				
Sub-total of A10						
A11	<b>MAINTENANCE TOOLS</b>					
A11.1	<b>Special Maintenance Tools for Engine Genset</b>					
A 11.1.1	Special maintenance tools and tackles (set) for 1000 hours to 30,000 hours maintenance works that are not available in market and only available in manufacture of main equipment like engine, alternator, breaker etc.	1 (one) lot				
A 11.1.2	Tools and tackles for turbocharger maintenance (set)	1 (one) lot				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
A 11.1.3	HFO separator tools and tackles (set)	1 (one) lot				
A 11.1.4	Lubricating oil separator tools and tackles (set)	1 (one) lot				
A11.2	Plant Hand Tools and tackles					
A 11.2.1	Hand tools set for Engine maintenance	1 (one) lot				
A 11.2.2	Other necessary tools and tackles	1 (one) lot				
<b>Sub-total of A11</b>						
A12	<b>OFFICE EQUIPMENT</b> The Contractor shall provide Five (05) Nos. of Computer (latest model), each with Laser Printer; UPS (30 Minutes at full load, Minimum), Stabilisers, Scanners, one Photocopier, Racks, Standard Tables & Chairs and other necessary office equipment.	1 (one) lot				
<b>Sub-total of A12</b>						
A13	ELECTRICAL TESTING TOOLS including following list, but not limited to: -A smart and modern test bench with standard testing facilities. -Current injection test set, -Megger, -Digital Multimeter, - Relay testing kit, -Process calibration, -Pressure simulator, -AVO insulation tester, -Temperature simulator bath, -Voltage detector with insulating telescope stick, -Electric power supply test bench,	1 (one) lot				



Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
	-Clamp on meter (0.600A), -Hand tools -Temperature gun -noise (db) measuring device -Vibration measuring device -Oil insulation (break down voltage) tester The origin of the tools must be Japan/USA/ Germany					
<b>Sub-total of A13</b>						
A14	<b>WEEKSHOP EQUIPMENT &amp; TOOLS</b> as per the list of clause 18.4.4, volume 2 of 2 (Part-A	1 (one) lot				
<b>Sub-total of A14</b>						
A15	<b>CHEMICAL LAB EQUIPMENT</b> Chemical Laboratory equipment & Tools shall include among others all necessary equipment & Tools for oil testing, water testing and testing of chemicals & exhaust gas used in the power plant including Spectro photo meter, Fuel oil (HFO,LFO) & Lube oil testing and measuring equipment (Water in oil content, BN, Insoluble, AN, Density, Viscosity, Compatibility, Metal in lube oil), water testing and measuring equipment (PH, Conductivity, TDS, Total Hardness, Nitrite, Total Alkalinity, Silica), Exhaust gas (SO <sub>x</sub> , NO <sub>x</sub> , CO and Particulate matter) measuring instrument etc.	1 (one) lot				
<b>Sub-total of A15</b>						
A16	<b>TRANSPORTS AND VEHICLE</b>					
A16.1	Jeep: One brand new 2700 CC Jeep, Must be unused, Origin: Japan	1 (one) No.				

Sl. No	Item Name	Qty.	CIP Price		Custom Clearance and Inland Transportation including loading and unloading etc.	
			Foreign Currency (US Dollar/Euro)		Local Currency (BDT)	
			Rate	Total	Rate	Total
A16.2	Car: One brand new 1500 CC car, Must be unused, Origin: Japan	1 (one) No.				
A16.3	Double Cabin Pick-up: One (1) brand new 2700 CC Double Cabin Pick-up; must be unused. Origin: Japan	1 (one) Nos.				
A16.4	Microbus: One brand new 2700 CC 12 seat Microbus; must be unused. Origin: Japan	1 (one) No.				
<b>Sub-total of A16</b>						
A17	OTHERS, if necessary (Tenderer shall specify those items)	1 (one) lot				
<b>Sub-total of A17</b>						
<b>Sub-total : Sch.2</b>						

**Note: Lot means all items which are required to complete the contract.**

## Schedule-2

### Erection & Commissioning

Sl. No.	Description	Qty	Erection & Commissioning				Insurance for Erection & Commissioning	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
2A	Engine Generating sets complete with all auxiliary equipment	1 (one) lot						
2B	Step-Up Transformers, station auxiliary transformers, and 230 KV switchgears, MV & LV switchgears, all HV, MV & LV equipment, DC battery system & chargers, radiator control system, DCS, Communication & SCADA system, Grid Inter-connection, Underground cable etc. and others required system for the plant.	1 (one) lot						
2C	Control and protection equipment, metering system, and other electrical equipment and materials.	1 (one) lot						
2D	Maintenance facilities, fuel unloading and handling, storage, treatment facilities, fire fighting facilities and other mechanical facilities.	1 (one) lot						
2E	OTHERS, if necessary (Tenderer shall specify those items)	1 (one) lot						
Sub-total : Sch.2								

**Note: Lot means all items which are required to complete the contract.**

### Schedule-3

#### Civil & Building Works:

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
3	CIVIL WORKS AND STRUCTURES							
3A	POWER PLANT BUILDINGS							
3A.1	ENGINE HALL including following list, but not limited to: Superstructures, engine hall Foundation of engines Earthworks and substructures, engine hall Earthworks and substructures, generating set Inlet ventilation, generator side Inlet ventilation, auxiliary side Outlet ventilation, roof monitor Plumbing and sanitary installations, engine hall Electrification, engine hall Fire detection, engine hall Sunlight shed Hydrant valve pairs Standpipe hose cabinet Portable fire extinguisher (dry powder type) Mobile foam unit Overhead cranes supply & installation , engine hall Others, as requirement	1 (one) lot						
3A.2	UTILITY BLOCK including following list, but not limited to: Superstructures, Utility block Earthworks and substructures, Utility block Ventilation,	1 (one) lot						

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
	Utility block Air-conditioning, Utility block Plumbing and sanitary installations, Utility block Electrification, Utility block Fire detection, Utility block Fire fighting, hose reel, Portable fire extinguisher (dry powder type), Portable fire extinguisher (CO2 type) Overhead cranes, Utility block Pillar jib crane, pipe support. Others, as requirement							
3A.3	<b>FUEL TREATMENT BUILDING including following list, but not limited to:</b> Superstructures, Fuel treatment building Earthworks and substructures, Fuel treatment building Ventilation, Fuel treatment building Plumbing and sanitary installations, Fuel treatment building Electrification, Fuel treatment building Fire detection, Fuel treatment building Portable fire extinguisher (dry powder type) Portable fire extinguisher (dry powder type) Overhead crane, Fuel treatment building Earthworks and substructures, pipe support cranes for Fuel treatment building Others, as requirement	1 (one) lot						
3A.4	<b>FIRE FIGHTING STRUCTURES</b> Substructures firefighting pump house Superstructures firefighting pump house, material Superstructures firefighting pump house, installation Earthworks and substructures	1 (one) lot						

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
	Others, as requirement							
Sub-total of 3A								
3B	<b>ANCILLIARY SERVICE BUILDINGS</b>							
3B.1	<b>GUARD HOUSE</b> Complete guard house Security ports	1 (one) lot						
3B.2	<b>OFFICE/ADMINISTRATION BUILDING</b> Two storied administration building each floor 360 Sq. meters area. Dimensions not less than 12 Meters x 30 Meters.	1 (one) lot						
3B.3	<b>WORKSHOP</b> Two storied workshop building with Maintenance people sitting facility. Each floor having minimum 500 Sq. meters area (including overhead crane and hoist crane etc.). Dimensions not less than 20 Meters x 25 Meters.	1 (one) lot						
3B.4	<b>WAREHOUSE</b> Three storied warehouse each floor minimum 300 Sq. meters storage area (including overhead crane and hoist crane etc.). Dimensions not less than 15 Meters x 20 Meters.	1 (one) lot						
Sub-Total of 3B								
3C	<b>OIL STORAGE AND CONTAINMENT AREAS</b>							
3C.1	<b>DAY TANK CONTAINMENT AREA including following list, but not limited to:</b> Earthworks and substructures, light fuel oil day tank Earthworks and substructures, heavy fuel oil buffer tank	1 (one) lot						

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
	Earthworks and substructures, heavy fuel oil day tank Earthworks and substructures, oily water buffer tank Earthworks and substructures, sludge tank Earthworks and substructures, lubricating oil storage tank: fresh oil Earthworks and substructures, lubricating oil storage tank: used oil Earthworks and substructures, lubricating oil service tank							
3C.2	<b>FUEL STORAGE CONTAINMENT AREA</b> including following list, but not limited to: Earthworks and substructures, light fuel oil storage tank Earthworks and substructures, heavy fuel oil storage tank Earthworks and substructures, dike bottom Earthworks and substructures, dike wall Earthworks and substructures, pipe support	1 (one) lot						
3C.3	<b>FUEL UNLOADING STATION</b> including following list, but not limited to: Superstructures, fuel unloading station Earthworks and substructures, fuel unloading station Plumbing and sanitary installations, fuel unloading station Jetty for fuel unloading Electrification, fuel unloading station Portable fire extinguisher (dry powder type) Earthworks and substructures, pipe support	1 (one) lot						
3C.4	<b>LUBRICATING OIL HANDLING FACILITIES</b> including following list, but not limited to: Earthworks and substructures, lubricating oil unloading station, structure for Lube oil drum storage	1 (one) lot						
<b>Sub-Total of 3C</b>								
3D	<b>AUXILIARY STRUCTURES</b>							

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
3D.1	<b>COOLING SYSTEM STRUCTURES including following list, but not limited to:</b> Earthworks and substructures, cooling radiator/tower Earthworks and substructures, pipe support	1 (one) lot						
3D.2	<b>CHARGE AIR / EXHAUST GAS DUCTING AND BOILER SUPPORT STRUCTURES including following list, but not limited to:</b> Steel structures for charge air duct support (set) Steel structures for auxiliary equipment support (set) Steel structures outside the building (set) Superstructures, exhaust gas stack Earthworks and substructures, exhaust gas stack Earthworks and substructures, heat recovery container Superstructures, boiler support Earthworks and substructures, boiler support	1 (one) lot						
3D.3	<b>OIL/WATER COLLECTING AND SEPARATION STRUCTURES including following list, but not limited to:</b> Oily water collecting pit Superstructures, oily water transfer pump shelter Superstructures, oily water treatment unit and separation compartment Earthworks and substructures, oily water treatment unit Plumbing and sanitary installations, oily water treatment unit	1 (one) lot						
3D.4	<b>WATER TREATMENT SYSTEM STRUCTURES including following list, but not limited to:</b> Earthworks and substructures, treated water storage tank, treated water tank having capacity of 15 days water for plant usage	1 (one) lot						
<b>Sub-Total of 3D</b>								



Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
3E	POWER TRANSMISSION AREAS							
3E.1	POWER TRANSFORMERS AREAS Earthworks and substructures, power transformers Fence, gravelling, around power transformers	1 (one) lot						
3E.2	STATION AUXILIARY TRANSFORMERS AREAS Earthworks and substructures, station auxiliaries’ transformers, Fence, around auxiliaries transformer	1 (one) lot						
3E.3	SWITCHYARD AREAS Earthworks and substructures, switchyard, Switchyard surface covering, gravelling, Fence, around switchyard. Demolition of existing 230 kV bay, if necessary	1 (one) lot						
Sub-Total of 3E								
3F	SITE WORKS							
3F	The following site works shall be done, but not limited to: Access Road to power plant from B-type main gate Site clearing, soil tests, removal of contamination, Land Development works, Earthworks, soil stabilization (piles, soil reinforcement, etc.) Temporary Jetty for heavy equipment unloading Existing elements on plot (demolition, protection, cleaning, top soil removal, etc.) (if required) Earth excavation on plot (if required) Rock excavation on plot (if required) Filling on plot (if required) Remedial work for the ground and / or groundwater contamination (if required)	1 (one) lot						

Sl. No.	Description	Qty	Civil & Building Works				Insurance for Civil & Building works	
			Foreign currency		Local Currency (BDT)		Local Currency (BDT)	
			Rate	Total	Rate	Total	Rate	Total
	Pipelines on plot, cable trench to switchyard Pavements, roads and parking Power plant surface covering (gravel) Lawns Boundary Wall and Fence, Pavements, kerbs and rain water drainage RCC made Water drainage system Power Plant internal road Fuel pipe to plant River bank Protection Riprap Protection to Slopes Water pipe to plant Sewage pipe to plant Sewage tank Landscaping Effluent Plant as per DEO requirement Telephone line to plant All pipe line shall be in standard color code with flow direction.							
	<b>Sub-Total of 3F</b>							
3G	OTHERS, if necessary (Tenderer shall specify those items)	1 (one) lot						
	<b>Sub-Total of 3F</b>							
	<b>Sub-Total : Sch.3</b>							

**Note: Lot means all items which are required to complete the contract.**

## Schedule-4

### Services :

Sl. No.	Description	Qty	Services			
			Foreign currency		Local Currency (BDT)	
			Rate	Total	Rate	Total
4A	DESIGN AND ENGINEERING including design review meeting in EPC country as per GC-10, Volume- 1 of 2	1 (one) lot				
4B	WORKSHOP TESTS at manufacturer's premises including test witnessing (Engineering Inspection) as per GC-16, Volume- 1 of 2	1 (one) lot				
4C	TRAINING					
4C1	Engine O&M Training at manufacturers factory including Air Ticket (Economy Class), internal transportation, accommodation, fooding, daily allowance @ 100.00 USD/day/person etc. for Fifteen (15) persons for thirty (30) days. As per clause 70.0, volume 1 of 2.	1 (one) lot				
4C2	Training at the job site	1 (one) lot				
4D	DOCUMENTS Drawings, operation and maintenance manuals etc. with clear diagram and dimensions. Basic design documents Conceptual design documents Detailed design documents Commercial operation & maintenance documents	1 (one) lot				
4E	Service for Execution of maintainance works (schedule maintenance, emergency maintenance, inspection, repair, overhauling etc.) during 2 (two) years warranty period	1 (one) lot				

Sl. No.	Description	Qty	Services			
			Foreign currency		Local Currency (BDT)	
			Rate	Total	Rate	Total
4F	Operation and maintenance services after satisfactory performances test by competent warranty Engineers. (One Elect. And I&C Engineer, one Mechanical Engineer and one Operation Engineer as warranty engineers for 2 (two) years warranty period).	1 (one) lot				
Sub-Total : Sch.4						

**Note:** Lot means all items which are required to complete the system.

#### Summary of Prices:

Sch. No.	Description	Foreign currency		Local Currency (BDT)		
		CIP prices	Service, Erection, Commissioning, Civil & Building works	Insurance for Erection, commissioning, civil & building works	Customs Clearance & Inland transportation	Services, Erection, Commissioning, civil and building works
Sch. 1	Supply of Equipment					
Sch. 2	Erection & Commissioning					
Sch. 3	Civil and Building works					
Sch. 4	Services					
Total						
Grand Total						

**TIME SCHEDULE**

**Manufacture, Delivery, Erection and Commissioning**

**Time In Days From Contract Effective Date**

<b>Generating unit</b>	<b>Date of FOB Delivery</b>	<b>Delivery to The Site</b>	<b>Erection and commissioning Completion</b>	<b>Completion of commercial operation Date</b>
	<b>in Days</b>	<b>in days</b>	<b>in Days</b>	<b>in Days</b>

### Bank Guarantee for Performance Security

*[this is the format for the Performance Security to be issued by a scheduled bank  
of Bangladesh in accordance with ITT Claus28 ]*

Tender No:

Date:

To:

[Name and address of Purchaser]

#### PERFORMANCE GUARANTEE NO.:

We have been informed that [name of Contractor] (hereinafter called "the Contractor") has undertaken, pursuant to Tender no. (Insert Tender no.) and NOA No. (Insert NOA no.) for the Detail design, manufacture, inspection, testing, delivery to the Site, installation, testing & commissioning, performance test and related civil and building works including necessary auxiliaries and ancillaries on Turnkey basis of Ashuganj 100 MW HFO Power Plant in conformity with the said Conditions of Contract and two (2) years warranty period.

Furthermore, we understand that, according to your conditions, Contracts must be supported by a performance guarantee.

At the request of the Contractor, we [name of bank] hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of [insert amount in figures and in words] upon receipt by us of your first written demand accompanied by a written statement that the Contractor is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

This guarantee is valid until [warranty period+28 days] or as it may be extended from time to time to such date or dates as may be necessary to ensure and complete performances of the contract, and we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

## **Contract Agreement**

(SPECIMEN)

THIS AGREEMENT is made the *[day]* day of *[month]* *[year]* between Ashuganj Power Station Company Ltd. , Ashuganj, Brahmanbaria, Bangladesh (hereinafter called "the APSCL") Party of the First Part :and *[name and address of Contractor]* (hereinafter called "the Contractor") Party of the Second Part :

WHEREAS the APSCL has invited tender for the design, manufacture, inspection, testing, delivery to the Site, installation, testing & commissioning, performance test and related civil and building works including necessary auxiliaries and ancillaries on Turnkey basis of Ashuganj 100 ( $\pm 10\%$ ) MW HFO Power Plant Project consisting of identical units, each of not less than 14 MW of engine generators (heavy duty, low/medium speed, 4 stroke, HFO FIRED engine) at Ashuganj, Brahmanbaria, Bangladesh having net output of 100 ( $\pm 10\%$ ) MW at Site conditions of 35°C, 1.013 bar, 98% R.H. and two (2) years warranty period but shall not be limited the scope of work specified in the Bid;

and

WHEREAS, the Contractor has submitted Bid vide their Bid dated for this work as specified above, and

WHEREAS the APSCL has accepted the Bid submitted by the Contractor in the sum of

*[Contract Price in figures and in words]* (hereinafter called "the Contract Price").

, and

Whereas, the parties now desire to evidence their agreement for the performance of the work, and upon the terms and conditions herein set forth.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions hereafter referred to.
2. The documents forming the Contract shall preferably be arranged in the following order, and the Contract shall be interpreted harmoniously considering the whole Contract in its entirety;
  - a. The Contract Agreement
  - b. Performance Guarantee
  - c. Power of Attorney
  - d. Final Price Schedule.
  - e. Acceptance of NOA
  - f. Notification of Award

- g. Addenda (If any)
  - h. All Correspondences between APSCL and the Contractor.
  - i. Volume 1:
    - Instructions to Tenderers
    - General Conditions
    - Special Conditions
    - Volume 2: Technical Specification and All Schedules
  - j. Contractor's Proposals
  - k. Any other document as stated in the tender document
3. In consideration of the payments to be made by the APSCL to the Contractor in accordance with General Condition's clause 61, the Contractor hereby covenants with the APSCL to execute the whole works as Turnkey basis and to remedy any defects therein in conformity with and in all respects with the provisions of the Contract.
4. The APSCL hereby covenants to pay the Contractor in consideration of the successful completion of the whole works as Turnkey basis and the remedying of defects therein, the Contract Price may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

For all purposes of the Contract, the following addresses shall be used

APSCL:

Contractor

-----  
-----



IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Bangladesh on the day, month and year first written above.

For the APSCL:

For the Contractor:

Signature

Print Name

Title

In the presence of Name

Address

NOT FOR SUBMISSION

## **Manufacturer's Authorisation Letter**

*[This letter of authorisation should be on the letterhead of the Manufacturer and should be signed by the person with the authority to sign documents that are binding on the Manufacturer]*

Invitation for Tender No:

Date:

Tender Package No:

To:

[Name and address of Purchaser]

WHEREAS,

We *[name and address of manufacturer]* are reputable manufacturers having factories at *[list of places of factories]*.

THEREFORE, we do hereby:

1. Authorise *[name of Tenderer]* to submit a Tender in response to the Invitation for Tenders indicated above, the purpose of which is to provide the following Goods, *[description of goods]*, manufactured by us, and to subsequently sign the Contract for the supply of such Goods; and,
2. Extend our full guarantee and warranty in accordance with Tender document respect to the Goods offered in the Tender.

Signature

In the capacity of:

Duly authorised to sign the authorisation for  
and on behalf of

*[name of Manufacturer]*

Date:

## Tenderer Information

[This Form should be completed only by the Tenderer, preferably on its Letter-Head Notepaper].

Invitation for Tender No: [indicate IFT No]  
Tender Package No [indicate Package No]  
This Package is divided into the following Number of Lots [indicate 1-4 Lots]

1. Eligibility Information of the Tenderer /				
1.1	Nationality of Individual or country of Registration			
1.2	Tenderer's legal title			
1.3	Tenderer's registered address			
1.4	Tenderer's legal status [complete the relevant box]			
	Proprietorship			
	Partnership			
	Limited Liability Concern			
	Government-owned Enterprise			
	Other (please describe)			
1.5	Tenderer's year of registration			
1.6	Tenderer's authorised representative details			
	Name			
	Address			
	Telephone / Fax numbers			
	e-mail address			
1.7	Litigation (ITA Sub-Cause 4.6)			
	If there is no history of litigation or no pending litigation then state opposite "None". If there is a history of litigation, or a number of awards, against the Tenderer provide details below.			
	A. – History of Litigation during the last 5 years			
	Year	Matter in dispute	Value of Award	As %age of net worth
	B. – Pending Litigation			

		Matter in dispute	Value of Claim	As %age of net worth
1.8	Tenderer to attach photocopies of the following original documents		Articles of Incorporation or Registration of the legal entity named above; Latest Income Tax Clearance Certificate Latest VAT Clearance Certificate Others <i>(to be completed by the Purchaser if required)</i> .	
	The following two requirements are for National Tenderer's only			
1.9	Tenderer's Value Added Tax Registration (VAT) Number			
1.10	Tenderer's Income Tax Identification (TIN) Number			
A Foreign Tenderer shall provide evidence by means of a written declaration to demonstrate that it meets the above two criteria				
<b>2. Qualification Information of the Tenderer</b>				
2.1	Number of years of overall experience of the Tenderer in the construction of Power Plant as Turnkey Basis			
2.2	Specific experience of the Tenderer in the construction of Combined Cycle Power Plant as Turnkey Basis as per ITT clause 5			
2.3	Minimum level of production capacity or availability of equipment			
<b>3. Financial information of Tenderer</b>				
3.1	Satisfactory completion of Combined Cycle Power Plant as Turnkey Basis of a minimum value under a single contract in the last five years			
3.1	Financial reports or balance sheets or profit and loss statements or auditor's reports or bank references with documents or a combination of these demonstrating availability of liquid assets List below and attach copies.			
3.2	Name, address, contact details of Banks that may provide references if contacted by the Purchaser			

## Appendix-9

### JVCA Partner Information

*[This Form should be completed by each JVCA partner].*

Invitation for Tender No.:

*[indicate IFT No]*

Tender Package No.:

*[indicate Package No]*

This Package is divided into the following Number of Lots

*[indicate 1-4 Lots]*

1. Eligibility Information of the JVCA Partner		
1.1	Nationality of Individual or country of Registration	
1.2	JVCA Partner's legal title	
1.3	JVCA Partner's registered address	
1.4	JVCA Partner's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe)	
1.5	JVCA Partner's year of registration	
1.6	JVCA Partner's authorised representative details	

	Name			
	Address			
	Telephone / Fax numbers			
	e-mail address			
1.7	Litigation (ITT Sub-Cause 4.6)			
	If there is no history of litigation or no pending litigation then state opposite "None". If there is a history of litigation, or a number of awards, against the JVCA Partner provide details below.			
	A. – History of Litigation during the last 5 years			
	Year	Matter in dispute	Value of Claim	As %age of net worth
	B. – Pending Litigation			
		Matter in dispute	Value of Claim	As %age of net worth
1.8	JVCA Partner to attach copies of the following original documents	Articles of Incorporation or Registration of the legal entity named above; Latest Income Tax Clearance Certificate Latest VAT Clearance Certificate Others (to be completed by the Purchaser if required).		
	The following two requirements are for national JVCA Partner's only.			
1.9	JVCA Partner's Value Added Tax Registration (VAT) Number			
1.10	JVCA Partner's Income Tax Identification (TIN) Number			
A Foreign JVCA Partner shall provide evidence by means of a written declaration to demonstrate that it meets the above two criteria				
<b>2. Qualification Information of the JVCA Partner</b>				
2.1	Number of years of overall experience of the Tenderer in the construction of Power Plant as Turnkey Basis			
2.2	Specific experience of the Tenderer in the construction of HFO based Power Plant as Turnkey			

	Basis as per ITT clause 5	
2.3	Minimum level of production capacity or availability of equipment	
<b>3. Financial information of Tenderer</b>		
3.1	Satisfactory completion of similar HFO based Power Plant of a minimum value under a single contract in the last five years	
3.1	Financial reports or balance sheets or profit and loss statements or auditor's reports or bank references with documents or a combination of these demonstrating availability of liquid assets	
3.2	Name, address, contact details of Banks that may provide references if contacted by the APSCL	

## Specialist Subcontractor Information

*[This Form should be completed by each Subcontractor, preferably on its Letter-Head Notepaper].*

Invitation for Tender No:

*[indicate IFT No]*

Tender Package No

*[indicate Package No]*

This Package is divided into the following Number of Lots

*[indicate 1-4 Lots]*

1. Eligibility Information of the Subcontractor		
1.1	Nationality of Individual or country of Registration	
1.2	Subcontractor's legal title	
1.3	Subcontractor's registered address	
1.4	Subcontractor's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe)	
1.5	Subcontractor's year of registration	
1.6	Subcontractor's authorised representative details	
	Name	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Subcontractor to attach copies of the following original documents	Articles of Incorporation or Registration of the legal entity named above; Latest Income Tax Clearance Certificate Latest VAT Clearance Certificate Others <i>(to be completed by the Purchaser if required)</i> .
	The following two requirements are to be completed by national Subcontractors only:	
1.8	Subcontractor's Value Added Tax Registration (VAT) Number	
1.9	Subcontractor's Income Tax Identification (TIN) Number	
A Foreign Subcontractor shall provide evidence by means of a written declaration to demonstrate that it meets the above two criteria		



Key Activity(ies) for which it is intended to be Subcontracted		
2.1	Nature of Activity	Brief description of Activity
List of Similar Contracts in which Subcontractor has been engaged		
A	Name of Contract Value of Contract Name of Purchaser Contact Person and contact details Type of Supply provided	Year Tk.

## Personnel

Bidders should provide the names of suitably qualified personnel to meet the requirements to construct the plant. The data on their experience should be supplied using the Form below for each candidate.

Sl. No.	Name	Title of position	Year of service
	[ad as many rows & details as there are needed]		

## Resume of Proposed Personnel

<b>Position</b>		
<b>Personnel information</b>	<b>Name</b>	<b>Date of birth</b>
	<b>Professional qualifications</b>	
<b>Present employment</b>	<b>Name of employer</b>	
	<b>Address of employer</b>	
	<b>Telephone</b>	<b>Contact (manager / personnel officer)</b>
	<b>Fax</b>	<b>E-mail</b>
	<b>Job title</b>	<b>Years with present employer</b>

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company / Project / Position / Relevant technical and management experience

## **Pending Litigation**

Each Bidder or member of a JV must fill in this form

Pending Litigation			
<input type="checkbox"/> No pending litigation  <input type="checkbox"/> Pending litigation			
Year	Matter in Dispute	Value of Pending Claim in US\$ Equivalent	Value of Pending Claim as a Percentage of Net Worth

## **Form of Notification of Award**

Memo No. APSCL/

Date : 00/00/00

To

**Subject:** Notification of Award for .....

Ref.: Invitation for Tender No.

Dear Sir,

This is to notify you that your Tender dated (Insert date) for the (Insert subject) for the Contract Price of [Insert Amount) only has been approved by the Board of Directors, APSCL.

You are thus requested to take following actions:

- i) accept in writing the Notification of Award within seven (7) days of its issuance pursuant to ITT clause 29;
- ii) furnish a Performance Security in the specified format and in the amount of [Insert amount] within fourteen (14) days of issuance of this letter but not later than 28 days , in accordance with ITT clause 28 ;
- iii) sign the Contract within twenty-one (21) days of issuance of this letter but not later than 28 days , in accordance with ITT clause 30.

You may proceed with the execution of the project only upon completion of the above tasks. You may also please note that this Notification of Award shall constitute the formation of this contract which shall become binding upon you.

Thanking you.

(Signature)

## Bank Guarantee Form for Advance Payment

**Beneficiary:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_

We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with you, for the execution of \_\_\_\_\_ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of \_\_\_\_\_ (\_\_\_\_\_) is to be made against an advance payment guarantee.

At the request of the Contractor, we \_\_\_\_\_ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of \_\_\_\_\_ (\_\_\_\_\_) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on his account number \_\_\_\_\_ at \_\_\_\_\_.

The maximum amount of this guarantee is valid shall be progressively reduced in proportion to the value of each part-shipment or part-delivery of plant and equipment to the site, as indicated in copies of the relevant shipping and delivery documents that shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of documentation indicating full repayment by the Contractor of the amount of the advance payment, or on the \_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_, whichever is later.<sup>17</sup> consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

\_\_\_\_\_  
[signature(s) with name of bank] [signature(s) with name of bank]

<sup>17</sup> Insert the expected expiration date of the Time for Completion. The *Employer* should note that in the event of an extension of the time for completion of the Contract, the *Employer* would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

## Recommended Spare Parts for Plant life

Sl.no.	Item name	Equipment name	Quantity installed	Quantity required	Unit price
	[add as many rows & details as there are needed]				

## **Financial Situation**

1. Historical Financial Performance
2. Average Annual Turnover
3. Financial Resources

NOT FOR SUBMISSION

### **Historical Financial Performance**

Bidder's Legal Name: \_\_\_\_\_

Date: \_\_\_\_\_

JVA Partner Legal Name: \_\_\_\_\_

ICB No.: \_\_\_\_\_

To be completed by the Bidder and, if JVA, by each partner



<b>Financial information in US\$ equivalent</b>	<b>Historic information for previous _____ (___) years (US\$ equivalent in 000s)</b>						
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year ...</b>	<b>Year n</b>	<b>Avg.</b>	<b>Avg. Ratio</b>
<b>Information from Balance Sheet</b>							
<b>Total Assets (TA)</b>							
<b>Total Liabilities (TL)</b>							
<b>Net Worth (NW)</b>							
<b>Current Assets (CA)</b>							
<b>Current Liabilities (CL)</b>							
<b>Information from Income Statement</b>							
<b>Total Revenue (TR)</b>							
<b>Profits Before Taxes (PBT)</b>							


☐ Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following conditions:

Must reflect the financial situation of the Bidder or partner to a JVA and not sister or parent companies

Historic financial statements must be audited by a certified accountant

Historic financial statements must be complete, including all notes to the financial statements

Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted)

## Average Annual Turnover

Bidder's Legal Name: \_\_\_\_\_

Date: \_\_\_\_\_ JVA

Partner Legal Name: \_\_\_\_\_

ICB No.: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

### Annual turnover data (construction only)

Year	Amount and Currency	US\$ equivalent
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
*Average Annual Construction Turnover	_____	_____

## **Financial Resources**

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in Section III, Evaluation and Qualification Criteria

<b>Source of financing</b>	<b>Amount (US\$ equivalent)</b>
<b>1.</b>	
<b>2.</b>	
<b>3.</b>	
<b>4.</b>	

**Experience**

1. General Experience
2. Specific Experience

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## **Experience - General Experience within last 10 years**

Bidder's Legal Name: \_\_\_\_\_ Date: \_\_\_\_\_ JVA  
 Partner Legal Name: \_\_\_\_\_ ICB No.: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_ pages

<b>Starting Month / Year</b>	<b>Ending Month / Year</b>	<b>Years *</b>	<b>Contract Identification</b>	<b>Role of</b>
_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____
_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____
_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____
_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____
_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____

_____	_____	_____	Contract name:  Brief Description of the Works performed by the Bidder:  Name of Employer:  Address:	_____
-------	-------	-------	--	-------

\*List calendar year for years with contracts with at least nine (9) months activity per year starting with the earliest year

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## Specific Experience within last 10 years

Bidder's Legal Name: \_\_\_\_\_ Date: \_\_\_\_\_ JVA  
 Partner Legal Name: \_\_\_\_\_ ICB No.: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_ pages

Similar Contract Number: ____ of ____ required.	Information		
Contract Identification			
Award date Completion date			
Role in Contract	<input type="checkbox"/> Contractor	<input type="checkbox"/> Management Contractor	<input type="checkbox"/> Subcontractor
Total contract amount	_____		US\$ _____
If partner in a JVA or subcontractor, specify participation of total contract amount	_____ %	_____ US\$	
Employer's Name:			
Address:			
Telephone/fax number:			
Website and E-mail:			
Amount			
Physical size			
Complexity			
Methods/Technology			
Physical Production Rate			

Note: In support of the above, the Tenderer must provide documentary evidence in respect of such services and contract. The documentary evidence shall be in the form of copies of: (i) the certificate of performance of the contractor certified by the owner/ end user and (ii) relevant pages of the contract under which the services were/ are performed that show the name of the contract, the parties to the contract and the names, signatures and designations of the representatives of the parties to the contract. Such copies of documentary evidence shall be notarized as true copies by a notary public or attested by an authorized officer of the Foreign Ministry of the Bidder's country. The original documents must be presented to the Employer if so requested.



## **Chapter II**

### **General Conditions**

## CHAPTER II : GENERAL CONDITION

### 1.0 CONTRACT DOCUMENTS

It is understood and agreed that the Form of Agreement and the Tender Security, Performance Security, Instructions to Tenderers, Completed Tender Form with Appendices/Annexure/Exhibit (and Data supplied by the Contractor), General Conditions, Special Conditions, Technical Requirements, Drawings, Addenda, and Amendments, all as issued by the APSCL and the Engineer, and the Drawings, Specifications and Engineering Data which may be furnished by the Contractor in the form agreed upon by the Ashuganj Power Station Company Ltd. included in this Contract and the Works will be done in accordingly.

The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the Documents, the Ashuganj Power Station Company Ltd. shall issue necessary clarifications or instructions to the Contractor, and the priority of the documents shall be as follows:

- a. The Contract Agreement
- b. Performance Guarantee
- c. Power of Attorney
- d. Final Price Schedule.
- e. The Letter of Acceptance
- f. Notification of Award
- g. Minutes of Contract Negotiation.
- h. Volume 1:
  - Instructions to Tenderers
  - General Conditions
  - Special Conditions
  - Volume 2: Technical Requirement
  - Technical Particulars [Schedules, Drawing & Data Sheets]
- i. Addenda, if any.
- j. All Correspondences between Ashuganj Power Station Company Ltd. and the Contractor.
- k. Contractor's Proposals

### 2.0 DEFINITIONS

Words, phrases, or other expressions used in these Contract Documents shall have the meanings hereby assigned to them except where the context otherwise requires :

- i) "Contract" or "Contract Document" shall include the items enumerated above under Section 1.0, CONTRACT DOCUMENT.
- ii) "**APSCL**" shall mean the Ashuganj Power Station Company Ltd. a Power generating company registered in named and designated in the Form of

Agreement as "Party of the First Part", acting through its duly authorised representative.

- iii) "Engineer or Consultant" shall mean such person or persons or consulting firm for the time being or from time to time duly appointed by the Ashuganj Power Station Company Ltd. and whose authority shall be notified in writing to the Contractor by the Ashuganj Power Station Company Ltd. and who is acting on behalf of the Ashuganj Power Station Company Ltd. as Engineer for the purpose of the Contract and includes such other person (if any) to whom the Engineer's authority may have been lawfully delegated pursuant to the Contract.
- iv) "Contractor" shall mean the corporation, company, partnership, firm or individual, named and designated in the Form of Agreement as the "Party of the Second Part", who has entered into this Contract for the performance of the Work covered thereby, or its, his, or their duly authorised agent or other legal representative.
- v) "Subcontractor" shall mean a corporation, partnership, or individual having a direct contract with the Contractor for performing work covered by these Contract Documents, but not including the Contractor's regular suppliers of materials and components.
- vi) "Project Director" shall mean the person, designated by the Ashuganj Power Station Company Ltd., to be stationed at the Site and to represent the Ashuganj Power Station Company Ltd. in all matters. Notice to him shall be notice to the Ashuganj Power Station Company Ltd..
- vii) "Project" shall mean all the Works to be done under the Contract for Ashuganj 100 MW HFO Power Plant Project at Ashuganj, Brahmanbaria.
- viii) "Plant" shall mean and include machinery, apparatus, structures, materials, articles, and things of all kinds to be provided under the Contract which will form part of the Permanent Works.
- ix) "Work", "Works" or "Permanent Works" shall mean the equipment, supplies, materials, labour and services to be furnished under the Contract and the carrying out of all obligations imposed by the Contract Document.
- x) "Temporary works" shall mean all temporary works of every kind required in or about the execution, maintenance or completion of the Works but not forming part of the Permanent Works.
- xi) "Date of Contract/Date of Order" or words equivalent thereto, shall mean the date written in the first paragraph of the Contract.
- xii) " Effective Date of Contract [EDOC] " shall mean the date of Contract signing or date of establishing of Letter of Credit, whichever is later.
- xiii) "Contractor's Representative" shall mean the erection or operating Superintendent designated by the Contractor to be stationed at the Site and to represent the Contractor in all matters. Notice to him shall be notice to the Contractor.
- xiv) "Engineer's Representative" shall mean the Resident Engineer appointed by the Engineer to be stationed at the Site and to represent the Engineer in all matters.

- xv) "Contract Price" shall mean the sum or all sums named in the Contract Agreement.
- xvi) "Site" means the power house grounds and buildings and the surrounding areas where the Work is to be carried on.
- xvii) "Day" or "Days", unless herein otherwise expressly defined, shall mean a calendar day or days of twenty-four hours each.
- xviii) "Specifications" shall mean and include the General Conditions, Special Conditions, Technical Requirements and Tender Forms which are part of the Contract Documents; and all standard specifications of any technical society, organisation, or association to which reference is made.
- xix) "Drawings" shall mean and include all (a) drawings furnished by the Ashuganj Power Station Company Ltd. as part of this Contract, (b) all supplementary drawings furnished by the Ashuganj Power Station Company Ltd. as and when required to clear, and to define in greater detail, the intent of the Contract Plans and Specifications, and (c) drawings submitted by the Contractor to the Ashuganj Power Station Company Ltd., when and as approved by the Engineer.
- xx) "Tests on completion" shall mean such tests to be made by the Contractor before the Works are taken over by the Ashuganj Power Station Company Ltd. as are provided for in the Contract and such other tests as may be agreed between the Ashuganj Power Station Company Ltd./Engineer and the Contractor.
- xxi) "Taking Over" shall signify that fabrication, construction, tests, inspections and adjustment has been satisfactorily completed and PAC issued.
- xxii) "Warranty Period" shall mean the period of 2(two) years following Taking over during which the Contractor guarantees the Plant and equipment against defects in design, materials, construction and workmanship.
- xxiii) "Final Acceptance Certificate" shall mean the official notification by the Ashuganj Power Station Company Ltd. to the Contractor, issued at the end of the warranty period which indicates that the Contractor has completed his obligation under the Contract.
- xxiv) "Payment Certificate" shall mean a certificate issued by the concerned Project Director or a person designated by the Ashuganj Power Station Company Ltd. that the monies claimed on the Contractor's invoice are correct and that the claim for payment is justified under the terms of the Contract.
- xxv) "Completion Certificate" shall mean a certificate issued by the Ashuganj Power Station Company Ltd., and signed by the Ashuganj Power Station Company Ltd. and confirmed by the Engineer confirming the Taking-over of the Plant.
- xxvi) "Award", "Acceptance" or "Letter of Intent" shall mean the official notice issued by the Ashuganj Power Station Company Ltd. notifying the successful Tenderer that his tender has been accepted and that the Ashuganj Power Station Company Ltd. desires to enter into a mutually acceptable contract.
- xxvii) Whenever in these Contract Documents the words "as ordered", "It as directed", "as required", "as permitted" "as allowed" or words or phrases of like import are used,, it shall be understood that the order, direction, requirement,

permission, or allowance of the Ashuganj Power Station Company Ltd. or the Engineer is intended only to the extent of judging compliance with the terms of the Contract; none of these terms shall imply that the Ashuganj Power Station Company Ltd. or the Engineer has any authority over or responsibility for supervision of the Contractor's forces or construction operation, such supervision including sole responsibility therefore being strictly reserved for the Contractor.

- xxviii) Similarly the words "approved", "reasonable", "suitable", "acceptable", "properly", "satisfactory", or words of like effect and import, unless otherwise particularly specified herein shall mean approved, reasonable, suitable, acceptable, proper, or satisfactory in the judgment of the Ashuganj Power Station Company Ltd. or the Engineer, to the extent provided in subsection xxvii) above.
- xxix) Whenever any statement is made in the Contract Documents containing the expression "it is understood and agreed", or an expression of like import, such expression means the mutual understanding and agreement of the parties executing the Contract Documents of which these General Conditions are apart.
- xxx) "FUND" shall mean the foreign currency and local currency to be provided under Supplier's/Buyer's Credit to the Ashuganj Power Station Company Ltd..
- xxxi) "Commissioning" shall mean completion of necessary tests of the Power Plant by the Contractor to ensure the reliable commercial operation of the same as per Contract .
- xxxii) "Project Acceptance Committee" shall mean the representatives of the Ashuganj Power Station Company Ltd. who are responsible for witnessing in collaboration with the representatives of the Engineer, the inspection and test of the Work prior to issue of the "Completion Certificate". The Project Acceptance Committee will be constitute by the Ashuganj Power Station Company Ltd.
- xxxiii) "Commercial Operation Date" (COD) shall relate to the operation of the plant. "COD" shall mean the successful continuous operation for seven (7) days (168 hours) of the plant including its auxiliaries on automatic and supervisory controls.
- xxxiv) "Taking Over Certificate by the Ashuganj Power Station Company Ltd." [or PAC] shall mean the Taking Over of the plant completed in all respects after successful completion of Commercial Operation and carrying out of the performance test.
- xxxv) "Contract Amount" shall mean the same as "Contract Price"
- xxxvi) "Contractor's Equipment" shall mean the equipment machinery, tool, spares, consumable and goods of kinds (as distinct from "Plant" or "Permanent Work") to be used only for the construction works at the contractor's expense and remain the property of the Contractor. The Contractor's Equipment will not form a part of the "Permanent Works".
- xxxvii) "Turnkey Work" shall mean design, engineering, manufacturing, inspection, testing, supply, delivery to the site, construction, erection, testing and commissioning including all other works to complete the project on a Turnkey Work basis.
- xxxviii) "Turn Over" shall mean the total Cash inflow in a particular fiscal year.

- xxxix) "Site Condition" Shall mean ambient condition of 35°C, 1.013 bar, 98% R.H.
- xl) "Net output" shall mean the total plant power output measured at the high voltage side of the step-up transformer (i.e. summation of generators terminal output less the total auxiliary consumptions including Fuel Handling System and excitation power, cooling system and all other auxiliary systems and losses which are normally required in continuous operation)
- xli) "TEC" mean Tender Evaluation Committee.

### **3.0 ASSIGNMENT**

The Contractor shall not assign the Contract or any part thereof or any benefit or interest therein or thereunder without the prior written consent of the Ashuganj Power Station Company Ltd..

### **4.0 SUB-LETTING**

The Contractor shall not sub-let the whole of the Works. Except where otherwise provided by the Contract, the Contractor shall not sub-let any part of the Works without the prior written consent of the Ashuganj Power Station Company Ltd. and such consent if given shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

Should any Subcontractor fail to perform in a satisfactory manner the works undertaken by him, the Contractor upon notice from the Ashuganj Power Station Company Ltd./the Engineer shall immediately terminate his Subcontract. Nothing contained in this Contract shall create any contractual relationship between any Subcontractor and the Ashuganj Power Station Company Ltd.

That means that the Ashuganj Power Station Company Ltd. shall not deal with the affairs of Subcontractors. For all Works, the Contractor shall be held responsible to the Ashuganj Power Station Company Ltd.

### **5.0 ORAL STATEMENTS NOT BINDING**

It is understood and agreed that the written terms and provisions of this Contract shall supersede all oral statements, and oral Statements shall not be effective or be construed as being a part of or altering this Contract in any way.

### **6.0 STANDARD SPECIFICATIONS**

Reference to standard specifications of any technical society, organisation, or association, or to codes of local or national authorities, shall mean the latest standard, code, specification, or tentative specification adopted and published at the Date of Contract unless specifically stated otherwise.

### **7.0 EXTENT OF CONTRACT:**

The Contract comprises the design of 100 ( $\pm 10\%$ ) MW Power Plant (HFO) fired Engine Generating Sets) and their execution, design, manufacture, factory testing, transportation and delivery to the Site, erection, testing and commissioning and warranty of the Work, and the provision of all labour, materials, temporary works and Contractor's equipment,

required in and for such design, manufacture, testing, transportation and delivery to the Site, erection, completion, testing and commissioning, trial run and warranty of the Work, providing training to the Ashuganj Power Station Company Ltd.'s personnel at the Site so far as the necessity for providing the same as is specified in the Contract.

## **8.0 SCOPE, NATURE AND INTENT OF SPECIAL CONDITION, TECHNICAL PROVISIONS AND PLANS**

The Special Conditions, Technical Requirements, and other parts of the Contract Documents are intended to supplement, but not necessarily duplicate each other. Any work exhibited in the one and not in the others shall be executed as if it had been set forth in all, in order that the Work be completed according to the complete design as determined by the Engineer.

Should anything be omitted from the Special Conditions, Technical Requirement and other Contract Documents which is necessary for a clear understanding of the Work, or should it appear that various instruction are in conflict, then the Contractor shall secure written instructions from the Engineer before proceeding with the Work affected by such omissions or discrepancies. It is understood and agreed that the Work shall be performed and completed according to the true spirit, meaning, and intent of the Contract Documents.

## **9.0 INSPECTION OF SITE**

The Contractor shall be deemed to have inspected and examined the Site and its surroundings and to have satisfied himself, so far as is practicable, before submitting his Proposal, as to the form and nature of the Site, the quantities and nature of the Work necessary for the completion of the Works and means of access to the Site, the accommodation he may require and in general shall himself obtain all necessary information as to risks, contingencies and all other circumstances which may influence or affect his Proposal.

The Contractor shall be deemed to have fully investigated without any commitment on the Engineer, and made appropriate arrangements for the establishment of proper accommodation, near the Site, of his workforce consistent with all Local and Governmental Regulations in force.

## **10.0 APPROVAL OF ENGINEERING DATA AND DRAWINGS**

- i) The Contractor shall submit to the Ashuganj Power Station Company Ltd./the Engineer for approval, within the time specified in the Specifications, such drawings, documents and data sheets as may be called for there in or as the Engineer may reasonably require. Within a reasonable period (21 days) after receiving such drawings, documents and data sheets, the PD/Engineer shall signify his approval or comment. Copies of all drawings which shall be required to be approved by the Engineer shall be provided by the Contractor. The Contractor shall supply additional copies of approved drawings in accordance with the detail set out in the Specifications.

Design drawing review meeting shall be held in EPC contractor country. EPC shall consider 150 Man days in three groups for design review meeting. The cost of design review meeting shall be borne by the Contractor. The payment for meeting at the EPC country including living expense, travelling expenses, daily pocket

expenses (150 USD per day per person) and lodging at actual shall be borne by EPC contractor. During the period of meeting including incidental expenses or medical expenses or Medical Insurance from time to time will be covered by the Contractor.

Approval of drawings shall in no way relieve the Contractor of any of his duties or responsibilities for engineering, design, workmanship, materials and all other liabilities under the Contract.

- ii) The contractor shall, within the time specified in the Specifications, provide drawings showing the manner in which the equipment and materials is to be affixed together with all information relating, unless otherwise agreed, only to the Works, required for preparing suitable foundations, for providing suitable access for equipment and materials and any necessary equipment which are to be erected and for making all necessary connections to the equipment and materials (whether such connections are to be made by the Contractor under the Contract or not).
- iii) Any expenses resulting from an error or omission in or from delay in delivery of the drawings and information mentioned in this Clause shall be borne by the Contractor.
- iv) The Contractor shall be responsible for any discrepancies, errors, or omissions in the drawings and other particulars supplied by him. Whenever the work is carried out on the basis of such discrepancies, errors, or omissions, any revision of the work shall be made at the expense of the Contractor.
- v) At least one copy of the final approved drawings shall be kept by the Contractor at the Site and the same shall at all reasonable times be available for inspection and use by the Ashuganj Power Station Company Ltd./Engineer and by any other person authorised by the Ashuganj Power Station Company Ltd./Engineer.

## **11.0 LEGAL ADDRESSES**

Both the business address of the Contractor given in the Contract, and the Contractor's office in the vicinity of the Work, are hereby designated as the places to which all notices, letters, and other communications to the Contractor may be mailed or delivered. The business address of the Ashuganj Power Station Company Ltd. appearing in Section Definitions, hereof is hereby designated as the place to which all notices, letters, and other communication to the Ashuganj Power Station Company Ltd. may be mailed or delivered. The delivery by one party to the other party at an address so designated, or the depositing in any mail box regularly maintained by the post office, of any notice, letter, or other communication addressed to such address postage prepaid, registered or certified mail, with return receipt requested, in Bangladesh shall be deemed sufficient service thereof, and the date of said service shall be the date of such delivery or mailing. Either Party may change the said address or addresses at any time by an instrument in writing delivered to the Engineer and to the other party. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or communication upon either party personally.

## **12.0 OFFICE AT SITE OF WORKS**

The Contractor shall maintain at Site an office for themselves and a separate office for use of the Consultant/Engineer and Project Office with proper equipment, furniture, appliances and appurtenance.



## **12.1 CONTRACTOR'S OFFICE AT SITE OF WORK**

During the performance of this Contracts the Contractor shall maintain a suitable office at or near the Site of the Work which shall be the headquarters of the Contractor's Representative authorised to receive drawings, instructions, or other communications or articles from the Ashuganj Power Station Company Ltd. or the Engineer's Representative; and any such communications given to the representative or deposited in a prescribed location or manner at the Contractor's office at the Site of the Work in his absence shall be deemed to have been given to the Contractor.

## **13.0 METHOD OF OPERATION**

The Contractor shall inform the Engineer in advance concerning his plans for carrying on each phase of the work. If at any time the Contractor's plant or equipment or any of his methods of executing the Work appear to the Engineer to be unsafe, inefficient, or inadequate to insure the required quality or rate of progress of the Work, the Engineer may order the Contractor to increase or improve his facilities, or methods and the Contractor shall promptly comply with such orders; but neither compliance with such orders nor failure of the Engineer to issue such orders shall relieve the Contractor from his obligation to secure the degree of safety, the quality of the Work, and the rate of progress required by this Contract. The Contractor alone shall be responsible for the safety, adequacy, and efficiency of his plant, equipment, and methods.

Any method of work suggested by the Engineer, but not specified, will be used at the risk and responsibility of the Contractor, and the Engineer and the Ashuganj Power Station Company Ltd. will assume no responsibility therefore.

Approval by the Engineer of any method of work proposed by the Contractor shall not relieve the Contractor of any responsibility therefore, and such approval shall not be considered as an assumption of any risk or liability by the Ashuganj Power Station Company Ltd. or the Engineer, or any officer, agent, or employees thereof. The Contractor shall have no claim on account of the failure or inefficiency of any method so approved. Such approval shall mean only that the Ashuganj Power Station Company Ltd. or the Engineer has no objection to the adoption or use by the Contractor of such method at the Contractor's own risk and responsibility.

## **14.0 AUTHORITY OF THE ENGINEER**

To prevent delays and disputes, and to discourage litigation, it is agreed by the parties to this Contract that the Engineer shall resolve, by written opinion, all questions in relation to the Work performed under this Contract.

In case of any decision or instruction involving financial implications, the Engineer shall obtain written confirmation from the Ashuganj Power Station Company Ltd. Through Project Director and advise the Contractor accordingly. The Engineer shall issue instructions in consultation with the Project Director.

If, in the opinion of the Contractor or the Ashuganj Power Station Company Ltd., a written decision made by the Engineer is not in accordance with the meaning and intent of the Contract, either party may file with the engineer and the other party to the Contract, within thirty (30) days after receipt written decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as acceptance of the Engineer's decision and the decision shall become final and conclusive. If such written objection is timely filed, the objecting party may at any time thereafter

and prior to final payment under the Contract, request that the matter be referred to arbitration pursuant to the provisions hereinafter set forth in Clause "Arbitration".

The Engineer's decision and the filing of the written objection thereto shall be Conditions precedent to the right to request arbitration or to start action in court.

It is the intent of this agreement that there shall be no delay in the execution of the Work, and the decision of the Engineer as rendered shall be promptly observed. The Contractor shall proceed with the Work in accordance with the Engineer's written decision, provided, however, that the Contractor shall not be requested to recognise or accept any change order or decision requiring extra or additional Work, unless the amount of additional compensation therefore is agreed upon by the Ashuganj Power Station Company Ltd. in accordance with the provisions of Clause 71.0, "Modifications. If, in any case, the Contractor is required to proceed over his objection, the Contractor shall be authorised, in an appropriate case, to notify the Ashuganj Power Station Company Ltd.

#### **15.0 WORK TO THE SATISFACTION OF APSCL / ENGINEER**

The Contractor shall execute and complete the Work in strict accordance with the Contract to the satisfaction of the Ashuganj Power Station Company Ltd./the Engineer and shall comply with and adhere strictly to the Engineer's instructions and directions on any matter, whether mentioned in the Contract or not, concerning the Work. The Contractor shall take instructions and directions only from the Engineer. Such instruction by the Engineer shall always be in writing and approved by the Ashuganj Power Station Company Ltd.

If contractor do not obey the Engineers instruction and any financial loss occurred, that loss will be borne by the EPC contractor.

#### **16.0 FACTORY WITNESS TEST (ENGINEERING INSPECTION)**

It is agreed by the Contractor that the Ashuganj Power Station Company Ltd. shall be and is hereby authorised to appoint or employ (either directly or through the Engineer) such inspectors as the Ashuganj Power Station Company Ltd. may deem proper to inspect the materials furnished under the Work performed under this Contract, for compliance with the Contract Documents. The Contractor shall furnish all reasonable aid and assistance required by the Engineer, or inspectors, for the proper inspection and examination of the Work and all parts thereof.

The Contractor shall obey the directions of the Engineer or inspector when they are consistent with the obligations of this Contract. Should the Contractor object to any order given by any inspector, the Contractor may make written appeal to the Engineer for his decision.

Inspectors and other properly authorised representatives of the Ashuganj Power Station Company Ltd. or the Engineer shall be free at all times to perform their duties, and any intimidation or attempted intimidation of any one of them by the Contractor or by any of his employees shall have sufficient reason, if the Ashuganj Power Station Company Ltd. so decides, to terminate the Contract. Such inspection shall not relieve the Contractor from any obligation to perform the Work in accordance with the Contract Documents. Work not so constructed shall be removed and made good by the Contractor at his own expense.

The Engineer and Ashuganj Power Station Company Ltd.'s authorised representative shall have the right to inspect and/or to test the Goods at Site and at manufacturer's premises

to confirm their conformity to the Contract. The cost of performing any tests shall be borne by the Contractor. The payment for inspection and tests at the manufacturer's premises and training on tests including living expenses, travelling expenses, daily pocket expenses (150 USD per day per Person) and lodging at actual for six round trips (Three Engineers/ round trip) and a maximum of seven working days spend with the addition of two days preparation for each participating engineer. During the period of test including incidental expenses or medical expenses or Medical Insurance from time to time will be covered by the Contractor. The cost of subsequent inspection(s) due to rejection/additional re-testing of Goods at the first inspection shall also be borne by the Contractor.

Factory Witness Test will be conducted on the following major items:

- a. Engines
- b. Alternator
- c. Transformer
- d. HV/MV switchgear
- e. Plant control system
- f. Protection system

## **17.0 NO WAIVER OF RIGHTS**

Neither the inspection by the Ashuganj Power Station Company Ltd. or the Engineer or any of their officials, employees, or agents, nor any order by the Ashuganj Power Station Company Ltd. or the Engineer for payment of money, or any payment for, or acceptance of, the whole or any part of the Work by Ashuganj Power Station Company Ltd. or the Engineer, nor any extension of time, nor any possession taken by the Ashuganj Power Station Company Ltd. or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Ashuganj Power Station Company Ltd., or any right to claim of damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

## **18.0 CONTRACTOR'S SUPERINTENDENCE**

The Contractor shall give or provide all necessary superintendence during the execution of the Work and as long thereafter as the Ashuganj Power Station Company Ltd. may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. A competent and authorised agent or representative approved of in writing by the Engineer, which approval may at any time be withdrawn, shall be constantly on the Work and shall give his whole time to the superintendence of the same. Such authorised agent or representative shall receive on behalf of the Contractor directions and instructions from the Engineer.

If such approval shall be withdrawn by the Engineer, the Contractor shall, as soon as is practicable having regard to the requirement of replacing him as hereinafter mentioned, after receiving written notice of such withdrawal, remove the agent from the Site and shall not thereafter employ him again on the Site in any capacity and shall replace him by another agent approved by the Engineer.

## **19.0 CONTRACTOR'S EMPLOYEES**

The Contractor shall provide and employ in connection with the execution of the Works:

- (a) only such technical assistants as are skilled and experienced in their respective trades and such sub-agents, foremen and leading hands as are competent to give proper supervision to the Work they are required to supervise and
- (b) such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the Works.

The Engineer will be after notifying and discussion with the Contractor to object to and require the Contractor to remove forthwith from the Work any person employed by the Contractor in or about the execution or maintenance of the Work who in the opinion of the Ashuganj Power Station Company Ltd./the engineer misconduct himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Ashuganj Power Station Company Ltd./the Engineer to be undesirable and such person shall not be again employed upon the Work without the written permission of the Ashuganj Power Station Company Ltd. through the Engineer. Any person so removed from the Work shall be replaced immediately by a competent substitute approved by the Ashuganj Power Station Company Ltd.

## **20.0 SETTING OUT**

The Contractor shall be responsible for the true and proper setting out of the Work in relation to original points, lines and levels of reference given by the Engineer in writing and for the correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of the Work and for the provision of all necessary instruments, appliances and labour in connection therewith.

If at any time during the progress of the Work any error shall arise in the position, levels, dimensions or alignment of any part of the Work, the Contractor, on being required to do so by the Engineer, shall at his own expense rectify such error to the satisfaction of the Engineer. The checking of any setting out or of any line or level will be verified by the Engineer but shall not in any way relieve the Contractor of his responsibility for the correctness thereof and the Contractor shall carefully protect and preserve all bench marks, sight rails, pegs and other things used in setting out the Work. The Contractor shall from time to time recheck the setting out of the Work and notify the Engineer accordingly.

## **21.0 FENCING, LIGHTING AND GUARDING**

The Contractor Shall be responsible for the proper fencing, lighting, guarding and watching of all the Work on the Site until Taking-over and for the proper provision during a like period of temporary roadways, foot-ways, guards, and fences as far as the same may be deemed necessary by reason of the Work for the accommodation and protection of the Ashuganj Power Station Company Ltd. and occupiers of adjacent property, the public and others.

## **22.0 CARE OF WORK**

From the Commencement to the completion of the Work the Contractor shall take full responsibility for the care thereof and of all Temporary Work and Contractor's Equipment and in case any damage, loss or injury shall happen to the Works or to any part thereof or to any Temporary Work or Contractor's Equipment from any cause whatsoever shall at his own cost, repair and make good the same so that at completion, the Work shall be in good order and condition and in conformity in every respect with the requirements of the Contract and the Engineer's instructions.

The Contractor shall also be liable for any damage to the Work occasioned by him in the course of any operations carried out by him for the purpose of the complying with his obligations under this Contract.

### **23.0 FORCE MAJEURE**

The term "Force Majeure" means any cause beyond the control of the Ashuganj Power Station Company Ltd. or the Contractor which the Ashuganj Power Station Company Ltd. or the Contractor could not foresee and or reasonably provide against at the time the Contract was made and which prevents the Ashuganj Power Station Company Ltd. or the Contractor from wholly or partly performing any duties under the Contract. Force Majeure includes, but is not limited to, any of the following :

- War, revolution, insurrection or hostilities (whether declared or not);
- Riot, civil commotion, or civil uprising
- Earthquake, flood, tempest, hurricane, lightning or other natural disasters;
- Any fire of major proportions;
- Epidemic;
- Hartal/ Strike
- Port Congestion.

If any event occurs constituting Force Majeure the Ashuganj Power Station Company Ltd. or the Contractor shall give written notice to the other party of the Contract as the case may be, as soon as possible after the occurrence but within fifteen (15) days of the event, including a statement describing the Force Majeure event and its effect upon the performance of this Contract. The parties shall within ten (10) days after such notice, consult each other regarding action to be taken. In the event of a Force Majeure the Contractor unless otherwise directed by the Ashuganj Power Station Company Ltd. in writing, shall continue to undertake and perform the duties set forth in this Contract so far as circumstances admit. In the event of a Force Majeure resulting in a suspension of the Work, this Contract may be extended subject to the mutual agreement of the parties to the Contract by a period equal to that for which the Ashuganj Power Station Company Ltd. or the Contractor was prevented from performing.

If the Ashuganj Power Station Company Ltd.'s or the Contractor's inability to perform by reason of Force Majeure lasts more than ninety (90) days after notice has been given to the either party as the case may be, the Ashuganj Power Station Company Ltd. or the Contractor may :

- i) request for an extension of time schedule.
- ii) or request for termination of the Contract in the event of which the parties shall negotiate an equitable adjustment.

Failure to arrive at a mutually acceptable equitable adjustment shall be a dispute under Clause Arbitration.

### **24.0 DAMAGE TO PERSONS AND PROPERTY**

The Contractor shall (except in so far as the Contract provides otherwise) indemnify and keep indemnified the Ashuganj Power Station Company Ltd./Engineer against all losses and claims for injuries or damage to any person or any property whatsoever, including surface or other damage to land or crops being on the Site suffered by tenants or occupiers, which may arise out of or in consequence of the execution of the Work and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, provided always that nothing herein contained shall be deemed to render the Contractor liable for or in respect of or to indemnify the Ashuganj Power Station Company Ltd./Engineer against any compensation or damages for or with respect to :

- (a) The permanent use or occupation of land by the Work or any part thereof.
- (b) The right of the Ashuganj Power Station Company Ltd. to execute the Work or any part thereof on, over, under, in or through any land.
- (c) Interference whether temporary or permanent with any right of lights, air, way or water or other easement or quasi-easement which is the unavoidable result of the construction of the Work in accordance with the Contract.
- (d) Injuries or damage to persons resulting from negligence committed during the currency of the Contract by the Ashuganj Power Station Company Ltd., his agents servants or other Contractors employed by the Ashuganj Power Station Company Ltd., (not being employed by the Contractor) or for or in respect of any claims, demands, proceedings damages, charges and expenses in respect thereof or in relation thereto.

Provided further that for the purpose of this Clause the expression "the Site" shall be deemed to be limited to the area defined in the specifications or shown on the drawings in which land and crops will be disturbed or damaged as an inevitable consequence of the carrying out of the Work.

## **25.0 ACCIDENT OR INJURY TO WORKMEN**

The Ashuganj Power Station Company Ltd. will not be liable for or in respect of any damages or compensation payable by law in respect or in consequence of any accident or injury to any workman or other person in the employment of the Contractor or any Subcontractor save and except an accident or injury resulting from any act or default of the Ashuganj Power Station Company Ltd., his agents or servants and the Contractor shall indemnify and keep indemnified the Ashuganj Power Station Company Ltd. against all such damages and compensation, save and except as aforesaid, and against all claims, demands., proceeding, costs. charges and expenses whatsoever in respect thereof or in relation thereto.

The Contractor, shall insure against such liability with an insurer approved by the Ashuganj Power Station Company Ltd., which approval will not be unreasonably withheld, or as required by Law and shall continue such insurance during the whole of the time that any persons are employed by him on the Work and shall provide the Ashuganj Power Station Company Ltd. and the Engineer 'with a copy of such policy of insurance and the receipt for payment of the current premium.

Provided always that in respect of any persons employed by Subcontractor the Contractor's obligation to insure as aforesaid under this sub-clause shall be satisfied if the Subcontractor shall have insured against the liability in respect of such persons in such manner that the Ashuganj Power Station Company Ltd. Is indemnified under the policy but the Contractor shall require such Subcontractor to provide to the Ashuganj Power

Station Company Ltd. and the Engineer with a copy of such policy of insurance and the receipt for payment of the current premium or evidence that it has complied with the law in this respect.

All accidents shall be reported by the Contractor directly to the appropriate Civil Authority as per Regulations remaining in force.

## **26.0 CONTRACTOR'S OBLIGATION TO INSURE**

The Contractor shall provide to the Ashuganj Power Station Company Ltd. and the Engineer copies of Policy or policies of insurance, undertaken by the Contractor for detailed security and approval. The Ashuganj Power Station Company Ltd. may accept or reject any company policy or section thereof, which in the Ashuganj Power Station Company Ltd.'s opinion do not meet the intent of Clause "INSURANCE". The contractor shall provide draft copies of his proposed contracts of insurance to the Ashuganj Power Station Company Ltd. immediately after such insurance come into effect.

The Ashuganj Power Station Company Ltd. reserves the right to effect the insurance referred to in this Clause at his own cost and under his own arrangement, in which case this Clause shall not be applicable. The Tenderer shall therefore, quote separately the cost of Insurances referred to in the appropriate spaces provided for in the Schedule of Prices.

In case the Insurances are arranged by the Ashuganj Power Station Company Ltd., the Contract Price shall be adjusted accordingly.

All insurance Policies shall provide that the insurance shall not without approval of the Ashuganj Power Station Company Ltd., be cancelled reduces, restricted, or changed in any way without at least fifteen (15) days' written notice being given to the Ashuganj Power Station Company Ltd. and sent by registered mail to the head office of the Ashuganj Power Station Company Ltd.. In the event of any such cancellation, reduction, restriction or change in any insurance, the Contractor shall immediately replace such insurance.

If the Contractor shall fail to effect and keep in force the insurance or any other insurance which he may be required to effect under the term of the Contract or if he should fail to provide evidence of this insurance being kept in effect then and in such case the Ashuganj Power Station Company Ltd. will effect and keep in force any such insurance and pay such premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Ashuganj Power Station Company Ltd. from any monies due or that may become due to the Contractor or recover the same as a debt due from the Contractor. It is expressly provided that any action on the part of the Ashuganj Power Station Company Ltd. in this respect will in no way change or reduce the Contractor's responsibilities and liabilities under this Contract.

## **27.0 PATENT RIGHTS**

The contractor shall fully indemnify the Ashuganj Power Station Company Ltd. against all actions, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement of letters patent, design, trademark or copyright protected in the country of supply or manufacture or in the country in which the Plant or Work is to be erected by the use of any Plant supplied or equipment or appliances or material used by the Work otherwise than for the purpose indicated by or reasonably to be inferred from the Specifications.

In the event of any claim being made or action brought against the Ashuganj Power Station Company Ltd. arising out of the matters referred to in this Clause, the Contractor shall be promptly notified thereof and may at his own expense conduct all negotiations for the settlement of the same, and any litigation that may arise therefrom.

The Ashuganj Power Station Company Ltd. will not, unless and until the Contractor shall have failed to take over the conduct of the negotiations or litigation, make any admission, which might be prejudicial thereto. The conduct by the Contractor of such negotiations or litigation shall be conditional upon the Contractor having first given to the Ashuganj Power Station Company Ltd. such reasonable security as shall from time to time be required by the Ashuganj Power Station Company Ltd. to cover the amount ascertained or agreed or estimated as the case may be, of any compensation, damages, expenses, and costs for which the Ashuganj Power Station Company Ltd. may become liable in respect of such infringement as aforesaid. The Ashuganj Power Station Company Ltd. will, at the request of the Contractor, afford all available assistance for the purpose of contesting any such claim or action, and shall be repaid any expenses in so doing.

The Ashuganj Power Station Company Ltd. on his part warrants that any design or instructions furnished or given by him will not be such as to cause the Contractor to infringe any letters patent, registered design, trademark, or copyright in the performance of the Contract.

## **28.0 AMICABLE SETTLEMENT AND ARBITRATION**

### **28.1 AMICABLE SETTLEMENT**

The APSCL and the Contractor shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

### **28.2 ARBITRATION**

Before bringing any action in court pertaining to a decision of the Engineer, the objector (hereinafter referred to as party A) to the decision shall first offer to arbitrate the question with the other party to the Contract (hereinafter referred to as party B) by notifying him in writing and setting forth in such notice the question to be arbitrated.

Party B can elect to arbitrate or not. If party B agrees to arbitrate he shall so advise does not wish to arbitrate or failure of party B to notify party A within the thirty(30) days period will give party A the right to start action in court.

If party B agrees to arbitrate, the same shall be referred to arbitration and final determination of a single arbitrator nominated by agreement between the Contractor and the Ashuganj Power Station Company Ltd. or, failing agreement, by and arbitrator appointed by the court of arbitration of the Bangladesh Chamber of Commerce & Industries, or other Agency mutually agreed upon by the Ashuganj Power Station Company Ltd. and the Contractor.

The arbitrator if he shall desire it or if one of the parties to the dispute recommends it shall have the assistance of a legal adviser. **To any proceedings under this Clause the provisions of the Bangladesh Arbitration act of 2001 and its subsequent amended time to time shall apply.** The Work under this Contract shall, if reasonably possible, continue during the arbitration proceedings, and no payment due to the Contractor shall be withheld on account of such proceedings.



Reference to arbitration shall be a condition precedent to any other action of law. The venue of arbitration shall be at **Dhaka**.

In any arbitration or litigation, the parties shall be at liberty to rely on reasons in addition to those stated in any protests or objections.

## **29.0 PROVISION FOR EMERGENCIES**

Whenever, in the opinion of the Engineer, the Contractor has not taken sufficient precaution for the safety of the public or the protection of the Work under this Contract, or of adjacent structures or property which may be injured by processes of the Work on account of such neglect, and whenever, in the opinion of the Engineer, an emergency shall arise and immediate action shall be considered necessary in order to protect public or private personal or property interests, then the Ashuganj Power Station Company Ltd., with or without notice to the Contractor, may provide Suitable protection to the said interests by causing such work to be done and material to be furnished and placed as the Ashuganj Power Station Company Ltd. may consider necessary and adequate. The cost and expense of such work and material so furnished shall be borne by the Contractor, and if the same shall not be paid on presentation of the bills therefore, such costs shall be deducted from any amounts due or to become due to the Contractor. The performance of such emergency work shall in no way relieve the Contractor of responsibility for damage which may occur during or after such precaution has been duly taken.

## **30.0 INSPECTION, TESTING, PROGRESS AND EXPEDITING DURING MANUFACTURE**

The Engineer/PD shall be entitled at all reasonable times during manufacture to inspect, examine, and test on the Contractor's premises the materials and workmanship of all Plant to be supplied under the Contract, and if part of the said plant is being manufactured on other premises the Contractor shall obtain for the Engineer permission to inspect, examine and test as if the said Plant were being manufactured on the Contractor's premises. Such inspection, examination or testing, if made, shall not release the Contractor from any obligation under the Contract.

The Contractor shall co-operate with and provide full opportunity to the Engineer to regularly monitor the progress of manufacture in the Works of the Contractor and Subcontractor to the detailed extent necessary to establish that satisfactory progress relative to the Contract Schedule is being achieved.

All pertinent information such as shop loading, detailed manufacturing programmes to enable the Engineer to determine the adequacy of the advance planning for material procurement, machine and manpower resources to meet the Contract Schedule shall be made freely available to the Engineer when visiting the manufacturing facilities.

These requirements shall be incorporated in orders placed with major sub-suppliers.

The Contractor shall give the Engineer reasonable notice in writing of the date on and the place at which any plant will be ready for testing as provided in the Contract and unless the Engineer shall attend at the place so named Forty (40) days in advance of the date which the Contractor has stated in his notice the Contractor may proceed with the tests, which shall be deemed to have been made in the Engineer's presence, and shall forthwith forward to the Engineer duly certified copies of the test readings. The Engineer will give the Contractor notice in writing of his intention to attend the tests.

Where the Contract provides for tests on the premises of the Contractor or of any subcontractor, the Contractor shall provide such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as may be required and as may be reasonably demanded to carry out such tests efficiently.

### **31.0 ACCESS TO SITE**

The Ashuganj Power Station Company Ltd./Engineer and any person authorised by them will at all times have access to the Works and to the Site and to all workshops and places where Work is being prepared or whence materials, manufactured articles or machineries are being obtained for the Work and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.

### **32.0 RIGHT OF ASHUGANJ POWER STATION COMPANY LTD. TO TERMINATE CONTRACT**

If the Work to be done under this Contract shall be abandoned by the Contractor, or if his Contract shall be assigned by him otherwise than as herein provided, or if the Contractor would be adjudged bankrupt, or if a general assignment of his assets be made for the benefit of his creditors, or if a receiver should be appointed for the Contractor or any of his property, or if at any time the Engineer shall certify in writing to the Ashuganj Power Station Company Ltd. that the performance of the Work under this Contract is being unnecessarily delayed, or that the Contractor is violating any of the conditions or covenants of this Contract or the Specifications therefore, or that he is executing the same in bad faith or otherwise not in accordance with the terms of said Contract, or if the Work be not substantially completed within the time named for its completion or within the time to which such completion date may be extended, then the Ashuganj Power Station Company Ltd. may serve written notice upon the Contractor and his surety, of said Ashuganj Power Station Company Ltd.'s intention to terminate this Contract and, unless within thirty (30) days after the serving of such notice upon the Contractor, a satisfactory arrangement is made for the continuance thereof, this Contract shall cease and terminate. In the event of such termination, the Ashuganj Power Station Company Ltd. shall immediately serve notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and complete the Work through employment of Contractor approved by the Ashuganj Power Station Company Ltd., such approval not to be unreasonably withheld, provided, however, that if the surety does not commence performance thereof within sixty (60) days from the date of said notice of termination the Ashuganj Power Station Company Ltd. may take over the Work and prosecute same to completion, by Contract or otherwise, for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the Ashuganj Power Station Company Ltd. for any and all excess cost sustained by the Ashuganj Power Station Company Ltd. by reason of such prosecution and completion, and in such event the Ashuganj Power Station Company Ltd. may take possession of, and utilise in completing the Work, all such materials, equipment, tools, and plant as may be on the Site of the Work and necessary therefore.

#### **32.1 TERMINATION FOR CONVENIENCE**

The Ashuganj Power Station Company Ltd. reserves the right to terminate the Contract, in whole or in part, for its convenience. If the Contract is so terminated, an equitable downward adjustment will be made in the Contract Price resulting in a revised price that compensates the Contractor fairly under all the circumstances for the Work performed under the Contract, but shall not include any compensation for unearned profit. The revised price shall be based on Contractor's cost and disbursements reasonably incurred

and attributable to the Contract Work, as certified by Contractor and reviewed for substantiation by the Engineer, plus a reasonable profit thereon.

If the Ashuganj Power Station Company Ltd. shall fail to comply with performance or deadline requirements imposed on him by the provisions of the Contract, time being of the essence, the Contractor may, by written notice to Ashuganj Power Station Company Ltd., advise the Ashuganj Power Station Company Ltd. that it deems the Ashuganj Power Station Company Ltd.'s failure to evidence an election on the part of the Ashuganj Power Station Company Ltd. to terminate the Contract for its convenience under this Clause and the Contract, on the giving of such notice by Contractor shall be deemed terminated.

### **33.0 REJECTION**

If at any time before the Work is taken over by the Engineer, the Engineer

- a) decides that any work done or Plant supplied or materials used by the Contractor or any Subcontractor is or are defective or not in accordance with the Contract or that the Work or any portion thereof are defective or do not fulfill the requirements of the Contract.
- b) as soon as reasonably practicable gives to the Contractor notice in writing of the said decision, specifying particulars of the defects alleged and of where the same as alleged to exist or to have occurred, and
- c) so far as may be necessary places the Work at the Contractor's disposal, then the Contractor shall with all speed and at his own expense make good the defects so specified. In case the Contractor shall fail to do the Engineer may provide he does so without undue delay, take, at the cost of the Contractor, such steps as may in all circumstances be reasonably practicable to make good such defects.

The Contractor shall be entitled to remove and retain all Work that the Engineer may have replaced at the Contractor's cost.

Nothing contained in this Clause will affect any claim by the Ashuganj Power Station Company Ltd. under Clause 45.0 (Liquidated Damages).

### **34.0 SUSPENSION OF THE WORK**

The Ashuganj Power Station Company Ltd. reserves the right to suspend and reinstate execution of the whole or any part of the Work without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the Work will be issued by the Ashuganj Power Station Company Ltd. to the Contractor in writing. The time for completion of the Work will be extended for a period equal to the duration of the suspension. Changes in Contractor's Contract Price or delivery schedules which occur during a period of suspension ordered by the Ashuganj Power Station Company Ltd. shall not affect the Contract except as agreed by the Ashuganj Power Station Company Ltd. and the Contractor. The phrase "changes in delivery schedule" as used in the preceding sentence shall mean extension of the scheduled time of delivery in excess of the number of days of the suspension period. If the Contractor proposes to change Time Schedule of the Contract, he shall present his proposal to the Ashuganj Power Station Company Ltd. in writing. During the sixty (60) days period from and after the receipt by the Ashuganj Power Station Company Ltd. of such written proposal, the Ashuganj Power Station Company Ltd. shall be permitted to reinstate the Work without change. If the Work is not reinstated during this sixty (60) days period, the Ashuganj Power Station Company Ltd.

and the Contractor shall agree upon reasonable and proper changes or the Ashuganj Power Station Company Ltd. may terminate the Works.

Any necessary and demonstrable costs incurred by the Contractor as a result of suspension of the Work will be paid by the Ashuganj Power Station Company Ltd., unless otherwise specified, provided such costs are substantiated to the satisfaction of the Ashuganj Power Station Company Ltd.

### **35.0 COMMENCEMENT OF THE WORK**

The Contractor shall commence the work within three days from the date of Letter of Credit Opening and shall proceed with the Work with due expedition and without delay in accordance with the provisions of the Contract Schedule.

### **36.0 POSSESSION OF SITE**

The Ashuganj Power Station Company Ltd. through the Engineer will, upon the date of the written order to commence the field work, give to the Contractor possession of so much of the Site as may be required to enable the Contractor to commence and proceed with the Construction of the Work in accordance with the Contract Schedule.

Access to and possession of the Site shall not be exclusive to the Contractor but only such as shall enable him to execute the Work. The Contractor shall afford to the Ashuganj Power Station Company Ltd., to the Engineer and to other Contractors engaged upon the Site every reasonable facility for the execution of Work concurrently with his own.

### **37.0 TIME FOR COMPLETION**

The Work shall be completed in accordance with the Schedule specified in the Contract. The Contractor will be required to furnish, for approval by the Engineer, a construction schedule setting forth in detail the procedure he proposes to follow, and give the date on which he expects to start and to complete separate portions of the Work. The construction schedule shall be of the Critical Path Method (CPM) type in the form of a network diagram and an activity listing. The network diagram shall show in detail and in orderly sequence all activities, their descriptions, duration and dependencies necessary to the completion of the Work. The activity listing shall show the following information for each activity on the network diagram:

- i) Identification of code numbers and descriptions.
- ii) Duration.
- iii) Earliest start and finish dates.
- iv) Latest starts and finish dates.
- v) Total float time.

Other scheduling methods may be utilised subject to the approval of the Engineer. If at any time in the opinion of the Engineer, proper progress is not being maintained, the Engineer will notify the Contractor in writing to take proper steps to expedite progress so as to complete the work by the schedule time.

The Contractor shall furnish the Engineer regular monthly and quarterly progress reports showing status and schedules of the supply of major or critical items and progress of the

Work. The Engineer shall also be kept informed of any impending or actual delays that may affect the progress of the Work.

### **38.0 RATE OF PROGRESS**

The whole of the materials, plant and labour to be provided by the Contractor and the mode, manner and speed of execution of the Work shall be of a kind and conducted in a manner to the satisfaction of the Engineer. Should the rate of progress of the Work or any part thereof be at any time in the opinion of the Engineer too slow to ensure the completion of the Work by the prescribed time for completion, the Engineer will so notify the Contractor in writing and the Contractor shall thereupon take such steps, as the Contractor may think necessary and the Engineer may think necessary and the Engineer may approve, to expedite progress so as to complete the Works by the prescribed time or extended time for completion. The Contractor shall not be entitled to any additional payment for taking such steps.

### **39.0 URGENT REPAIRS**

If by reason of any accident or failure or other event occurring to in or in connection with the Work or any part thereof either during the execution of the Work or during the warranty period any remedial or other work or repair shall in the opinion of the Engineer be urgently necessary for security and the Contractor is unable or unwilling at once to do such work or repair the Ashuganj Power Station Company Ltd. may by his own or other workmen do such work, or repair so done by the Ashuganj Power Station Company Ltd. is work which the Contractor was liable to do at his own expense under the Contract all costs and charges properly incurred by the Ashuganj Power Station Company Ltd. in so doing shall on demand be paid by the Contractor to the Ashuganj Power Station Company Ltd. or may be deducted by the Ashuganj Power Station Company Ltd. from any monies due or which may become due to the Contractor. Provided always that the Engineer will as soon after the occurrence of any such emergency as may be reasonably practicable notify the Contractor thereof in writing.

### **40.0 CONTRACTOR TO CHECK PLANS AND SCHEDULES**

During the course of the Work, the Contractor shall check all dimensions elevations, and quantities shown on the plans and schedules related to the Work given to him by the Engineer, and shall notify the Engineer of any discrepancy found between the plans and the conditions on the ground, or any error or omission in plans or in the layout as given by staked points, or instruction, which he may discover. The Contractor will not take advantage of any minor error or omission in the plans or the Contract Documents. Full instructions will be furnished by the Engineer should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

No work shown on the plans, the dimensions of which are not indicated, shall be executed until necessary dimensions have been obtained from the Engineer.

### **41.0 LAWS AND REGULATIONS**

The Contractor shall observe and comply with all applicable ordinances, laws and regulations in the Country or Countries where the Contractor may reside or perform work, directly or indirectly under this Contract. The Contractor shall protect and indemnify the Ashuganj Power Station Company Ltd. and the Ashuganj Power Station Company Ltd.'s officers and agents against any claim or liability arising from or based on violation of ordinances, regulations, or laws of the Country where the Contractor may reside or perform any of the Work.

The Contractor shall observe, comply with and respect Bangladesh laws, rules and regulations and shall not interfere with Bangladesh Political or religious affairs either directly or indirectly.

The Contractor shall comply with such other rules and regulations as the Ashuganj Power Station Company Ltd. and the Engineer may establish from time to time with respect to the construction work and personnel employed by the Contractors provided such rules and regulations shall not modify any of the Contract Documents.

The Contractor shall, in all dealings with labour in his employ, have due regard to all recognised festival days of rest and religious or other customs.

The Contractor shall not give or barter or otherwise dispose of, to any person or persons, any arms or ammunition of any kind, or permit the same as aforesaid.

In the event of any outbreak of illness of an epidemic nature the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government of the People's Republic of Bangladesh or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.

#### **42.0 CHARACTER OF WORKMEN**

The Contractor shall employ only workmen who are competent to perform the Work assigned to them and, in the case of skilled labour, foremen, leadsmen, and supervisors, those who are actually trained and experienced in their respective trades and who do satisfactory work.

Notwithstanding any security clearances which may be required or given by the Government of the People's Republic of Bangladesh, if any, the Contractor shall be solely responsible for determining the suitability for employment of all personnel performing services provided pursuant to the Contract.

In all cases local labour shall be used to the greatest extent practical. The number of key personnel imported shall be limited to that necessary to accomplish the Work on schedule and in a satisfactory manner, taking into consideration all factors affecting work of this nature in Bangladesh.

The imported personnel of the Contractor shall respect all Bangladesh laws, rules, and regulations and shall not interfere with Bangladesh political or religious affairs either directly or indirectly and shall comply with such other rules and regulations as the Contractor, the Ashuganj Power Station Company Ltd./Engineer may establish from time to time with respect to the imported personnel employed by the Contractor. The imported personnel of the Contractor shall work and live in harmony with their co-workers (both imported and Bangladesh) employed on the Work and at all times conduct themselves in an orderly manner. The imported personnel shall not engage, directly or indirectly, in any other employment, service or business whatever, nor shall they take part in local politics.

The local employees of the Contractor shall abide by all Bangladesh laws, rules, and regulations. The Contractor shall conform to all Bangladesh laws and regulations pertaining to the employment of Bangladesh nationals for the specific Work covered by these Specifications.

The Contractor shall at all times take reasonable precautions to prevent any unlawful, riotous or disorderly conduct by, or amongst his employees, and for the preservation of

peace and protection of persons and property in the neighborhood of the Work against the same.

Whenever the Engineer's Representative shall notify the Contractor in writing that any man on the Work is, in his opinion, incompetent, unfaithful, or disorderly, or who uses threatening or abusive language to any person representing the Ashuganj Power Station Company Ltd. when on the Work, such man shall be immediately discharged from the Work and shall not be re-employed thereon except with the consent of the Engineer. The Contractor shall replace such employees so discharged as is practical if replacement is required.

All imported personnel of the Contractor under this Contract shall remain employees of the Contractor and shall receive their salaries and allowances directly from the Contractor. The Contractor agrees not to discriminate against any employee or applicant for employment by reason of race, colour or national origin in carrying out this Contract.

The Contractor shall be responsible for observance of his Subcontractors of the foregoing provisions.

#### **43.0 WORKING HOURS**

No work shall be done on legal Bangladesh holidays or at times other than the regularly established working hours without the written approval of the Engineer. However, work necessary in case of emergencies or for the proper case, receipt, unloading, transporting, maintenance, and protection of equipment or finished work may be done without prior approval.

This requirement shall not preclude the Contractor's use of scheduled overtime work and such work may be established by the Contractor, as a regular procedure, with the written permission of the Engineer; such permission, however, may be revoked at any time by the Engineer if the Contractor fails to maintain adequate equipment and supervision for proper prosecution and control of the Work and all operations performed thereunder.

#### **44.0 UNFAVOURABLE CONSTRUCTION CONDITIONS**

During unfavorable weather, the Contractor shall confine his operations to portions of the Work which will not be affected adversely thereby. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform that portion of the Work in a proper and satisfactory manner.

#### **45.0 LIQUIDATED DAMAGES (LD)**

' LIQUIDATED DAMAGES ' shall mean the sum(s) which the Contractor is liable to pay to the APSCL in full for failure to meet the guaranteed completion date or performance figures and all the terms and conditions as stated in the Contract.

##### **45.1 Delay completion**

It is understood and agreed that time is the essence of the Contract. If the Contractor fail to complete the specified supply and portions of the Work within the periods of time stipulated in the Contract, after due allowance for any extension of time which may be granted under the provisions set forth hereinafter, the Contractor shall pay to the Ashuganj Power Station Company Ltd. Liquidated Damages for 'each" day of default.

The amount of the Liquidated Damages shall be assessed at the rate of 0.10 percent of contract price for each calendar day of default in completion of commercial operation Date (COD) as guaranteed in Schedule-A [Guarantee], Vol. 2 of 2 (Part-B).

The total amount of Liquidated Damages assessed against the Contractor for failure to comply with the specified schedule shall not exceed ten percent (10%) of the-Contract Price. Beyond the ceiling the contract may be terminated.

#### 45.2 Net output

If the plant fails to achieve such net power output at site conditions as guaranteed by the Contractor in GUARANTEE SCHEDULE-A, he shall pay to the Ashuganj Power Station Company Ltd. a liquidated damage in US Dollar:

An amount at the rate of one (1) percent of the Contract Price for each one (1) percent or a part thereof decrease in net output. The maximum LD shall be of ten (10) percent of contract price

#### 45.3 Heat rate

If the net heat rate for the plant exceeds the guaranteed value [GUARANTEE SCHEDULE-A, Volume 2 of 2, Part-B] by the Contractor by more than One (1) percent, he shall pay to the Ashuganj Power Station Company Ltd. a liquidated damage an amount at the rate of Three (3) percent of the Contract Price for each one (1) percent or a part thereof increase in the heat rate on the guaranteed value. The maximum LD shall be of ten (10) percent of contract price

The increase in heat rate is to be calculated by the following formula: -

Hg	:	Guaranteed heat rate
Hg(100)	:	Guaranteed heat rate at 100% base rating
Hg(75)	:	Guaranteed heat rate at 75% base rating
Hg(50)	:	Guaranteed heat rate at 50% base rating
Hg(W)	:	Calculated weighted average guaranteed heat rate,
Hg(W)	=	$Hg_{100\%} \times 0.3 + Hg_{75\%} \times 0.4 + Hg_{50\%} \times 0.3$
Ha(100)	:	Actual measured heat rate at 100% base load
Ha(75)	:	Actual measured heat rate at 75% base load
Ha(50)	:	Actual measured heat rate at 50% base load
Ha(W)	:	Calculated weighted average actual heat rate,
Ha(W)	=	$Ha_{100\%} \times 0.3 + Ha_{75\%} \times 0.4 + Ha_{50\%} \times 0.3$

The increased heat rate is calculated as follows:

$$h (\%) = \frac{Ha (W) - Hg(W)}{Hg (W)} \times 100$$



#### 45.4 Transformer loss

If the losses in respect to each step-up transformer calculated by the result of the shop tests exceed the guaranteed value with the tolerance, the Contractor shall pay to the Ashuganj Power Station Company Ltd. a liquidated damage an amount calculated by the following formula in Bangladesh Taka.

$$X = a (Na - 1.01 \times Ng) + b (La - 1.01 \times Lg)$$

Where: x : Liquidated damage in Bangladesh Taka

a : TK. 57,000 /kW

Na : No load loss to be tested at shop

Ng : No load loss to be guaranteed

b : TK. 25,650 /kW

La : Load loss to be tested at shop

Lg : Load loss to be guaranteed

In the application of the calculation formula above, if the results become a minus (-) the Ashuganj Power Station Company Ltd. shall not be liable to pay the Contractor such value.

#### 45.5 Total Auxiliary consumption

If the total auxiliary consumption found more than the guaranteed by the contractor in Guarantee Schedule-A, he shall pay to the APSCL liquidated damages.

An amount at the rate of 1% of the contract price for one (1) percent or a part thereof increase in Total auxiliary consumption. The increase in auxiliary consumption is to be calculated by the formula:

$$Ac (\%) = (ACa/ACg) \times 100$$

$$\text{Where, } ACa = (Pg - Pn)$$

ACg : Guaranteed Total auxiliary consumption

Pn : Net power output ( measured at the high voltage side of the step up transformer)

Pg : Summation of total power output measured at generator terminal

ACa : Actual Total auxiliary Consumption

AC (%) : Increase in auxiliary consumption

In the application of the calculation formula above, if the results become a minus (-) the APSCL shall not be liable to pay the contractor such value.

#### 45.6 Deduction of the LD:

The APSCL shall have the full, complete and unequivocal right to deduct LD for delay of completion, Heat Rate, Net Output, Transformer losses and auxiliary losses separately in accordance with clause 45.1, 45.2 , 45.3, 45.4 and 45.5 respectively from any sum or amount in its hands or otherwise due, or to become due, to the Contractor, or to sue for and recover such LD and any or all other claims for losses and damages including but not limited to encashment of the performance and other security."

The amount of LD for may be deducted from any money due or which may become due to the Contractor under the Contract and/or collect such amount of LD from the Retention Money (if any) or other securities posted by the Contractor whichever is convenient to the Employer.

#### **46.0 HINDRANCES AND DELAYS**

In executing the Contract, the Contractor expressly covenants and agrees that .in undertaking to complete the Work within the time therein fixed, he has taken into consideration and made allowances for all hindrances and delays incident to such Work, whether growing out of delays in securing materials or workmen or otherwise. No charge shall be made by the Contractor for hindrances or delays from any cause during the progress of the Work, or any portion thereof, embraced in this Contract.

#### **47.0 EXTENSION OF TIME**

Except in the case of Force Majeure, as provided under General condition clause 23 extension of time will not be granted.

#### **48.0 MATERIALS AND EQUIPMENT**

Unless specifically provided otherwise in each case, all materials and equipment furnished for permanent installation in the Work shall conform to applicable standard specifications and shall be new, unused, and undamaged when installed or otherwise incorporated in the Work. No such material or equipment shall be used by the Contractor for any purpose other than that intended or specified, unless such use is specifically authorised by the Engineer in each case.

After signing of the Contract, Contractor shall not change the manufacturer, specification of any equipment/ materials without prior approval of the Ashuganj Power Station Company Ltd. If any such change is detected before issuance of Final Acceptance Certificate, Contractor have to replace the Equipment/ materials by those as mentioned in the contract at his own cost. If Contractor failed to oblige, Ashuganj Power Station Company Ltd. has the right to deduct full cost of such equipment/ materials form the amount payable against Contractor's bill/ invoice/ performance guaranty.

When equipment or material furnished by the Contractor cannot be installed as specified or as shown on the plans, the Contractor shall, without extra cost to the Ashuganj Power Station Company Ltd., make all modifications required to properly install the equipment or material such modifications shall be subject to approval of the Engineer.

Excess and un-used goods imported for permanent installation for which customs duties, sales tax etc. have been paid by the Ashuganj Power Station Company Ltd. shall be the property of the Ashuganj Power Station Company Ltd. At the completion of the Project, the Contractor shall prepare a proper inventory of the excess and un-used goods and hand over the same to the Ashuganj Power Station Company Ltd.

## 49.0 CLEAN UP OF SITE

The Contractor shall clean the working areas periodically of all trash and waste materials and shall maintain the Site in a neat and orderly condition throughout the construction period. The Engineer shall have the right to determine what is waste material or rubbish and the manner and place of disposal. On or before the completion of the Work the Contractor shall, without charge therefore, carefully clean out all pits, pipes, chambers or conduits, and shall tear down and remove all temporary structures built by him, and shall remove all rubbish of every kind from the tracts or grounds which he has occupied and shall leave them in first class condition.

In the event that the Contractor fail to comply with the cleanliness requirement or to perform the cleanup work assigned to him by the Ashuganj Power Station Company Ltd. the Ashuganj Power Station Company Ltd. will reserve the right to hire another contractor to perform the necessary cleaning work and the Contractor shall reimburse the Ashuganj Power Station Company Ltd. for the cost of all such clean up work.

## 50.0 WARRANTY

The Contractor warrants that each item of materials, equipment and the work furnished under this Contract will be as specified and will be free from all defects in design, workmanship, materials & equipment etc. The warranties contained in these Contract Documents are the warranties made by Contractor with respect to the design, material, equipment and the work. If within the warranty period set forth below, any part of the material, equipment, any defects in design or the work fails to meet the warranty, the Ashuganj Power Station Company Ltd. will notify the Contractor and the Contractor shall promptly correct any defects, including non-conformance with the specifications, by adjustment, repair or replacement of any and all defective parts or materials.

**Unless otherwise specified, the warranty period hereunder shall begin on the date of Commercial Operation Date (COD) which will be declared by BPDB and shall end after twenty-four (24) months. During the warranty period, if any equipment/material is damaged and replaced by the Contractor, fresh warranty period for twenty four (24) months shall be counted for the replaced equipment/material. However, the Warranty period will not exceed 36 months.**

During the warranty period of 24 months, duration of unscheduled outages due to Contractor's fault shall be worked out, which shall be added to 24 months warranty period i.e. warranty period shall be extended accordingly by such unscheduled outages.

During the warranty period, the Contractor shall supply all (whether it is listed or not in their list) necessary equipment, spare parts, materials, consumables (Engine lube Oils, Fuel injector, greases, air & oil filters, Fuel oil filters, Charge air filters, ventilation filter, Breather filter, all chemicals etc.) to be necessary for day to day operation and maintenance of the generating units and other plant equipment inclusive of emergency use that takes place in the course of operation at his own cost and. The operation of the plant should be such that plant factor should be minimum 80%.

During the warranty period, the Contractor shall perform all schedule maintenance works, minor overhauling or any other maintenance works as per manufacturer recommendation (OEM) in the course of operation at minimum 80 % Plant Factor at his own cost and whether it is listed or not in their list.

The Contractor shall pay all costs for correction of defects, including shop and field labour and supervision transportation parts, supplies and special tools.

When it is necessary to dismantle Piping, ducts, machinery, equipment or other work furnished or performed by the Contractor in order to obtain access to the Work, the cost of all such dismantling and re-assembly will be paid by the Contractor.

The Contractor shall extend the provisions of this warrant to cover all repaired and replacement parts furnished under the warranty provision for a period of twenty four (24) months from the date of installation thereof.

If within ten (10) days after the Ashuganj Power Station Company Ltd. gives the Contractor notice of a defect, the Contractor neglects to make or undertake with due diligence to make the necessary corrections, the Ashuganj Power Station Company Ltd. is hereby authorised to make the corrections by himself or order the Work to be done by a third party, and the cost of the corrections shall be paid by the Contractor.

The Ashuganj Power Station Company Ltd. will be permitted to make repairs or replacements of equipment without affecting the warranty or without prior notice to the Contractor so long as the repairs or replacements involve the correct installation of spare parts. The Ashuganj Power Station Company Ltd. shall also be permitted to adjust or test equipment as outlined in instruction manuals provided by the Contractor or as directed by the Contractor's Representative. During major repairs or replacement respective manufacturer's representative shall be present.

In the event of an emergency where in the judgement of the Ashuganj Power Station Company Ltd. the delay resulting from giving formal notice would cause serious loss or damage which could be prevented by immediate action, defects may be corrected by the Ashuganj Power Station Company Ltd. or a third party chosen by the Ashuganj Power Station Company Ltd. without giving prior notice to the Contractor and the cost of the corrections shall be paid by the Contractor. In the event such action is taken by the Ashuganj Power Station Company Ltd., the Contractor will be notified promptly and shall assist wherever possible in making the necessary corrections.

The Contractor shall provide One (1) Competent Electrical and Instrument & Control Engineer, One (1) Mechanical Engineer and One (1) operation Engineer during 24 months warranty period for smooth maintenance and operation of the Plant. The said Engineer shall have minimum 10 years experience in relevant field of which minimum 5 (Five) years on same model of Engine. Bio-data (CV) of above Engineers have to be submitted by the Tenderer for approval from APSCL before Commercial Operation (CO).

During warranty period the above mentioned Engineers jointly with APSCL'S Engineers/Staff shall have to perform the operation & maintenance of the plant which will ensure the operation and maintenance of the plant after the warranty period by APSCL personnel exclusively. Contractor shall train-up APSCL Engineers/Technicians/ Operators about the plant operation and maintenance so that they can perform the necessary operation & maintenance of the plant by themselves exclusively after warranty period. For this purpose, quarterly progress report of APSCL Personnel shall have to be submitted to the APSCL authority by the above mentioned Engineers showing the progress of APSCL Personnel for safe & reliable operation and maintenance of the plant independently.

### **50.1 Penalty During Warranty Period :**

During warranty period, tripping, unscheduled shutdown of the any unit (Genset) due to contractor's/ machine's (installed by contractor) fault shall be allowed for maximum 24 times/year. After each tripping/unscheduled shutdown, unit outage time of maximum 06

hours will be allowed. If Nos. of tripping/unscheduled shutdown of any unit (Genset) is more than 24 times/ year, amount of penalty will be 0.005% of each unit contract price (Total contract price /Total no. unit) for every additional tripping/ unscheduled shutdown. This calculation will be applied to find out the penalty for total no. of unit. In addition, if outage of the each unit after every tripping/ unscheduled shutdown continues for more than 06 hours (tripping/ shutdown time to synchronising time) additional penalty will be (0.005/ Total unit no.) % of contract price (Total contract price /Total no. unit) for every additional outage hour. At the end of every month, unit tripping/ unscheduled shutdown and outage time calculation report will be prepared by the Project Director/ Manager of the Power station and penalty will be imposed to the contractor on monthly basis. This penalty will be in addition to the Liquidated Damages (as per Clause GC 45.0).

In the case of individual trips/ unscheduled shutdown of the units of the plant, the penalty shall be proportional to the reduction of power from the offered net output.

Load restriction (partial load operation due to contractor's or machine fault) will also be considered as unscheduled shutdown and these period will be calculated and penalised proportional to the reduction of energy (MWhr) from the offered net energy (MWhr) for these period.

## **51.0 CLAIMS FOR LABOUR AND MATERIALS**

The Contractor shall indemnify and save harmless the Ashuganj Power Station Company Ltd. from all claims for labour and materials furnished under this Contract.

## **52.0 MAINTAINING COMMERCIAL OPERATION**

The Contractor shall prosecute the Work in such a manner that the minimum disturbance to maintaining commercial operation of the existing power system and appurtenances will result. Any outage of power shall be requested in writing to the Ashuganj Power Station Company Ltd. at least five (5) days in advance and shall be scheduled during weekends, nights, or other periods of low demand. Any operations that may endanger the integrity of the power system shall first be cleared with the Ashuganj Power Station Company Ltd.

## **53.0 CUTTING INTO EXISTING WORK**

Cutting into existing work that will affect commercial operation or integrity of the power system shall be conducted in accordance with Clause 52.0, "MAINTAINING COMMERCIAL OPERATION". Cutting into transmission / Auxiliary system and communication system, or other work not involving the above shall be performed in such a manner that the performance of the existing system will not be adversely affected, except for temporary personnel inconvenience. After putting in the new work, the existing work shall be returned to satisfactory and safe condition, equivalent or better, than it was found.

## **54.0 MAJOR ECONOMIC DISLOCATION: Deleted**

## **55.0 PAYMENT OF DUTIES, TAXES, VAT, FEES AND OTHER TAXES:**

### **55.01 Bangladesh Customs and import duties, levies, VAT and Tax**

The Purchaser (APSCL) shall pay all Bangladesh customs and import duties and all other levies arising from the importation of all material and equipment (as mentioned in Price schedule -1, CIP value) which shall be APSCL property under the contract imposed by the law of the country where the Site is located. The contractor shall submit to APSCL 5 (five) copies of non-negotiable clean shipping

document ahead of shipment for arranging payment of such taxes. The contractor shall bear port demurrage & others charges due to delay submission of shipping documents, any discrepancies, late assessment and clearance of imported goods as stated GC clause 63.

The Purchaser (APSCL) shall also pay all Taxes and Value Added Tax (VAT) (except personnel income tax and VAT) at prescribed rate at the prevailing rule of the Government of Bangladesh on all payments of foreign currency & local currency specified in Price Schedule No.2,3,4 and under the contract at the territory of Bangladesh.

The VAT and Taxes imposed on Clearing and Forwarding Agent (C & F Agent) by the port authority is contractor account. Employer (APSCL) will not bear this cost.

The Contractor shall obtain all import permits or licenses required for any part of the work within the terms stated in the program or if not so stated, in reasonable time having regard to the time for delivery of the work and the time for completion.

The Ashuganj Power Station Company Ltd. shall not bear customs and import duties and all other levies whatsoever arising from the importation of all material and equipment (as mentioned in Price schedule -2, 3 and 4 ) and any expenditure on account of import of cement, Rod if any, by the Contractor.

Normally, equipment and materials that will be incorporated in the permanent works shall be transported by vessel. If the Contractor decides to air freight any items, the excess customs duty to be levied by customs authorities and excess freight on account of air freight shall be borne by the Contractor.

#### **55.02 For Contractor's equipment, materials and services**

##### **a) For Contractor's equipment, materials imported on re-exportable basis**

The Contractor shall be entirely responsible for all Bangladesh Custom and Import duties, VAT, taxes and all other levies imposed under applicable law of Bangladesh for Importation of Contractor's Construction equipment, tools and materials required for implementation of the contract in Bangladesh which shall be imported on the condition to be exported after completion of the work, if the same are not exempted from such taxes, VAT & levies.

##### **b) Foreign country Taxes and Permits**

The Contractor shall pay all sales, income and other taxes and duties, tariffs and imports that can be lawfully assessed against the contractor by the Government or any lawful authority of any country other than the people's Republic of Bangladesh which has jurisdiction over the contractor in connection with this contract and shall pay for all licenses permits and inspection required for the work including the cost or securing all export licenses and permits for materials, equipment, supplies and personnel exported from that country to Bangladesh.

#### **55.03 CONTRACTOR'S RESPONSIBILITY TO GET ACQUAINTED WITH BANGLADESH LAWS, IMPORT POLICY, ETC.**

The Contractor shall get himself acquainted with the relevant Bangladesh Laws as well as the Import Policy of the Government of People's Republic of Bangladesh remaining in force regarding import of banned items, if any, during the execution of the Contract. In case of import of any banned items and/or contraband item, the consequential effect shall rest with the Contractor. Similarly the Contractor shall be responsible for any non-conformance of Bangladesh Laws either by his own employees or any of the employees of his Subcontractors during execution of the Contract.

## **56.0 CONTRACTOR'S BREAK DOWN ESTIMATE**

The Contractor shall prepare and submit to the Engineer for approval a breakdown estimate for and covering each lump sum price of installation work stated in the Contract. The breakdown estimate, showing the value of each kind of work, shall be submitted to and approved by the Engineer before any partial payment estimate is prepared. Such items as Security premium, temporary facilities, and plant may be listed separately in the breakdown estimate, provided that their costs can be substantiated.

The sum of the items listed in any breakdown estimate shall equal the Contract Lump Sum Price or Prices listed as separate items. Overhead and profit shall not be listed as separate items.

An unbalanced breakdown estimate, providing for overpayment of the Contractor on items of the Work which would be performed first under the lump sum item or the Contract, will not be accepted and shall be revised and resubmitted until acceptable to the Engineer.

## **57.0 DEFENSE OF SUITS**

In case any action at law or suit in equity is brought against the Ashuganj Power Station Company Ltd. or the Engineer or any officer or agent of either of them, for or on account of the failure, omission, or neglect of the Contractor to do and perform any of the covenants, acts, matters, or things by this Contract undertaken to be done or performed, or for the injury or damage caused by the negligence or alleged negligence of the Contractor or his Subcontractors or his or their agents, or in connection with any claim or claims based on the lawful demands of Subcontractors, workmen, material, men, or supplies of machinery and parts thereof, equipment, power tools and supplies incurred in the fulfillment of this Contract, the Contractor shall indemnify and save harmless the Ashuganj Power Station Company Ltd. and the Engineer and their officers and agents, of and from all losses, damages, costs, expenses, judgments, or decrees whatever arising out of such action or suit that may be brought as aforesaid. The Contractor shall be permitted to participate on the defense of any suit.

## **58.0 GOVERNMENTAL AUTHORISATION**

The Ashuganj Power Station Company Ltd. will assist the Contractor for obtaining any required authorisation and export licenses for exporting tolls, equipment, test equipment, unused materials, and the like, all of which are and remain the property of the Contractor, from Bangladesh at the conclusion of the work. The Ashuganj Power Station Company Ltd. shall have the first option to purchase for fair value any of the Contractor's plant, equipment, tools, materials, and supplies which are imported for use in the performance thereof and subsequently offered for sale in Bangladesh, but the Contractor is relieved of any responsibility to recognise the option and may sell to anyone at the best price obtainable in the event that Ashuganj Power Station Company Ltd. does not exercise the option within thirty (30) days of Ashuganj Power Station Company Ltd.

receipt from the Contractor of written notice of the intent to sell, provided, however, that the Contractor will observe usual Government Regulation with regard to sale of such imported goods in Bangladesh.

## **59.0 LOSSES FROM NATURAL CAUSES**

All loss or damage arising out of the nature of the Work, or from the action of the elements, or overflows, or from ground water, or from any unusual obstruction or difficulty, or any other natural or existing circumstances foreseeable, which may be encountered in the prosecution of the Work, shall be sustained and borne by the Contractor at his own cost and expense.

## **60.0 INSURANCE**

The Contractor shall arrange the following insurance except "Workmen's compensation Insurance for the Contractor's expatriate personnel" from M/S Bangladesh Sadharan Bima Corporation and Policies to be taken in foreign currency and local currency wherever necessary and the payment of premium shall be made by the Contractor.

### **60.01 MARINE INSURANCE**

Insurance of equipment/Spare parts/materials/Vehicles and other goods covering all risks including war, strike, riots, civil commotion from Manufacturer warehouse to APSCL warehouse or/and project site, i.e. from the manufacturer warehouse to port of loading, port of loading to the port of landing (discharge), port of landing to the project Site at Ashuganj, Bangladesh.

The Contractor shall promptly furnish one set of shipping documents, a copy of Bill of lading, invoice, packing list etc., of each consignment direct to the Project Director, Ashuganj 100 MW HFO Power plant, APSCL well in time of the shipment of goods indicating the contract number and name of the insurer. If they fail to comply with this instruction they will be held responsible to compensate the losses if any arising out of the non-compliance of this conditions.

### **60.02 INSURANCE for Erection & Commissioning, Civil and Building works**

"Builder's risk Insurance" and "Erection Insurance" and or "Structural Insurance" including third party liabilities wherever considered necessary by the Contractor and approved by the Ashuganj Power Station Company Ltd.

### **60.03 TRANSPORT LIABILITY INSURANCE**

Comprehensive water crafts if necessary automobile insurance on motor vehicles to be used by the Contractor during the working period in Bangladesh.

### **60.04 WORKMEN'S COMPENSATION INSURANCE**

The Contractor shall procure and maintain Workman's Compensation Insurance for all expatriate personnel employed by the Contractor for services in Bangladesh and shall provide for such employees other insurance benefits such as it customarily provides for overseas assignments of its other employees.

### **60.05 REPLACEMENT AND REPAIR UNDER INSURANCE**

The Contractor shall follow customary insurance claim procedures in seeking to effect recovery under the applicable insurance coverage, of the costs of repair or



replacement of any materials lost or damaged in shipment or handling, replacement shipments for materials being replaced or materials that has been returned to the country of origin for repair shall be shipped at no charge to the Ashuganj Power Station Company Ltd. However, any costs for custom duties, taxes, import licenses under an insurances claim will be borne by the Contractor. The contractor shall in no way withheld the project works/ supplies / services for finalisation of the insurance claimed, if any.

## **61.0 CONTRACT PRICE AND TERMS OF PAYMENT**

The Employer shall pay the Contractor in the following manner and at the following times, on the basis of the Price Breakdown given in the section on Price Schedules. Payments will be made in the currencies quoted by the Bidder as per contract agreement. Applications for payment in respect of part deliveries may be made by the Contractor as work proceeds

### **61.01 Local Currency [Bangladesh Taka]**

Eligible claims for Local Currency [Bangladesh Taka] payment shall be made by APSCL through a bank of Bangladesh from the Project Budget allocated by APSCL.

### **61.02 Foreign currency**

Foreign Currency payment shall be made through irrevocable Letter of Credit (L/C). The charges for establishment of letter of credit within the territory of Bangladesh shall be borne by the Employer (APSCL) and outside Bangladesh shall be borne by the Contractor. But in case the amendment of the L/C is required due to the cause of the Contractor, the amendment charge shall be paid by the Contractor. The freight, insurance, inland transportation (if applicable) shall be paid at actual but not exceeding the quoted amount.

#### **Invoices**

The Contractor shall submit invoices (original) in triplicate to the Project Director whenever an invoice is required to be submitted as per provision of this Contract

### **61.03 Terms of payment**

APSCL shall make payment to the Contractor in both foreign currency and Bangladesh Taka respectively in the following manner:

#### **1. Schedule No. 1. Plant and Equipment Supplied from Abroad**

##### **i. Foreign currency**

- a. Ten percent (10%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security from any schedule Bank of Bangladesh for the equivalent amount made out in favor of the Employer. The advance payment security shall valid until issuance of PAC. The advance payment security may be reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by shipping and delivery documents.

- b. Fifty percent (50%) of the total or pro rata CIP amount upon Incoterm "CIP", upon delivery to the carrier within forty-five (45) days after receipt of documents *as per clause GC 62*. Payment advice shall be issued to the Bank by the competent authority of APSCL.
- c. Twenty percent (20%) of the total or pro rate CIP amount upon Incoterm "CIP", upon receipt of plant and equipment at Site. The payment shall be paid on issuance of receiving cum damage report against submission of invoices duly certified by the Project Director and Payment advice shall be issued by the competent authority of APSCL.
- d. Ten percent (10%) of the total or pro rata CIP amount upon issue of the Operational Acceptance Certificate (provisional acceptance certificate) within forty-five (45) days after receipt of invoice duly certified by the Project Director and approved by the APSCL. Payment advice shall be issued by the competent authority of APSCL.
- e. Remaining ten percent (10%) of the total or pro rata CIP amount upon issue of the Final Acceptance Certificate (after warranty period of 24 months) within forty-five (45) days after receipt of invoice or

The contractor is entitle to receive the remaining 10% payment after 6 (six) months successful operation of plant from the date of issuing PAC and upon receipt of an new irrevocable and unconditional Bank Guarantee (except performance security) from schedule bank of Bangladesh for the equivalent amount. The Bank Guarantee shall be valid up to 60 days beyond the end of the Warranty period.

## **ii. Payment of Local Currency [Bangladesh Taka]:**

- a. Ten percent (10%) of the total Local currency amount as an advance payment against receipt of invoice and an irrevocable advance payment security from any schedule Bank of Bangladesh for the equivalent amount made out in favor of the Employer. The advance payment security shall valid until issuance of PAC. The advance payment security may be reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by delivery documents.
- b. 70% of the total Local Currency [Bangladesh Taka component] of the Contract Price shall be paid against running invoices against actual progress and supporting documents (Receiving cum damage report, if applicable) for the actual progress of the respective month accompanied by the statement of the Works duly certified by the Project Director and approved by the competent authority of APSCL within 45 days of the date of approval of the invoice.
- c. 10% of the total Local Currency [Bangladesh Taka Component] of the Contract Price shall be paid after issuance of Provisional Acceptance/Taking over certificate.
- d. Ten percent (10%) of the total or pro rata CIP amount upon issue of the Final Acceptance Certificate (after warranty period of 24 months) within forty-five (45) days after receipt of invoice or

## **2. Schedule No. 2. Payment against Erection and Commissioning**

In respect of Erection and Commissioning services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total Erection and Commissioning amount as an advance payment against receipt of invoice, and an irrevocable advance payment security from any schedule Bank of Bangladesh for the equivalent amount made out in favor of the Employer. The advance payment security shall valid until issuance of PAC. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for services.

Seventy percent (70%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice duly certified by the Project Director and Payment advice shall be issued by the competent authority of APSCL.

Ten percent (10%) of the total or pro rata value of services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Operational Acceptance Certificate (provisional acceptance certificate), within forty-five (45) days after receipt of invoice.

Remaining ten percent (10%) of the total or pro rata CIP amount upon issue of the Final Acceptance Certificate (after warranty period of 24 months) within forty-five (45) days after receipt of invoice or The contractor is entitle to receive the remaining 10% payment after 6 (six) months successful operation of plant from the date of issuing PAC and upon receipt of an new irrevocable and unconditional Bank Guarantee (except performance security) from schedule bank of Bangladesh for the equivalent amount. The Bank Guarantee shall be valid up to 60 days beyond the end of the Warranty period.

## **3. Schedule No. 3. Civil and Building Works:**

In respect of Civil and Building Works for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total works amount as an advance payment against receipt of invoice, and an irrevocable advance payment security from any schedule Bank of Bangladesh for the equivalent amount made out in favor of the Employer. The advance payment security shall valid until issuance of PAC. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for services.

Seventy percent (70%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice duly certified by the Project Director and Payment advice shall be issued by the competent authority of APSCL.

Ten percent (10%) of the total or pro rata value of works performed by the Contractor as evidenced by the Employer's authorization of the Contractor's

monthly applications, upon issue of the Operational Acceptance Certificate (provisional acceptance certificate), within forty-five (45) days after receipt of invoice.

Remaining ten percent (10%) of the total or pro rata CIP amount upon issue of the Final Acceptance Certificate (after warranty period of 24 months) within forty-five (45) days after receipt of invoice or

The contractor is entitled to receive the remaining 10% payment after 6 (six) months successful operation of plant from the date of issuing PAC and upon receipt of an new irrevocable and unconditional Bank Guarantee (except performance security) from schedule bank of Bangladesh for the equivalent amount. The Bank Guarantee shall be valid up to 60 days beyond the end of the Warranty period.

#### **4. Schedule No. 4. Services:**

In respect of services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security from any schedule Bank of Bangladesh for the equivalent amount made out in favor of the Employer. The advance payment security shall valid until issuance of PAC. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for services.

Seventy percent (70%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice duly certified by the Project Director and Payment advice shall be issued by the competent authority of APSCL.

Ten percent (10%) of the total or pro rata value of services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Operational Acceptance Certificate (provisional acceptance certificate), within forty-five (45) days after receipt of invoice.

Remaining ten percent (10%) of the total or pro rata CIP amount upon issue of the Final Acceptance Certificate (after warranty period of 24 months) within forty-five (45) days after receipt of invoice or

The contractor is entitled to receive the remaining 10% payment after 6 (six) months successful operation of plant from the date of issuing PAC and upon receipt of an new irrevocable and unconditional Bank Guarantee (except performance security) from schedule bank of Bangladesh for the equivalent amount. The Bank Guarantee shall be valid up to 60 days beyond the end of the Warranty period.

5. Any individual claim for payment submitted by the Contractor is to be for a minimum sum of 0.5% of the Contract Price.

6. No extra payments in respect of overtime, additional materials or special conditions of hardship shall be claimed by the Contractor unless and otherwise specified in the contract.
7. If at any time any payment would fall to be due for a work or portion of a work and if there shall be any defect in portion of such works in respect of which such payment is proposed, APSCL may retain the whole or any portion of such payment. Any sum retained by the APSCL pursuant to the provision of this sub Clause shall be paid to the Contractor after the said defect is removed.

## **62.0 DOCUMENTATION FOR PAYMENT**

Claims for payment must be supported by the following documentation as specified hereinafter; Requests for reimbursement for the cost of equipment materials, freight, transportation and insurance shall be supported by the following documents (each copy to be certified by the Contractor or the Contractor's representative to be a true copy of the document of which it is a copy):

50% of the CIP cost of supply of materials and equipment shall be paid upon presentation of:

- invoice in 3 (three) originals,
- packing list in 3(three) originals,
- marine insurance certificate in 1(one) original,
- Bill of lading/ Airway Bill in 1(one) original and 3(three) copies marked Freight prepaid,
- Warranty certificate in 1(one) original,
- manufacturer's factory test certificate in 1(one) original,
- quality and quantity certificate of the materials and equipment shipped in 1 (one) original,
- factory test witnessing certificate in 1(one) original
- certificate of origin issued by the manufacturer of the materials shipped in 1(one) original' and
- insurance premium certificate,

20% of the CIP cost of supply of materials and equipment shall be paid upon presentation of:

- Invoice
- bill of entry,
- customs assessment notice,
- post landing inspection statement,
- receiving cum damage report at site,

- payment certificate.

10% of the CIP cost of supply of materials and equipment shall be paid upon presentation of

- Invoice
- Provisional Acceptance Certificate
- payment certificate

Remaining 10% of the CIP cost of supply of materials and equipment shall be paid upon presentation of

- Invoice
- Equivalent amount of Bank guarantee
- Payment certificate

Requests for mobilization fund and progress payments shall be supported by the following documents for schedule 2,3 &4:

- One copy of the Contractor's invoice which shall identify the Contract and which shall show the total foreign currency value and local currency value of the Contract, the total amounts previously received and or claimed as mobilization fund or progress payments; the foreign currency and local currency amount being invoiced for payment; separate total values as of the date of said invoice of equipment and materials delivered (including shipping and related costs) and services performed; and separate total values since the date of the previous notice.
- One counterpart of a Work Progress Certificate signed by the Contractor and jointly countersigned by the Owner's Engineer and the Project Director.
- The Contractor shall submit all Work Progress Certificates to both the Owner's Engineer and the Project Director simultaneously by registered air mail. The Owner's Engineer and the Project Director will either countersign or reject a Work Progress Certificate within a maximum period of forty (45) days from the date of receipt of such Certificate by him. If the Owner's Engineer and the Project Director or either shall fail either to countersign or to reject a Work progress Certificate within the said forty (45) days period, the Contractor shall notify the Project Director by cable of the delay in the approval from the Site; and the Project Director will either countersign the Work Progress Certificate in question or assign his reasons for not doing so within a maximum period of sixty (60) days from the date of receipt of the Contractor's said cable notice to him.
- The Contractor shall furnish to the Project Director and the Owner's Engineer or either whenever called upon to do so any additional information or documents that may be required in connection with verification of progress claims and or any other payments made.

### **63.0 REPORTING, CLEARING AND SHIPPING DOCUMENTS**

The contractor shall be taken prior written permission from the APSCL/Project Director before shipment of any equipment & materials for the project. The Contractor shall

provide all official forms and documental information as shall be needed to satisfy the requirements of Bangladesh Customs and the APSCL. Upon shipment, the Contractor shall notify the Project Director of APSCL and the insurance company by cable or telex full details of the shipment including contract and L/C number, description of goods, quantity, the vessel, the bill of lading number, land date, port of loading, date of shipment, port of discharges, etc. The Contractor shall send by mail / Air Mail the following documents to the APSCL, insurance company and Bank.

The documents to be provided are as follows:

- Copies of the supplier's invoice showing goods description, quantity, unit price total amount.
- three (3) copies of the negotiable clean shipping document, bill of lading/Air way bill/Truck receipt marked freight prepaid and four (04) copies of non-negotiable shipping document.
- Copies of packing list identifying contents of each package.
- Insurance certificate.
- Manufacturer's warranty, supplier guarantee certificate stating quality, quantity and genuineness of goods.
- Manufacturer factory inspection/test report (where necessary)
- Certificate of origin.
- Bill of entry in supported of imported goods
- Drawing, Operating & maintenance instruction manual, technical data and factory test certificate of each item (Both hard and soft copy)

The above documents shall be made available to the APSCL at least one week before arrival of goods at the port of destination and if not received, the Contractor will be responsible for any consequent expenses. The Contractor shall ensure that the documents to be sent are free from any discrepancy. In case of any discrepancy in the document, the supplier shall be responsible for any consequent expenses, such as additional bank charges, additional demurrage at port owing to delayed clearance of goods etc. The negotiable sets of documents shall be original, signed by the contractor. The commercial invoice is to show material values plus freight & insurance.

**SHIPPING DOCUMENTS:** The shipping documents described above shall be received by the APSCL and Bank at the latest one week before arrival of cargoes at the port of destination. The number of shipping documents shall be supplied are as follows:

1. Managing Director, APSCL.
2. Executive Director (Finance), APSCL
3. Project Director, Ashuganj 100 MW HFO Power Plant

After shipment equipment and materials the Contractor shall able to, or notify by registered air mail, the Ashuganj Power Station Company Ltd. at the addresses under 1 and 2 above not later than three (3) days after the sailing date of the vessel the following information:

1. The name of the vessel.
2. The sailing date of vessel.
3. Port of destination.
4. Description of the cargo (grouped).
5. Number of cases and/or weight of cargo.
6. Number of cases weighing above 20 tons and their individual weights.
7. Number of Bills of Lading.
8. Expected date of arrival at the port of destination.

#### **64.0 BOOKS AND RECORDS**

The Contractor shall maintain books and records covering all transactions under this Contract. These books and records shall be available for inspection and audit by the Ashuganj Power Station Company Ltd. for a period of three (3) years after termination as provided under the Contract.

#### **65.0 PACKAGING**

All equipment and materials shall be suitably coated wrapped, or covered and boxed or crated for export shipment and to prevent damage during handling and storage at the Site. Cardboard containers shall be enclosed in a solid wooden container.

Equipment and process materials shall be packed and semi-kocked down, to the extent possible, to facilitate handling and storage and to protect bearings and other machine surfaces from oxidation. Each container, box, crate or bundle shall be reinforced with steel strapping in such a manner that breaking of one strap will not cause complete failure of the packaging. The packing shall be of best standard to withstand rough handling and to provide suitable protection from tropical weather while in transit and while awaiting erection at the Site.

Equipment and materials in wooden cases or crates shall be properly cushioned to withstand the abuse of handling, transportation and storage. Packing shall include preservatives suitable to tropical conditions. All machine surfaces and bearings shall be coated with oxidation preventative compounds. All parts subject to damage when in contact with water shall be coated with suitable grease and wrapped in heavy asphalt or tar impregnated paper.

Crates and packing material used for shipping will become the property of the Ashuganj Power Station Company Ltd., but the Contractor will be allowed to use the same for the Work as needed, but the remaining material shall be turned over to the Ashuganj Power Station Company Ltd. upon completion of the Project.

Packaging or shipping units shall be designed within the limitations of the unloading facilities of the receiving ports and the ship which will be used. Ships with special heavy capacity unloading rigging may be required for large units of equipment. It shall be the Contractor's responsibility to investigate these limitations and to provide suitable packaging and shipping to permit unloading at the Port.

Each package or shipping unit shall be clearly marked or stenciled on at least two



(2) Sides as follows:

ASHUGANJ POWER STATION COMPANY LTD.  
ASHUGANJ 100 MW HFO POWER PLANT  
ASHUGANJ, BRAMANBARIA, BANGLADESH

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(Name of Contractor)

In addition, each package or shipping unit shall have the symbol painted in red on at least two sides of the package, covering one fourth of the area of the side.

Each part of the equipment which is to be shipped as a separate piece or smaller parts packed within the same case shall be legibly marked to show the unit of which it is a part and matchmarked to show its relative position in the unit, to facilitate assembly in the field. Unit marks and matchmarks shall be made with steel stamps and with paint.

Each case shall contain a packing list showing the detailed contents of the package. When any technical documents are Supplied together with the shipment of materials no single package shall contain more than one set of such documents. Shipping papers shall clearly indicate in which packages the technical documents are contained.

The case number shall be written in the form of a fraction, the numerator of which is the serial number of the case and the denominator the total number of case in which a complete unit of equipment is packed.

Wherever necessary besides usual inscriptions the cases shall bear special indication such as "Top", "Do not turn over", "Care", "Keep dry", etc., as well as indication of the centre of gravity (with red vertical lines) and places for attaching slings (with chain marks).

Cases which cannot be marked as above shall have metal tags with the necessary markings on them. The metal tags shall be securely attached to the packages with strong steel binding wire.

Each piece, skid, case or package shipped separately shall be labelled or tagged properly.

## **66.0 COMPLETION**

All works under the scope of this Contract shall be completed on or before the expiration of Two hundred and Seventy **(270)** calendar days counted from the Contract effective date.

## **67.0 PROVISIONAL ACCEPTANCE CERTIFICATE (PAC)**

The work shall not be considered as complete until a PAC has been issued for the work, signed and dated by the Acceptance Committee constituted by the Ashuganj Power Station Company Ltd. and the Engineer and delivered to the Contractor with a copy to the Ashuganj Power Station Company Ltd. The PAC will be issued (by the Ashuganj Power Station Company Ltd.) only after a final inspection and performance test of the power plant has been carried out by a team of representatives of the Contractor, the Engineer and the members of the acceptance committee of the Ashuganj Power Station Company Ltd. and the work has been judged complete and in compliance with the

Contract Documents. The test shall be performed as specified in the applicable Technical Requirements. Necessary testing equipment will be supplied by the Contractor. The final inspection and the performance test of the unit and the subsequent issuance of the PAC shall not be construed as a release to the Contractor from any contractual liability or responsibility, such release being subject only to the provisions of the release of liability clause, Clause GC-68. The Ashuganj Power Station Company Ltd. may take over completed portions of the work, prior to completion of the Contract, by written notice to the Contractor.

From the date of final inspection and test of completed works, at least three (3) weeks time should be taken for observation to the outcome of the work, after which Provisional Acceptance Certificate should be issued for the work, signed and dated by the Ashuganj Power Station Company Ltd. and the Engineer and delivered to the Contractor, provided that no omissions or defects are found which may affect the commercial operation of the plant.

It is noted that after successful performance test of the plant Acceptance Committee certify the date of COD of the plant. Formal PAC shall be issued from the effective COD date of the plant as per contractual obligation.

## **68.0 RELEASE OF LIABILITY**

The acceptance by the Contractor of the last payment shall operate as, and shall be, a release to the Ashuganj Power Station Company Ltd. and every officer, agent and employee thereof, from all claims and liability hereunder for anything done or furnished for, or relating to the Work or for any act or neglect of the Ashuganj Power Station Company Ltd. or Of any person relating to or affecting the work.

The last Payment by the Ashuganj Power Station Company Ltd. to the Contractor shall constitute final acceptance of all work performed under this Contract and shall be release of the Contractor and his surety, from all contractual. Liabilities and responsibilities to the Ashuganj Power Station Company Ltd. except those liabilities and responsibilities assumed under the Clause 50.0 "WARRANTY" of these General Conditions, or arising out of hidden defects.

In the event a suit were to be instituted in Bangladesh against the Ashuganj Power Station Company Ltd. and the Contractor as Joint defendants, neither shall be released from his respective liabilities under this Contract.

## **69.0 SUCCESSFUL PERFORMANCE**

This Contract shall be deemed successfully performed, that is completely performed, at the expiration of the specified warranty period, notwithstanding the provision whereby the Ashuganj Power Station Company Ltd. may extend the warranty period, at its option, for consideration to be paid to the Contractor as determined by negotiation.

## **70.0 TRAINING**

### **(1) Foreign Training**

The total person-months for training will be limited to 15 (fifteen) Person-Months on Engine Generating unit (HFO fired) at manufacturer's factory in the following manner:

- (a) Operation & Maintenance Training: 15 Engineers from Ashuganj Power Station Company Ltd. for 15 person months.

All living expenses, travelling expenses, daily pocket expenses (100 USD per day per Person) and lodging at actual of the trainees to and from Bangladesh to the country of Manufacturer's factory and during the period of training including incidental expenses or medical expenses or Medical Insurance from time to time will be covered by the Contractor. The Contractor must indicate in technical offer the practical arrangements he is offering for ensuring the training, as well as the methodology used.

The Contractor will provide all maintenance and operation manual (Hard & Soft copy), drawings relating to all the equipment to each trainee on the first day of his arrival at the Manufacturer's factory/country.

## **(2) Job Site Training**

The Contractor shall also provide on-the-job training at site, at free of cost, to the suitable number of staff members of the Employer during installation, testing, commissioning and initial operation of the plant for one (1) month. During warranty period, it shall be the responsibility of the Contractor to train them adequately and properly in a planned manner so that these member of the Ashuganj Power Station Company Ltd.'s staff could take over the responsibility of operation and maintenance of the plant and equipment independently at the time of handing over of such plant and equipment as well as before issuing of FAC.

## **71.0 MODIFICATIONS**

The contractor shall not alter any of the Work, except as directed in writing by the Ashuganj Power Station Company Ltd. through the Engineer, but the Engineer will assist the Ashuganj Power Station Company Ltd. subject to the provisions hereinafter contained from time to time during the execution of the Contract by notice in writing to direct the Contractor to alter, amends, omit, add to, or otherwise vary any of the works, and the Contractor shall carry out such variation, and be bound by the same conditions, so far as applicable, as though the said variations were stated in the Specifications. In any case in which the Contractor has received any such direction from the Ashuganj Power Station Company Ltd. through the Engineer which either then or later will, in the opinion of the Contractor, involve an increase or decrease in the Contract Price, the Contractor shall as soon as reasonably possible, advise the Engineer in writing to that effect.

The difference in cost to the Ashuganj Power Station Company Ltd., if any, occasioned by any such variations, shall be added to or deducted from the Contract Price as the case may require. The amount of such difference shall be ascertained and determined in accordance with the rates specified in Schedule of Prices, so far as the same may be applicable, and where are not contained in the said Schedule or are not applicable, such amount shall be agreed between Ashuganj Power Station Company Ltd. and the Contractor.

Should the Ashuganj Power Station Company Ltd./Engineer make any such variations in any part of the Work such reasonable notice in writing will be given to the Contractor as we will enable him to make his arrangements accordingly, and in case where plant is already manufactured or in course of manufacture, or any matter done or drawings or patterns made that require to be altered, a reasonable sum in respect thereof will be allowed by the Ashuganj Power Station Company Ltd. If in the opinion of the Contractor any such variation is likely to prevent or prejudice the Contractor from or in fulfilling any of his obligations under the Contract, he shall notify the Ashuganj Power Station Company Ltd. through the Engineer thereof in writing, and the Engineer will decide forthwith in accordance with the Ashuganj Power Station Company Ltd.'s instruction whether or not the same shall be carried out. If the Ashuganj Power Station Company Ltd.

confirms his instructions in writing, the said obligations shall be modified to such an extent as may be justified. Until the Ashuganj Power Station Company Ltd. so confirms their instructions these shall be deemed not to have been given.

## **72.0 FINAL ACCEPTANCE CERTIFICATE (FAC)**

The work shall not be considered as completed until a Final Acceptance Certificate (FAC) shall have been jointly signed by the Engineer and the Ashuganj Power Station Company Ltd. and delivered to the Contractor stating that all work has been finally completed to their satisfaction. The Final Acceptance Certificate (FAC) will be given by the Ashuganj Power Station Company Ltd. latest twenty eight (28) days after the expiration of the warranty period or if different warranty periods shall become applicable to different parts of the work, after the expiration of the latest of such periods and as soon as any and all work to be made good is completed to the satisfaction of the Engineer and the Ashuganj Power Station Company Ltd.

## Chapter III

### Special Conditions

## **1.0 CONTRACTOR'S DRAWINGS**

### **1.1 SHOP DRAWINGS**

Engineering data (both soft and hard copy) covering the manufacture of all equipment and fabricated materials specified hereunder shall be submitted to the Ashuganj Power Station Company Ltd./Engineer for approval. These data shall include drawings and descriptive material in sufficient detail to show the type, size, arrangement, operation of component, materials, devices, the external connections, anchorage's, supports required and any dimensions necessary for installation and co-ordination with related equipment. No work shall be performed until the drawings and data have been approved.

### **1.2 WORKING DRAWINGS**

The Contract drawings (both soft and hard copy) shall show the arrangement, layout, existing equipment, method of control and the design of the, completion of power plant addition as specified herein.

- 1) The title of the drawing, the signature of the Contractor's responsible engineer, the date prepared shall appear in the bottom right hand corner of the drawing. The size of drawings shall be as follows:

AO 841 mm x 1,188 mm

AI 594 mm x 840 mm

A2 420 mm x 594 mm

A3 297 mm x 420 mm

A4 210 mm x 297 mm

- 2) The Contractor shall submit for approval checked arrangement and detailed drawings of all parts, schematic and wiring diagrams and description of equipment to demonstrate that the equipment to be furnished will conform to the requirements and intent of the Specifications.

The arrangement drawings shall show overall dimensions, clearance heights for the equipment, weight, description and location of all accessories.

Schematic diagrams shall indicate the operation and function of all electrical equipment, accompanied, where necessary, with explanatory notes.

- 3) The Contractor shall submit installation drawings for approval including embedded Piping, piping details, support for pipings, conduits and fittings, cable laying, cable rack fixing and other detailed drawings for installation work.
- 4) The following types of drawings shall be submitted for approval immediately on completion of design:
  - a. The drawings showing the arrangement of necessary devices specified in the Technical Requirements
  - b. Sequence and internal connection diagram

- c. Drawings of installation equipment and measuring instruments to be supplied by the Contractor
- 5) The Contractor shall, in addition to the documents specified in the Contract, furnish without delay the documents, drawing and other information, which though not specified in the Contract, may be required by the Ashuganj Power Station Company Ltd. or the Engineer from time to time during the period of execution of the Contract.
- 6) Unless otherwise specially provided, any and all expense required to submit the documents, drawing and other information in compliance with the Contract shall be borne by the Contractor.
- 7) Prior to fabrication of the equipment, the Contractor shall submit approval drawings to the Engineer for approval. Should the Engineer direct modifications to be made in order to satisfy the requirements of the Specifications, the Contractor shall submit modified approval drawings. Alterations in the Contract Price shall not be made by reason of the modifications in the approval drawings. In the event the Contractor proceeds with fabrication without approval of drawings, he shall make the necessary changes at his own expense. Approval of drawings shall in no way relieve the Contractor of his obligation to satisfy the requirements of the Specifications or the responsibility of making corrections in his drawings.
- All approved drawings shall have a column provided for inscription of modifications in the contents. Drawings shall clearly indicate modified parts by arrows or other means.
- 8) After approval, the drawings shall be kept up to date reflecting any changes made, and upon completion. "As built" drawings (both soft and hard copy) shall be delivered to the Ashuganj Power Station Company Ltd. The Ashuganj Power Station Company Ltd.'s approval shall be obtained for all Contractor's drawings including any changes made.

### **1.3 FOUNDATION DESIGN**

The Contractor shall be responsible for the proper design of the equipment foundations to withstand the dynamic load and static load of load of engine and generators etc. Location and arrangement of steel reinforcement, concrete keyways and detailed drawings showing additional concrete required shall be prepared by the Contractor.

## **2.0 PHOTOGRAPHS**

**Deleted**

## **3.0 CO-OPERATION WITH APSCL.**

The continuity of commercial power service by the Ashuganj Power Station Company Ltd. is of prime importance. Complete co-operation between the Contractor and the operating departments of the Ashuganj Power Station Company Ltd. must be maintained. All works which may affect the operation of the existing system shall be scheduled to suit the Ashuganj Power Station Company Ltd.'s convenience, taking into consideration the power system facilities and requirements at all time during construction.

In the event that it is necessary to either interrupt the power supply limit the amount of power available or to impose abnormal operating conditions on the power system, such procedure must be approved by the Ashuganj Power Station Company Ltd. and a complete understanding and agreement must be reached by all parties concerned well in advance. The time scheduled for such understanding shall be definite as to date, time of day and length of time required.

The Contractor shall not be entitled to any additional payment for any costs arising from the necessity to perform the Work which, by its effect on the Ashuganj Power Station Company Ltd.'s existing operating systems, requires that it be performed at times other than regular working hours.

#### **4.0 CONSTRUCTION PLANT AND TEMPORARY FACILITIES**

Unless otherwise specified, the Contractor shall furnish at his own expense all construction equipment, temporary structures and enclosure, utilities and other temporary facilities and all tools, materials and supplies which are required for prosecution of the Work but which will not be incorporated in the permanent Work.

All such temporary structures and facilities furnished by the Contractor shall remain the property of the Contractor and shall be maintained throughout the Construction Work.

When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition.

All equipment and facilities shall be safe and in first class condition and shall be of the proper type and size to adequately perform the Work. Such equipment and facilities shall be regularly and systematically maintained throughout the Work to ensure proper and efficient operation. Equipment and facilities which are inadequate or improperly maintained shall promptly be modified, repaired, or removed from the Site and replaced.

##### **4.1 TEMPORARY STRUCTURES**

Temporary structures if required, for Offices, quarters, storage and other use for the Contractor or his Subcontractors shall be constructed by the Contractor only in locations assigned by the Project Director. The construction of such structures shall be subject to the Ashuganj Power Station Company Ltd.'s approval.

The Contractor shall erect temporary walls, fences to isolate the construction area to keep dust and dirt from the remainder of the Plant and prevent unauthorized access to operating sections and to keep plant personnel and visitors away from the construction area if any.

Temporary structures shall be property of Ashuganj Power Station Company Ltd. after completion of project, if not removed by the Contractor in due time.

##### **4.2 CONSTRUCTION ELECTRIC POWER**

Contractor shall bear all cost of Electricity consumption for construction use at Site according to prevailing tariff rate including government duty.

The energy will be available at a single supply point on the Site and it will be 230/400 V, 50 Hz(including domestic power required by personnel at the Site) or 11 KV. All equipment/ arrangements shall be of the Contractor at his cost.



The Contractor shall connect to the supply terminals or load bus designated and shall provide all wiring, transforming and protecting devices, switches, starters, and other electrical systems and equipment required to adopt and distribute power for his use.

#### **4.3 TEMPORARY LIGHTING**

The Contractor shall provide his own temporary lighting facilities at the Site.

#### **4.4 WATER**

The Contractor shall provide his own arrangement of construction water and process water.

The Contractor shall provide purified water for drinking and sanitary use of his personnel. The Contractor shall be solely responsible for the quality of the water he furnishes. Likewise the Contractor shall be responsible for furnishing a sanitary system for dispensing drinking water.

#### **4.5 SANITARY FACILITIES**

The Contractor shall furnish and maintain sanitary facilities for the use of all personnel engaged in the Work under this Contract. These facilities shall be subject to the approval of the Ashuganj Power Station Company Ltd..

The Contractor's workmen shall not be permitted to use sanitary facilities in the existing plant.

### **5.0 SCHEDULE OF IMPORTED TOOLS, TESTING EQUIPMENT AND PERSONNEL**

If requested by the Ashuganj Power Station Company Ltd. the Contractor shall submit a complete itemized schedule of the construction and maintenance tools, and testing equipment that he intends to send to the construction Site in Bangladesh. The schedule shall include quantities, capacities, type and model designations, and other descriptive information for the Ashuganj Power Station Company Ltd. to evaluate the capability of the Contractor's field construction forces.

In addition, the Contractor shall submit to the Ashuganj Power Station Company Ltd. a schedule of all personnel which he intends to import into Bangladesh for the Work covered by this Contract. This Schedule shall include any non-Bangladesh personnel presently employed in Bangladesh who will be assigned to the Work. The schedule shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned.

### **6.0 CUSTOMS CLEARANCE**

The Contractor shall be responsible for Bangladesh customs clearance of all materials, supplies, equipment, tools and other articles shipped into Bangladesh by the Contractor for the accomplishment of this Work, including the food and the personal effect of the Contractor's personnel. This customs clearance will take place at the Bangladesh port (Chittagong/Mongla) or at the International Airport at Dhaka. The Ashuganj Power Station Company Ltd. will, however, pay import and export duties (custom duties, sale tax, etc.), excise duty, import permit fees and all other taxes leviable in Bangladesh on only the equipment and materials that will be incorporated in the Permanent Works (as distinct from the Contractor's equipment, tools, spares, consumables, etc.). The Ashuganj

Power Station Company Ltd. will help the Contractor to obtain necessary import permits and licenses required for customs clearance.

All payment for clearance charge, storage charge, etc. (excluding charge, fees, etc. claimed by Clearing Agents, if any) which are imposed by the relevant agencies of the Government of Bangladesh, relating to the clearance of equipment and materials that will be incorporated in the Permanent Works shall be made by the Ashuganj Power Station Company Ltd. subject to the Condition that if the Contractor makes delay in submitting necessary shipping documents to the Ashuganj Power Station Company Ltd., the demurrage charges by the Port Authority will be borne by the Contractor ( chapter II, clause 55.0 )

Tools and equipment for use during construction but which are to remain the property of the Contractor and which are to be exported by the Contractor from Bangladesh at the completion of the Work shall be carefully documented and specially listed to facilitate both import and export. The Contractor shall determine prior to shipment the customs regulations applicable to this special case as well as normal import rules and regulations applicable.

The Contractor shall also be responsible for inland transport by barge/ truck/train to the Site.

## **7.0 RECEIVING, TRANSPORTING, HANDLING AND STORAGE**

The Contractor shall receive, transport, handle, store and install all materials and equipment furnished under these specifications, or otherwise involved in the performance of this Contract. It shall be the responsibility of the Contractor to determine the availability and capacity of transportation and unloading facilities and to make whatever arrangements are required to secure to the necessary facilities.

The Ashuganj Power Station Company Ltd. will not be responsible for furnishing any equipment or providing any services.

The Contractor shall be responsible for the prompt unloading of all equipment or materials. The Contractor shall pay any demurrage incurred due to delay in unloading and for any other reasons except the case that the Ashuganj Power Station Company Ltd. has not arranged timely discharge of the payment of custom duties.

Storage space at plant site shall be arranged by the EPC at their own responsibility. The storage space shall be utilised in accordance with the drawing as approved by the Ashuganj Power Station Company Ltd.. This drawing shall be kept current and shall show the location and description of each stored item for which Contractor is responsible. Revised copies of these drawings shall be submitted to the Project Director as they are made. The Contractor shall examine the Site and the means of transportation from the storage space.

The Contractor shall handle materials and equipment carefully to prevent damage or loss. The use of bare rope slings for handling will not be permitted unless specifically approved by the Engineer. Special handling devices shall be used when necessary to avoid damage.

**There is no direct road communication from APSCL to project site for caring any materials, plant equipment and construction materials. Only river communication is available for carry of all type plant equipment and construction materials. A suitable Jetty for loading/unloading of machine, equipment, construction materials etc. shall have to be built by contractor own responsibility. Necessary permission from BIWTA for temporary jetty construction is contractor responsibility.**

## **7.1 PLATFORMS**

Open platforms shall be constructed by the Contractor at least 50 cm above grade and shall have adequate flooring and base structure to support the stored materials and equipment.

## **7.2 INDOOR STORAGE**

Indoor storage shall be constructed by the Contractor by suitable means for keeping materials and equipment from contact with the ground.

## **7.3 SHORING**

Shoring shall be provided by the Contractor to safely support materials and equipment not less than 30 cm above the ground.

## **7.4 WEATHER PROOF COVERINGS**

Weatherproof coverings for outdoor storage shall be provided by the Contractor and shall utilise a waterproof flame resistant type of sheeting. The sheeting shall be carefully placed and tied down to prevent moisture from entering the laps and to prevent wind damage to the coverings.

## **8.0 EQUIPMENT PERFORMANCE**

The Contractor shall be responsible for the correct design and operation of each individual item of equipment in his supply. In addition, he shall be responsible for the correct performance and operation of his equipment when functioning with equipment supplied by other contractors. The Contractor shall carry out such design work and tests on systems within his supply as may be necessary for establishing and demonstrating their combined performance and good working to the satisfaction of the Engineer.

## **9.0 IDENTIFICATION OF CONTRACTOR'S EMPLOYEES ,VEHICLES AND BUILDINGS**

The Contractor shall provide each of 'his employees and his Subcontractor's employees with a suitable numbered badge bearing the name or initials of the Contractor. Each employee shall wear his badge upon his person while at work on the Site in such a manner that it will be plainly visible as a means of identification.

All vehicles and large equipment furnished and used by the Contractor or his Subcontractors on the Work shall be clearly marked with the Contractor's or Subcontractor's business name. The Contractor's offices, stores, depots and other facilities shall also be clearly identified.

## **10.0 EXPATRIATE PERSONNEL**

The Contractor shall submit to the Ashuganj Power Station Company Ltd. through the Engineer data on all personnel he intends to bring into Bangladesh for the performance of the Work. This data shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned. This data shall be submitted to the Engineer at least thirty (30) days prior to their expected arrival in Bangladesh.

Any expense associated with illness of the Contractor's personnel, including replacement thereof, shall be to the Contractor's account.

Costs of passports, visas, travel documents, inoculations and other incidental expenses incurred by the Contractor's non-Bangladesh employees and their dependents occasioned by travel to and from Bangladesh shall be borne by the Contractor.

The Ashuganj Power Station Company Ltd. will not furnish living quarters for the Contractor's personnel and families.

The Contractor and the expatriate personnel of the Contractor shall respect all Bangladesh laws, rules and regulations and shall not interfere with Bangladesh political or religious affairs either directly or indirectly and shall comply with such other rules and regulations.

## **11.0 SAFETY**

The Contractor shall comply with all ordinances and regulations including, but not limited to, National, State, Municipal laws and Department of Labour, Transmigration and Co-operation Regulations that are in force in the locality of the Works and shall comply with any instructions that may be from time to time issued by the Ashuganj Power Station Company Ltd./Engineer.

## **12.0 PROTECTION OF OPERATING PLANT**

The Contractor's attention is drawn to the fact that during the course of the construction period, existing APSCL 230 kV Grid Sub-Station and related transmission/auxiliary system are under operation.

The Contractor shall not interrupt or interfere with these services.

The Contractor shall ensure that none of his personnel enter any section of the Ashuganj Power Station Company Ltd.'s plant, which is in operation, without permission of the Ashuganj Power Station Company Ltd..

No work shall be carried out on existing equipment by the Contractor unless a permit has been issued to the Contractor by the Ashuganj Power Station Company Ltd./ Engineer.

The Contractor shall obtain from the Ashuganj Power Station Company Ltd. an authorised person's signature before the Work is commenced and shall return the permit to the Ashuganj Power Station Company Ltd. on completion of the Work. The Contractor shall state on the permit that the Work has been completed and obtain an authorised person's signature for acceptance.

In respect of work related to existing plant or substations or transmission/auxiliary system which are required to be carried out during a shutdown period, the Contractor shall inform at least three(3) months before. All such works shall be completed within the decided period.

Any shutdown periods of operational plant will be scheduled by the Ashuganj Power Station Company Ltd./Engineer in such a manner as to cause minimum interference with the operations and may be scheduled outside normal hours.

## **13.0 COORDINATION OF WORK**

The Contractor shall be required to attend design discussion meetings at the Ashuganj Power Station Company Ltd.'s office in Dhaka or Project Director's office in Ashuganj to attend progress, liaison and co-ordination meetings at intervals as required by the Ashuganj Power Station Company Ltd. and/or the Engineer for design progress and other contractors at the Site. Such co-ordination meetings at the Site shall be held at least once in every month.

#### **14.0 LANGUAGE**

The ruling language of the Contract shall be English and all correspondence, technical schedules, drawings and other documents of whatever nature required by the Engineer or the Ashuganj Power Station Company Ltd. under the provisions of the Contract shall be provided in the English language.

#### **15.0 QUALITY ASSURANCE**

The Contractor shall operate and demonstrate a Quality Assurance Programme to ensure that the Contract is completed in accordance with the Contract Schedule and to the standards specified. Work procedures shall be fully documented and shall be available to satisfy the Ashuganj Power Station Company Ltd./ the Engineer of the Contract execution in civil, architectural, mechanical and electrical engineering:

- a) Design
- b) Procurement, manufacture and packaging
- c) Construction, commissioning and final testing

The Contractor shall within thirty (30) days after signing the Contract present to the Ashuganj Power Station Company Ltd. for approval two (2) copies of comprehensive procedures as to the organization and type of documentation adopted to exercise a meaningful quality assurance programme. These shall include:

- d) The submission of inspection and test plans for factory manufactured plant.
- e) The submission of a plan for obtaining the Engineers approval of important stages of the Site construction work, e.g. material receipt and storage, construction, erection, testing and setting to the Work.

#### **16.0 CONTRACT PLANNING AND CONTROL**

The Contractor shall have an experienced and qualified Contract Manager available and assigned full time during the execution of the Contract. The Contract Manager shall act for and represent the Contractor in all Contract matters.

Thirty (30) days before starting the Work at the Site, the Contractor shall submit the detail site management organization for approval by the Ashuganj Power Station Company Ltd./Engineer. Such proposals shall show clearly the Contractor's key personnel, classification and qualification with the detailed information and curriculum vitae for above key personnel.

The Site Manager and senior key personnel who will be responsible for working closely with the Project Director's/Engineer's staff to achieve efficient execution of the Contract shall be competent to conduct meetings and communications in the English language.

The management organization shall include a planning and programming service covering the Work, and shall operate the latest techniques in communication and analysis. The Contractor shall nominate a planning engineer to co-ordinate all planning activities. The Contractor shall accept active participation by the Engineer in the programming and progressing of all phases of the Contract and shall provide full facilities and access to all sources of detailed programming and progressing information, including Subcontractors, for monitoring purposes.

## **17.0 RELEASE OF INFORMATION**

The Contractor shall not communicate or use in advertising, publicity, or sales release, photographs or other reproductions of the Work under this Contract, or descriptions of the size, dimensions, quantity, quality, or other information concerning the Work unless prior written permission has been obtained from the Ashuganj Power Station Company Ltd./Engineer.

## **18.0 SAFETY AND ACCIDENT PREVENTION**

It shall be the Contractor's responsibility to maintain throughout the construction period, a safety and accident prevention program satisfactory to the Ashuganj Power Station Company Ltd. and which meets the requirements of applicable governmental codes and of all other authority having jurisdiction over this Work.

## **19.0 FIRE PROTECTION**

Only construction procedures which minimise fire hazard to the extent practicable shall be used. Combustible debris and waste materials shall be collected and burned or removed from the Site each day, good housekeeping shall be practiced by the Contractor throughout the construction period. Unless specified herein or a particular application, untreated canvas, paper, plastic and other flammable flexible materials shall not be used on the Site for any purpose. If such materials are on equipment or materials which arrive at the Site they shall be removed and replaced with an approved covering before storing or moving into the construction area.

Likewise corrugated paper and fiberboard cartons shall not be permitted in the construction area for the storage or handling of materials and if such cartons do arrive in the construction area they shall be immediately unpacked and removed from the Site.

Approved flexible materials shall be waterproof and flame resistant.

The Contractor shall provide adequate fire protection equipment in each warehouse office and other temporary structure and in each work area which he is occupying. Access to fire hydrants and other sources of fire water shall be identified and kept open at all times. Suitable fire extinguishers shall be provided in enclosed area and in areas which are not accessible to fire water or which may be exposed to fire that cannot be safely extinguished with water. Each fire extinguisher shall be of a type suitable for extinguishing fires which might occur in the area in which it is located. In areas where more than one type of fire might occur the type of fire extinguisher required in each case shall be provided. Each extinguisher shall be placed in a convenient, clearly identified location which will most likely be accessible in the event of fire. Formwork, scaffolding, planking and similar materials which are combustible but which are essential to execution of the Work shall be treated for fire resistance or otherwise protected against combustion resulting from welding sparks cutting flames and similar fire sources.

The above recommendations shall not be construed to establish minimum fire protection requirements. The Contractor alone shall be responsible for providing adequate fire protection.

## **20.0 LINES AND GRADES**

All work done under this Contract shall be done to the lines, grades, and elevations shown on the plans. The Contractor shall furnish competent men and suitable equipment as required for the proper laying out of the Work, for making measurements and for establishing temporary or permanent marks in connection with the Work.

The Engineer may, at his sole discretion, check the reference marks, lines, grades and measurements so established. The Contractor shall furnish competent men from his force and such tools, stakes and other materials as the Engineer may require in making the check. The Contractor shall keep the Engineer informed a reasonable time in advance, of the times and places at which he wishes to do work so that any checking deemed necessary may be made with the minimum of inconvenience to the Engineer and of delay to the Contractor.

Any work done without being properly located and established by base lines, offset stakes bench marks or other basic reference points may be ordered removed and replaced at the Contractor's cost and expense. The Contractor shall carefully preserve all monuments, bench marks and reference points.

In case of his destruction thereof, the Contractor will be charged with the expenses of replacement and shall be responsible for any mistake or loss of time that may be caused. Permanent monuments or bench marks which must be removed or disturbed shall be protected until they can be properly referenced for relocation. The Contractor shall furnish materials and assistance for the proper replacement of such monuments or bench marks.

## **21.0 SECURITY**

The Contractor shall be solely responsible for the security of all equipment and materials incorporated or to be incorporated in the Work by him and all equipment, materials, tools, supplies, structures, facilities and others properly used in the prosecution of the Work but not incorporated therein while in his care and custody.

The Contractor shall conform also to any specific security requirements of the Ashuganj Power Station Company Ltd. but such compliance shall not relieve the Contractor from the total responsibility for security.

## **22.0 HOUSING & TRANSPORT**

The Contractor shall arrange by themselves suitable family housing units together with furnishing and utilities in the close proximity of the Site for accommodation of all imported personnel. If the services of any imported personnel of the Contractor or its Subcontractors are required for a period of more than six (6) months the Contractor may authorise the employees' wife and children accompany him or to subsequently join him. In any such case the Contractor shall make available suitable family accommodations at the proximity of the Site.

If the Contractor decides in consultation with Ashuganj Power Station Company Ltd. that the health or safety of any imported personnel is or might be Jeopardised by political or health hazards in Bangladesh, the Contractor may, after forty eight (48) hours notice,

order its employees and the employees of its Subcontractors and suppliers to return to their headquarters or other safe location, in which case the Work will be deemed to be suspended for the duration as may be jointly decided, Provisions of Clause 34.0 of GC "SUSPENSION OF THE WORK" of Chapter II will apply in case of suspension of work.

The Contractor shall provide to the extent agreed transport vehicles for use during construction period by the expatriate as well as local personnel.

### **23.0 PROTECTION OF WORK**

The Contractor shall be solely responsible for the protection of his Work until its Final Acceptance by the Ashuganj Power Station Company Ltd.. The date of commercial production, or the date of issuance of the Completion Certificate whichever is earlier shall, except as portions may earlier be placed in service, be deemed the date of Final Acceptance.

The Contractor shall have no claim against the Ashuganj Power Station Company Ltd. because of any damage or loss to the Contractor's Work, except damage or loss resulting directly from the actions of the Ashuganj Power Station Company Ltd. or the employees thereof, and shall be responsible for the complete restoration of damaged work to its original conditions complying with the specifications and drawings.

### **24.0 PROPRIETARY NAMES**

Whenever a material or article is specified or described on the plants by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function and quantity desired. Unless otherwise specified, other manufacturers products which in the opinion of the Ashuganj Power Station Company Ltd., are equivalent of those specified will be accepted. Such items shall be submitted for approval by the procedure set forth in the General Conditions.

### **25.0 STARTUP AND INITIAL OPERATION**

The Contractor shall render all services and do all Work required to place each item of equipment installed by him, including all auxiliaries, piping, and wiring, and the plant in operating condition to the satisfaction of the Engineer and the Ashuganj Power Station Company Ltd.. Individual systems and items of equipment shall be completed in a sequence that will permit systematic start-up and trial operation of each such component before it is incorporated in the plant start-up and initial operation.

After erection, all equipment having moving parts, or subjected to pressures or voltages, shall be given trial operation. Rotating equipment shall be checked for proper direction of rotation, shaft alignment and balance. Equipment subject to pressures shall be carefully examined for leakage. A representative of the Ashuganj Power Station Company Ltd. shall be present at start-up of all the equipment and all procedures shall have his approval, in addition to that of the Engineer.

The Ashuganj Power Station Company Ltd. will furnish operating personnel during start-up and initial operation provided that they are adequately trained by the contractor. The Contractor shall provide all other workmen required, in the opinion of the Engineer, to make adjustments and correct deficiencies during the initial equipment and plant start-up testing and initial operation will be in progress continuously over extended periods of time. The workmen required of the Contractor shall be on the Site at all times during



these periods. All costs for the Contractor's personnel in connection with the start-up and initial operation of equipment and plant are included as a part of the lump sum price under the Contract.

The Contractor shall provide all temporary instrumentation and gauging devices, including connections, required during start-up and trial operation of equipment and systems which he has installed.

All rotating machinery shafts shall be in as nearly perfect alignment as practicable. Rotating machinery shall be free from excessive vibration, overheating bearings, and other conditions, which would tend to shorten the life of the machinery. Bearings, shafts, and other moving parts shall be checked for proper alignment, cleaned and lubricated before the equipment is initially started. Full compliance with each equipment manufacturer's specifications and instructions shall be observed.

## **26.0 ACCEPTANCE TESTING**

The issuance of the Completion Certificate [PAC] as specified in Chapter II "GENERAL CONDITIONS", Clause 67 "PAC", shall be contingent upon the successful and favourable completion of all inspections and testing required to verify the performance, installation, and acceptability of the Work. The Contractor's Representative and key technical, supervisory and skilled personnel, with necessary tools and equipment, shall remain at the Site until the Completions Certificate is issued, and shall make all adjustments and modifications required to comply with the performance and acceptance requirements. Acceptance Tests shall be conducted at the Site by the Contractor to prove the performance of each plant according to the guarantees as specified in the Tender Form under the attendance of the Ashuganj Power Station Company Ltd./Engineer.

The Contractor shall furnish the characteristics data of the plants according to the performance given in the Tender Form, to be supplemented by the Contractor as necessary.

Before commencement of Acceptance Tests, the Contractor shall ensure that each generating unit shall have operated successfully without any interruption for seven (7) days (168 hrs.)

## **27.0 DISPOSAL OF REPLACED EQUIPMENT AND MATERIAL**

Equipment and materials replaced by the Contractor will be inspected by the Engineer or the Ashuganj Power Station Company Ltd. If found in usable, or repairable condition, the Contractor shall place them in storage at the point designated. All other equipment and material will be classed as debris, and disposed off.

## **28.0 OPEATING AND MAINTENANCE INSTRUCTIONS**

Twelve (12) printed copies and 3 digitized copies of complete operating and maintenance instructions in English, (including inventories of spare parts and tools and parts lists with ordering instructions), bound in book form, shall be furnished by the Contractor for each piece of equipment. Operating instructions explaining preventive maintenance procedures, methods of checking the system for normal safe operation, and procedure for safely starting and stopping the system shall be prepared in typed form, complete with wiring, flow, and control diagram. These manuals/instructions have to be provided prior to the issuance of PAC.

Soon after startup of the plant, qualified personnel shall be provided by the Contractor to instruct selected representatives of the Ashuganj Power Station Company Ltd. in the operation and maintenance of the equipment. At least three (3) weeks notice to carry out such instructions shall be given to the Engineer and the Ashuganj Power Station Company Ltd. by the Contractor, together with an agenda and procedure, for approval of the Engineer.

## 29.0 GUARANTEE ON PERFORMANCE

The Contractor must guarantee the performance of each plant and equipment as specified in GUARANTEE SCHEDULE-A, Vol. 2 of 2 (Part-B).

### 29.1 Net output

If the plant fails to achieve such net power output at site conditions as guaranteed by the Contractor in GUARANTEE SCHEDULE-A, he shall pay to the Ashuganj Power Station Company Ltd. a liquidated damage in US Dollar:

An amount at the rate of one (1) percent of the Contract Price for each one (1) percent or a part thereof decrease in net output.

### 29.2 Heat rate

If the net heat rate for the plant exceeds the guaranteed value [GUARANTEE SCHEDULE-A, Volume 2 of 2, Part-B] by the Contractor by more than One (1) percent, he shall pay to the APSCL a liquidated damage an amount at the rate of Three (3) percent of the Contract Price for each one (1) percent or a part thereof increase in the heat rate on the guaranteed value. The increase in heat rate is to be calculated by the following formula: -

Hg	:	Guaranteed heat rate
Hg(100)	:	Guaranteed heat rate at 100% base rating
Hg(75)	:	Guaranteed heat rate at 75% base rating
Hg(50)	:	Guaranteed heat rate at 50% base rating
Hg(W)	:	Calculated weighted average guaranteed heat rate,
Hg(W)	=	$Hg_{100\%} \times 0.3 + Hg_{75\%} \times 0.4 + Hg_{50\%} \times 0.3$
Ha(100)	:	Actual measured heat rate at 100% base load
Ha(75)	:	Actual measured heat rate at 75% base load
Ha(50)	:	Actual measured heat rate at 50% base load
Ha(W)	:	Calculated weighted average actual heat rate,
Ha(W)	=	$Ha_{100\%} \times 0.3 + Ha_{75\%} \times 0.4 + Ha_{50\%} \times 0.3$

The increased heat rate is calculated as follows:

$$h (\%) = \frac{Ha (W) - Hg(W)}{Hg (W)} \times 100$$

### 29.3 Transformer loss

If the losses in respect to each step-up transformer calculated by the result of the shop tests exceed the guaranteed value with the tolerance, the Contractor shall pay to the Ashuganj Power Station Company Ltd. a liquidated damage an amount calculated by the following formula in Bangladesh Taka.

$$X = a(Na - 1.01 \times Ng) + b(La - 1.01 \times Lg)$$

Where: x : Liquidated damage in Bangladesh Taka

a : TK. 57,000 /kW

Na : No load loss to be tested at shop

Ng : No load loss to be guaranteed

b : TK. 25,650 /kW

La : Load loss to be tested at shop

Lg : Load loss to be guaranteed

In the application of the calculation formula above, if the results become a minus (-) the Ashuganj Power Station Company Ltd. shall not be liable to pay the Contractor such value.

### 29.4 Total Auxiliary consumption

If the total auxiliary consumption found more than the guaranteed by the contractor in Guarantee Schedule-A, he shall pay to the APSCL liquidated damages.

An amount at the rate of 1% of the contract price for one (1) percent or a part thereof increase in Total auxiliary consumption. The increase in auxiliary consumption is to be calculated by the formula:

$$Ac (\%) = ACa/ACg$$

Where, ACa = (Pg-Pn)

ACg : Guaranteed Total auxiliary consumption

Pn : Net power output ( measured at the high voltage side of the step up transformer)

Pg : Summation of total power output measured at generator terminal

ACg : Actual Total auxiliary Consumption

AC (%) : Increase in auxiliary consumption

In the application of the calculation formula above, if the results become a minus (-) the APSCL shall not be liable to pay the contractor such value.

### 29.5 Completion Time:

270 days from the EDOC to Commercial Operation Date (COD)

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