

STANDARD BIDDING DOCUMENT

Procurement of Plant Design, Supply, and Installation

Single-Stage: Two-Envelope Bidding Procedure

for projects governed by
Procurement Regulations for ADB Borrowers: Goods, Works,
Non-Consulting and Consulting Services (2017)

Asian Development Bank

June 2018

Procurement of Plant Design, Supply, and Installation

**Single-Stage: Two-Envelope
Bidding Procedure**

BIDDING DOCUMENT

For

**Design, Supply, Installation, Integration, Operation
and Maintenance of Prepaid Smart Metering
System of 150,000 smart meters in Tripura, India**

Issued on: 17 October 2022

Invitation for Bids No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

OCB No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

Employer: Tripura State Electricity Corporation Ltd., Agartala, Tripura

Country: India

Preface

This Bidding Document for Procurement of Plant – Design, Supply, and Installation, has been prepared by Tripura State Electricity Corporation Ltd, Agartala and is based on the Standard Bidding Document for Procurement of Plant – Design, Supply, and Installation (SBD Plant) issued by the Asian Development Bank dated June 2018.

ADB's SBD Plant has the structure and the provisions of the Master Procurement Document entitled "Procurement of Plant – Design, Supply, and Installation", prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

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PART I

BIDDING PROCEDURES

Section 1: Instructions to Bidders (ITB)

A. General

1. Scope of Bid

- 1.1. In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of plant and services as specified in Section 6 (Employer's Requirements). The name, identification, and number of lot/s (contract/s) of the open competitive bidding (OCB) are provided in the BDS.
- 1.2. Throughout this Bidding Document,
- a) the term "in writing" means communicated in written form and delivered against receipt;
 - b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
 - c) "day" means calendar day.

2. Source of Funds

- 2.1. The Borrower or Recipient (hereinafter called "Borrower") indicated in the BDS has applied for or received financing (hereinafter called "funds") from the Asian Development Bank (hereinafter called "ADB") toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
- 2.2. Payments by ADB will be made only at the request of the Borrower and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Borrower and ADB (hereinafter called "Financing Agreement"), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Borrower shall derive any rights from the Financing Agreement or have any claim to the funds.

3. Fraud and Corruption

- 3.1. ADB's Anticorruption Policy (1998, as amended to date) requires Borrowers (including beneficiaries of ADB-financed activity), as well as Bidders, Suppliers, and Contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, ADB
- a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

- (iii) “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - (iv) “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
 - (v) “abuse” means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
 - (vi) “conflict of interest” means any situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations;
 - (vii) “obstructive practice” means (a) deliberately destroying, falsifying, altering, or concealing of evidence material to an ADB investigation, or deliberately making false statements to investigators, with the intent to impede an ADB investigation; (b) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to a Bank investigation or from pursuing the investigation; or (c) deliberate acts intended to impede the exercise of ADB’s contractual rights of audit or inspection or access to information; and
 - (viii) “integrity violation” is any act, as defined under ADB’s Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB’s Anticorruption Policy, including (i) to (vii) above and the following: violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB’s Anticorruption Policy, including failure to adhere to the highest ethical standard.
- b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
 - c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation;
 - d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB’s Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

-supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or other integrity violations; and

e) will have the right to require that a provision be included in the Bidding Documents and in contracts financed by ADB, requiring Bidders, suppliers and contractors to permit ADB or its representative to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.

3.2. All Bidders, consultants, contractors, suppliers, and other third parties engaged or involved in ADB-related activities have a duty to cooperate fully in any screening or investigation when requested by ADB to do so. Such cooperation includes, but is not limited to, the following:

- a) being available to be interviewed and replying fully and truthfully to all questions asked;
- b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
- c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;
- d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);
- e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
- f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB.

3.3. All Bidders, consultants, contractors and suppliers shall ensure that, in its contract with its sub-consultants, subcontractors, and other third parties engaged or involved in ADB-related activities, such sub-consultants, subcontractors, and other third parties similarly undertake the foregoing duty to cooperate fully in any screening or investigation when requested by ADB to do so.

3.4. The Employer hereby puts the Bidder on notice that the Bidder or any Joint Venture partner of the Bidder (if any) may not be able to receive any payments under the Contract if the Bidder or any of its Joint Venture partners, as appropriate, is, or is owned (in whole or in part) by a person or entity subject to applicable sanctions.

3.5. Furthermore, Bidders shall be aware of the provision stated in GCC 9.6 and GCC 42.2.1 (c).

4. Eligible Bidders

- 4.1. A Bidder may be a natural person, private entity, or government-owned enterprise subject to ITB 4.5 - or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture,
- a) all partners shall be jointly and severally liable, and
 - b) the Joint Venture shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.
- 4.2. A Bidder, and all partners constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 4.3. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:
- a) they have controlling shareholders in common; or
 - b) they receive or have received any direct or indirect subsidy from any of them; or
 - c) they have the same legal representative for purposes of this bid; or
 - d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
 - e) a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a Joint Venture, except for alternative offers permitted under ITB 13. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a) - (d) above, this does not limit the participation of a Bidder as a subcontractor in another Bid or of a firm as a subcontractor in more than one Bid; or
 - f) a Bidder, Joint Venture partner, associates, parent company or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the plant and services that are the subject of the Bid; or
 - g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Borrower as Project Manager for the Contract; or

- h) a Bidder would be providing goods, works, or nonconsulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm.
- 4.4. A firm shall not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under temporary suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporary suspended or debarred firm will be rejected.
- 4.5. Government-owned enterprises in the Borrower's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not dependent agencies of the Employer.
- 4.6. A Bidder shall not be under suspension from bidding by the Employer as the result of the execution of a Bid–Securing Declaration.
- 4.7. Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.8. Firms shall be excluded if by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country or any payments to persons or entities in that country.
- 4.9. In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders.

5. Eligible Plant and Services

- 5.1. The plant and services to be supplied under the Contract shall have their origin in eligible source countries as defined in ITB 4.2 and all expenditures under the Contract will be limited to such plant and services.
- 5.2. For purposes of ITB 5.1 above, "origin" means the place where the plant, or component parts thereof are mined, grown, produced, or manufactured, and from which the services are provided. Plant components are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that is substantially in its basic characteristics or in purpose or utility from its components.

B. Contents of Bidding Document

6. Sections of Bidding Document

- 6.1. The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.

PART I Bidding Procedures

Section 1 - Instructions to Bidders (ITB)

Section 2 - Bid Data Sheet (BDS)

Section 3 - Evaluation and Qualification Criteria (EQC)

Section 4 - Bidding Forms (BDF)

Section 5 - Eligible Countries (ELC)

PART II Requirements

Section 6 - Employer's Requirements (ERQ)

PART III Conditions of Contract and Contract Forms

Section 7 - General Conditions of Contract (GCC)

Section 8 - Special Conditions of Contract (SCC)

Section 9 - Contract Forms (COF)

- 6.2. The IFB issued by the Employer is not part of the Bidding Document.
- 6.3. The Employer is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the source stated by the Employer in the IFB.
- 6.4. The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the Bid.

7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

- 7.1. A prospective Bidder requiring any clarification on the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS, or raise inquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond to any request for clarification, provided that such request is received no later than 21 days prior to the deadline for submission of bids. The Employer's response shall be in writing with copies to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 24.2.
- 7.2. The Bidder is advised to visit and examine the site where the plant is to be installed and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for the provision of plant and services. The costs of visiting the site shall be at the Bidder's own expense.

- 7.3. The Bidder and any of its personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4. The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5. The Bidder is requested to submit any questions in writing, to reach the Employer not later than 1 week before the pre-bid meeting.
- 7.6. Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.
- 7.7. Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

- 8.1. At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Document by issuing addenda.
- 8.2. Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3.
- 8.3. To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 24.2

C. Preparation of Bids

9. Cost of Bidding

- 9.1. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10. Language of Bid

10.1. The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents Comprising the Bid

11.1. The Bid shall comprise two envelopes submitted simultaneously, one containing the Technical Bid and the other the Price Bid, both envelopes enclosed together in an outer single envelope.

11.2. The Technical Bid submitted by the Bidder shall comprise the following:

- a) Letter of Technical Bid;
- b) Bid Security or Bid-Securing Declaration, in accordance with ITB 21;
- c) alternative Bids, if permissible, in accordance with ITB 13;
- d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 22.2;
- e) documentary evidence in accordance with ITB 14.1, that the plant and services offered by the Bidder in its Bid or in any alternative Bid, if permitted, are eligible;
- f) documentary evidence in accordance with ITB 15, the Bidder's eligibility and qualifications to perform the contract if its Bid is accepted;
- g) Technical Proposal in accordance with ITB 17.
- h) documentary evidence in accordance with ITB 16, that the plant and services offered by the Bidder conform to the Bidding Document;
- i) in the case of a bid submitted by a Joint Venture, the Bid shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed agreement;
- j) list of subcontractors, in accordance with ITB 17.2; and
- k) any other document required in the BDS.

11.3. The Price Bid submitted by the Bidder shall comprise the following:

- a) Letter of Price Bid;
- b) completed schedules as required, including Price Schedules, in accordance with ITB 12 and ITB 18;
- c) alternative price Bids, if permissible, in accordance with ITB 13; and
- d) any other document required in the BDS.

12. Letter of Bid and Schedules

12.1. The Letters of Technical Bid and Price Bid, and the Schedules, and all documents listed under ITB 11, shall be prepared using the relevant forms furnished in Section 4 (Bidding Forms). The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested and as required in the BDS.

13. Alternative Bids

13.1. The BDS indicates whether alternative Bids are allowed. If they are allowed, the BDS will also indicate whether they are permitted in accordance with ITB 13.3, or invited in accordance with ITB13.2 and/or ITB 13.4.

13.2. When alternatives to the Time Schedule are explicitly invited, a statement to that effect will be included in the BDS, and the method of evaluating different time schedules will be described in Section 3 (Evaluation and Qualification Criteria).

13.3. Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the Employer's requirements as described in the Bidding Document must also provide: (i) a price at which they are prepared to offer a plant meeting the Employer's requirements; and (ii) all information necessary for a complete evaluation of the alternatives by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed installation methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.

13.4. When Bidders are invited in the BDS to submit alternative technical solutions for specified parts of the facilities, such parts shall be described in Section 6 (Employer's Requirements). Technical alternatives for the specific parts of the facilities that comply with the performance and technical criteria specified for the plant and services shall be considered by the Employer on their own merits, pursuant to ITB 32.

14. Documents Establishing the Eligibility of Plant and Services

14.1. To establish the eligibility of the plant and services in accordance with ITB 5, Bidders shall complete the Country of Origin Declaration Form included in Section 4 (Bidding Forms).

15. Documents Establishing the Eligibility and Qualifications of the Bidder

15.1. To establish its eligibility and qualifications to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria), the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms).

15.2. Domestic Bidders, individually or in Joint Ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility as described in ITB 38.

16. Documents Establishing Conformity of the Plant and Services

16.1. The documentary evidence of the conformity of the plant and services to the Bidding Document may be in the form of literature, drawings and data, and shall furnish:

- a) a detailed description of the essential technical and performance characteristics of the plant and services, including the functional guarantees of the proposed plant and services, in response to the Specification;
- b) a list giving full particulars, including available sources, of all spare parts and special tools necessary for the proper and continuing functioning of the plant for the period named in the BDS, following completion of plant and services in accordance with provisions of the contract; and
- c) a commentary on the Employer's Specifications and adequate evidence demonstrating the substantial responsiveness of the plant and services to those specifications. Bidders shall note that standards for workmanship, materials and equipment designated by the Employer in the Bidding Document are intended to be descriptive (establishing standards of quality and performance) only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalog numbers in its Bid, provided that it demonstrates to the Employer's satisfaction that the substitutions are substantially equivalent or superior to the standards designated in the Specifications.

17. Technical Proposal, Subcontractors

17.1. The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section 4 (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.

17.2. For major items of plant and services as listed by the Employer in Criterion 2.5 of Section 3 (Evaluation and Qualification Criteria), which the Bidder intends to purchase or subcontract, the Bidder shall give details of the name and nationality of the proposed Subcontractors, including Manufacturers, for each of those items. In addition, the Bidder shall include in its Bid information establishing compliance with the requirements specified by the Employer for these items. Bidders are free to list more than one Subcontractor against each item of the plant and services. Quoted rates and prices will be deemed to apply to whichever Subcontractor is appointed, and no adjustment of the rates and prices will be permitted.

17.3. The Bidder shall be responsible for ensuring that any Subcontractor proposed complies with the requirements of ITB 4, and that any plant, or services to be provided by the Subcontractor comply with the requirements of ITB 5 and ITB 15.1.

18. Bid Prices and Discounts

18.1. Unless otherwise specified in the BDS and/or Section 6 (Employer’s Requirements), bidders shall quote for the entire plant and services on a “single responsibility” basis such that the total Bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the Bidding Document in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation, and completion of the plant. This includes all requirements under the Contractor’s responsibilities for testing, pre-commissioning and commissioning of the plant and, where so required by the Bidding Document, the acquisition of all permits, approvals, and licenses, etc.; the operation, maintenance, and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions. Items against which no price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items.

18.2. Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the Bidding Document.

18.3. Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules included in Section 4 (Bidding Forms). Where no different Price Schedules are included in the Bidding Document, Bidders shall present their prices in the following manner: Separate numbered Schedules included in Section 4 (Bidding Forms) shall be used for each of the following elements. The total amount from each Schedule (Nos. 1 to 4) shall be summarized in a Grand Summary (Schedule No. 5) giving the total bid price(s) to be entered in the Letter of Price Bid. Absence of the total bid price in the Letter of Price Bid may result in the rejection of the Bid.

- Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad
- Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer’s Country
- Schedule No. 3: Design Services
- Schedule No. 4: Installation and Other Services
- Schedule No. 5: Grand Summary (Schedule Nos. 1 to 4)
- Schedule No. 6: Recommended Spare Parts

Bidders shall note that the plant and mandatory spare parts included in Schedule Nos. 1 and 2 above exclude materials used for civil, building, and other construction works. All such materials shall be included and priced under Schedule No. 4, Installation and Other Services.

18.4. In the Schedules, Bidders shall give the required details and a breakdown of their prices as follows:

- a) Plant to be Supplied from Abroad (Schedule No. 1):
 - (i) the price of the plant shall be quoted carriage and insurance paid (CIP)-named place of destination basis specified in the BDS;
 - (ii) all customs duties and other taxes paid or payable in the Employer's country on the plant if the contract is awarded to the Bidder; and
 - (iii) the total price for the plant.
- b) Plant Supplied from Within the Employer's Country (Schedule No. 2):
 - (i) the price of the plant shall be quoted on an EXW Incoterm basis (ex-works, ex-factory, ex warehouse, ex showroom, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of plant quoted ex works or ex-factory, or on the previously imported plant of foreign origin quoted ex warehouse, ex showroom;
 - (ii) sales tax and other taxes payable in the Employer's country on the plant if the contract is awarded to the Bidder, and
 - (iii) the total price for the plant.
- c) Design Services. (Schedule No. 3). Rates or prices shall include all taxes, duties, levies, and charges payable in the Employer's country as of 28 days prior to the deadline for submission of Bids.
- d) Installation and Other Services (Schedule No. 4) shall be quoted separately and shall include rates or prices for local transportation, insurance, and other services incidental to delivery of the plant, all labor, contractor's equipment, temporary works, materials, consumables, and all matters and things of whatsoever nature, including operations and maintenance services, the provision of operations and maintenance manuals, training, etc., where identified in the Bidding Document, as necessary for the proper execution of the installation and other services, including all taxes, duties, levies, and charges payable in the Employer's country as of 28 days prior to the deadline for submission of bids.
- e) Recommended spare parts (Schedule No. 6) shall be quoted separately as specified in either subparagraph (a) or (b) above in accordance with the origin of the spare parts.

18.5. The current edition of Incoterms, published by the International Chamber of Commerce shall govern.

- 18.6. The prices shall be either fixed or adjustable as specified in the BDS.
- a) In the case of Fixed Price, prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation will be treated as nonresponsive and rejected.
 - b) In the case of Adjustable Price, prices quoted by the Bidder shall be subject to adjustment during performance of the contract to reflect changes in the cost elements such as labor, material, transport, and contractor's equipment in accordance with the procedures specified in the corresponding appendix to the Contract Agreement. A Bid submitted with a fixed price quotation will be treated as nonresponsive and be rejected. The Bidder shall furnish the indexes (e.g. for labor and materials), their weightings and source in the Tables of Adjustment Data included in Section 4 (Bidding Forms). The Employer may require the Bidder to justify its proposed indexes and weightings. Any bid that omits indexes and weightings shall be subject to clarification with the Bidder.
- 18.7. If so indicated in BDS 1.1, Bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer any price reduction (discount) for the award of more than one contract shall specify in their Letter of Price Bid the price reductions applicable to each package, or alternatively, to individual contracts within the package, and the manner in which the price reductions will apply.

19. Currencies of Bid and Payment

- 19.1. The currency(ies) of the bid shall be, as specified in the BDS.
- 19.2. Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements.

20. Period of Validity of Bids

- 20.1. Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Employer. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.
- 20.2. In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 21, it shall also be extended 28 days beyond the deadline of the extended bid validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its Bid.

21. Bid Security/ Bid Securing Declaration

21.1. Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS.

21.2. If a Bid-Securing Declaration is required pursuant to ITB 21.1, it shall use the form included in Section 4 (Bidding Forms). The Employer will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if a Bid-Securing Declaration is executed.

21.3. If a bid security is specified pursuant to ITB 21.1, the bid security shall be, at the Bidder's option, in any of the following forms:

- a) an unconditional bank guarantee,
- b) an irrevocable letter of credit,
- c) a cashier's or certified check, or
- d) SWIFT message in the form of MT760.

all from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted using either the Bid Security Form included in Section 4 (Bidding Forms) or another form acceptable to the Employer. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 20.2.

21.4. Unless otherwise specified in the BDS, any Bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 21.1, shall be rejected by the Employer as nonresponsive.

21.5. If a bid security is specified pursuant to ITB 21.1, the bid security of the unsuccessful Bidder shall be returned promptly upon the successful Bidder's furnishing of the performance security pursuant to ITB 46.

21.6. If a bid security is specified pursuant to ITB 21.1, the bid security of successful Bidders shall be returned promptly once the successful Bidder has signed the Contract and furnished the required performance security.

21.7. The bid security may be forfeited or the Bid-Securing Declaration executed, if

- a) notwithstanding ITB 26.3, a Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Letters of Technical Bid and Price Bid, except as provided in ITB 20.2 or
- b) the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 45;
 - (ii) furnish a performance security in accordance with ITB 46; or

(iii) accept the arithmetical corrections of its Bid in accordance with ITB 36.

21.8. If the bid security is required as per ITB 21.1, the bid security of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security shall be in the name of any or all of the Joint Venture partners. If the Bid-Securing Declaration is required as per ITB 21.1, the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent referred to in ITB 4.1.

22. Format and Signing of Bid

22.1. The Bidder shall prepare one original set of the Technical Bid and one original set of the Price Bid comprising the Bid as described in ITB 11 and clearly mark it "ORIGINAL - TECHNICAL BID" and "ORIGINAL - PRICE BID". Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the Bid, in the number specified in the BDS and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2. The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Employer shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the period stated in the Employer's request shall cause the rejection of the Bid. If either the Letter of Technical Bid or Letter of Price Bid or the Bid-Securing Declaration (if applicable) is not signed, the Bid shall be rejected.

22.3. A Bid submitted by a Joint Venture shall be signed so as to be legally binding on all partners.

22.4. Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

23. Submission, Sealing, and Marking of Bids

23.1. Bidders may submit their Bids by mail or by hand. When so specified in the BDS, Bidders shall have the option of submitting their Bids electronically. Procedures for submission, sealing and marking are as follows:

- a) Bidders submitting Bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative Bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as “ORIGINAL,” “ALTERNATIVE,” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB 23.2 to ITB 23.6.
- b) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS.

23.2. The inner and outer envelopes shall

- a) bear the name and address of the Bidder,
- b) be addressed to the Employer in accordance with ITB 24.1, and
- c) bear the specific identification of this bidding process indicated in the BDS 1.1.

23.3. The outer envelopes and the inner envelopes containing the Technical Bid shall bear a warning not to open before the time and date for the opening of Technical Bid, in accordance with ITB 27.1.

23.4. The inner envelopes containing the Price Bid shall bear a warning not to open until advised by the Employer in accordance with ITB 27.7.

23.5. Alternative Bids, if permissible in accordance with ITB 13, shall be prepared, sealed, marked, and delivered in accordance with the provisions of ITB 20 and ITB 21, with the inner envelopes marked in addition “ALTERNATIVE NO....” as appropriate.

23.6. If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

24. Deadline for Submission of Bids

24.1. Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS.

24.2. The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

25. Late Bids

25.1. The Employer shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 24. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

26. Withdrawal, Substitution, and Modification of Bids

- 26.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 22.2 (except for withdrawal notices, which do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:
- a) prepared and submitted in accordance with ITB 22 and ITB 23 (except for withdrawal notices, which do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
 - b) received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 24.
- 26.2. Bids requested to be withdrawn in accordance with ITB 26.1 shall be returned unopened to the Bidders.
- 26.3. No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Technical Bid or any extension thereof.

27. Bid Opening

- 27.1. The Employer shall open the Technical Bids in public at the address, on the date, and time specified in the BDS in the presence of Bidder's designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 23.1, shall be as specified in the BDS. The Price Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening. If the Technical Bid and the Price Bid are submitted together in one envelope, the Employer may reject the entire Bid. Alternatively, the Price Bid may be immediately resealed for later evaluation.
- 27.2. First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening.
- 27.3. Second, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bid will remain unopened in accordance with ITB 27.1. No envelope shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.

27.4. Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original as well as Modification, will remain unopened in accordance with ITB 27.1.

27.5. All other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded:

- a) the name of the Bidder;
- b) whether there is a modification or substitution;
- c) the presence of a bid security or a Bid-Securing Declaration, if required; and
- d) any other details as the Employer may consider appropriate.

Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Technical Bid are to be initialed by at least three representatives of the Employer attending the bid opening. No Bid shall be rejected at the opening of Technical Bids except for late Bids, in accordance with ITB 25.1.

27.6. The Employer shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; and alternative Bids; and the presence or absence of a bid security or a Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted Bids on time, and posted online when electronic bidding is permitted.

27.7. At the end of the evaluation of the Technical Bids, the Employer will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice of the opening of Price Bids.

27.8. The Employer will notify Bidders in writing who have been rejected on the grounds of their Technical Bids being substantially nonresponsive to the requirements of the Bidding Document and return their Price Bids unopened.

27.9. The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders' representatives who choose to attend at the address, on the date, and time specified by the Employer. The

Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.

27.10. All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded:

- a) the name of the Bidder;
- b) whether there is a modification or substitution;
- c) the Bid Prices, including any discounts and alternative offers; and
- d) any other details as the Employer may consider appropriate.

Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Price Bid and Price Schedules are to be initialed by at least three representatives of the Employer attending bid the opening. No Bid shall be rejected at the opening of Price Bids.

27.11. The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted Bids on time, and posted online when electronic bidding is permitted.

E. Evaluation and Comparison of Bids

28. Confidentiality

28.1. Information relating to the evaluation of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until publication of Contract award.

28.2. Any attempt by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.

28.3. Notwithstanding ITB 28.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it should do so in writing.

29. Clarification of Bids

29.1. To assist in the examination, evaluation, and comparison of the Technical and Price Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and

the response shall be in writing. No change in the substance of the Technical Bid or prices in the Price Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 36.

29.2. If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.

30. Deviations, Reservations, and Omissions

30.1. During the evaluation of Bids, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the Bidding Document;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

31. Examination of Technical Bids

31.1. The Employer shall examine the Technical Bid to confirm that all documents and technical documentation requested in ITB 11.2 have been provided, and to determine the completeness of each document submitted. If any of these documents or information is missing, the Bid may be rejected.

31.2. The Employer shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected.

- a) Letter of Technical Bid;
- b) written confirmation of authorization to commit the Bidder;
- c) Bid Security or Bid-Securing Declaration, if applicable; and
- d) Technical Proposal in accordance with ITB 17.

32. Responsiveness of Technical Bid

32.1. The Employer's determination of a bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB11.

32.2. A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the plant and services specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or

b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

32.3. The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 17, Technical Proposal, in particular to confirm that all requirements of Section 6 (Employer's Requirements) have been met without any material deviation, reservation, or omission.

32.4. If a Bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

33. Nonmaterial Nonconformities

33.1. Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid that do not constitute a material deviation, reservation, or omission.

33.2. Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

33.3. Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or nonconforming item or component. The adjustment shall be made using the method indicated in Section 3 (Evaluation and Qualification Criteria).

34. Detailed Evaluation of Technical Bids

34.1. The Employer will carry out a detailed technical evaluation of the Bids not previously rejected as being substantially nonresponsive, to determine whether the technical aspects are in compliance with the Bidding Document. The Bid that does not meet minimum acceptable standards of completeness, consistency, and detail, and the specified minimum and/or maximum requirements for specified functional guarantees, will be treated as nonresponsive and hence rejected. To reach such a determination, the Employer will examine and compare the technical aspects of the bids on the basis of the information supplied by the Bidders, taking into account the following:

a) overall completeness and compliance with the Employer's Requirements; deviations from the Employer's Requirements; conformity of the plant and services offered with specified performance criteria; suitability of the plant and services offered in relation to the

environmental and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the Bid. The Bid that does not meet minimum and/or maximum acceptable standards of completeness, consistency, and detail will be rejected for nonresponsiveness;

- b) type, quantity, and long-term availability of mandatory and recommended spare parts and maintenance services; and
- c) other relevant factors, if any, listed in Section 3 (Evaluation and Qualification Criteria).

34.2. Where alternative technical solutions have been allowed in accordance with ITB 13, and offered by the Bidder, the Employer will make a similar evaluation of the alternatives. Where alternatives have not been allowed but have been offered, they shall be ignored.

35. Eligibility and Qualification of the Bidder

35.1. The Employer shall determine to its satisfaction during the evaluation of Technical Bids whether a Bidder meets the eligibility and qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria).

35.2. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 15. Unless permitted in the BDS, the determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialist Subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder.

35.3. An affirmative determination shall be a prerequisite for the opening and evaluation of a Bidder's Price Bid. The Employer reserves the right to reject the bid of any bidder found to be in circumstances described in GCC 42.2.1(a). A negative determination shall result into the disqualification of the Bid, in which event the Employer shall return the unopened Price Bid to the Bidder.

35.4. The capabilities of the manufacturers and subcontractors proposed in its Bid for the major items of plant and services to be used by a Bidder will also be evaluated for acceptability in accordance with Section 3 (Evaluation and Qualification Criteria). Their participation should be confirmed with a letter of intent between the parties, as needed. Should a manufacturer or subcontractor be determined to be unacceptable, the Bid will not be rejected, but the Bidder will be required to propose, without changing its bid price, an acceptable substitute manufacturer or subcontractor meeting the minimum technical specifications stated in Section 6 (Employer's Requirements). If a Bidder does not provide an acceptable substitute manufacturer or subcontractor by the date and time set in the Employer's request for substitution of manufacturer or subcontractor, its Bid may be rejected.

35.5. Prior to signing the Contract, the corresponding Appendix to the Contract Agreement shall be completed, listing the approved manufacturers or subcontractors for each item concerned.

36. Correction of Arithmetical Errors

36.1. During the evaluation of Price Bids, the Employer shall correct arithmetical errors on the following basis:

- a) where there are errors between the total of the amounts given under the column for the price breakdown and the amount given under the Total Price, the amounts given under the column for the price breakdown shall prevail and the Total Price will be corrected accordingly;
- b) where there are errors between the total of the amounts of Schedule Nos. 1 to 4 and the amount given in Schedule No. 5 (Grand Summary), the total of the amounts of Schedule Nos. 1 to 4 shall prevail and the Schedule No. 5 (Grand Summary) will be corrected accordingly;
- c) if there is a discrepancy between the grand total price given in Schedule No. 5 (Grand Summary) and the bid amount in item (c) of the Letter of Price Bid, the grand total price given in Schedule No. 5 (Grand Summary) will prevail and the bid amount in item (c) of the Letter of Price Bid will be corrected; and
- d) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetical error, in which case the amount in figures shall prevail subject to (a), (b), and (c) above.

36.2. If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its bid security may be forfeited or its Bid-Securing Declaration executed.

37. Conversion to Single Currency

37.1. For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS.

38. Domestic Preference

38.1. Unless otherwise specified in the BDS, domestic preference shall not apply.

39. Evaluation and Comparison of Price Bids

39.1. The Employer shall use the criteria and methodologies listed in this clause. No other evaluation criteria or methodologies shall be permitted.

39.2. I. To evaluate a Price Bid, the Employer shall consider the following:

- a) the bid price, excluding provisional sums and the provision, if any, for contingencies in the Price Schedules;

- b) price adjustment for correction of arithmetical errors in accordance with ITB 36.1;
- c) price adjustment due to discounts offered in accordance with ITB 18.7;
- d) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 33.3;
- e) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 37;
- f) assessment whether the bid is abnormally low in accordance with ITB 40; and
- g) the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria).

II. The Employer's evaluation of a Bid will exclude and not take into account,

- a) in the case of Plant and Mandatory Spare Parts (Schedule No. 1) supplied from abroad, all taxes and duties, applicable in the Employer's country and payable on the Plant and Mandatory Spare Parts if the Contract is awarded to the Bidder; and
- b) in the case of Plant and Mandatory Spare Parts (Schedule No. 2) supplied from within the Employer's country, sales and other taxes, applicable in the Employer's country and payable on the Plant and Mandatory Spare Parts if the Contract is awarded to the Bidder.

39.3. If price adjustment is allowed in accordance with ITB 18.6, the estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.

39.4. If this Bidding Document allows Bidders to quote separate prices for different lots (contracts), and the award to a single Bidder of multiple lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Price Bid, is specified in Section 3 (Evaluation and Qualification Criteria).

39.5. If the Bid, which results in the lowest Evaluated Bid Price, is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Price Schedules, to demonstrate the internal consistency of those prices with the methods and time schedule proposed. After evaluation of the price analyses, taking into consideration the terms of payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

39.6. The Employer shall compare all substantially responsive Bids to determine the lowest evaluated Bid, in accordance with ITB 39.2.

40. Abnormally Low Bids

40.1. An abnormally low bid is one where the bid price, in combination with other elements of the bid, appears to be so low that it raises concerns as to the capability of the Bidder to perform the contract for the offered bid price.

- 40.2. When the offered bid price appears to be abnormally low, the Employer shall undertake a three-step review process as follows:
- a) identify abnormally low costs and unit rates by comparing them with the engineer's estimates, other substantially responsive bids, or recently awarded similar contracts;
 - b) clarify and analyze the bidder's resource inputs and pricing, including overheads, contingencies and profit margins; and
 - c) decide whether to accept or reject the bid.
- 40.3. With regard to ITB 40.2 (b) above, the Employer will seek a written explanation from the bidder of the reasons for the offered bid price, including a detailed analysis of costs and unit prices, by reference to the scope, proposed methodology, schedule, and allocation of risks and responsibilities. This may also include information regarding the economy of the manufacturing process; the services to be provided, or the construction method to be used; the technical solutions to be adopted; and any exceptionally favorable conditions available to the bidder for the works, equipment or services proposed.
- 40.4. After examining the explanation given and the detailed price analyses presented by the bidder, the Employer may:
- a) accept the bid, if the evidence provided satisfactorily accounts for the low bid price and costs, in which case the bid is not considered abnormally low;
 - b) accept the bid, but require that the amount of the performance security be increased at the expense of the bidder to a level sufficient to protect the Employer against financial loss. The amount of the performance security shall generally be not more than 20% of the contract price; or
 - c) reject the bid if the evidence provided does not satisfactorily account for the low bid price, and make a similar determination for the next ranked bid, if required.

41. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

- 41.1. The Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

42. Notice of Intention for Award of Contract

- 42.1. If Standstill provisions apply as specified in the BDS, the standstill period shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before making the actual contract award) within which any unsuccessful bidder can challenge the proposed award.

F. Award of Contract

43. Award Criteria

43.1. The Employer shall award the Contract to the Bidder whose offer has been determined successful in line with ITB 34 to ITB 40 above to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be eligible and qualified to perform the Contract satisfactorily.

44. Notification of Award

44.1. Prior to the expiration of the period of bid validity and upon expiry of the standstill period specified in ITB 42.1, or upon satisfactory resolution of a complaint filed within standstill period, if applicable, the Employer shall transmit the Notification of Award using the form included in Section 9 (Contract Forms) to the successful Bidder, in writing, that its Bid has been accepted. At the same time, the Employer shall also notify all other Bidders of the results of the bidding.

44.2. Unless standstill period applies, upon notification of award, unsuccessful Bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Employer shall promptly respond in writing and/or in a debriefing meeting to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.

44.3. Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

44.4. Within 2 weeks of the award of contract or expiry of the standstill period, where such period applies, or, if a complaint has been filed within the standstill period, upon receipt of ADB's confirmation of satisfactory resolution of the complaint, the borrower shall publish in an English language newspaper or widely known and freely accessible website the results identifying the bid and lot or package numbers, as applicable and the following information:

- a) name of each Bidder who submitted a bid;
- b) bid prices as read out at bid opening;
- c) name and evaluated prices of each bid that was evaluated;
- d) name of Bidders whose Bids were rejected and the reasons for their rejection; and
- e) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

45. Signing of Contract

45.1. Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement.

45.2. Within 28 days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

46. Performance Security

46.1. Within 28 days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, subject to ITB 39.5 and ITB 40.4, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Employer. If the institution issuing the performance security is located outside the country of the employer, it shall have a correspondent financial institution located in the country of the employer to make it enforceable.

46.2. Failure of the successful Bidder to submit the abovementioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. In that event, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

47. Bidding-Related Complaints

47.1. The procedures for dealing with Bidding-Related Complaints arising out of this bidding process are specified in the BDS.

Section 2: Bid Data Sheet

This section consists of provisions that are specific to each procurement and supplement the information or requirements included in Section 1 (Instructions to Bidders)

A. General

ITB 1.1

The number of the Invitation for Bids (IFB) is: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

The Employer is: Tripura State Electricity Corporation Ltd, Agartala, Tripura.

The name of the open competitive bidding (OCB) is: **Design, Supply, Installation, Integration, Operation and Maintenance of Prepaid Smart Metering System of 150,000 smart meters in Tripura, India.**

The identification number of the OCB is: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

The number and identification of lots (contracts) comprising this OCB is: **One**

ITB 1.2(a) Add after the paragraph:

It is expressly understood that all e-mail communications will be treated as equivalent of "in writing"

ITB 2.1

The Borrower is: Government of India for Tripura State Electricity Corporation Ltd, Agartala, Tripura **/India**

The name of the Project is : Tripura Power Generation Upgradation & Distribution Reliability Improvement Project

ITB 4.1

Following sub-clauses shall be added:

- (c) Original copy of JV Agreement (form of undertaking by the Joint Venture Partners), indicating joint and several liability among the parties to the Joint Venture, should be provided with the bid.

B. Contents of Bidding Documents

ITB 6.1

Replace the existing Clause with the following:

The Bidding Document comprises of Volume-I to Volume- III as under: -

Volume I consists of Parts I, II, and III, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8:

PART I Bidding Procedures

Section 1 - Instructions to Bidders (ITB)

Section 2 - Bid Data Sheet (BDS)

Section 3 - Evaluation and Qualification Criteria (EQC)

Section 4 - Bidding Forms (BDF)

Section 5 - Eligible Countries (ELC)

PART II Requirements

Section 6 - Employer's Requirements (ERQ)

PART III Conditions of Contract and Contract Forms

Section 7 - General Conditions of Contract (GCC)

Section 8 - Special Conditions of Contract (SCC)

Section 9 - Contract Forms (COF)

VOLUME-II: Technical Specifications & Bill of Quantities

ITB 7.1

For clarification purposes only, the Employer's address is:

Attention: Mr. K.L. Das
Address: Additional General Manager (DP&C)
Bidyut Bhavan, Corporate Office
TSECL, Agartala, West Tripura
Email: tsecl.adbproject@gmail.com

ITB 7.1

Replace with the following:

A prospective Bidder requiring any clarification on the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS, or raise inquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond to any request for clarification, provided that such request is received no later than 21 days prior to the deadline for submission of bids. The Employer shall publish its response in the e-Tendering platform where the tender is published online. This response shall include a description of the inquiry but without identifying its source. Prospective bidders are informed to visit the e-Tendering platform to learn about the clarifications. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 24.2.

ITB 7.4

A Pre-Bid meeting will take place as per details given below:

Address: Mr. K.L. Das
AGM (DP&C) & Nodal Officer
Corporate Office, Tripura State Electricity Corporation Limited
Agartala, Tripura (W), Pin:-799001

Date: **29 November 2022**

Time: **15:00Hrs IST**

A site visit conducted by the Employer will not be organized. However, bidders are advised to acquaint themselves with the site conditions before bidding. No time extension in opening of bid shall be permitted on the ground that site visit got delayed for any reason.

ITB 7.6 Replace first sentence with the following:

Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be published in the e-Tendering platform in accordance with ITB 6.3. Prospective bidders are informed to visit the e-Tendering platform to learn about the clarifications.

ITB 8.2

The existing clause is amended as:

Any addendum issued shall be part of the Bidding Document and shall be published in the e-Tendering platform where the tender is published online in accordance with ITB 6.3. The onus is on the bidder to visit the e-Tendering platform to learn about the addendum and to submit its response as per the addendum published.

C. Preparation of Bids

ITB 9.1

The following shall be added:

The interested Bidders can view / download the bid document from the Web Site, <https://tripuratenders.gov.in/nicgep/app> free of cost. Bidders who submit the bids online are, however, required to remit the Bid Document fee of INR 25,000/-Equivalent amount of US \$ 350(incl GST) by Demand Draft / Banker's Cheque in favor of "**Tripura State Electricity Corporation Limited**", payable at "**Agartala**", in sealed cover in such a way that the envelope containing the Demand Draft is separately available for examination. This envelope containing the Demand Draft / Banker's Cheque towards Bid Document Fee must be received in the office of TESCL, Agartala by the designated time before the opening of the technical bids.

In case of any discrepancy between the downloaded soft copy and hard copy of the DD/ Banker's Cheque towards Bid Document Fee, the hard copy will prevail.

ITB 10.1

The language of the Bid is: **English**

ITB 11.1

Replace existing clause with following:

The Bid shall comprise two envelopes submitted simultaneously online, as prescribed in the e-Tendering system <https://tripuratenders.gov.in/nicgep/app>

ITB 11.2

Please insert at the beginning:

Bidder shall upload its Technical Bid in the prescribed file upload slots and online forms defined in the e-Tendering platform.

ITB 11.2 (k)

The Bidder shall submit with its Technical Bid the following additional documents: None

ITB 11.3

Please insert at the beginning:

Bidder shall upload its Price Bid in the prescribed file upload slots and online forms available defined in the e-Tendering platform.

ITB 11.3 (d)

The Bidder shall submit with its Price Bid the following additional documents: None

ITB 11.4

Since the bids are to be submitted through E-tendering mode, the prices are to be filled and uploaded on e-tender portal only and bidders are advised not to submit the price bid in hard copy at the Employer's Office along with the documents. The same will not be entertained and summarily rejected. Any loss of information on account of this shall be sole responsibility of bidder.

ITB 12.1

The units and rates in figures entered into the Price Schedules should be typewritten or if written by hand, must be in print form. Price Schedules not presented accordingly may be considered nonresponsive. The bid may be rejected if the form or file is found to be modified or altered by the bidder.

ITB 13.1 Alternative bids are NOT permitted.

ITB 13.2 Alternatives to the Time Schedule shall NOT be permitted.

ITB 13.4 Alternative technical solutions shall NOT be permitted.

ITB 18.1 Bidders shall quote for the entire plant and services on a single responsibility basis.

ITB 18.4(a)(i) The Incoterm for quoting plant to be supplied from abroad is: CIP

ITB 18.4 (d) GST is not to be included in Section 4 Schedule 4 and rates for all line items here are to be quoted exclusive of GST. The GST applicable to works contracts in the State of Tripura (current rate being 18 %) shall be paid additionally on production of documentary evidence. The Bidder shall, however, pass on the benefit of exemptions, if any, given by the State Govt to the Employer.

ITB 18.4 (e) Not Applicable in accordance with 18.3 above.

ITB 18.6 The unit prices quoted by the Bidder shall be: Fixed

The bidder should quote their taxes taking into account all the Input Tax Credit (ITC) benefits available to them under GST Act and the benefit of Input Tax Credit (ITC) if any availed by the bidder shall be passed on to Employer.

Since it is a works contract as per clause 119 of section 2 of Central Goods and Services Tax Act 2017, GST shall be quoted accordingly.

All prevailing GST provisions are applicable.

ITB 19.1

The currencies of the Bid shall be as follows:

- a) The prices shall be quoted in **INR/EURO/USD/JPY** or any combination thereof.
 - b) A Bidder expecting to incur a portion of its expenditures in the performance of the Contract in more than one currency, and wishing to be paid accordingly, shall so indicate in the Schedule of Prices and the Letter of Price Bid.
 - c) If some of the contract expenditures related to Installation and Other Services are to be incurred in the Employer's country, such expenditures shall be quoted in either foreign and/or local currency, depending upon the currency in which the costs are to be incurred.
 - d) Bidders may be required by the Employer to clarify their local and foreign currency requirements, and to substantiate that the amounts included in the Price Schedules are reasonable and responsive to ITB 18.1 in which case a detailed breakdown of its foreign currency requirements shall be provided by the Bidder
 - e) During the performance of the contract, the foreign currency portions of the outstanding balance of the Contract Price may be adjusted by agreement between the Employer and the Contractor to reflect any changes in foreign currency requirements for the contract. Any such adjustment shall be effected by comparing the amounts quoted in the bid with the amounts already used in the Facilities and the Contractor's future needs for imported items
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ITB 20.1

The bid validity period shall be 180 days after the bid submission date. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

ITB 21.1

The Bidder shall furnish a bid security in the amount of INR 125 lakhs or USD 160,000 (INR one hundred twenty five lakhs or USD one hundred sixty thousand only).

The Bidder is required to submit original copy of the bid security in Employer's office address as per ITB 23.1 on or before the due date and time for bid submission. A scanned copy of the Bid Security

corresponding to the original shall be uploaded in the e-Tendering platform during online bid submission.

Should there be any discrepancy between scanned copy of the bid security uploaded by bidder in the e-Tendering platform and the original submitted by bidder, the Employer will verify compliance of the bid security to tender requirements as per the original bid security submitted by bidder.

ITB 21.1 Insert the following additional clause:

The Bidder is required to upload as part of its bid a scanned copy of the Tender fees required in the bidding document during online bid submission. Also, the Bidder shall submit original copy of the tender fees in Employer's office address as per ITB 23.1 on or before the due date and time for bid opening.

ITB 21.2 Not Applicable. A Bid Securing Declaration will be NOT be accepted in lieu of Bid Security

ITB 21.4 Subject to the succeeding sentences, any bid not accompanied by an irrevocable and callable bid security shall be rejected by the Employer as nonresponsive. If a Bidder submits a bid security that (i) deviates in form, amount, and/or period of validity, or (ii) does not provide sufficient identification of the Bidder (including, without limitation, failure to indicate the name of the Joint Venture or, where the Joint Venture has not yet been constituted, the names of all future Joint Venture Partners), the Employer shall request the Bidder to submit a compliant bid security within 14 days of receiving such a request. Failure to provide a compliant bid security within the prescribed period of receiving such a request shall cause the rejection of the Bid.

ITB 22.1 Not applicable to e-bidding. Employer will accept only electronic bids. Any bids received in physical form will be returned unopened to the bidder

ITB 22.2 Replace the existing clause 22.2 by the following:

The Bidder shall digitally sign to authorize and make amendments to its bid submitted in the e-Tendering platform <https://tripuratenders.gov.in/nicgep/app>

The written confirmation of authorization to sign on behalf of the Bidder shall consist of:

- a) For a single entity, it shall consist of Power of Attorney containing name, position held and signature of authorized person; or
- b) In case of a JV or proposed JV or Consortium, the Power of Attorney for authorization shall be issued in the name of a nominated representative who shall have the authority to sign and conduct all business for and on behalf of the JV / Consortium during contract negotiation/execution.

Power of Attorney shall be duly notarized or attested by an appropriate Agency within the Bidder's home country.

The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid, except for un-amended printed literature, shall be signed or initialled by the person signing the Bid. If a Bidder submits a deficient authorization, the

Bid shall not be rejected in the first instance. The Employer shall request the Bidder to submit an acceptable authorization within seven (07) days of receiving such a request. Failure to provide an acceptable authorization within the prescribed period shall cause the rejection of the Bid.

D. Submission and Opening of Bids

ITB 23.1 Replace the paragraph with following:

- a) Bidders shall submit Bids only electronically through the e-Tendering platform <https://tripuratenders.gov.in/nicgep/app>
- b) Hard Copy submission of Bids is not permitted and shall not be accepted.
- c) Bidders should enroll online in the e-Tendering platform
- d) Bidders shall obtain a Digital Signature Certificate (DSC) as prescribed in the e-Tendering platform to complete online enrolment and bid submission.
- e) The Bidder is advised to submit its bid online in the e-Tendering platform well in advance before the prescribed time.
- f) Bids submitted online in the e-Tendering platform shall be considered as the original of the bid.

ITB 23.1 (g) The electronic bidding submission procedures shall be:

- i. The Bidder shall digitally sign and submit its bid online in the e-Tendering platform before the prescribed time. The Employer shall not accept bids submitted in manual form.
- ii. The Bidder shall take due precaution to upload technical bid documents and price bid document onto the respective envelopes defined in the e-Tendering platform.
- iii. 'e-Tendering' means submission of a digitally signed bid (by a valid digital certificate which has been issued by a licensed Certifying Agency (as approved by Controller of Certifying Agency) which is stored in Time Stamped electronic sealed tender box.
- iv. Bidder seeking to participate in the bidding process, shall have to procure a suitable class of Digital Certificate as per Information Technology Act 2000 and accepted by the e-Tendering platform using which it shall digitally sign and submit its electronic bids online. Bidder can procure the same from any CCA approved Certifying Authority.
- v. Online bids will have to be digitally signed and submitted in a Time stamped electronic sealed tender box on <https://tripuratenders.gov.in/nicgep/app>
- vi. Bidders shall take due care to ensure that the documents uploaded by them in the e-Procurement platform are virus free. If the Employer is unable to download the Documents due to a virus and /or the downloaded documents are not legible, such Bids shall be rejected and the Employer will not be liable for the same.
- vii. The downloaded Bid forms shall be typed or written in indelible ink and shall be signed by a person duly authorised to sign on behalf of Bidder.

- viii. Bidder is required to download the bidding forms, print the forms, fill them, scan them and upload in the portal. The information on eligibility and qualification provided in the bidding forms only will be considered. Bidder will also provide reference of supporting documents provided in its support in the bidding forms.
- ix. Employer shall not accept any responsibility for failures or breakdowns for systems other than in those systems strictly within the control of the Employer and its e-Tendering service provider.
- x. The onus is on the Bidder to ensure availability of the requisite infrastructure and systems required for online bid submission viz. Digital Signature Certificates and as applicable Digital Encryption Certificates required for bid submission in the e-Tendering platform, reliable internet connectivity and requisite client software.
- xi. Bidder is informed to get acquainted with the bid submission process in e-Tendering platform by contacting the e-Tendering service provider. Refer for further details.
- xii. Bidder is solely responsible for safe keeping of its Digital Signature Certificate (DSC) and as applicable Digital Encryption Certificate (DEC).
- xiii. The Employer reserves the right to verify original copies of scanned documents uploaded by bidders. The employer may seek additional documentary evidence on their technical proposals, which the bidder shall provide either online via the e-Tendering platform or in manual form.
- xiv. Bidders shall upload their bid documents in formats, which can be opened and read by open standard interfaces
- xv. Bidders shall not lock electronic files uploaded in their proposal with passwords of their choice. The Employer reserves the right to reject password locked files outright and not consider contents within such locked files for bid evaluation

ITB 23.2, 23.3, 23.4, 23.5 and 23.6 Not applicable to electronic bid submission.

ITB 24.1

Replace ITB 24.1 with the following:

Bidder shall submit its bid before expiry of the date and time for bid submission as specified in the e-Tendering platform. The system will automatically lock the tender as per the server clock. The Time followed in the portal is ordinarily as per Indian Standard Time (IST) which is GMT+5:30 hours. Bid opening date specified in the e-Tendering platform shall be taken as the final date. Employer reserves the right to open bids on or after the announced bid opening date and time specified in the e-Tendering platform <https://tripuratenders.gov.in/nicgep/app>

Bid submission and bid opening timelines will be defined as per line e-Tendering system server clock only.

The address for submission of the original copy of bid security and tender document / tender processing fees is:

Additional General Manager (DP&C)

Bidyut Bhavan, Corporate Office

TSECL, Agartala, West Tripura

The deadline for bid submission is

Date: **30 December 2022**

Time: **14:00hrs**

ITB 25.1

Replace ITB 25.1 with the following:

The system will automatically lock the tender and disallow bid submission after the deadline for submission of bids.

ITB 26.1

Replace ITB 26.1 with the following:

Bidder may withdraw or modify its Technical or Price Bid after it has been submitted and until the bid submission deadline by logging into the e-Tendering platform.

ITB 26.2

Replace ITB 26.2 with the following:

Bids withdrawn by the Bidders will remain in draft mode in the e-Tendering platform and will not be considered for bid evaluation.

The e-Tendering platform <https://tripuratenders.gov.in/nicgep/app> disallows bidder to resubmit bid after it has withdrawn its bid for the same tender

ITB 27.1

The Employer reserves the right to extend bid submission timeline if the e-Tendering platform is inaccessible or inoperative for over 8 hours within the last 24 hours of the bid submission due date. The Employer shall consult the e-Tendering service provider and seek its opinion and decide to extend the bid submission timeline in accordance with the technical explanation provided by the e-Tendering service provider

Technical bids shall be opened online and the bidders may view the status of technical bid opening online in the e-Tendering platform. The designated representative of the Bidders may also choose to attend the technical bid opening at :

Corporate Office, Tripura State Electricity Corporation Limited, Agartala, Tripura (W), Pin:-799001.

Date: 30 December 2022

Time: 14: 30hrs IST

Location: TSECL Corporate office, Agartala. PIN- 799001

The Price Bids will remain unopened in the e-Tendering platform and will remain encrypted, until the specified time of its opening. The Price Bids will be opened online in the e-Tendering platform upon expiry of the date and time specified in the e-Tendering platform for price bid opening. If the Price Bid details are uploaded in Technical bid slots in the e-Tendering platform, the Employer may reject the entire Bid.

The technical bids recorded and opened at the time of opening shall be considered for evaluation.

The Letter of Technical Bid shall be initialed by three representatives of the Employer attending the bid opening.

The Price Bids will remain unopened in the e-procurement website and will remain encrypted, until the specified time of its opening

ITB 27.2, 27.3, 27.4& 27.5 Not applicable to electronic bid submission

ITB 27.6 Replace the existing sub-clause by the following:

Technical bids shall be opened online and the bidders may view the status of technical bid opening online in the e-Tendering platform. The Employer shall prepare a record of the opening of Technical Bids that shall include, as minimum: the name of the Bidder and whether there are alternative bids; and the presence or absence of a bid security. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record

ITB 27.7 At the end of the evaluation of the Technical Bids, the Employer will open the Price Bids online on the date and time specified in the e-Tendering platform for opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice of the opening of Price Bids.

ITB 27.8 Replace the existing sub-clause by the following:

The Employer will notify Bidders who have been rejected on the grounds of their Technical Bids being substantially non-responsive to the requirements of the Bidding Document by a system generated e-mail and their Price Bids will remain encrypted in the e-Tendering portal.

ITB 27.10 Replace the existing sub-clause by the following:

Price bids shall be opened online and the bidders may view the status of price bid opening online in the e-Tendering platform.

Price Bids will be opened electronically in the presence of at least three authorized officials of the Employer. A system generated e-mail will be received by all the eligible bidders for price bid opening and they may come with proper authorization for witnessing opening of price bid.

All Price Bids on the e-Proc system shall be opened one at a time and the following read out and recorded:

- (a) the name of the Bidder;
- (b) whether there is a modification or substitution;
- (c) the Bid Prices, including any discounts and alternative offers; and
- (d) any other details as the Employer may consider appropriate.

Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation.”

No Bid shall be rejected at the opening of Price Bids

ITB 27.11 Replace the existing sub-clause by the following:

The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be uploaded in the e-Tendering platform, which the Bidders can view and download.

E. Evaluation and Comparison of Bids

ITB 29.1

Replace the first sentence of the existing sub-clause by the following.

To assist in the examination, evaluation, and comparison of the Technical and Price Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid in writing via the e-Tendering platform.”

ITB 35.2

The qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, Subcontractors shall not be permitted

ITB 37.1

The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: INR (Indian Rupees)

The source of the selling exchange rate shall be: TT Selling rate of State Bank of India

The date for the selling exchange rate shall be: The Date of the Technical Bid Opening

ITB 38.1

Domestic preference shall NOT apply.

ITB 39.2

The following is added after 39.2 II:

This is a works contract and GST will be reimbursed at the rate applicable to a works contract (current rate being 18 %) on the contract amount on submission of documentary evidence. The Bidder shall, however, pass on the benefit of exemptions, if any, given by the State Govt to the Employer. The GST /SGST/IGST/CGST or any other taxes/ duties etc. will not, however, be taken into account either for the domestic or the overseas bidders while evaluating the bids.

ITB 42.1

Standstill provisions shall apply. The duration of standstill period will be 7 days from the date of notice of intention for award of contract.

The Employer shall, at the start of the standstill period, notify in writing each Bidder that submitted a bid, of its intention to award a contract to the successful Bidder at the end of standstill period. The notification using the form included in Section 9 (Contract Forms) shall include the following information:

- a) the name of each Bidder who submitted a Bid;
- b) the bid prices as read out at bid opening;
- c) the name and evaluated prices of each Bid that was evaluated;
- d) the name of Bidders whose bids were rejected and the reasons for their rejection;
- e) the name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded; and
- f) a statement of the reason(s) the bid of the unsuccessful Bidder to whom the notification is addressed was unsuccessful, unless the price information under (e) of this paragraph already reveals the reason.

ITB 44.1

Replace “At the same time, the Employer shall also notify all other Bidders of the results of the bidding” with “At the same time, the Employer shall upload the result of the bidding in the e-Tendering platform, which can be viewed by all the Bidders”.

ITB 47.1 Bidding Related Complaints

Section 2: Bid Data Sheet

The procedures for Bidding-Related Complaints are referenced in Appendix 7 of the Procurement Regulations for ADB Borrowers. The Bidder should submit its complaint following these procedures, in writing, to:

Attention: **K. L. DAS, AGM (Nodal Officer)**

Address: ADB Project,

Corporate Office, Tripura State Electricity Corporation Limited

Agartala, Tripura (W), Pin: -799001

Mob: +91 9436471375

Section 3: Evaluation and Qualification Criteria

A. Evaluation

1. Technical Evaluation

In addition to the criteria listed in ITB 34.1 (a)–(b), other relevant factors are as follows:

- 1.1.** Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements as stipulated in Section 6 (Employer's Requirements). Noncompliance with equipment and personnel requirements described in Section 6 (Employer's Requirements) shall not normally be a ground for bid rejection and such noncompliance will be subject to clarification during bid evaluation and rectification prior to contract award.
- 1.2.** Bidders shall meet the qualification criteria set by the Purchaser on a pass-fail basis. It is the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries or affiliates that must normally satisfy these criteria. However, as indicated below, the credentials of the parent / holding company can be considered if the stipulated conditions therein are duly complied
- 1.3.** The price bids shall be evaluated as per the grand-total price of all BOQ items i.e., For Indian Bidder Grand total of Schedule 1 and Schedule 3 and for Foreign Bidder Grand total of Schedule 2 and Schedule 3 of a particular lot.

2. Alternative Technical Solutions

Alternative Technical Solutions are not permitted for this tender

3. Economic Evaluation

"In addition to the criteria listed in ITB 39.2.1 (a)–(f), other relevant factors are as follows:

Adjustments in price that result from the procedures outlined below shall be added, for purposes of comparative evaluation only, to arrive at an "Evaluated Bid Price." Bid prices quoted by Bidders shall remain unaltered

3.1. Quantifiable Deviations and Omissions

Quantifiable Deviations and Omissions from the contractual obligations: the evaluation shall be based on the evaluated cost of fulfilling the contract in compliance with all contractual obligations under this Bidding Document.

Pursuant to ITB 33.3, the cost of all quantifiable nonmaterial nonconformities or omissions from the contractual and commercial conditions shall be evaluated. The Employer will make

its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of Bids.

3.2. Time Schedule

Time to complete the plant and services from the effective date specified in Article 3 of the Contract Agreement for determining the time for completion of pre-commissioning activities is:18months. No credit will be given for earlier completion.

3.3. Operation and Maintenance (O&M) Costs

The contractor is required to provide AMI system management, operation and maintenance services for a period of 120 months.

3.4. Functional Guarantees of the Facilities

Not applicable.

3.5. Work, Services, Facilities, etc., to Be Provided by the Employer

No services to be provided by the Employer. The Contractor to make his own arrangements at his own cost.

3.6. Specific Additional Criteria

Nil

3.7. Domestic Preference

Not applicable

3.8 Multiple Lots (Contracts)

Not Applicable

B. Qualification

It is the legal entity or entities comprising the Bidder, and not the Bidder’s parent companies, subsidiaries, or affiliates, that must satisfy the qualification criteria described below.

1. Eligibility

Criteria	Compliance Requirements			Documents	
	Single Entity	Joint Venture		Submission Requirements	
All Partners Combined		Each Partner	One Partner		
Nationality					
Nationality in accordance with ITB 4.2.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI - 1; ELI – 2 with attachments
Conflict of Interest					

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
No conflicts of interest in accordance with ITB 4.3.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Technical Bid
ADB Eligibility					
Not having been declared ineligible by ADB, as described in ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Technical Bid
Government-Owned Enterprise					
Bidder required to meet conditions of ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI - 1; ELI – 2 with attachments
United Nations Eligibility					
Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB 4.8.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Technical Bid

2. Historical Contract Non-Performance

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.1 Pending Litigation and Arbitration					
All pending litigation and arbitration, if any, shall be treated as resolved against the Bidder and so shall in total not represent more than 50% (Fifty percent) of the Bidder’s net worth calculated as the difference between total assets and total liabilities.	must meet requirement by itself or as partner to past or existing Joint Venture	not applicable	must meet requirement	not applicable	Form CON - 1
2.2 History of Non-Performing Contracts					
Non-performance of a contract ² did not occur as a result of contractor default since 1 January 2014	Must meet requirement	Must meet requirement	Must meet requirement ³	Not applicable	Form CON-1
2.3 Suspension Based on Execution of Bid-Securing Declaration					

²Non-performance, as decided by the Employer, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted

³This requirement also applies to contracts executed by the Bidder as Joint Venture member

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB 4.6	Must Meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Technical Bid

3. Financial Situation

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Historical Financial Performance					
Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last 3years to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last year calculated as the difference between total assets and total liabilities should be positive.	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form FIN - 1with attachments
Average Annual Turnover					
Minimum average annual turnover of INR 150cr or USD 18.50 mn, calculated as total certified payments received for contracts in progress or completed, within the last 5 years.	Must meet requirement	Must meet requirement	Must meet 20% of the requirement	Must meet 50% of the requirement	Form FIN – 2
Financial Resources *					
For Single Entities: The Bidder must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its current contract commitments defined in FIN - 4, meet or exceed the total requirement for the Subject Contract of INR 18.50cr or USD 2.30mn	Must meet requirement	Not applicable	Not applicable	Not applicable	Form FIN – 3 and Form FIN - 4
For Joint Ventures: 1) One partner must demonstrate that its	Not applicable	Not applicable	Not applicable	Must meet requirement	Form FIN – 3 and Form FIN - 4

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 40% from the total requirement for the Subject Contract. AND					
2) Each partner must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 25% from the total requirement for the Subject Contract. AND	Not applicable	Not applicable	Must meet requirement	Not applicable	Form FIN – 3 and Form FIN - 4
3) The Joint Venture must demonstrate that the combined financial resources of all partners defined in FIN - 3, less all the partners’ total financial obligations for the current contract commitments defined in FIN - 4, meet or exceed the total requirement for the subject Contract of INR 18.50cr or USD 2.30 mn.	Not applicable	Must meet requirement	Not applicable	Not applicable	Form FIN – 3 and Form FIN - 4

- If the bid evaluation process and the decision for the award of the Contract takes more than 1 year from the date of bid submission, Bidders may be asked to resubmit their current contract commitments and latest information on financial resources supported by latest audited accounts or audited financial statements, or if not required by the law of the Bidder’s country, other financial statements acceptable to the Employer, and the Bidders’ financial capacity will be reassessed on this basis.

4. Bidder’s Experience

4.1 Contracts of Similar Size and Nature

Criteria	Compliance Requirements				Documents
	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<p>Participation as an EPC Contractor or Joint Venture Partner in at least one (1) or more contracts that are similar to the proposed contract and have successfully or substantially completed within the last 5 (five) years from the bid submission deadline, where the value of the Bidder’s participation in these contracts exceeds INR 90 Cr or USD 11.50mn.</p> <p>Note 1: The similarity of the Bidder’s participation shall be based on the physical size, nature of works, complexity, methods, technology or other characteristics as described in Section 6 (Employer’s Requirements).</p> <p>In addition to Form EXP-1 evidence of above experience such as contract agreement, completion reports and end user certificates shall be submitted along with the Technical Bid.</p>	Must meet requirement	Must meet requirement	Must meet minimum one (1) contract of similar nature, and participation in relevant contract shall meet or exceed 75% of the amount stipulated for the tender	Not applicable	Form EXP – 1

4.2 Experience in Key Activities

4.2(a) Must be complied with by the Bidder. In case of a Joint Venture Bidder, at least one of the partners must meet the requirement in the key activity.

Table A

Criteria	Compliance Requirements				Documents
	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Experience in implementing following key activities in	Must meet	Must meet	Not	Must meet	Form EXP – 2

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<p>above or any other contracts covering at least 25,000 consumers / smart-meter nodes, successfully or substantially completed within last five (five) years from the bid submission deadline which are currently in commercial operation for Indian / Global Utility clients.</p> <p>(i). Design, supply, installation, testing and commissioning of smart meters with RF-Mesh and cellular NAN / WAN communication networks.</p> <p>(ii). Implementation of cloud-based AMI system solution.</p> <p>(iii) Integration HES with MDM on standard interfaces and data exchange models and integration of MDM with utility billing systems.</p> <p>(iii) Establishment of control center for an AMI system solution including installation, testing, and commissioning of system hardware / software and networking.</p> <p>(iv) Provision of Operation and Maintenance services for implementing AMI smart metering system.</p> <p>In addition to Form EXP-2, evidence of above mentioned technical experience such as certified copy(ies) of Contract Agreements, Purchase Order(s)/Letter of Award(s), Work Order(s), Completion Certificate(s), Delivery Order(s), Sale Receipt(s), and substantial completion certificates shall be submitted along with the Technical Bid.</p>	<p>requirement</p>	<p>requirement</p>	<p>Applicable</p>	<p>requirement</p>	

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Employer reserves the right to verify such information from the clients.					

4.2(b) The Employer accepts any of the following activities to be subcontracted. They may be complied with by the Bidder or by its proposed Specialist Subcontractor. In this case the specialist subcontractors experience will be counted for bidders experience in respect of the requirements specified in 4.2(a)

Table B

Criteria	Compliance Requirements		Documents
Requirement	Single Entity or its Specialist Subcontractors	Joint Venture or its Specialist Subcontractors	Submission Requirements
<p>Experience in implementing following key activities as an EPC Contractor / Joint Venture Partner or Subcontractor in at least two or more contracts which are successfully or substantially completed within the last 5 (five) years from the bid submission deadline;</p> <p>(i) Design, construction, testing and commissioning of low voltage (LV) and medium voltage (MV) power distribution lines and equipment, in particular Distribution Transformer (DT) metering panels and LV distribution boards / feeder pillar panels.</p> <p>In addition to Form EXP-2, evidence of technical experience such as certified copy(ies) of Contract Agreements, Purchase Order(s)/Letter of Award(s), Work Order(s), Completion Certificate(s), Delivery Order(s), Sale Receipt(s) and substantial completion certificates etc. shall be submitted along with the Technical Bid.</p> <p>Employer reserves the right to verify such information from the clients.</p>	<p>One must meet requirement</p>	<p>One must meet requirement</p>	<p>Form EXP-2 / EXP-3 (as applicable).</p>

5. Subcontractors

Subcontractors or Manufacturers for the following major items of plant and services must meet the following minimum qualification criteria, herein listed for a Subcontractor for that item. Failure to comply with this requirement will result in rejection of the Subcontractor but not the Bidder.

Item #	Description of Item	Minimum Criteria to be met	Documents Submission Requirements
1	Smart Meters	<p>(i) Meter manufacturer must have Manufactured and supplied minimum 50,000 nos. of Smart Meters (cumulative) on proposed communication technology/ies with required hardware, software and other associated accessories during past five years from the deadline for bid submission which are in successful field operation for at least 1(one) year period.</p> <p>(ii) Meter manufacturer must have manufacturing facility with minimum capacity of 1,000 Smart meters per day.</p> <p>(iii) Meter manufacturer must have in-house, NABL or ISO/IEC -17025 accredited testing facility for sample and routine testing of smart meters</p>	<p>Form EXP – 3</p> <p>Manufacturer’s Authorization together with certified profile / letter confirming compliance to specified criteria.</p>

DOCUMENTARY EVIDENCES:

- a) The bidder shall furnish necessary detailed LOA copies with BOQ and end user certificates as documentary evidence thereof for the works specified in Technical experience criteria.

OTHER CONDITIONS:

- a) The documentary evidences required for satisfying Technical experience criteria, financial criteria, performance criteria and other Bidder's Qualifying Requirements (BQR) shall be furnished along with the offer.
- b) As regards documentary proof to substantiate experience requirement in regard to erection work, experience in manufacturing capacity, supply of cables, execution of works and satisfactory operation is concerned, the bidder will have to submit necessary certificates from User Agency clearly specifying the period of experience and other details.(All the certificates for proof should be attested)
- c) Evaluation of various experience criteria shall be done on the basis of certificates submitted by the bidder for which responsibility to furnish necessary documentary proof rests on participating bidder.
- d) However, clarifications in line with ITB 29 may be sought by the Employer.

Section 4 - Bidding Forms

Letter of Technical Bid

Note:

The bidder must accomplish the Letter of Technical Bid on its letterhead clearly showing the bidder's complete name and address.

Date:

OCB No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

Invitation for Bid No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

To:

K. L. Das, AGM (DP&C) & Nodal Officer
Corporate Office, Tripura State Electricity Corporation Limited
Agartala, Tripura (W), Pin:-799001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We offer to design, manufacture, test, deliver, install, pre-commission, and commission in conformity with the Bidding Document the following Plant and Services: **Design, Supply, Installation, Integration, Operation and Maintenance of Prepaid Smart Metering System of 150,000 smart meters in Tripura, India.**
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 180 days from the date fixed for the bid 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.
- (d) We, including any Subcontractors or Manufacturers for any part of the Contract, have or will have nationalities from eligible countries, in accordance with ITB 4.2.
- (e) We, including any Subcontractors or Suppliers for any part of the Contract, do not have any conflict of interest in accordance with ITB 4.3.
- (f) We are not participating, as a Bidder, either individually or as partner in a Joint Venture, in more than one bid in this bidding process in accordance with ITB 4.3(e), other than alternative offers submitted in accordance with ITB 13.
- (g) Our firm, Joint Venture partners, associates, parent company, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, are not subject to, or

not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Asian Development Bank or a debarment imposed by the Asian Development Bank in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the Asian Development Bank and other development banks

- (h) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the Contract, are not, or have never been, temporarily suspended, debarred, declared ineligible, or blacklisted by the Employer's country, any international organization, and other donor agency.

If so debarred, declared ineligible, temporarily suspended, or blacklisted, please state details (as applicable to each Joint Venture partner, associate, parent company, affiliate, subsidiaries, Subcontractors, and/or Suppliers):

- (i) Name of Institution: _____
(ii) Period of debarment, ineligibility, or blacklisting [*start and end date*]: _____
(iii) Reason for the debarment, ineligibility, or blacklisting: _____

- (i) Our firm's, Joint Venture partners, associates, parent company's affiliates or subsidiaries, including any Subcontractors or Suppliers key officers and directors have not been [*charged or convicted*] of any criminal offense (including felonies and misdemeanors) or infractions and/or violations of ordinance which carry the penalty of imprisonment.

If so charged or convicted, please state details:

- (i) Nature of the offense/violation: _____
(ii) Court and/or area of jurisdiction: _____
(iii) Resolution [*i.e. dismissed, settled, or convicted; duration of penalty*]: _____
(iv) Other relevant details [*please specify*]: _____

- (j) We understand that it is our obligation to notify ADB should our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors or Suppliers, be temporarily suspended, debarred or become ineligible to work with ADB or any other MDBs, the Employer's country, international organizations, and other donor agencies, or any of our key officers and directors be charged or convicted of any criminal offense or infractions/violations of ordinance which carry the penalty of imprisonment.

- (k) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors or Suppliers, are not from a country which is prohibited to export goods to or receive any payments from the Employer's country by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

- (l) [We are not a government-owned enterprise] / [We are a government-owned enterprise but meet the requirements of ITB 4.5].⁴
- (m) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration in accordance with ITB 4.6.
- (n) We agree to permit ADB or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB.
- (o) If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section 6 (Employer’s Requirements) and our technical proposal, or as otherwise agreed with the Employer.
- (p) We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded, and may result in remedial actions, in accordance with ADB’s Anticorruption Policy (1998, as amended to date) and Integrity Principles and Guidelines (2015, as amended from time to time).

Name _____

In the capacity of _____

Signed _____

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

Date _____

⁴ Use one of the two options as appropriate.

1. Country of Origin Declaration Form

Item	Description	Country of Origin

Letter of Price Bid

Note:

The bidder must accomplish the Letter of Price Bid on its letterhead clearly showing the bidder's complete name and address.

Date:

OCB No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

Invitation for Bid No.: AGM (DP&C)/ADB/SM/TSECL/Package-IV/09

To:

K. L. Das, AGM (DP&C) & Nodal Officer
Corporate Office, Tripura State Electricity Corporation Limited
Agartala, Tripura (W), Pin:-799001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We offer to design, manufacture, test, deliver, install, pre-commission, and commission in conformity with the Bidding Document the following Plant and Services: Supply, Installation & Integration of AMI Smart Meters in Tripura, India.
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is the sum of

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]

The total bid price from the Grand Summary (Schedule No. 5) should be entered by the Bidder inside this box. Absence of the total bid price in the Letter of Price Bid may result in the rejection of the bid.

- (d) The discounts offered and the methodology for their application are as follows: [. . . *insert discounts and methodology for their application if any* . . .]
- (e) Our Bid 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 Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document.

(g) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract⁵:

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____

(h) We understand that this bid, 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.

(i) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

(j) We agree to permit ADB or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB.

Name _____
In the capacity of _____
Signed _____
Duly authorized to sign the Bid for and on behalf of _____
Date _____

⁵If none has been paid or is to be paid, indicate "None."

Schedule: Deviation from Technical Requirements

All Technical deviations from the specification shall be filled in by the Bidder clauses by clause in the schedule

Section	Clause No	Deviation

Note: Deviation if not listed in this **will not be considered** and it will be assumed that **there are no deviations**.

The bidder hereby certifies that the above mentioned are the only deviations from the Technical Specification and the tender confirms to the specification in all other respects without any reservations.

Name of Bidder _____
Signature of Bidder _____
Company seal _____

Price Schedules

PREAMBLE

General

1. The Price Schedules are divided into separate Schedules as follows:

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Schedule No. 3: Design Services

Schedule No. 4: Installation and Other Services

Schedule No. 5: Grand Summary

Schedule No. 6: Recommended Spare Parts

2. The Schedules do not generally give a full description of the plant to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Employer's Requirements and other sections of the Bidding Document and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to cover the full scope as aforesaid, including overheads and profit.
3. If Bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with ITB 7 prior to submitting their bid.

Pricing

4. The units and rates in figures entered into the Price Schedules should be typewritten or if written by hand, must be in print form. Price Schedules not presented accordingly may be considered nonresponsive. Any alterations necessary due to errors, etc., shall be initialed by the Bidder.

As specified in the Bid Data Sheet and Special Conditions of Contract, prices shall be fixed and firm for the duration of the Contract, or prices shall be subject to adjustment in accordance with the corresponding Appendix (Price Adjustment) to the Contract Agreement.

5. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the Bidding Document.

For each item, Bidders shall complete each appropriate column in the respective Schedules, giving the price breakdown as indicated in the Schedules.

Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in Section 6 (Employer's Requirements) or elsewhere in the Bidding Document.

6. Payments will be made to the Contractor in the currency or currencies indicated under each respective item.

7. When requested by the Employer for the purposes of making payments or part payments, valuing variations or evaluating claims, or for such other purposes as the Employer may reasonably require, the Contractor shall provide the Employer with a breakdown of any composite or lump sum items included in the Schedules.

2. Schedules of Rates and Prices: Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad :

Item	Description	Country of Origin	Quantity	Unit Price ⁶		Total CIP Price	Unit Taxes & Duties ⁷	Taxes & Duties
				Foreign Currency	CIP	Foreign Currency	Local Currency	Local Currency
1	2	3	4	5	6	7 = 4 x 6	8	9=4*8
To be filled in Excel BOQ								
TOTAL Column 7 and 9 to be carried forward to Schedule No.6: Grand Summary								

Name of Bidder _____

Signature of Bidder _____

⁶Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies if so required

⁷Taxes shall exclude the Goods and Services Tax (GST) as defined in the GST Act 2017

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer’s Country

Item	Description	Quantity	Unit Price ⁸		Total EXW Price 6 = 3 x 5
			Local Currency	EXW Price ⁹	
1	2	3	4	5	6 = 3 x 5
To be filled in Excel BOQ					
TOTAL Column 6 to be carried forward to Schedule No. 5: Grand Summary¹⁰					

Name of Bidder _____

Signature of Bidder _____

⁸Specify currency in accordance with ITB 19.1 of the BDS.

⁹Column 5 EXW Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items

¹⁰As per the Goods and Services (GST) Act 2017, prices in Schedule no.2 shall exclude GST which subsumes Sales and other Taxes for Plant and Mandatory Spare Parts Supplied from Within the Employer’s Country. The GST shall be later added to the total contract price (refer to Schedule no. 5).

Schedule of Rates and Prices: Schedule No. 3 – Design Services

Schedule No. 3: Design Services

Item	Description	Quantity	Unit Price ^a		Total Price ^a	
			Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5
	TO BE FILLED	IN	EXCEL	BOQ		
TOTAL Columns 6 and 7 to be carried forward to Schedule No. 5: Grand Summary						

Note : All rates quoted above to be exclusive of GST

Schedule of Rates and Prices: Schedule No. 4 –Installation and Other Services to be Incurred in Employer’s Country (Incidental expenses, Installation & other services)

Item	Description	Quantity	Unit Price ¹¹¹²	Total Price
			Local Currency Portion	Local Currency Portion
1	2	3	4	5 = 3 x 4
1		To be filled in Excel BOQ	
2			
3			
4			
5			
6			
etc			
TOTAL Column 5 to be carried forward to Schedule No. 6: Grand Summary				

Name of Bidder _____

Signature of Bidder _____

¹¹Specify currency in accordance with ITB 19.1 of the BDS.

¹²As per the Goods and Services (GST) Act 2017, prices in Schedule No. 4 shall exclude GST which subsumes all applicable taxes, duties, levies, and charges for Installation and Other Services. The GST amount shall be later added to the total contract price (refer to Schedule no. 5).

Schedule of Rates and Prices: Schedule No. 5: Grand Summary

Schedule No.	Title	Total Price ¹³	
		Foreign	Local
1	Plant and Mandatory Spare Parts Supplied from Abroad ¹⁴		
2	Plant and Mandatory Spare Parts Supplied from Within the Employer’s Country ¹⁵		
3	Design Services ¹⁶		
4	Installation and other services ¹⁷		
(i) Grand Total for Bid Evaluation			

To be filled in
Excel BOQ

(ii) Custom Duties from Schedule No. 1 (column 9)

(iii) GST Amount = 18% x (i+ii)

Grand Total to be carried forward to Letter of Price Bid = (i) +(ii)+ (iii)

--	--

Name of Bidder _____

Signature of Bidder _____

Grand Total to be carried forward to Letter of Price Bid

¹³ Specify currency in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies if so required

¹⁴ Taxes and or duties from Schedules 1 and 2 may be added to the contract price in accordance with GCC 14 (Taxes and Duties) but excluded from bid evaluation in accordance with ITB 39.2.

¹⁵ Prices excluding GST

¹⁶ Prices excluding GST

¹⁷ Prices excluding GST

Schedule of Rates and Prices :Schedule No. 6: Recommended Spare Parts

Item	Description	Quantity	Unit Price*		Total Price*	
			EXW Local Parts Local Currency	CIP Imported Parts Foreign Currency	Local Currency Portion	Foreign Currency Portion
1	2	3	4	5	6= 3 x 4	7 = 3 x 5
1					
2					
3					
4					
5					
6					
TOTAL						

To be filled in by the Bidder and
Submitted as a pdf document
along with the bid.

* Specify currency in accordance with ITB 19.1 of the BDS.

Name of Bidder _____

Signature of Bidder _____

Manufacturer's Authorization

Date: *[insert date (as day, month and year) of bid submission]*

OCB No.: *[insert number of bidding process]*

To: *[insert complete name of the Employer]*

WHEREAS

We *[insert complete name of the manufacturer or manufacturer's authorized agent]*, who are official manufacturers or agent authorized by the Manufacturer of *[insert type of goods manufactured]*, having factories at *[insert full address of manufacturer's factories]*, do hereby authorize *[insert complete name of the Bidder]* to submit a bid the purpose of which is to provide the following goods, manufactured by us *[insert name and/or brief description of the goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 27 of the General Conditions of Contract, with respect to the goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of *[insert complete name of the manufacturer]*

Dated on _____ day of _____, _____ *[insert date of signing]*

-- Note --

The bidder shall require the manufacturer to fill out this form in accordance with the instructions indicated. This letter of authorization should be signed by a person with the proper authority to sign documents that are binding on the manufacturer. The bidder shall include it in its bid, if so indicated in the BDS.

Bid Security

Bank Guarantee

*Bank's name, and address of issuing branch or office*¹⁸

Beneficiary: *Name and address of the employer*

Date: _____

Bid Security No.: _____

We have been informed that *name of the bidder*. (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of *name of contract* under Invitation for Bids No. ("the IFB").

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

At the request of the Bidder, we *name of Bank*. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *amount in words* (. *amount in figures*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letters of Technical and Price Bid; or
- b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our

¹⁸All italicized text is for use in preparing this form and shall be deleted from the final document

receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458¹⁹.

..... Authorized signature(s) and bank's seal (where appropriate)

Note:

In case of a joint venture, the bid security must be in the name of all partners to the joint venture that submits the bid.

¹⁹Or 758 as applicable

Technical Proposal

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Plant

Personnel

Equipment

Proposed Subcontractors for Major Items of Plant and Services

Manufacturer’s Authorization

Time Schedule

Functional Guarantee of the Proposed Facilities

1. Site Organization

2. Method Statement

3. Mobilization Schedule

4. Construction Schedule

5. Plant

6. Personnel

Form PER – 1: Proposed Personnel

Bidders should provide the details of proposed personnel and their experience record in the relevant Information Forms below for each of the candidate.

1.	Title of position*
	Name
2.	Title of position*
	Name
3.	Title of position*
	Name
4.	Title of position*
	Name
etc.	Title of position*
	Name

*** Note: As listed in Section 6 (Employer’s Requirements).**

Form PER – 2: Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Use one form for each position.

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

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

7. Equipment

Form EQU: Equipment

The Bidder shall provide adequate information and details to demonstrate clearly that it has the capability to meet the equipment requirements indicated in Section 6 (Employer’s Requirements), using the Forms below. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder

Item of Equipment		
Equipment Information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current Status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	E-mail :
Agreements	Details of rental/lease/manufacture agreements specific to the project	

8. Proposed Subcontractors and/or Manufacturers for Major Items of Plant and Services

The following Subcontractors and/or Manufacturers are proposed for carrying out the item of the facilities indicated. Bidders are free to propose more than one for each item.

Major Items of Plant and Services	Proposed Subcontractors or Manufacturers	Nationality
(a) Smart Meters and Accessories (b) Communication Modules (c) Data Concentrator Unit (DCU) (d) 1.1 kV Service Cables (e) 1.1 kV DT / Feeder Cables (f) LT Current Transformers (g) LT Feeder Pillars		

9. Time Schedule

Technical Proposal

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI – 1: Bidder’s Information Sheet

Bidder’s Information	
Bidder’s legal name	
In case of a Joint Venture, legal name of each partner	
Bidder’s country of constitution	
Bidder’s year of constitution	
Bidder’s legal address in country of constitution	
Bidder’s authorized representative (name, address, telephone number(s), fax number(s), e-mail address)	
<p>Attached are copies of the following documents:.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. In case of a single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2 <input type="checkbox"/> 2. Authorization to represent the firm or Joint Venture named above, in accordance with ITB 22.2 <input type="checkbox"/> 3. In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1 <input type="checkbox"/> 4. In case of a government-owned enterprise, any additional documents not covered under 1 above required to comply with ITB 4.5 	

Form ELI – 2: Joint Venture Information Sheet

Each member of the Joint Venture must fill out this form separately. Subcontractor must fill out this form.

Joint Venture/Subcontractor Information	
Bidder's legal name	
Joint Venture Partner's or Subcontractor's legal name	
Joint Venture Partner's or Subcontractor's country of constitution	
Joint Venture Partner's or Subcontractor's year of constitution	
Joint Venture Partner's or Subcontractor's legal address in country of constitution	
Joint Venture Partner's or Subcontractor's authorized representative information (name, address, telephone number(s), fax number(s), e-mail address)	
Attached are copies of the following documents:	
<input type="checkbox"/> 1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2	
<input type="checkbox"/> 2. Authorization to represent the firm named above, in accordance with ITB 22.2	
<input type="checkbox"/> 3. In the case of a government-owned enterprise, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5	

Subcontractors are those listed in Technical Proposal – Proposed Subcontractors and/or Manufacturers for Major Items of Plant and Services.

Form FIN – 1: Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name below:

Joint Venture Partner: _____

Financial Data for Previous Years [\$ Equivalent]		
Year 1:	Year 2:	Year __:

Information from Balance Sheet

Total Assets (TA)			
Total Liabilities (TL)			
Net Worth = TA-TL			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital = CA – CL			

Most Recent Working Capital		To be obtained for most recent year and carried forward to FIN - 3 Line 1; in case of Joint Ventures, to the corresponding Joint Venture Partner’s FIN – 3.
------------------------------------	--	---

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last ____ years, as indicated above, complying with the following conditions.

- Unless otherwise required by Section 3 of the Bidding Documents, all such documents reflect the financial situation of the legal entity or entities comprising the Bidder and not the Bidder’s parent companies, subsidiaries or affiliates.
- Historical financial statements must be audited by a certified accountant.
- Historical financial statements must be complete, including all notes to the financial statements.
- Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Form FIN - 2: Average Annual Turnover

Each Bidder must fill out this form.

The information supplied should be the Annual Turnover of the Bidder or each member of a Joint Venture in terms of the amounts billed to clients for each year for work in progress or completed, converted to US dollars at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: _____

Annual Turnover Data for the Last ____ Years			
Year	Amount Currency	Exchange Rate	\$ Equivalent
Average Annual Turnover			

Form FIN – 3: Availability of Financial Resources

Bidders must demonstrate sufficient financial resources, usually comprising of Working Capital supplemented by credit line statements or overdraft facilities and others to meet the Bidder’s financial requirements for

- (a) its current contract commitments, and
- (b) the subject contract.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name below:

Joint Venture Partner: _____

Financial Resources		
No.	Source of financing	Amount (\$ equivalent)
1	Working Capital (to be taken from FIN - 1)	
2	Credit Line ²⁰	
3	Other Financial Resources	
Total Available Financial Resources		

²⁰ To be substantiated by a letter from the bank issuing the line of credit.

Form FIN – 4: Financial Requirements for Current Contract Commitments

Bidders (or each Joint Venture partner) should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name below:

Joint Venture Partner: _____

Current Contract Commitments						
No.	Name of Contract	Employer’s Contact (Address, Tel, Fax)	Contract Completion Date	Outstanding Contract Value (X)21	Remaining Contract Period in months (Y)22	Monthly Financial Resources Requirement (X / Y)
1						
2						
3						
4						
Total Monthly Financial Requirement for Current Contract Commitments						\$

²¹ Remaining outstanding contract values to be calculated from 28 days prior to the bid submission deadline (\$ equivalent based on the foreign exchange rate as of the same date).

²² Remaining contract period to be calculated from 28 days prior to bid submission deadline

Form EXP – 1: Contracts of Similar Size and Nature

Fill out one (1) form per contract.

Contract of Similar Size and Nature		
Contract No. of	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	\$	
If partner in a Joint Venture or subcontractor, specify participation of total contract amount	Percent of Total	Amount
	Employer’s name Address Telephone number Fax number E-mail	
Description of the Similarity in Accordance with Criterion 2.4.1 of Section 3 (Evaluation and Qualification Criteria)		
(Summary Scope of work of the Contract must be provided here)		

Note :The exchange rate to be used to calculate the value of the contract for conversion to a specific currency shall be the selling rate of the Borrower’s national bank on the date of the contract

Form EXP – 2: Experience in Key Activities

Fill out one (1) form per contract.

Contract with Similar Key Activities		
Contract No. of	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	\$	
If partner in a Joint Venture or subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's name Address Telephone number Fax number E-mail		
Description of the Key Activities in Accordance with Criterion 2.4.2 of Section 3 (Evaluation and Qualification Criteria)		
	(Summary Scope of work of the Contract must be provided here)	

Form EXP - 3: Subcontractors

Fill out one (1) form per contract.

Contract for the Major Items		
Contract No of	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	\$	
If partner in a Joint Venture or Subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer’s name Address Telephone number Fax number E-mail		
Description of the Major Items in Accordance with Criterion 2.5 of Section 3 (Evaluation and Qualification Criteria)		
	(Summary Scope of work of the Contract must be provided here)	

GST Registration details of bidder

Section 5: Eligible Countries

List of Eligible Countries of the Asian Development Bank

1. Afghanistan
2. Armenia
3. Australia
4. Austria
5. Azerbaijan
6. Bangladesh
7. Belgium
8. Bhutan
9. Brunei Darussalam
10. Cambodia
11. Canada
12. China, People's Republic of
13. Cook Islands
14. Denmark
15. Fiji
16. Finland
17. France
18. Georgia
19. Germany
20. Hong Kong, China
21. India
22. Indonesia
23. Ireland
24. Italy
25. Japan
26. Kazakhstan
27. Kiribati
28. Korea, Republic of
29. Kyrgyz Republic
30. Lao PDR
31. Luxembourg
32. Malaysia
33. Maldives
34. Marshall Islands
35. Micronesia, Federated States of
36. Mongolia
37. Myanmar
38. Nauru
39. The Netherlands
40. Nepal
41. New Zealand
42. Niue
43. Norway
44. Pakistan
45. Palau
46. Papua New Guinea
47. Philippines

Section 5: Eligible Countries

48. Portugal
49. Samoa
50. Singapore
51. Solomon Islands
52. Sri Lanka
53. Spain
54. Sweden
55. Switzerland
56. Taipei, China
57. Tajikistan
58. Thailand
59. Timor Leste
60. Tonga
61. Turkmenistan
62. Turkey
63. Tuvalu
64. Uzbekistan
65. United Kingdom
66. United States
67. Vanuatu
68. Vietnam

PART II

EMPLOYER'S REQUIREMENTS

PART II

EMPLOYER'S REQUIREMENTS

Section 6: EMPLOYER'S REQUIREMENTS

1. Project Requirements and Scope of Work

1.1. Background

1.1.1. Tripura Power Generation Upgradation & Distribution Reliability Improvement Project is co-financed by the Asian Development Bank (ADB) and the Government of Tripura. Tripura Power Distribution Corporation Limited (TSECL) is responsible for implementation of the Project. The goal of this project is improvement of system reliability, quality of supply and efficiency of the electricity distribution system in Tripura and capacity enhancement of gas based generation and promotion of renewable energy generation.

1.1.2. As one of the key project interventions, TSECL plans to replace existing electro-mechanical consumer energy meters with smart meters in identified areas in its sub-divisions and establish an AMI smart metering system, with MDM based prepaid metering solution.

1.2. Engagement of a Turnkey Contractor

1.2.1. TSECL intends to engage a suitably qualified and experienced Contractor with expertise and capacity for implementation of the proposed AMI based prepaid smart metering system on turnkey basis, through a process of competitive bidding.

1.2.2. The Bidder/s should provide credentials and references to demonstrate expertise for implementation of the scope of work. The firm should meet qualification criteria provided in section 3 of this Volume.

1.3. Scope of Work

The scope of work to be implemented by the successful bidder shall be as indicated in the Technical Specifications and BOQ/Price schedules. Summary scope of work include the following.

- Site survey and consumer indexing on de-novo basis for contiguous electrical locations in the designated project area (sub-divisions) for AMI system implementation along with its regular updates during contract period.
- Designing field implementation of smart metering including communications infrastructure as defined.
- Replacing existing single and three phase energy meters with smart meters for all consumers in designated contiguous electrical locations along with meter box installation and replacement of service cables.
- Installing smart metering for Distribution Transformers (DTRs) in designated contiguous electrical locations through smart 1-Ph, 3-Ph and LT-CT meters
- Replacing CT and CT-PT operated bulk consumer energy meters in all locations with smart energy meters.
- Supply spare smart meters and other accessories as specified in BOQs

- Establishment of communication NAN/WAN networks for two-way communication between smart devices and AMI Head End System as specified.
- Establishing of Head End System (HES) and its deployment on cloud
- Establishing Meter Data Management system (MDM) with prepaid functionality (as a part of MDM or through a separate pre-payment application) and its deployment on cloud
- Design, development and deployment on cloud, User interface (for utility), Consumer portal and mobile application as specified.
- Establishing Network Operation cum Monitoring Centre (NOMC) with suitable backend communication infrastructure, hardware, software, power supply and other equipment.
- Supply, installation, testing and deployment of necessary software along with valid licenses, all hardware and networking as required for the Project
- AMI System integration as specified to establish complete functionality of the end to end solution including integration with utility billing system and payment gateways.
- Development of a comprehensive consumer engagement plan related to different stages of implementation in consultation with utility and implement its part of its activities as per the developed plan.
- System management, operation, maintenance, and support services after the successful completion of the Operational Go-Live of the system for period as specified in BOQ / Price Schedules.
- Training of Utility personnel, as required for establishment and operation of efficient, viable and fully functional AMI system.

Implementation of all activities should be carried out complying with the requirements specified in this section, BOQ/Price Schedules and Technical Specifications provided in Vol II.

1.3.1 Designated Areas for AMI System Implementation

The designated contiguous areas identified for implementation of AMI smart metering system under this project are as indicated in the Table below. However, it should be noted that proposed designated areas / quantities may be subject to change during contract execution stage as notified by the Project Manager. No additional charges shall be payable by the Employer for any change in the numbers for any location within the State.

Table 6.1 Designated Contiguous Areas for Smart Meter Installations

#	Sub Division / Area	Proposed SM Consumers		Total
		Single Phase	3 Phase (LT)	
1	Electrical Sub-Division, GB under Capital Complex Electrical Division	18877	943	19820
2	Electrical Sub-Division, Durjoynagar under Capital Complex Electrical Division	18599	576	19175
3	Electrical Sub-Division, Capital Complex under Capital Complex Electrical Division	5724	646	6370
4	Electrical Sub-Division, Jogendranagar under Electrical Division No.II	19568	433	20001

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#	Sub Division / Area	Proposed SM Consumers		Total
5	Electrical Sub-Division, Sekerkote under Electrical Division No.II	9689	198	9887
6	Electrical Sub-Division, Amtali under Electrical Division No.II	15257	485	15742
7	Electrical Sub-Division, Pratapgarh under Electrical Division No.II	9004	131	9135
8	Electrical Sub-Division, Bordwali-VI under Electrical Division No.II	13176	306	13482
9	Electrical Sub-Division, Bordwali-III under Electrical Division No.II	20081	591	20672
10	Spare meter stock (future connections)	15242	474	15716
11	Total	145217	4783	150,000

1.3.2 DTR metering in Contiguous Areas

The Contractor is required to provide Distribution Transformer (DTR) metering for all DTRs in contiguous areas to facilitate MDM energy auditing functionality. The scope includes installation of LT-CT operated Smart Energy Meters, LT-CT Meter Boxes with Current Transformers of required CT ratios, cabling and other accessories. The following table provides list of DTRs for installation of LT-CT smart metering which is subject to change during implementation stage.

Table 6.2 List of DTRs in contiguous areas for DTR metering

#	Sub Division / Area	DTRs (Nos)													Total
		Upto 25 kVA	63 kVA	100 kVA	160 kVA	200 kVA	250 kVA	315 kVA	400 kVA	500 kVA	600/750 KVA	1250 kVA	1600 kVA	1700 kVA	
1	Electrical Sub-Division, GB under Capital Complex Electrical Division	4	51	91		31		22	1	21		1		2	224
2	Electrical Sub-Division, Durjoynagar under Capital Complex Electrical Division	26	46	80		17	8	11		19					207
3	Electrical Sub-Division, Capital Complex under Capital Complex Electrical Division	4	26	52		19	0	6	1	27	1	2	2		140
4	Electrical Sub-Division, Jogendranagar under Electrical Division No.II	38	77	73		17		7		4					216
5	Electrical Sub-Division, Sekerkote under Electrical Division No.II	42	56	19		1		1							119
6	Electrical Sub-Division, Amtali under Electrical Division No.II	15	60	71		26		15		13					200
7	Electrical Sub-Division, Pratapgarh under Electrical Division No.II	8	31	32		4		3							78
8	Electrical Sub-Division, Bordwali-VI under Electrical Division No.II	2	2	55		12		9		6					86
9	Electrical Sub-Division, Bordwali-III under Electrical Division No.II	17	24	83		26		13		9					172
10	Spare DTR meters	16	37	56	0	15	1	9	0	10	0	0	0	0	144
11	Total	172	410	612	0	168	9	96	2	109	1	3	2	2	1586

1.3.3 Conversion of HT (CT-PT) Bulk Consumer Meters to Smart Meters all Areas

The Contractor is required to replace existing HT meters (CT-PT operated) of all bulk metering installations with smart energy meters and connect to AMI system via Cellular

communication. The scope includes replacement of existing meters and installation of HT meters (CT-PT operated) smart energy meters at respective sites.

1.3.4 Establishment of Network Operations and Monitoring Centre (NOMC)

The Network operation and monitoring centre shall be established in the utility premises by the Contractor, for which suitable built-up space, mains electricity and water supply shall be provided by the utility. The proposed AMI Network Operation and Monitoring Centre shall be established in Agartala either in existing Data Center building or other building as offered by TSECL. The NOMC shall be equipped with required number of workstations and facilities for AMI system operation and management, including necessary workstations, hardware, software, networking, security systems, video display system, printers, data backup systems, online UPS, internet connections, equipment accessories and furniture for workstations etc. as specified in the Technical Specifications and BOQs.

1.3.5 Cloud Services

The Contractor is required to design, source, integrate, deploy and host required cloud services for provision of complete cloud-based AMI system management applications including HES, MDM, NMS, DBMS and other. The services shall provide specified functionality, performance and capacity as specified. The MDM shall be provided with Prepaid application to implement and manage prepaid metering functionality as specified.

The cloud services shall be secure, reliable and comprise of the necessary application, platform, infrastructure, and hardware layers to provide complete functionality as specified. The Contractor shall also ensure proper back-end management and maintenance services are provided by respective cloud service providers. MeitY empaneled (Ministry of Electronics and Information Technology, Govt. of India) GI cloud (MeghRaj) compliant Cloud services should be used in providing the proposed AMI solution.

1.3.6 Utility and Customer Interfaces

The contractor is required to design, develop and implement utility and customer interfaces with specified functionality and information.

A web-based user interface system shall be provided to the TSECL users with necessary access controls and authorization management system to access and manage MDM data and functions.

Customer Interface shall consist of Consumer portal and mobile application for all consumer categories. This shall be integrated into existing customer portal and mobile application for TSECL customers with additional options / functionalities as required, including prepaid metering information as indicated in Technical Specifications.

1.3.7 AMI System Integration

The AMI system integration should be carried out by the Contractor or its nominated specialized subcontractor in a professional manner which should include following system integrations as a minimum.

- i. Integration of HES with the field smart devices (DCUs/Routers and smart Meters) based on specified communication technologies.
- ii. Integration of MDM with (a) HES and (b) TSECL Billing(Revenue Management) system and payment gateways
- iii. Integration of MDM with ERP based utility information systems (FMS/MMS/HRMS) and provision for interfacing with future utility and national level systems (national level reporting platform).

HES shall export all meter data to MDM and pass control commands from MDM. HES should conform to IEC 61968-9 as well as support CIM 2.0 / MultiSpeak v3.0 standards. In case, utility has implemented any Service Oriented Architecture (SOA)/Enterprise Service Bus (ESB) architecture, the data exchange to and from HES shall be through this ESB.

The HES shall follow the integration protocol established by IS 15959 (DLMS-COSEM) and make use of ACSE and xDLMS services to communicate with southbound field devices (DCUs and SmartMeters) irrespective of the physical communication layer. The Network Management function specific to the HES shall be integrated with overall Data Centre level NMS module for easy monitoring, analysis and reporting

The MDM will act as the bridge to integrate the AMI system with other utility IT/OT systems. MDM shall interface with utility IT/OT systems on standard interfaces. The data exchange models and interfaces shall comply with CIM-XML-IEC 61968-9 / IEC 61968-100 / Web Services / MultiSpeakv3.0. MDM solution shall be ESB-SOA enabled.

For those IT/OT systems which the Utility have planned in future, the Contractor shall publish document on available standard interfaces to enable their integration.

The AMI system should provide a seamless exchange of data with future national level data portal without any manual interface including NFMS. In this regard, the MDM shall have an out-bound interface to facilitate data transfer through API-based model/ service bus to a central platform as and when made available.

1.3.8 Communication Technology for Deployment of Smart Meters

Use of following communication technologies are permitted in the Project for communication between smart devices / systems.

WAN connectivity for backhaul communications between DCUs and HES ;

- (a) Cellular (mobile) communication (GPRS /3G /4G / NB-IOT as appropriate) **and /or**
- (b) Fiber Optic Communications (OFC)

Connectivity for smart meters with DCU or HES

- (a) RF – Mesh (for NAN connectivity) **and**
- (b) Cellular communication (GPRS/3G/4G/NB-IOT as appropriate)

Section of communication technologies for WAN connectivity (cellular, OFC or combination of both) is open to the bidders. (Commercial OFC networks are available in most parts of Agartala offered by reputed third parity companies).

For communications between smart meters and DCU/HES bidders are required to submit rates based on predefined mix of cellular communication (20%) and RF-Mesh (80%) as given in BOQs. However, this mix may vary upon field survey and other requirements as decided by TSECL and the unit rates quoted for respective items in the BOQ shall be apply for any change in quantity during implementation.

1.3.9 Technological Obsolescence

When selecting communication technology for NAN / WAN networks, bidders shall ensure selected technology is unlikely to become obsolete during the specified O&M period. In the event offered technology becomes obsolete during contractual operation and maintenance period, the Contractor shall be responsible to migrate smart devices to an operable new technology that ensure reliability and functionality of the AMI system.

1.3.10 Training

The Contractor is required to provide professional and end user training to nominated TSECL staff covering the content as indicated in Technical Specifications. In addition, Contractor is required to provide on-the-job training to nominated TSECL staff who are assigned to work with the Contractor's staff during Operation and Maintenance Stage.

1.4. Site Surveys/ Consumer Indexing

The Contractor is required to carry out site survey / consumer indexing in the designated contiguous areas to collect necessary asset data for planning and designing deployment of smart meters and establish AMI system.

Consumer indexing refers to door-to-door survey to identify locations of each smart meter to be installed and to obtain required asset / consumer data and asset mapping information, i.e. the linkage of the consumer meter to the electric network. During consumer indexing existing meter and consumer data will be recorded and its association with electricity network with respect to DTR / LT and HT feeders will be identified as per details provided in the Technical Specification.

Any additional information such as data for communication network infrastructure design and feasibility of using specified communication technologies in the respective localities shall also be collected during the site survey.

Consumer Indexing & Meter Installation should be carried out through a robust web/mobile application provided by the Contractor for better tracking and record of field data and activities. TSECL will provide available information such as billing data to carry out consumer indexing activity by the contractor and guide / assist contractor for planning and carrying out survey work subject to availability of TSECL field staffs at respective sub-divisions.

Except for the information and assistance to be provided by TSECL, all other resources required for consumer indexing such as manpower, equipment (including GPS equipment, Tabs), transportation and other logistics, software etc. shall be Contractor's responsibility.

Upon completion of survey and consumer indexing, the contractor shall submit **updated schedule of quantities** for deployment of smart meters, communication and other equipment in respective contiguous areas / sub-divisions for approval of the Employer. The scope of supply and works shall be in accordance with approved updated schedule of quantities.

1.5. Design

The successful bidder shall plan and design the AMI system based on the survey information and approved communications technology options for respective designated areas. The scope of design includes planning smart meter deployment, design of communication network infrastructure, design of smart metering networks, formulation and processing consumer data and associations into AMI system databases.

1.6. System Capacity and Scalability

The HES and MDM systems provided through cloud services shall comply with the capacity requirements as specified in the Technical Specifications. The other cloud based software systems provided for AMI including network and database management systems shall have adequate capacity for trouble free operation of the entire system.

The capacity of HES and MDM systems shall be scalable and upgradable as specified in Technical Specifications. In the event TSECL requests for upgrading capacity in future, The Contractor shall comply with such request with reasonable rates for capacity upgrades, subject to scalability limits as specified.

1.7. Multiple HES support

The MDM shall support multiple HES for integration of smart metering networks provided by different vendors.

The Contractor upon request of the Employer, shall accommodate and integrate MDM with HES from other vendors (developed based on similar specifications and communication protocols) using standard interfaces and the data exchange models, with reasonable rates for implementing such integration, where applicable.

1.8. Project Management System (PMS)

- 1.8.1. Employer will designate a Project Manager to coordinate and manage all project related activities who will act as the overall in-charge of the Project, whose decisions are binding on the implementation of the project. The successful bidder (Contractor) shall assign a Team Leader with the authority to make commitments and decisions. All communications between Employer and the Contractor shall be coordinated through the Project Manager.

- 1.8.2. The Contractor shall comply with all requirements specified in the bid document including communications, submittals, approvals, documentation, progress monitoring, Quality Assurance and evaluation Mechanism (QAM), occupational health & safety management system (OSM) etc. to ensure smooth functioning of the PMS. Any non-compliances with respect to the above will be dealt with in accordance with the terms and conditions of the contract.
- 1.8.3. In the event computerized / web based tools are introduced by TSECL for effective functioning of PMS, the Contractor is required provide necessary facilities, data and inputs in a timely manner for functioning of such system.
- 1.8.4. The Employer may appoint Consultants / third party inspectors to handle various technical and management aspects of the Project on their behalf. The Contractor is required to cooperate with such Consultants including provision of information and facilitating inspection of work.

1.9. Project Personnel:

The Bidder must demonstrate that it has the suitably qualified and experienced personnel for to manage and carry out project implementation works as per requirements indicated in Clause 7 of this section.

1.10. Organization :

The Bidder shall provide to the Employer an organization chart showing the proposed organization to be established for implementation of project activities if contract is awarded to him.

1.11. Equipment:

- 1.11.1. The Bidder must demonstrate that they possess the required equipment for implementation of the scope of works as per requirements specified in clause 8.
- 1.11.2. The use of appropriate equipment and tools for work at site will be verified as a part of Quality Assurance and Evaluation Mechanism (QAM) established for the project.

1.12. Project Implementation Program:

- 1.12.1. The bidder shall submit proposed mobilization, construction and time schedules as provided in section 4, along with the bid for implementation of the scope of work. .
- 1.12.2. The successful bidder (Contractor) shall submit detailed implementation program showing the sequence in which proposed implementation activities to be carried out with time periods in the form of "BAR CHART" and "SUB BAR CHARTS" within 28 days after effective date. Also Contractor shall indicate the dates by which the Contractor reasonably requires that the Employer shall have fulfilled its obligations under the Contract so as to enable the Contractor to execute the contract in accordance with the program and to achieve completion, commissioning and acceptance in accordance with the Contract. The program so submitted by the Contractor shall accord with the dates and periods specified in the

Contract. The Contractor shall update and revise the program as and when appropriate or when required by the Project Manager, but without modification in the times for completion given in the SCC and any extension granted and shall submit all such revisions to the Employer.

1.12.3. The detailed project implementation program shall include schedule of following activities:

- Site surveys / consumer indexing updated schedule of quantities and cost estimates
- Documents submission and approval schedule
- Equipment / Material procurement, inspection and testing
- Equipment / Material dispatch
- Erection, testing and commissioning
- Operation go-live and rollout AMI system services

1.13. Progress Report

The Contractor shall monitor progress of all the activities specified in the project implementation program and supply a progress report to the Project Manager every month. The progress report shall be in a form acceptable to the Project Manager and shall indicate: (a) percentage completion achieved compared with the planned percentage completion for each activity; and (b) where any activity is behind the program, giving comments and likely consequences and stating the corrective action being taken.

1.14. Communication Plan

The Project Manager will establish a communication plan with necessary time frames for supply of information and submittals etc. for effective management of the Project. The bidder shall provide his inputs / submittals according to such Plan.

1.15. Meetings

Scheduled project meetings shall be conducted each month attended by the Contractor, Employer and Consultants in order to review the progress and to discuss and resolve any implementation issues. Minutes of the meetings shall be maintained.

1.16. Statutory Clearances and Approvals

The Contractor shall be responsible for obtaining statutory and regulatory clearances from the concerned authorities for supply of items and execution of works. TSECL shall provide necessary assistance and authorization for obtaining such clearances.

1.17. Documents and Approvals





1.17.1. The Contractor shall submit to the Employer all documents in accordance the contract. The Contractor shall also submit any further information (in the form of drawings, documents, manuals, literature, reports etc.) when asked by the Employer.

The Contractor shall supply 4 hard copies and soft copy of all drawings and documents. The Contractor shall maintain a correspondence index and assign transmittal numbers for all

Contractor documents. Employer shall also maintain a similar numbering scheme identifying documents and correspondence that Employer initiates.

- 1.17.2. The documents which are subject to the approval of the Employer shall be identified by the Contractor with the stamp "FOR APPROVAL". All other documents shall be submitted to the Employer for information and shall be identified by the Contractor with the stamp "FOR INFORMATION".
- 1.17.3. In case a "SUBSEQUENT" revision of any document is made due to any reason, a revision of the same, highlighting the changes shall be resubmitted for the Employer's specific approval/ information.
- 1.17.4. The Employer shall be allowed fifteen (15) calendar days to review and approve the Contractor's submissions. The Contractor shall submit necessary documents for approval accordingly in advance in order to ensure progress of work is not affected pending approvals from the Employer.

The Employer shall review documents and provide approvals as per following categories;

Category	Status	Status Color Code	Remarks
Category I:	Approved		Proceed with the work as shown on the document
Category II:	Approved with Comments		Work shall be done subject to the corrections indicated thereon
Category III:	Returned For Correction		Make required alterations and resubmit.
Category IV:	For Information		Take note and comment is required.

- 1.17.5. The Contractor shall note that the approval / commenting by the Employer does not relieve him of any of his contractual obligations and his responsibilities for correctness of dimensions, materials, weights quantities or any other information contained therein, as well as the obligations for compliance to technical specification and standards. The approval also does not limit the Employer's rights under the Contract.

1.18. Quality Assurance and Evaluation Mechanism (QAM)

The quality assurance and evaluation mechanism (QAM) will be established by the Employer to ensure quality individual items of scope of works and overall quality of installations.

The key objectives and measures to be established by the Employer to accomplish these objectives for effective implementation of the QAM are indicated in the table below;

Table 6.2 QAM Objectives and Measures

Scope	QAM Objective	QAM Measures
Engineering	<ul style="list-style-type: none"> • Contractor to establish good engineering practice as per applicable standards, rules, codes etc. for design, installation, testing and commissioning of the AMI system. 	<ul style="list-style-type: none"> • All surveys, designs, drawings, diagrams, calculations to be provided by the Contractor as per technical specifications and applicable standards. All documents to be reviewed approved by the Project Manager (PM) / Consultants prior to implementation of works. • All erection / installation works, testing and commissioning are carried out as per specifications and applicable standards following good engineering practice with acceptable quality of workmanship. This will be closely monitored by the PM / Consultants and any unsatisfactory works will be rejected.
Supply	<ul style="list-style-type: none"> • All plant, equipment and materials are supplied in accordance with the technical specifications and drawings. • Any deviations from the above are declared and approved. • The subcontractors / manufacturers possess required qualifications and experience as per specified requirements including licenses. • Type testing requirements as per technical specifications are fully complied. • Acceptance and routine tests are carried out as per specifications during the manufacturing process. • All items supplied conform to the guaranteed technical Particulars 	<ul style="list-style-type: none"> • All major items of supply are offered from approved sub-contractors / manufacturers as provided in the bid document. • The Contactor to follow due procedure as specified in the bid document for approval of new sub-contractors / manufacturers for supply of major items. • Verification of qualifications of the subcontractor / manufacturer for supply of plant / equipment and materials. Factory inspections may be conducted if required. • Submittal of the General Technical Particulars (GTPs), deviation schedules, data, samples, specifications, drawings and type test reports

Scope	QAM Objective	QAM Measures
	<p>(GTPs)furnished by the Contractor .</p> <ul style="list-style-type: none"> • All items are packed and transported as per requirements of technical specifications. • All items are stored in accordance with specified requirements. 	<p>by the Contractor for major plant and equipment for verification and approval by the PM. Such items shall be ordered / procured only upon written approval from PM.</p> <ul style="list-style-type: none"> • Verification of type test reports including qualifications of the test laboratory, completeness and acceptance of the type test reports. • Witnessing acceptance tests carried out by the subcontractor / manufacturer by nominated TSECL engineers, consultants or third party inspectors. • Review and approval of all routine and acceptance test reports by the PM and approval. • Carrying out pre-dispatch inspections for all key items by nominated TSECL engineers, consultants or third party inspectors prior to granting approval for dispatch. • Inspection of temporary storage facilities of the Contractor.
Erection	<ul style="list-style-type: none"> • All erection / installation works are carried out in full complacence with the specifications including requirements specified in scope of works, technical specifications and drawings. • All items installed at site are approved materials complying with the specifications. • All Installations are carried out following proper technical procedures and using proper 	<ul style="list-style-type: none"> • All works are carried out by qualified and skilled personnel. The contractor to submit details of key personnel assigned to respective sub-project whose qualifications are accessed by the PM in granting permission to work • Carry out inspections during execution to verify works are carried out in compliance to technical specifications and standards and acceptable

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Scope	QAM Objective	QAM Measures
	<p>equipment and tools.</p> <ul style="list-style-type: none"> • Workmanship of installations are of acceptable quality. • All works are approved for hand-over and acceptance. 	<p>quality of workmanship.</p> <ul style="list-style-type: none"> • Issue Site Observation Reports (SOR) or any works that are not satisfactory and follow-up with the Contractor implementation of any remedial actions. • Issue Warning Letters and Advisory Notices for any serious non-compliances. • Review Contractors notice of work completion including commissioning test reports for compliance to technical requirements. • Upon completion, joint inspections to be carried out for certification of works. • Ensure all defects / punch list items are cleared by the Contractor prior to hand over and processing of payments for respective works. • Follow-up any on technical issues for corrective action during defects liability period.
<p>Testing and Commissioning</p>	<ul style="list-style-type: none"> • All individual equipment, protection, control and communications systems are installed and tested as per technical specifications and standards and are operational. • All components of the installations, hardware and software are operational and provide required functionality individually and collectively under operational condition. 	<ul style="list-style-type: none"> • Contractor to submit proposed procedure, schedule and test plan for testing and commissioning, to be reviewed and approved by the PM. TSECL may recommend to incorporate their own commissioning and testing requirements in this respect. • The PM to nominate TSECL engineers / consultants to witness / verify testing and commissioning process at any stage. • All commissioning reports and test results to be

Scope	QAM Objective	QAM Measures
		submitted by the Contractor for approval of the PM upon completion.
Post Implementation Services	<ul style="list-style-type: none"> Post implementation O&M services are provided in accordance with the requirements specified. 	<ul style="list-style-type: none"> Evaluation of performance of post implementation services as specified in Technical Specifications.

The Contractor shall cooperate and comply with the QAM requirements with respect to engineering, supply, erection, testing and commissioning accordingly and provide necessary inputs, data and other facilities in time to ensure establishment of an effective Quality Assurance and Evaluation Mechanism.

1.19. Occupational Health and Safety Management

1.19.1. As per provisions laid down in CEA regulation – ‘safety requirements for construction, operation and maintenance of electrical plants and electric lines’, 2011 or subsequent amendments thereof (<http://www.cea.nic.in/regulations.html>) and safety requirements of the Employer are required to be complied by the Contractor during execution of works.

1.19.2. Contractor shall be fully responsible for the safety of workers, public, plant and equipment during execution of works until handover. Further as per stated regulations the Contractor is required to appoint a safety coordinator to ensure the implementation of safety requirements and to liaise with the safety officer of the Employer.

1.19.3. The Contractor is therefore required to prepare a Safety Plan indicating provisions for ensuring for safety, incorporating safety requirements of the owner and as provided in regulations. The safety plan submitted by the Contractor should include the following;

- Defining policy and responsibilities for safety
- Allocation of human, physical and financial resources
- Compliance to owner’s safety requirements
- Measures to ensure safety at work
- Defined procedures for obtaining permit to work, isolation & earthing etc.
- Strict measures to ensure use of safety equipment such as safety belts, helmets etc. during execution of works
- Provisions to ensure public safety during execution of works
- Provisions to ensure awareness of works on safety requirements including training
- Emergency management plan for quickly and effectively dealing with probable emergencies / accidents including first aid, medical evaluation etc.
- System to monitor and report matters of safety including compliance and accident reporting.

- Provision for liaising and reporting on matters of safety with the owner

1.19.4. The Safety Plan shall be approved by the Project Manager. The Contractor is responsible to ensure compliance to the safety plan. The Project Manager will make arrangements to monitor effective implementation and compliance to the approved safety plan.

1.20. Social and Environmental Responsibility

The contractor is required to plan and execute works ensuring compliance to applicable environmental regulations and with minimum impacts to general public and environment.

In this respect, the contractor is also required comply with Environmental Management Plan (EMP) / Environmental Monitoring Plan provided in **Appendix B**.

The contractor is required establish any measures recommended by the Employer / Asian Development Bank to minimize adverse environmental and social impacts.

The Contractor shall list out measures implemented in this regard and submit to the Employer. The Contractor shall also maintain records of any complaints / requests received from general public and other organizations.

1.21. Scope of Supply

All plant / equipment and materials shall fully comply with applicable standards and technical specifications provided in Vol II and shall be supplied from approved subcontractors (if applicable) as provided in the bid document. The Contractor shall follow due procedure as specified in the bid document for approval of new sub-contractors / manufacturers for supply of major items if required.

In addition to above, requirements indicated in following sub-clauses shall apply for supply, of plant, equipment and materials.

1.21.1. Guaranteed Technical Particulars (GTPs)

The Bidder shall furnish guaranteed technical particulars (GTP) as per GTP Schedules provided in the Technical Specifications (Volume II) together with other technical information such as catalogues, engineering data, technical information, design documents, drawings etc for all major items in the scope of supply.

The bidder shall provide key technical parameters in the GTPs during bidding stage for verification of general technical compliance of the items offered, for the purpose of technical evaluation of the bids. These should include manufacturer details, compliance standards, equipment model numbers, capacity and ratings, accessories, samples, guaranteed performance details etc. **The GTPs submitted during bidding stage will be used only for general review in the technical evaluation process. However, technical evaluation during bidding stage shall not be considered as a guarantee that offered models / technical particulars will be approved following detailed review of GTPs during the execution stage.**

During execution of stage, the Contractor is required to provide complete and detailed technical parameters in GTPs together with other technical information and samples (if required) for the purpose of approval.

1.21.2. **Schedule of Deviations**

The bidder shall submit schedule of deviations for all items under the scope of supply clearly indicating any deviations from technical specifications and standards. Any discrepancy between the specifications and offered items in the bid, if not clearly indicated in the schedule of deviations, will not be considered as valid deviation.

Manufacturers may have standardized on the use of certain components, materials, processes or procedures different from those specified in technical specifications. Alternate proposals offering similar equipment based on the manufacturer's standard practice will also be considered provided such proposals meet the basic design, standard and performance requirements and are acceptable to the Employer.

1.21.3. **Calibration Certificates**

All smart meters shall be calibrated at factory and calibration certificates shall be provided for each meter / batch of meters.

1.21.4. **Type Tests**

Contractor shall supply equipment / materials of type & design which has already been Type Tested. Bidder / Contractor shall provide certified copies of such type test reports for all mandatory type tests specified in relevant technical specifications / standards for each item in the scope of supply. No extra payment or time shall be granted for type testing of equipment / materials.

Type test reports should be issued during period not exceeding 10 years from the bid opening date. In case the type test reports are of the test conducted earlier than 10 (ten) years prior to the date of bid opening, the contractor shall repeat these test(s) at no extra cost to the Employer.

Type tests reports shall be from reputed independent NABL accredited testing laboratories in India or reputed international test laboratories accredited to ISO/IEC 17025:2005 for carrying out specified type tests. The test laboratories should be acceptable to TSECL.

In case the Contractor opts to supply any item from more than one manufacturer, certified copies of type tests reports shall be submitted for each manufacturer / product.

In the event of any discrepancy in the type test reports i.e. any test report not acceptable due to any model /design/manufacturing changes or due to non-compliance with the requirements stipulated in the Technical Specification same shall be carried out without any additional cost implication to the Employer.

If TSECL requires any additional type tests to be carried out or any mandatory type test to be repeated on the offered equipment, Contractor shall arrange such tests to be conducted

as required. Reasonable costs incurred by the Contractor in this respect shall be reimbursed by the Employer as per invoice from the test laboratory and reasonable shipping and overhead costs.

1.21.5. Routine and Acceptance Tests

Acceptance Tests shall mean those tests which are to be carried out on samples taken from each lot offered for pre-dispatch inspection, for the purposes of acceptance of that lot.

Routine Tests shall mean those tests, which are to be carried out on the material/equipment to check requirements which are likely to vary during production.

The Employer may nominate his representative and / or third party inspection company to witness the acceptance tests to verify compliance to the specified technical requirements. The Contractor shall facilitate such inspections in coordination with the manufacturer. The manufacturer shall afford the inspector all reasonable facilities, without charge, to satisfy him that the material is being furnished are in accordance with the standards and specifications. The Contractor shall submit notice of acceptance tests to be carried out by the manufacturer for each batch of supply at least two weeks in advance. Generally acceptance tests shall be arranged together with pre-dispatch inspections.

1.21.6. Special Tests

Requirements with respect to special tests shall apply if specified in the Technical Specifications and Contractor shall provide the same without extra cost to the Employer.

Special Tests on Smart Meters

Bidder is required to provide any available reports on estimation of life characteristics of the offered smart meters as per IS 15707 (2006) or IEC 62059-31-1 (accelerated reliability testing) or according to other equivalent standard. If these are presently not available, TSECL reserve the right to request to carry out such tests if deemed to be required.

1.21.7. Inspections

The Employer, his duly authorized representative and/or outside inspection agency acting on behalf of the Employer shall have at all reasonable times free access to the Contractor's/sub-vendors premises or Works and shall have the power at all reasonable times to inspect and examine the materials and workmanship of the Works during its manufacture. Inspections may be made at any stage of manufacture, dispatch or at site at the discretion of the Employer and the equipment if found unsatisfactory due to bad workmanship or quality, are liable to be rejected.

The Contractor shall submit schedule of dispatch by the manufacturer for each batch of supply and Employer may nominate his representative and / or third party inspection company to inspect the items prior to dispatch. The Employer may also make similar arrangements to inspect items at Contractor's stores upon delivery. The Contractor in

coordination with the manufacturer shall afford the inspector all reasonable facilities, without charge, to carry out such inspections.

1.21.8. **Packing, Marking and Transportation**

Packing and markings shall be provided for all supply items as per specified technical specifications.

All the items shall be suitably protected, sealed, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage. This includes any special arrangements required for transportation of larger equipment such as power transformers.

The Contractor shall be responsible for any loss or damage during transportation, handling and storage due to improper packing.

1.21.9. **Handling and storage**

The Contractor shall be responsible for examining all shipments and notify the Employer immediately of any damage, shortage, discrepancy etc. for the purpose of information only.

The Contractor shall be solely responsible for any shortages or damages in transit, handling and/or in storage and erection of the equipment at site. Any demurrage, wharfage and other such charges claimed by the transporters, railways etc. shall be responsibility of the Contractor. The contractor shall ensure adequate insurance coverage is provided for this purpose.

The Contractor shall be responsible for making suitable indoor/ outdoor storage facilities, to store all equipment and materials until installation. The Contractor shall be fully responsible for the equipment / material until the same is handed over to the Employer in an operating condition after commissioning.

1.21.10. **Spare parts**

The Contractor is required to supply **mandatory spare parts** as listed in the BOQs.

The bidder shall also submit **schedule of recommended spare parts** for five year operation of the plant and equipment supplied in accordance with format specified in section 4. The schedule of recommended spare parts shall be submitted along with the bid as a pdf document. Bidders shall note that the **price of recommended spare parts will not be considered for bid evaluation**, but if any such spare parts are required to be included in the Contract it will be added during contract award stage.

The Contractor shall ensure availability of spare parts required for the operation and maintenance of the installed facilities for a minimum period of 10years from completion of works.

1.21.11. **Warranty**

Successful Bidder shall provide warranty towards design, materials, workmanship & quality of process / manufacturing of smart energy meters of all type for due and intended performance for a period of 120 months from the date of commissioning. For all other items of the scope of supply, warranty shall be 3 years from the date of commissioning or date of delivery and acceptance as indicated in Technical Specifications.

If any equipment found defective within the above warranty period bidder shall be responsible to repair / replace defective equipment free of cost immediately to ensure continuity of service within a reasonable time frame.

Provisions applicable for defect liability as indicated in section 7 and section 8 shall be applicable in this respect.

1.21.12. **Software**

All application software provided through cloud services shall have valid licensing, covered under subscription payments by the Contractor. Applicable subscription payment costs and other charges relating cloud services shall be included in the rates for Operation and Maintenance quoted by the bidder. Any other software physically supplied to be used with the various system components including smart meter and communication equipment software, software for NOMC etc. shall carry perpetual licensing without any additional / annual changes.

1.21.13. **Documentation**

The Bidder shall provide all documentation and submittals as specified in the Technical Specifications including Guaranteed Technical Particulars (GTP), Schedule of Deviations, drawings, technical literature, operations / maintenance manuals, test reports, calibration certificates, service manuals and other documents as applicable.

1.21.14. **After Sales Service**

The bidder shall confirm provision of after sales services including supply of spares at reasonable rates for 10 (ten) years after warranty period. The bidder has to indicate clearly type of after sales service that will be provided within warranty period and outside and provide address of the manufacturer's service center in India and contact details.

1.22. **Implementation**

All erection / installation works shall be carried out in full complacence with the specifications including requirements specified in scope of works, technical specifications and approved drawings. All Installations shall be carried out by qualified and skilled staffs following proper technical procedures and using proper equipment and tools. Workmanship of installations shall be of acceptable quality.

The Contractor is required to maintain records of installation of each equipment including necessary data, measurements, drawings, calculations, notes, verifications and tests.

The Contractor shall ensure all safety measures and procedures are followed when carrying out erection works. Adherence to safety requirements during erection including compliance to safety procedures by the workers as per approved Safety Plan shall be monitored by the Safety Officer at all sites.

The Employer has the right to carry out inspections through his nominated staffs, consultants or third party inspectors, during execution to verify works are carried out in compliance to technical specifications and standards and are of acceptable quality of workmanship.

The Employer as a part of QAM process shall issue Site Observation Reports (SOR) for any works that are not satisfactory and follow-up with the Contractor implementation of any remedial actions.

Any of the works with improper installation or poor workmanship are liable to be rejected by the Employer.

1.22.1. Scope for AMI system implementation

The scope of work for AMI system implementation shall be as indicated in clause 1.3. Following specific requirements shall apply with respect to filed implementation activities.

1.22.2. Replacement of existing meters with smart energy meters

The requirements with respect to replacement of existing meters with smart energy meters include the following;

- i. For meter replacements, existing meters, accessories, and meter boxes shall be removed and returned to TSECL warehouses in respective sub-divisions.
- ii. New smart meters and meter boxes shall be installed at site according to approved drawings, circuit diagrams, specifications and instructions issued by TSECL. If any existing wooden baseboard holding existing meter box is not re-usable, same should be replaced with polycarbonate base board supplied under the Contract.
- iii. The smart meter should be positioned at a suitable location at customer premises according to IP rating and accessibility for inspections. If existing location is not suitable the location for smart meter may be shifted as appropriate.
- iv. The service cable from supply line to the smart meter should be clearly distinguishable and clear from load cable / wires. There shall be no crisscrossing between supply and load cables. There shall be no intermediate tappings in the supply service cable, if any should be permanently removed.
- v. The existing supply service cables should be removed and replaced with new service cable of appropriate size (according to load capacity and no of phases). The electrical conduits and GI wires shall also be replaced, while other service accessories may be reused.
- vi. Upon installation, meter shall be tested as per TSECL instructions. This includes visibly check of the installation, verification against approved drawings (size, type, model etc.) and correctness of wiring as per approved circuit diagrams, checking that

general construction and standard of finish is satisfactory and proper functionality of meter is in working order upon energization.

- vii. Appropriate settings of the meter according to modality of operation shall be verified and connection to the communication networks (WAN or NAN) shall be tested to ensure two-way communication between smart devices / DCU / HES as required.
- viii. Information of existing and new meters including meter serial numbers, consumer details, last meter reading of replaced meters (with photo), any other related information for billing records shall be recorded and submitted.

Bidders shall note that smart meters will be received and accepted by TSECL only upon successful implementation at site and connection to the AMI system, except for the number of meters retained by TSECL as spares for future use.

1.22.3. Installation of DTR meters and feeder pillars

LTCT operated DTR metering shall be installed for all existing distribution transformers. For distribution transformers upto capacity of 630 KVA, LT feeder pillar panels (with fuse disconnectors) shall also be installed on ground under the H-pole. These feeder pillar panels shall also include metering compartment to house smart meter and CTs as per specifications. The feeder pillars are to be provided to facilitate future undergrounding of LT networks as per TSECL plans. However at present outgoing cable from LT feeder pillars shall be connected to existing overhead LT lines.

In case of distribution transformers of capacity more than 630 kVA (these are generally bulk consumer transformers) the LT feeder pillar panels are not required. However CT or CT-PT operated smart metering housed in a pole mounted enclosure shall be provided.

The following table provides types of feeder pillars, sizes of DT cables (from DTR bushing into Feeder Pillar incomer via metering CTs) and sizes of feeder cables (from Feeder Pillar outgoing to LT overhead line).

DTR Capacity (KVA)	Feeder Pillar Type	Cable Type	DT Cable size (sqmm)	Feeder Cable size (sqmm)
25 - 100 KVA	FP1 - 1x400 A/ 3x160A	1C, Al/XLPE	95	50
160 - 315 KVA	FP2 - 1x630 A/ 3x250A	1C, Al/XLPE	240	120
400 - 630 KVA	FP3 - 1x100 A/ 3x315A	1C, Al/XLPE	630	240
1250 KVA	-	1C, Al/XLPE	2x630	-
1500 - 1750 KVA	-	1C, Al/XLPE	3x630	-

The contractor shall ensure proper installation of CTs s and wiring according to approved drawings and circuit diagrams. This includes ensuring the following in accordance with approved circuit diagrams.

- i. Feeder pillar panels are installed with foundations as per manufacturer’s recommendations.
- ii. LT-CT meters are properly and firmly installed with CTs and test terminal blocks.

- iii. DT and feeder cables are provided with correct sizing and numbers according to transformer capacity.
- iv. Connection of CTs are made ensuring the following.
 - CTs are connected in proper direction / polarity,
 - CTs are matched to the same phase voltage (no cross-connection errors) ,
 - CTs are connected as per appropriate phase sequence (no phase sequence connection errors).
- v. Instrument transformer operated smart meters are properly installed and their parameters / registers are programmed to apply scaling / correction factors for CT (and PT as applicable) ratios to provide actual consumption value for meter face reading. Any discrepancy between the internally programmed ratios and the physical CT / PT ratios must be recorded and appropriate action shall be taken for immediate correction.

Contractor shall also ensure meter parameters / registers are appropriately adjusted to compensate for CT/PT errors as required. Calculations in this respect shall be submitted to the Project Manager for approval.
- vi. Upon installation, CT / CT-PT operated smart meter shall be tested as per TSECL instructions. This includes accuracy check using portable reference standard meter testing equipment, visibly check of the installation, verification against approved drawings (size, type, model etc.) and correctness of wiring as per approved circuit diagrams, checking that general construction and standard of finish is satisfactory and proper functionality of meter is in working order upon energization.
- vii. Connection of installed meters to the communication networks (WAN or NAN) shall be tested to ensure two-way communication between smart devices / DCU / HES as applicable.

1.22.4. **Supply Interruptions**

No network supply interruptions are envisaged for smart meter installations. However, in the event some local supply interruptions are deemed necessary, Contractor shall be responsible for obtaining prior approval from TSECL. The contractor shall notify required interruptions schedule to the TESCL in advance to process necessary approvals. The Contractor shall make all efforts to minimize supply interruptions to the consumers by proper planning and scheduling of the works.

1.22.5. **Testing and Commissioning**

The contractor shall carry out testing and commissioning of smart meters, communication equipment, AMI system hardware and software as per applicable standards and specifications by trained and skilled personnel.

Any special equipment and tools required for carrying out commissioning tests shall be provided by the contractor, free of cost.

1.23. **Responsibilities of the Employer and Contractor**

Responsibilities of the Employer and Contractor shall be as defined in the Contract.

The Employer shall endeavor to fulfill the following requirements for smooth implementation of the Project;

- a) Make its best effort to assist the Contractor in obtaining permits, approvals, and import and other licenses from local public authorities as required.
- b) Provide on Contractor's request, particulars/ information / or documentation that may be required by the Contractor.
- c) Provide existing database of consumer data and physical & IT infrastructure as available with the Utility.
- d) Provide drawings for NOMC building where AMI system installations are planned.
- e) Provide necessary inputs for developing a comprehensive consumer engagement plan.
- f) Provide necessary approvals for shutdowns as required for implementing the AMI System.
- g) Make arrangements to receive spare meters and equipment supplied by the Contractor and receive or dispose existing meters and accessories, boxes, service wires etc removed from the network.
- h) Implement consumer engagement plan with support of Contractor. This may include running media campaign to raise awareness and countering myths around smart metering prior to installation, providing SOPs for smart meter installation to Contractor ,etc.
- i) Keep Contractor informed of any changes in the area network during the project installation and operation period. Furthermore, Utility will partner with Contractor for discovering/updating consumer indexing (DT/ Feeder wise) after installation of smart meters through structured power events data analysis including scheduling such events for each node with minimum inconvenience to consumer.
- j) Provide mains A.C. power supply inputs for Network Operation and Monitoring center (NOMC) and other project facilities.
- k) Provide all required documents for delivery of material at site
- l) Provide at its expense, the electrical energy required for performance of the Project activities, installation, testing, and operation of the AMI Systems
- m) Providing support and access to facilities at the sites, including consumer premises.
- n) Provide the required integration interface details of the existing billing enterprise and related information required for Operational Go-Live of the AMI system.
- o) Provide reasonable support to the Contractor for the Operational Go-Live in terms of the provisions of this Contract
- p) Provide necessary support to Contractor in the Project area, in relation to (amongst others) access to Utility's/consumers premises, installation of AMI system, repair and maintenance services, etc. The Employer shall also:
 - i. Give access to Contractor supervisor or its operation & maintenance staff to work in the Project area during the Contract Period.
 - ii. Give access to Contractor to use existing power and water supply at NOMC, and other necessary equipment, as mutually agreed with the Contractor.
 - iii. Not move, remove, modify, alter, or change the AMI system or any part thereof in the boundary of the AMI system installed by the Contractor without the prior notification. Employer shall take all reasonable steps to protect the AMI system from damage or injury and shall follow procedure for emergency action provided in advance by Contractor
- q) Be responsible for operation and maintenance of power supply system, and promptly

- attend to any break down including repair or replacement of any equipment used/needed for maintaining continuity of electricity supply for AMI system operation.
- r) Permit the Contractor to perform the project activities during working hours, and also after working hours as necessary, to meet the requirements of Project Implementation Plan.
 - s) Provide necessary support in development of pre-payment application / infrastructure.
 - t) Allow Contractor (and/or its implementation partner, sub-contractors, investor(s), authorized agency) unfettered access to network operation cum monitoring centre. Such covered and enclosed space as required by Contractor shall be provided to it by Utility free of cost during the Contract Period;
 - u) Facilitate Contractor for the timely implementation of the AMI Project and for its successful operation and maintenance during the Contract Period
 - v) Release payments to Contractor as per agreed terms
 - w) At its own cost, replace or repair existing equipment (other than AMI systems), such as poles, cables including consumer service lines, and transformers etc. where necessary to make the AMI system operational and/ or safe from hazards and maintain in proper working condition all portions of all facilities that are not included in the Contractor 's scope of maintenance
 - x) Provide all other necessary support as may be required time to time.

The Contractor will be responsible to provide sufficient number of teams for installation activities as per approved work schedule targets to complete the work. Each Team should comprise of at least one technician along with a supervisor. The Contractor shall perform all works in a professional manner with acceptable quality to the Employer.

1.24. Operation and Maintenance Services

1.24.1. The Contractor is required to provide operation, maintenance and system management services (O&M services) upon successful completion of the operational go-live of the system, for a period as specified in the BOQ / Price Schedules.

1.24.2. The scope of O&M services include the following;

(a) **Field O&M Services** : Provision of field services for operation and maintenance of smart meters and communications networks in respective sub-divisions (designated contiguous areas). This includes maintaining smart meters and communication equipment for trouble free operation, repair / replacement of defective devices, mobilizing adequate number of required staffs and maintaining spares inventory as required to meet specified performance levels. The Contractor shall also provide necessary support to TSECL for adding new smart meters and new bulk metering installations to accommodate consumer growth in the respective sub-divisions.

(b) **AMI System Management Services** : Provision of services for management, operation and maintenance of complete AMI system including provision of HES, MDM and other cloud services with valid licensing and development in cloud, managing all activities at NOMC including mobilizing required staffs, troubleshooting and debugging for trouble free operation of AMI, maintaining system data and backups, updating system resources, provision of all required communication / data services, maintaining spares inventory of critical system hardware and components to maintain the system at specified performance levels.

The Contractor is responsible to provide full scope of O&M services as indicated in clause 7.0 of the Technical Specifications.

- 1.24.3. The contractor is required to provide unit rates for above services in the Price Schedules in terms of Rs / Month / Smart Meter Node. The smart meter nodes shall be counted as the total number of single phase, three phase or bulk (LT-CT or HT) consumers physically serviced through the AMI system during specified month. Any other common system resources such as DTR meters and DCUs etc, which are not associated with the consumers shall not be accounted. In the event this consumer count has changed during the month, the minimum number of consumers serviced throughout the month shall be considered for O&M payments for respective month.
- 1.24.4. The provision of O&M services shall commence following operational go-live of the system. The start date for commencement of O&M services shall be officially notified by the Employer as mutually agreed with the Contractor, upon operationalization of critical components of the AMI system including AMI Cloud services ,Communication Networks and following availability of minimum number of **10,000** smart meters successfully installed in field, connected to the AMI system and ready for commercial operation.
- 1.24.5. **Bidders shall note that rates for O&M services to be provided in BOQ/ Price schedules are monthly O&M rates applicable for specified quantity of smart meter nodes(as per BOQ) serviced through the AMI system during a month. Pro rata rates from this rate shall be applicable according to actual number of smart meter nodes serviced through the AMI system in a respective month.**
- 1.24.6. The payment for O&M services are subject to meeting minimum threshold of service defined against each performance level as indicated in clause 7.7 of Technical Specifications. The contractor shall be liable for applicable penalties for failure to meet specified performance requirements as provided in Technical Specifications.
- 1.24.7. The Contractor is required to enter into a Service Level Agreement (SLA) with the Employer for provision of O&M services. In the SLA, the Employer will specify applicable service delivery requirements as per specified performance levels, payment terms and applicable penalties as indicated in clause 1.24.6. The Employer may secure a reasonable performance security from the Contractor for execution of the SLA.
- 1.24.8. The ownership of all devices, software, hardware and equipment shall remain with the Employer upon issuance of operational acceptance certificate whereas the Contractor is entrusted to operate and maintain them on behalf of the Employer for the period as specified in the service level agreement.
- 1.24.9. During the period of operation and maintenance services, the Contractor's staffs are required to provide complete on the job training to nominated TSECL staffs and ensure that they are capable of operating the system independently upon handover.
- 1.24.10. Successful bidder is also responsible to coordinate and arrange warranty replacement and after sales services during the O&M services period.

1.25. Handover of AMI System

The Contractor is required to hand hold the Utility team to take over operation, maintenance and support services upon completion of the period of service level agreement (SLA).

Upon completion of specified duration of the service level agreement for provision of O&M services, the Contractor shall handover operation of the whole system to TSECL. Provision of cloud services by the Contractor may however be continued based on mutually agreed and revised rates.

Alternatively, TSECL has the option of extending service level agreement for a further period on revised scope of services and renegotiated rates, terms and conditions.

In the event of handover, the Contractor is required to handover the complete AMI system including hardware, software and other infrastructure in satisfactory working condition with full functionality tested and established. In the event of any defect in equipment, the Contractor is required to replace such equipment prior to handover without additional charge.

1.26. Payments for supply, works and services

The contractor is entitled for cap-ex payments for all supply and works (excluding O&M services) implemented under the contract in accordance with the payment terms as specified in Appendix 1 of section 9.

For provision of specified O&M services, the contractor is entitled for monthly op-ex payments as per service level agreement (SLA).

1.27. Temporary storage facilities

Successful bidder shall be fully responsible for supplied smart meters and other equipment until installation at site. Successful bidder shall arrange suitable temporary storage facilities as appropriate and ensure safekeeping of meters and equipment until installation.

1.28. Change Orders

If any variation is required in design or qualities during implementation due to actual site conditions or technical requirements, the Contractor shall submit Request for Change Proposal with necessary justifications to the Employer and follow stipulated procedures as provided in clause 6 of this section.

1.29. Defect list Items

All defect / punch lists issued by the Employer with respect to works implemented by the Contractor shall be cleared prior to issuance of operational acceptance certificate.

1.26. Time Schedule

The Contractor shall comply with the time schedule for completion as indicated in Appendix 4 of the bid document.

1.30. Joint Inspection

Employer shall arrange joint inspection together with the Contractor for final measurements and certification of works.

1.31. Defect Liability

The Contractor is required to rectify, repair or replace any defect/s in the design, engineering, materials, and workmanship found and notified during the defect liability period as specified in sections 7 and 8 of the bid documents.

1.32. Documentation upon completion

The Contractor is required to finalize and submit all documentation including as built drawings, specifications, supplier information, wiring / schematic diagrams, settings, operation and maintenance manuals, safety instructions, licenses, clearance from authorities and guarantees prior to issuance of completion / substantial completion certificate.

2. Specifications

- 2.1. Technical specifications provided in **Volume II** shall be applicable for supply of plant / equipment and materials and execution of works which forms a part of the Contract.
- 2.2. All equipment shall comply with the BIS and other standards provided in technical specifications. Other alternative international standards which ensure equal or better quality / performance than the standards mentioned above will also be considered by TSECL. In such case bidder shall submit copies of the alternate international standards to which offered items are manufactured together with comparison of requirements as per applicable standards. The TSECL decision regarding acceptance of alternate standards shall be final.
- 2.3. In case technical specifications do not cover adequate details of any item/s, bidder shall offer suitable product specifications as per item description provided in BOQs and as suitable for intended application, which is subject to approval of the Project Manager during contract execution stage pursuant to Clause 1.17.
- 2.4. **Order of precedence for technical requirements:**

In the event of any ambiguity or uncertainty with respect to interpretation of the technical requirements provided in bid document, the following order of precedence shall apply, unless otherwise advised by the Employer during execution of the Contract

- (1) **PRICE SCHEDULES (BOQs) – Excel Format**
- (2) **VOLUME I** (Including this Section No 6)
- (3) **VOLUME II :TECHNICAL SPECIFICATIONS**

3. Drawings

- 3.1. No specific drawings are provided for this Bid. Any reference drawing provided with the technical specifications are indicative.
- 3.2. The Contractor during implementation phase is required prepare required detailed drawings in accordance with the characteristics of the equipment offered and as per applicable specifications, standards & statutory requirements and submit them for approval of the Employer.
- 3.3. All drawings submitted by the Contractor shall be in sufficient detail to indicate the type, size, arrangement, material description, Bill of Materials, weights, dimensions, internal & external connections, fixing arrangements and any other information specifically requested in the specifications.
- 3.4. Each drawing submitted by the Contractor shall be clearly marked with the drawings and revision numbers, name of the Employer & Contractor, title, reference number and the name of the Project. If standard catalogue pages are submitted, the applicable items shall be indicated therein. All titles, noting, markings and writings on the drawing shall be in English. All the dimensions should be in metric units.

Further, work carried out by the Contractor shall be in strict accordance with the approved drawings and any deviation if so required, shall be permitted with the written approval of the Employer.

- 3.5. The review of these drawings by the Employer will cover only general conformance of the data to the specifications and documents interfaces with the equipment provided under the specifications. This review by the Employer may not indicate a thorough review of all dimensions, quantities and details of the equipment, materials, any devices or items indicated or the accuracy of the information submitted. This review and/or approval by the Employer shall not be considered by the Contractor, as a blanket approval for all details provided in such drawings.
- 3.6. All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawings shall be at the Contractor's risk. The Contractor may make any changes in the design which are necessary to make the equipment conform to the provisions and intent of the Contract and such changes will again be subject to approval by the Employer. Approval of Contractor's drawing or work by the Employer shall not relieve the contractor of any of his responsibilities and liabilities under the Contract.
- 3.7. All drawings and engineering data submitted by the Contractor after final process including review and approval by the Employer shall form part of the Contract Document and the entire works shall be performed in strict conformity with the specifications, unless otherwise expressly requested by the Employer in Writing.

4. Supplementary Information

Nil.

5. Certificates

5.1 FORM OF COMPLETION CERTIFICATE

Contract: [. . . *insert name of contract and contract identification details.* . . .]

Date:

Certificate No.:

To: [. . . *insert name and address of Contractor.* . . .]

Dear Ladies and/or Gentlemen,

Pursuant to GCC Clause 24 (Completion of the Facilities) of the General Conditions of the Contract entered into between yourselves and the Employer dated [. . . *insert date.* . . .], relating to the [. . . *brief description of the Facilities* . . .], we hereby notify you that the following part(s) of the Facilities was (were) complete on the date specified below, and that, in accordance with the terms of the Contract, the Employer hereby takes over the said part(s) of the Facilities, together with the responsibility for care and custody and the risk of loss thereof on the date mentioned below.

1. Description of the Facilities or part thereof: [. . . *description* . . .]
2. Date of Completion: [. . . *date* . . .]

However, you are required to complete the outstanding items listed in the attachment hereto as soon as practicable.

This letter does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

[. . . *Signature* . . .]

Project Manager

5.2 FORM OF OPERATIONAL ACCEPTANCE CERTIFICATE

Contract: [. . . *insert name of contract and contract identification details.* . . .]

Date:

Certificate No.:

To: [. . . *insert name and address of Contractor.* . . .]

Pursuant to GCC Subclause 25.3 (Operational Acceptance) of the General Conditions of the Contract entered into between yourselves and the Employer dated [. . . *date.* . .], relating to the [. . . *brief description of the facilities.* . .], we hereby notify you that the Functional Guarantees of the following part(s) of the Facilities were satisfactorily attained on the date specified below.

1. Description of the Facilities or part thereof: [. . . *description* . . .]
2. Date of Operational Acceptance: [. . . *date* . . .]

This letter does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

[. . . *Signature* . . .]

Project Manager

6. Change Orders

6.1 Change Order Procedure

6.1.1 General

6.1.2 Change Order Log

6.1.3 References for Changes

6.2. Change Order Forms

6.2.1 Request for Change Proposal

6.2.2 Estimate for Change Proposal

6.2.3 Acceptance of Estimate

6.2.4 Change Proposal

6.2.5 Change Order

6.2.6 Pending Agreement Change Order

6.2.7 Application for Change Proposal

6.1. Change Order Procedure.

6.1.1. General

This section provides samples of procedures and forms for implementing changes in the Facilities during the performance of the Contract in accordance with GCC Clause 39 (Change in the Facilities) of the General Conditions.

6.1.2. Change Order Log

The Contractor shall keep an up-to-date Change Order Log to show the current status of Requests for Change and Changes authorized or pending. Entries of the Changes in the Change Order Log shall be made to ensure that the log is up-to-date. The Contractor shall attach a copy of the current Change Order Log in the monthly progress report to be submitted to the Employer.

6.1.3. References for Changes

- 1) Request for Change as referred to in GCC Clause 39 shall be serially numbered CR-X-nnn.
- 2) Estimate for Change Proposal as referred to in GCC Clause 39 shall be serially numbered CN-X-nnn.
- 3) Acceptance of Estimate as referred to in GCC Clause 39 shall be serially numbered CA-X-nnn.
- 4) Change Proposal as referred to in GCC Clause 39 shall be serially numbered CP-X-nnn.
- 5) Change Order as referred to in GCC Clause 39 shall be serially numbered CO-X-nnn.

Note:

- a) Requests for Change issued from the Employer's Home Office and the Site representatives of the Employer shall have the following respective references:

Home Office CR-H-nnn

Site CR-S-nnn

- b) The above number "nnn" is the same for Request for Change, Estimate for Change Proposal, Acceptance of Estimate, Change Proposal and Change Order.

6.2. Change Order Forms

6.2.1. Request for Change Proposal Form

[*Employer's letterhead*]

To: [*Contractor's name and address*]

Date:

Attention: [*Name and title*]

Contract Name: [*Contract name*]

Contract Number: [*Contract number*]

Dear Ladies and/or Gentlemen:

With reference to the captioned Contract, you are requested to prepare and submit a Change Proposal for the Change noted below in accordance with the following instructions within [*number*] days of the date of this letter [or on or before (*date*)].

1. Title of Change: [*Title*]
2. Change Request No./Rev.: [*Number*]
3. Originator of Change:
Employer: [Name]
Contractor (by Application for Change Proposal No. [Number Refer to Annex 6.2.7])
4. Brief Description of Change: [*Description*]
5. Facilities and/or Item No. of equipment related to the requested Change: [*Description*]
6. Reference drawings and/or technical documents for the request of Change:
Drawing No./Document No. Description
7. Detailed conditions or special requirements on the requested Change: [*Description*]
8. General Terms and Conditions:
 - a) Please submit your estimate showing what effect the requested Change will have on the Contract Price.
 - b) Your estimate shall include your claim for the additional time, if any, for completing the requested Change.

Section 6: Employer's Requirements

- c) If you have any opinion that is critical to the adoption of the requested Change in connection with the conformability to the other provisions of the Contract or the safety of the Plant or Facilities, please inform us in your proposal of revised provisions.
- d) Any increase or decrease in the work of the Contractor relating to the services of its personnel shall be calculated.
- e) You shall not proceed with the execution of the work for the requested Change until we have accepted and confirmed the amount and nature in writing.

[*Employer's name*]

[*Signature*]

[*Name of signatory*]

[*Title of signatory*]

6.2.2. Estimate for Change Proposal Form

[Contractor's letterhead]

To: [Employer's name and address]

Date:

Attention: [Name and title]

Contract Name: [Contract name]

Contract Number: [Contract number]

Dear Ladies and/or Gentlemen:

With reference to your Request for Change Proposal, we are pleased to notify you of the approximate cost to prepare the below-referenced Change Proposal in accordance with GCC Subclause 39.2.1 of the General Conditions. We acknowledge that your agreement to the cost of preparing the Change Proposal, in accordance with GCC Subclause 39.2.2, is required before estimating the cost for change work.

1. Title of Change: [Title]
2. Change Request No./Rev.: [Number]
3. Brief Description of Change: [Description]
4. Scheduled Impact of Change: [Description]
5. Cost for Preparation of Change Proposal: [insert costs, which shall be in the currencies of the contract]
 - a) Engineering (Amount)

(i)	Engineer	_____	hours (hrs)	x	_____	rate/hr =	_____
(ii)	Draftsperson	_____	hours (hrs)	x	_____	rate/hr =	_____
	Sub-total	_____	hrs				_____
	Total Engineering Cost						_____
 - b) Other Cost _____
 - Total Cost (a) + (b) _____

[Contractor's name]

[Signature]

[Name of signatory]

[Title of signatory]

6.2.3. Acceptance of Estimate Form

[*Employer's letterhead*]

To: [*Contractor's name and address*]

Date:

Attention: [*Name and title*]

Contract Name: [*Contract name*]

Contract Number: [*Contract number*]

Dear Ladies and/or Gentlemen:

We hereby accept your Estimate for Change Proposal and agree that you should proceed with the preparation of the Change Proposal.

1. Title of Change: [*Title*]
2. Change Request No./Rev.: [*Request number/revision*]
3. Estimate for Change Proposal No./Rev.: [*Proposal number/revision*]
4. Acceptance of Estimate No./Rev.: [*Estimate number/revision*]
5. Brief Description of Change: [*Description*]
6. Other Terms and Conditions: In the event that we decide not to order the Change accepted, you shall be entitled to compensation for the cost of preparing the Change Proposal described in your Estimate for Change Proposal mentioned in para. 3 above in accordance with GCC Clause 39 of the General Conditions.

[*Employer's name*]

[*Signature*]

[*Name of signatory*]

[*Title of signatory*]

6.2.4. Change Proposal Form

[Contractor's letterhead]

To: [Employer's name and address]

Date:

Attention: [Name and title]

Contract Name: [Contract name]

Contract Number: [Contract number]

Dear Ladies and/or Gentlemen:

In response to your Request for Change Proposal No. [Number], we hereby submit our proposal as follows:

1. Title of Change: [Name]
2. Change Proposal No./Rev.: [Proposal number / revision]
3. Originator of Change: Employer: [Name] / Contractor: [Name]
4. Brief Description of Change: [Description]
5. Reasons for Change: [Reason]
6. Facilities and/or Item No. of Equipment related to the requested Change: [Facilities]
7. Reference drawings and/or technical documents for the requested Change:
[Drawing/Document No./Description]
8. Estimate of increase/decrease to the Contract Price resulting from the Change Proposal:

Amount

[insert amounts in the currencies of the Contract]

- | | |
|-----------------------------------|-------|
| a) Direct material | _____ |
| b) Major construction equipment | _____ |
| c) Direct field labor (Total hrs) | _____ |
| d) Subcontracts | _____ |
| _____ | |
| e) Indirect material and labor | _____ |
| _____ | |
| f) Site supervision | _____ |

g) Head office technical staff salaries

Design engineer	___	hrs @	___	rate/hr	_____
Project engineers	___	hrs @	___	rate/hr	_____
Procurement	___	hrs @	___	rate/h	_____
Draftsperson	___	hrs @	___	rate/hr	_____
Total	___	hrs			_____

h) Extraordinary costs (computer, travel, etc.) _____

i) Fee for general administration, % of Items _____

j) Taxes and customs duties _____

Total lump sum cost of Change Proposal [Sum of items (a) to (j)]

Cost to prepare Estimate for Change Proposal [Amount payable if Change is not accepted]

9. Additional time for Completion required due to Change Proposal

10. Effect on the Functional Guarantees

11. Effect on the other terms and conditions of the Contract

12. Validity of this Proposal: within [Number] days after receipt of this Proposal by the Employer

13. Other terms and conditions of this Change Proposal:

- a) You are requested to notify us of your acceptance, comments or rejection of this detailed Change Proposal within [Number] days from your receipt of this Proposal.
- b) The amount of any increase and/or decrease shall be taken into account in the adjustment of the Contract Price.
- c) Contractor's cost for preparation of this Change Proposal: [.insert amount. This cost shall be reimbursed by the employer in case of employer's withdrawal or rejection of this Change Proposal without default of the Contractor in accordance with GCC Clause 39 of the General Conditions . . .]

[Contractor's name]

[Signature]

[Name of signatory]

[Title of signatory]

6.2.5. **Change Order Form**

[Employer's letterhead]

To: [Contractor's name and address]

Date:

Attention: [Name and title]

Contract Name: [Contract name]

Contract Number: [Contract number]

Dear Ladies and/or Gentlemen:

We approve the Change Order for the work specified in the Change Proposal (No. [number]), and agree to adjust the Contract Price, Time for Completion, and/or other conditions of the Contract in accordance with GCC Clause 39 of the General Conditions.

1. Title of Change : [Name]
2. Change Request No./Rev. : [Request number / revision]
3. Change Order No./Rev. : [Order number / revision]
4. Originator of Change : Employer: [Name] / Contractor: [Name]
5. Authorized Price:

Ref. No.: [Number] Date: [Date]

Foreign currency portion [Amount] plus Local currency portion [Amount]

6. Adjustment of Time for Completion
None Increase [Number] days Decrease [Number] days
7. Other effects, if any

Authorized by: _____

Date: _____

Employer

Accepted by: _____

Date: _____

Contractor

6.2.6. Pending Agreement Change Order Form

[*Employer's letterhead*]

To: [*Contractor's name and address*]

Date:

Attention: [*Name and title*]

Contract Name: [*Contract name*]

Contract Number: [*Contract number*]

Dear Ladies and/or Gentlemen:

We instruct you to carry out the work in the Change Order detailed below in accordance with GCC Clause 39 of the General Conditions.

1. Title of Change: [*Name*]
2. Employer's Request for Change Proposal No./Rev.: [*number/revision*] dated: [*date*]
3. Contractor's Change Proposal No./Rev.: [*number / revision*] dated: [*date*]
4. Brief Description of Change: [*Description*]
5. Facilities and/or Item No. of equipment related to the requested Change: [*Facilities*]
6. Reference Drawings and/or technical documents for the requested Change:
[*Drawing / Document No. / Description*]
7. Adjustment of Time for Completion:
8. Other change in the Contract terms:
9. Other terms and conditions:

[*Employer's name*]

[*Signature*]

[*Name of signatory*]

[*Title of signatory*]

6.2.7. Application for Change Proposal Form

[Contractor's letterhead]

To: [Employer's name and address]

Date:

Attention: [Name and title]

Contract Name: [Contract name]

Contract Number: [Contract number]

Dear Ladies and/or Gentlemen:

We hereby propose that the work mentioned below be treated as a Change in the Facilities.

1. Title of Change: [Name]
2. Application for Change Proposal No./Rev.: [Number / revision] dated: [Date]
3. Brief Description of Change: [Description]
4. Reasons for Change:
5. Order of Magnitude Estimation (amount in the currencies of the Contract): [Amount]
6. Scheduled Impact of Change:
7. Effect on Functional Guarantees, if any:
8. Appendix:

[Contractor's name]

[Signature]

[Name of signatory]

[Title of signatory]

7. Personnel Requirements

Using Form PER - 1 and PER - 2 in Section 4 (Bidding Forms), the Bidder must demonstrate that it has personnel who meet the following requirements.

No	Position	Total Work Experience [years]	Experience in Similar Work [years]
1	Team Leader/ Smart Metering Expert	7	4
2	Project engineers experienced in detailed engineering, design, specifications, procurement and implementation AMI smart metering system.	5	3
3	AMI system integration expert/s experienced in AMI system integration works with offered communication technologies.	5	3
4	IT professionals experienced application development, database development, SOA/ESB architecture and cyber security.	5	3
5	Survey staff or survey and consumer indexing	2	1
6	Skilled manpower with requisite tradesmen/ statutory license and experience in installation of smart meters, communication devices, service cabling, feeder pillars etc.	3	3
7	Safety officer experienced in safety of electrical construction work	5	3
8	Supervisor for O&M services experienced in operation and maintenance of AMI systems.	3	2
9	AMI system operators	3	2
10	Field O&M services staffs	3	2

The number of personnel for each category to be mobilized shall be indicated in bidder's technical proposal.

8. Equipment Requirements

Using Form EQU in Section 4 (Bidding Forms), the Bidder must demonstrate that it possess key equipment (own/ hired/leased) as per following requirements.

No	Equipment Type and Characteristics	Minimum Number Required
1	Portable reference standard meter testing equipment	Quantities to suit the construction schedule submitted.
2	Communication test equipment	
3	Personal Protective Equipment including Safety gloves and other PPEs	
4	Tools & Tackles	
5	Insulation Tester, 5 kV	
6	Crimping tools	
7	Safety ladders	
8	Vehicles for transportation of equipment and personnel.	

Section 7: General Conditions of Contract

A. General

1. Definitions

1.1. The following words and expressions shall have the meanings hereby assigned them:

- a) "Contract" means the Contract Agreement entered into between the Employer and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term "the Contract" shall in all such documents be construed accordingly.
- b) "Contract Documents" means the documents listed in Article 1.1 (Contract Documents) of the Contract Agreement (including any amendments thereto).
- c) "GCC" means the General Conditions of Contract.
- d) "SCC" means the Special Conditions of Contract.
- e) "day" means calendar day.
- f) "year" means 365 days.
- g) "month" means calendar month.
- h) "Party" means the Employer or the Contractor, as the context requires.
- i) "Employer" means the person named as such in the SCC and includes the legal successors or permitted assigns of the Employer.
- j) "Project Manager" means the person appointed by the Employer in the manner provided in GCC Subclause 17.1 (Project Manager) hereof and named as such in the SCC to perform the duties delegated by the Employer.
- k) "Contractor" means the person(s) named as Contractor in the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor.
- l) "Contractor's Representative" means any person nominated by the Contractor and approved by the Employer in the manner provided in GCC Subclause 17.2 (Contractor's Representative and Construction Manager) hereof to perform the duties delegated by the Contractor.
- m) "Construction Manager" means the person appointed by the Contractor's Representative in the manner provided in GCC Subclause 17.2.4.
- n) "Subcontractor," including manufacturers, means any person to whom execution of any part of the Facilities, including preparation of any design or supply of any Plant, is sub-contracted directly or indirectly by the Contractor, and includes its legal successors or permitted assigns.
- o) "Dispute Board" means the person or persons named as such in the SCC appointed by agreement between the Employer and the Contractor to make a decision on or to settle any dispute or difference between the Employer and the Contractor referred to him or her by the parties pursuant to GCC Subclause 45.1 (Dispute Board) hereof.

- p) "The Bank" means the financing institution named in the SCC.
- q) "Contract Price" means the sum specified in Article 2.1 (Contract Price) of the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- r) "Facilities" means the Plant to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor under the Contract.
- s) "Plant" means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Facilities by the Contractor under the Contract (including the spare parts to be supplied by the Contractor under GCC Subclause 7.3 hereof), but does not include Contractor's Equipment.
- t) "Installation Services" means all those services ancillary to the supply of the Plant for the Facilities, to be provided by the Contractor under the Contract, such as transportation and provision of marine or other similar insurance, inspection, expediting, site preparation works (including the provision and use of Contractor's Equipment and the supply of all construction materials required), installation, testing, precommissioning, commissioning, operations, maintenance, the provision of operations and maintenance manuals, training, etc. as the case may require.
- u) "Contractor's Equipment" means all facilities, equipment, machinery, tools, apparatus, appliances, or things of every kind required in or for installation, completion and maintenance of Facilities that are to be provided by the Contractor, but does not include Plant, or other things intended to form or forming part of the Facilities.
- v) "Country of Origin" means the countries and territories eligible under the rules of the Bank as further elaborated in the SCC.
- w) "Site" means the land and other places upon which the Facilities are to be installed, and such other land or places as may be specified in the Contract as forming part of the Site.
- x) "Effective Date" means the date of fulfillment of all conditions stated in Article 3 (Effective Date) of the Contract Agreement, upon which the period until the Time for Completion shall be counted from.
- y) "Time for Completion" means the time within which Completion of the Facilities as a whole (or of a part of the Facilities where a separate Time for Completion of such part has been prescribed) is to be attained, as referred to in GCC Clause 8 and in accordance with the relevant provisions of the Contract.
- z) "Completion" means that the Facilities (or a specific part thereof where specific parts are specified in the Contract) have been completed operationally and structurally and put in a tight and clean condition, that all work in respect of Precommissioning of the Facilities or

such specific part thereof has been completed, and that the Facilities or specific part thereof are ready for Commissioning as provided in GCC Clause 24 (Completion) hereof.

- aa) "Precommissioning" means the testing, checking and other requirements specified in the Employer's Requirements that are to be carried out by the Contractor in preparation for Commissioning as provided in GCC Clause 24 (Completion) hereof.
- bb) "Commissioning" means operation of the Facilities or any part thereof by the Contractor following Completion, which operation is to be carried out by the Contractor as provided in GCC Subclause 25.1 (Commissioning) hereof, for the purpose of carrying out Guarantee Test(s).
- cc) "Guarantee Test(s)" means the test(s) specified in the Employer's Requirements to be carried out to ascertain whether the Facilities or a specified part thereof is able to attain the Functional Guarantees specified in the Appendix (Functional Guarantees) to the Contract Agreement in accordance with the provisions of GCC Subclause 25.2 (Guarantee Test) hereof.
- dd) "Operational Acceptance" means the acceptance by the Employer of the Facilities (or any part of the Facilities where the Contract provides for acceptance of the Facilities in parts), which certifies the Contractor's fulfillment of the Contract in respect of Functional Guarantees of the Facilities (or the relevant part thereof) in accordance with the provisions of GCC Clause 28 (Functional Guarantees) hereof and shall include deemed acceptance in accordance with GCC Clause 25 (Commissioning and Operational Acceptance) hereof.
- ee) "Defect Liability Period" means the period of validity of the warranties given by the Contractor commencing at Completion of the Facilities or a part thereof, during which the Contractor is responsible for defects with respect to the Facilities (or the relevant part thereof) as provided in GCC Clause 27 (Defect Liability) hereof.

2. Contract Documents

- 2.1. Subject to Article 1.2 (Order of Precedence) of the Contract Agreement, all documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

3. Interpretation

- 3.1. In the Contract, except where the context requires otherwise,
 - a) words indicating one gender include all genders;
 - b) words indicating the singular also include the plural and words indicating the plural also include the singular;
 - c) provisions including the word "agree," "agreed," or "agreement" require the agreement to be record in writing;

- d) the word “tender” is synonymous with “bid,” “tenderer” with “Bidder,” and “tender documents” with “Bidding Documents;” and
- e) “written” or “in writing” means handwritten, typewritten, printed or electronically made, and resulting in a permanent record.

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

3.2. Incoterms

Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

“Incoterms” means international rules for interpreting trade terms published by the International Chamber of Commerce (latest edition), 38 Cours Albert 1er, 75008 Paris, France.

3.3. Entire Agreement

Subject to GCC Subclause 16.4 hereof, the Contract constitutes the entire agreement between the Employer and Contractor with respect to the subject matter of Contract and supersedes all communications, negotiations, and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

3.4. Amendment

No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party hereto.

3.5. Independent Contractor

The Contractor shall be an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint venture, or other joint relationship between the parties hereto. Subject to the provisions of the Contract, the Contractor shall be solely responsible for the manner in which the Contract is performed. All employees, representatives, or Subcontractors engaged by the Contractor in connection with the performance of the Contract shall be under the complete control of the Contractor and shall not be deemed to be employees of the Employer, and nothing contained in the Contract or in any subcontract awarded by the Contractor shall be construed to create any contractual relationship between any such employees, representatives, or Subcontractors and the Employer.

3.6. Non-Waiver

- 3.6.1. Subject to GCC Subclause 3.6.2 below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- 3.6.2. Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, must be dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

3.7. Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity, or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

3.8. Country of Origin

"Origin" means the place where the plant and component parts thereof are mined, grown, produced, or manufactured, and from which the services are provided. Plant components are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that is substantially in its basic characteristics or in purpose or utility from its components.

4. Communications

- 4.1. Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests, and discharges, these communications shall be
- a) in writing and delivered against receipt; and
 - b) delivered, sent, or transmitted to the address for the recipient's communications as stated in the Contract Agreement.

When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Project Manager, a copy shall be sent to the Project Manager or the other Party, as the case may be.

5. Law and Language

- 5.1. The Contract shall be governed by and interpreted in accordance with laws of the country specified in the SCC.
- 5.2. The ruling language of the Contract shall be that stated in the SCC.

5.3. The language for communications shall be the ruling language unless otherwise stated in the SCC.

6. Fraud and Corruption

6.1. ADB's Anticorruption Policy (1998, as amended to date) requires Borrowers (including beneficiaries of ADB-financed activity), as well as Contractors, Subcontractors, manufacturers, and Consultants under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, ADB

a) defines, for the purposes of this provision, the terms set forth below as follows:

- i. "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
- ii. "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- iii. "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- iv. "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
- v. "abuse" means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
- vi. "conflict of interest" means any situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations;
- vii. "obstructive practice" means (a) deliberately destroying, falsifying, altering, or concealing of evidence material to an ADB investigation, or deliberately making false statements to investigators, with the intent to impede an ADB investigation; (b) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to a Bank investigation or from pursuing the investigation; or (c) deliberate acts intended to impede the exercise of ADB's contractual rights of audit or inspection or access to information; and
- viii. "integrity violation" is any act, as defined under ADB's Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB's Anticorruption Policy, including (i) to (vii) above and the following: violations of ADB

sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.

- b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation;
- d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate²³ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
- e) will have the right to require suppliers and contractors to permit ADB or its representative to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.

6.2. All Bidders, consultants, contractors, suppliers and other third parties engaged or involved in ADB-related activities have a duty to cooperate fully in any screening or investigation when requested by ADB to do so. Such cooperation includes, but is not limited to, the following:

- a) being available to be interviewed and replying fully and truthfully to all questions asked;
- b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
- c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;
- d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communications Technology (ICT)

²³Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);

- e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
- f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB.

6.3. All Bidders, consultants, contractors and suppliers shall ensure that, in its contract with its sub-consultants, subcontractors, and other third parties engaged or involved in ADB-related activities, such sub-consultants, subcontractors, and other third parties similarly undertake the foregoing duty to cooperate fully in any screening or investigation when requested by ADB to do so.

B. Subject Matter of Contract

7. Scope of Facilities

- 7.1. Unless otherwise expressly limited in the Employer's Requirements, the Contractor's obligations cover the provision of all Plant and the performance of all Installation Services required for the design, the manufacture (including procurement, quality assurance, construction, installation, associated civil works, pre-commissioning and delivery) of the Plant and the installation, completion, and commissioning of the Facilities in accordance with the plans, procedures, specifications, drawings, codes, and any other documents as specified in the section Employer's Requirements. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labor, materials, equipment, spare parts (as specified in GCC Subclause 7.3 below) and accessories; Contractor's Equipment; construction utilities and supplies; temporary materials, structures, and facilities; transportation (including, without limitation, unloading and hauling to, from and at the Site); and storage, except for those supplies, works, and services that will be provided or performed by the Employer, as set forth in the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement:
- 7.2. The Contractor shall, unless specifically excluded in the Contract, perform all such work and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Completion of the Facilities as if such work and/or items and materials were expressly mentioned in the Contract.
- 7.3. In addition to the supply of Mandatory Spare Parts included in the Contract, the Contractor agrees to supply spare parts required for the operation and maintenance of the Facilities for the period specified in the SCC and the provisions, if any, specified in the SCC. However, the

identity, specifications, and quantities of such spare parts and the terms and conditions relating to the supply thereof are to be agreed between the Employer and the Contractor, and the price of such spare parts shall be that given in Price Schedule No. 6, which shall be added to the Contract Price. The price of such spare parts shall include the purchase price therefore and other costs and expenses (including the Contractor's fees) relating to the supply of spare parts.

8. Time for Commencement and Completion

- 8.1. The Contractor shall commence work on the Facilities within the period specified in the SCC and without prejudice to GCC Subclause 26.2 hereof, the Contractor shall thereafter proceed with the Facilities in accordance with the time schedule specified in the Appendix 4 (Time Schedule) to the Contract Agreement.
- 8.2. The Contractor shall attain Completion of the Facilities or of a part where a separate time for Completion of such part is specified in the Contract, within the time stated in the SCC or within such extended time to which the Contractor shall be entitled under GCC Clause 40 hereof.

9. Contractor's Responsibilities

- 9.1. The Contractor shall design, manufacture, including associated purchases and/or subcontracting, install, and complete the Facilities in accordance with the Contract. When completed, the Facilities should be fit for the purposes for which they are intended as defined in the Contract.
- 9.2. The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Facilities, including any data as to boring tests provided by the Employer, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site if access thereto was available and of other data readily available to it relating to the Facilities as of the date 28 days prior to bid submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Facilities.
- 9.3. The Contractor shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the country where the Site is located, which such authorities or undertakings require the Contractor to obtain in its name and which are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits, approvals, and/or licenses that are not the responsibility of the Employer under GCC Subclause 10.3 hereof and that are necessary for the performance of the Contract.

- 9.4. The Contractor shall comply with all laws in force in the country where the Facilities are to be implemented. The laws will include all local, state, national, or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to GCC Subclause 10.1 hereof.
- 9.5. Any plant and services that will be incorporated in or be required for the Facilities and other supplies shall have their origin as specified under GCC Clause 1 (Country of Origin). Any Subcontractors retained by the Contractor shall be from a country as specified in GCC Clause 1 (Country of Origin).
- 9.6. The Contractor shall permit ADB to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by ADB, if so required by ADB.
- 9.7. If the Contractor is a joint venture or consortium of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfillment of the provisions of the Contract and shall designate one of such persons to act as a leader with authority to bind the joint venture or consortium. The composition or the constitution of the joint venture or consortium shall not be altered without the prior consent of the Employer.
- 9.8. Protection of the Environment
- a) The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise, and other results of his operations.
 - b) The Contractor shall ensure that emissions, surface discharges, and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

10. Employer's Responsibilities

- 10.1. All information and/or data to be supplied by the Employer as described in the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement shall be deemed to be accurate, except when the Employer expressly states otherwise.
- 10.2. The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the Appendix (Scope of Works and Supply by the Employer) to the

Contract Agreement. The Employer shall give full possession of and accord all rights of access thereto on or before the date(s) specified in that Appendix.

- 10.3. The Employer shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities, or public service undertakings in the country where the Site is located which (a) such authorities or undertakings require the Employer to obtain in the Employer's name, (b) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract, and (c) are specified in the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement.
- 10.4. If requested by the Contractor, the Employer shall use its best endeavors to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals, and/or licenses necessary for the execution of the Contract from all local, state, or national government authorities, or public service undertakings that such authorities or undertakings require the Contractor or Subcontractors or the personnel of the Contractor or Subcontractors, as the case may be, to obtain.
- 10.5. Unless otherwise specified in the Contract or agreed upon by the Employer and the Contractor, the Employer shall provide sufficient, properly qualified operating and maintenance personnel; shall supply and make available all raw materials, utilities, lubricants, chemicals, catalysts, other materials and facilities; and shall perform all work and services of whatsoever nature, including those required by the Contractor to properly carry out Pre-commissioning, Commissioning, and Guarantee Tests, all in accordance with the provisions of the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement at or before the time specified in the program furnished by the Contractor under GCC Subclause 18.2 hereof and in the manner thereupon specified or as otherwise agreed upon by the Employer and the Contractor.
- 10.6. The Employer shall be responsible for the continued operation of the Facilities after Completion, in accordance with GCC Subclause 24.8, and shall be responsible for facilitating the Guarantee Test(s) for the Facilities, in accordance with GCC Subclause 25.2.
- 10.7. All costs and expenses involved in the performance of the obligations under this GCC Clause 10 shall be the responsibility of the Employer, except those incurred by the Contractor with respect to the performance of Guarantee Tests, in accordance with GCC Subclause 25.2.
- 10.8. In the event that the Employer shall be in breach of any of his obligations imposed by the Contract, then the additional cost reasonably incurred by the Contractor in consequence thereof shall be added to the Contract Price.

C. Payment

11. Contract Price

- 11.1. The Contract Price shall be as specified in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement.
- 11.2. Unless an adjustment clause is provided for in the SCC, the Contract Price shall be a firm lump sum not subject to any alteration, except in the event of a Change in the Facilities or as otherwise provided in the Contract.
- 11.3. Subject to GCC Subclauses 9.2, 10.1, and 35 hereof, the Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.

12. Terms of Payment

- 12.1. The Contract Price shall be paid as specified in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement and in the Appendix (Terms and Procedures of Payment) to the Contract Agreement, which also outlines the procedures to be followed in making application for and processing payments.
- 12.2. No payment made by the Employer herein shall be deemed to constitute acceptance by the Employer of the Facilities or any part(s) thereof.
- 12.3. In the event that the Employer fails to make any payment by its respective due date or within the period set forth in the Contract, the Employer shall pay to the Contractor interest on the amount of such delayed payment at the rate(s) shown in the Appendix (Terms and Procedures of Payment) to the Contract Agreement for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.
- 12.4. The currency or currencies in which payments are made to the Contractor under this Contract shall be specified in the Appendix (Terms and Procedures of Payment) to the Contract Agreement, subject to the general principle that payments will be made in the currency or currencies in which the Contract Price has been stated in the Contractor's bid.

13. Securities

13.1. Issuance of Securities

The Contractor shall provide the securities specified below in favor of the Employer at the times, and in the amount, manner, and form specified below.

13.2. Advance Payment Security

- 13.2.1. The Contractor shall, within 28 days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the Appendix

(Terms and Procedures of Payment) to the Contract Agreement, and in the same currency or currencies.

13.2.2. The security shall be in the form provided in the Bidding Documents or in another form acceptable to the Employer. The amount of the security shall be reduced in proportion to the value of the Facilities executed by and paid to the Contractor from time to time, and shall automatically become null and void when the full amount of the advance payment has been recovered by the Employer. The security shall be returned to the Contractor immediately after its expiration.

13.3. Performance Security

13.3.1. The Contractor shall, within 28 days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the SCC.

13.3.2. The security shall be denominated in the currency or currencies of the Contract, or in a freely convertible currency acceptable to the Employer, and shall be in one of the forms of bank guarantees provided in the Bidding Documents, as stipulated by the Employer in the SCC, or in another form acceptable to the Employer.

13.3.3. Unless otherwise specified in the SCC, the security shall be reduced by half on the date of the Operational Acceptance. The Security shall become null and void, or shall be reduced pro rata to the Contract Price of a part of the Facilities for which a separate Time for Completion is provided, 540 days after Completion of the Facilities or 365 days after Operational Acceptance of the Facilities, whichever occurs first; provided, however, that if the Defects Liability Period has been extended on any part of the Facilities pursuant to GCC Subclause 27.8 hereof, the Contractor shall issue an additional security in an amount proportionate to the Contract Price of that part. The security shall be returned to the Contractor immediately after its expiration, provided, however, that if the Contractor, pursuant to GCC Subclause 27.10, is liable for an extended defect liability obligation, the performance security shall be extended for the period and up to the amount specified in the SCC.

14. Taxes and Duties

14.1. Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies, and charges assessed on the Contractor, its Subcontractors, or their employees by all municipal, state, or national government authorities in connection with the Facilities in and outside of the country where the Site is located.

14.2. Notwithstanding GCC Subclause 14.1 above, the Employer shall bear and promptly pay all customs and import duties as well as other local taxes like, e.g., a value-added tax (VAT),

imposed by the law of the country where the Site is located on the Plant specified in Price Schedule No. 1 and that are to be incorporated into the Facilities.

- 14.3. If any tax exemptions, reductions, allowances, or privileges may be available to the Contractor in the country where the Site is located, the Employer shall use its best endeavors to enable the Contractor to benefit from any such tax savings to the maximum allowable extent.
- 14.4. For the purpose of the Contract, it is agreed that the Contract Price specified in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement is based on the taxes, duties, levies, and charges prevailing at the date 28 days prior to the date of bid submission in the country where the Site is located (hereinafter called "Tax" in this GCC Sub-clause 14.4). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Contractor, Subcontractors, or their employees in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction therefrom, as the case may be, in accordance with GCC Clause 36 hereof.

D. Intellectual Property

15. License/Use of Technical Information

- 15.1. For the operation and maintenance of the Plant, the Contractor hereby grants a non-exclusive and nontransferable license (without the right to sublicense) to the Employer under the patents, utility models, or other industrial property rights owned by the Contractor or by a third party from whom the Contractor has received the right to grant licenses thereunder, and shall also grant to the Employer a nonexclusive and nontransferable right (without the right to sublicense) to use the know-how and other technical information disclosed to the Employer under the Contract. Nothing contained herein shall be construed as transferring ownership of any patent, utility model, trademark, design, copyright, know-how, or other intellectual property right from the Contractor or any third party to the Employer.
- 15.2. The copyright in all drawings, documents, and other materials containing data and information furnished to the Employer by the Contractor herein shall remain vested in the Contractor or, if they are furnished to the Employer directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

16. Confidential Information

- 16.1. The Employer and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during, or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data, and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this GCC Clause 16.
- 16.2. The Employer shall not use such documents, data, and other information received from the Contractor for any purpose other than the operation and maintenance of the Facilities. Similarly, the Contractor shall not use such documents, data, and other information received from the Employer for any purpose other than the design, procurement of Plant, construction, or such other work and services as are required for the performance of the Contract.
- 16.3. The obligation of a party under GCC Subclauses 16.1 and 16.2 above, however, shall not apply to that information, which
- a) now or hereafter enters the public domain through no fault of that party;
 - b) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party hereto; and
 - c) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 16.4. The above provisions of this GCC Clause 16 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Facilities or any part thereof.
- 16.5. The provisions of this GCC Clause 16 shall survive termination, for whatever reason, of the Contract.

E. Execution of the Facilities

17. Representatives

17.1. Project Manager

If the Project Manager is not named in the Contract, then within 14 days of the Effective Date, the Employer shall appoint and notify the Contractor in writing of the name of the Project Manager. The Employer may from time to time appoint some other person as the Project

Manager in place of the person previously so appointed, and shall give notice of the name of such other person to the Contractor without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of work on the Facilities. Such appointment shall only take effect upon receipt of such notice by the Contractor. The Project Manager shall represent and act for the Employer at all times during the performance of the Contract. All notices, instructions, orders, certificates, approvals, and all other communications under the Contract shall be given by the Project Manager, except as herein otherwise provided.

All notices, instructions, information, and other communications given by the Contractor to the Employer under the Contract shall be given to the Project Manager, except as herein otherwise provided.

17.2. Contractor's Representative and Construction Manager

17.2.1. If the Contractor's Representative is not named in the Contract, then within 14 days of the Effective Date, the Contractor shall appoint the Contractor's Representative and shall request the Employer in writing to approve the person so appointed. If the Employer makes no objection to the appointment within 14 days, the Contractor's Representative shall be deemed to have been approved. If the Employer objects to the appointment within 14 days giving the reason therefor, then the Contractor shall appoint a replacement within 14 days of such objection, and the foregoing provisions of this GCC Subclause 17.2.1 shall apply thereto.

17.2.2. The Contractor's Representative shall represent and act for the Contractor at all times during the performance of the Contract and shall give to the Project Manager all the Contractor's notices, instructions, information, and all other communications under the Contract.

All notices, instructions, information, and all other communications given by the Employer or the Project Manager to the Contractor under the Contract shall be given to the Contractor's Representative or, in its absence, its deputy, except as herein otherwise provided.

The Contractor shall not revoke the appointment of the Contractor's Representative without the Employer's prior written consent, which shall not be unreasonably withheld. If the Employer consents thereto, the Contractor shall appoint some other person as the Contractor's Representative, pursuant to the procedure set out in GCC Subclause 17.2.1.

17.2.3. The Contractor's Representative may, subject to the approval of the Employer which shall not be unreasonably withheld, at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any

time. Any such delegation or revocation shall be subject to a prior notice signed by the Contractor's Representative, and shall specify the powers, functions, and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until a copy thereof has been delivered to the Employer and the Project Manager.

Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GCC Subclause 17.2.3 shall be deemed to be an act or exercise by the Contractor's Representative.

- 17.2.4. From the commencement of installation of the Facilities at the Site until Completion, the Contractor's Representative shall appoint a suitable person as the Construction Manager. The Construction Manager shall supervise all work done at the Site by the Contractor and shall be present at the Site throughout normal working hours except when on leave, sick, or absent for reasons connected with the proper performance of the Contract. Whenever the Construction Manager is absent from the Site, the Contractor's Representative or the Construction Manager shall appoint a suitable person to act as the Construction Manager's deputy.
- 17.2.5. The Employer may by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the Employer, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under GCC Subclause 22.4. The Employer shall provide evidence of the same, whereupon the Contractor shall remove such person from the Facilities.
- 17.2.6. If any representative or person employed by the Contractor is removed in accordance with GCC Subclause 17.2.5, the Contractor shall, where required, promptly appoint a replacement.

18. Work Program

18.1. Contractor's Organization

The Contractor shall supply to the Employer and the Project Manager a chart showing the proposed organization to be established by the Contractor for carrying out work on the Facilities within 21 days of the Effective Date. The chart shall include the identities of the key personnel, and the curricula vitae of such key personnel to be employed shall be supplied together with the chart. The Contractor shall promptly inform the Employer and the Project Manager in writing of any revision or alteration of such an organization chart.

18.2. Program of Performance

Within 28 days after the Effective Date, the Contractor shall submit to the Project Manager a detailed program of performance of the Contract, made in a form acceptable to the Project Manager and showing the sequence in which it proposes to design, manufacture, transport, assemble, install, and pre-commission the Facilities, as well as the date by which the Contractor reasonably requires that the Employer shall have fulfilled its obligations under the Contract so as to enable the Contractor to execute the Contract in accordance with the program and to achieve Completion, Commissioning, and Acceptance of the Facilities in accordance with the Contract. The program so submitted by the Contractor shall accord with the Time Schedule included in the Appendix (Time Schedule) to the Contract Agreement and any other dates and periods specified in the Contract. The Contractor shall update and revise the program as and when appropriate or when required by the Project Manager, but without modification in the Times for Completion given in the SCC and any extension granted in accordance with GCC Clause 40, and shall submit all such revisions to the Project Manager.

18.3. Progress Report

The Contractor shall monitor progress of all the activities specified in the program referred to in GCC Subclause 18.2 above, and supply a progress report to the Project Manager every month.

The progress report shall be in a form acceptable to the Project Manager and shall indicate: (a) percentage completion achieved compared with the planned percentage completion for each activity; and (b) where any activity is behind the program, giving comments and likely consequences and stating the corrective action being taken.

18.4. Progress of Performance

If at any time the Contractor's actual progress falls behind the program referred to in GCC Subclause 18.2, or it becomes apparent that it will so fall behind, the Contractor shall, at the request of the Employer or the Project Manager, prepare and submit to the Project Manager a revised program, taking into account the prevailing circumstances, and shall notify the Project Manager of the steps being taken to expedite progress so as to attain Completion of the Facilities within the Time for Completion under GCC Subclause 8.2, any extension thereof entitled under GCC Subclause 40.1, or any extended period as may otherwise be agreed upon between the Employer and the Contractor.

18.5. Procedures

The Contract shall be executed in accordance with the Contract Documents including the procedures given in the Forms and Procedures of the Employer's Requirements.

The Contractor may execute the Contract in accordance with its own standard project execution plans and procedures to the extent that they do not conflict with the provisions contained in the Contract.

19. Subcontracting

- 19.1. The Appendix 5 (List of Major Items of Plant and Services and List of Approved Subcontractors) to the Contract Agreement specifies major items of plant and services and a list of approved Subcontractors against each item, including manufacturers. Insofar as no Subcontractors are listed against any such item, the Contractor shall prepare a list of Subcontractors for such item for inclusion in such list. The Contractor may from time to time propose any addition to or deletion from any such list. The Contractor shall submit any such list or any modification thereto to the Employer for its approval in sufficient time so as not to impede the progress of work on the Facilities. Such approval by the Employer for any of the Subcontractors shall not relieve the Contractor from any of its obligations, duties, or responsibilities under the Contract.
- 19.2. The Contractor shall select and employ its Subcontractors for such major items from those listed in the lists referred to in GCC Subclause 19.1.
- 19.3. For items or parts of the Facilities not specified in the Appendix (List of Major Items of Plant and Services and List of Approved Subcontractors for Major Items) to the Contract Agreement, the Contractor may employ such Subcontractors as it may select, at its discretion.
- 19.4. Each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under GCC 19.5 (if and when applicable), or in event of termination by the Employer under GCC 42.2.
- 19.5. If a Sub-contractor's obligations extend beyond the expiry date of the relevant Defects Liability Period and the Project Manager, prior to that date, instructs the Contractor to assign the benefits of such obligations to the Employer, then the Contractor shall do so.

20. Design and Engineering

20.1. Specifications and Drawings

- 20.1.1. The Contractor shall execute the basic and detailed design and the engineering work in compliance with the provisions of the Contract, or where not so specified, in accordance with good engineering practice.

The Contractor shall be responsible for any discrepancies, errors, or omissions in the specifications, drawings, and other technical documents that it has prepared, whether such specifications, drawings, and other documents have been approved by the Project Manager

or not, provided that such discrepancies, errors, or omissions are not because of inaccurate information furnished in writing to the Contractor by or on behalf of the Employer.

20.1.2. The Contractor shall be entitled to disclaim responsibility for any design, data, drawing, specification, or other document, or any modification thereof provided or designated by or on behalf of the Employer, by giving a notice of such disclaimer to the Project Manager.

20.2. Codes and Standards

Wherever references are made in the Contract to codes and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date 28 days prior to date of bid submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied subject to approval by the Employer and shall be treated in accordance with GCC Clause 39.

20.3. Approval/Review of Technical Documents by Project Manager

20.3.1. The Contractor shall prepare or cause its Subcontractors to prepare, and furnish to the Project Manager the documents listed in the Appendix (List of Documents for Approval or Review) to the Contract Agreement for its approval or review as specified and in accordance with the requirements of GCC Subclause 18.2 (Program of Performance).

Any part of the Facilities covered by or related to the documents to be approved by the Project Manager shall be executed only after the Project Manager's approval thereof.

GCC Subclauses 20.3.2 through 20.3.7 shall apply to those documents requiring the Project Manager's approval, but not to those furnished to the Project Manager for its review only.

20.3.2. Within 14 days after receipt by the Project Manager of any document requiring the Project Manager's approval in accordance with GCC Subclause 20.3.1, the Project Manager shall either return one copy thereof to the Contractor with its approval endorsed thereon or shall notify the Contractor in writing of its disapproval thereof and the reasons therefor and the modifications that the Project Manager proposes.

If the Project Manager fails to take such action within the said 14 days, then the said document shall be deemed to have been approved by the Project Manager.

20.3.3. The Project Manager shall not disapprove any document, except on the grounds that the document does not comply with the Contract or that it is contrary to good engineering practice. If the Project Manager disapproves a document, he shall specify the reasons for his decision.

- 20.3.4. If the Project Manager disapproves the document, the Contractor shall modify the document and resubmit it for the Project Manager's approval in accordance with GCC Subclause 20.3.2. If the Project Manager approves the document subject to modification(s), the Contractor shall make the required modification(s), whereupon the document shall be deemed to have been approved.
- 20.3.5. If any dispute or difference occurs between the Employer and the Contractor in connection with or arising out of the disapproval by the Project Manager of any document and/or any modification(s) thereto that cannot be settled between the parties within a reasonable period, then such dispute or difference may be referred to a Dispute Board for determination in accordance with GCC Subclause 45.3 hereof. If such dispute or difference is referred to a Dispute Board, the Project Manager shall give instructions as to whether and, if so, how, performance of the Contract is to proceed. The Contractor shall proceed with the Contract in accordance with the Project Manager's instructions, provided that if the Dispute Board upholds the Contractor's view on the dispute and if the Employer has not given notice under Subclause 45.3 hereof, then the Contractor shall be reimbursed by the Employer for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the dispute and the execution of the instructions as the Dispute Board shall decide, and the Time for Completion shall be extended accordingly.
- 20.3.6. The Project Manager's approval, with or without modification of the document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager.
- 20.3.7. The Contractor shall not depart from any approved document unless the Contractor has first submitted to the Project Manager an amended document and obtained the Project Manager's approval thereof, pursuant to the provisions of this GCC Subclause 20.3.

If the Project Manager requests any change in any already approved document and/or in any document based thereon, the provisions of GCC Clause 39 shall apply to such request.

21. Procurement

21.1. Materials

Subject to GCC Subclause 14.2, the Contractor shall procure and transport all materials in an expeditious and orderly manner to the Site.

21.2. Employer-Supplied Materials

If the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement provides that the Employer shall furnish any specific items to the Contractor, the following provisions shall apply:

- 21.2.1. The Employer shall, at its own risk and expense, transport each item to the place on or near the Site as agreed upon by the parties and make such item available to the Contractor at the time specified in the program furnished by the Contractor, pursuant to GCC Subclause 18.2, unless otherwise mutually agreed.
- 21.2.2. Upon receipt of such item, the Contractor shall inspect the same visually and notify the Project Manager of any detected shortage, defect, or default. The Employer shall immediately remedy any shortage, defect, or default, or the Contractor shall, if practicable and possible, at the request of the Employer, remedy such shortage, defect, or default at the Employer's cost and expense. After inspection, such item shall fall under the care, custody, and control of the Contractor. The provision of this GCC Subclause 21.2.2 shall apply to any item supplied to remedy any such shortage or default or to substitute for any defective item, or shall apply to defective items that have been repaired.
- 21.2.3. The foregoing responsibilities of the Contractor and its obligations of care, custody, and control shall not relieve the Employer of liability for any undetected shortage, defect, or default, nor place the Contractor under any liability for any such shortage, defect or default whether under GCC Clause 27 or under any other provision of Contract.

21.3. Transportation

- 21.3.1. The Contractor shall at its own risk and expense transport all the materials and the Contractor's Equipment to the Site by the mode of transport that the Contractor judges most suitable under all the circumstances.
- 21.3.2. Unless otherwise provided in the Contract, the Contractor shall be entitled to select any safe mode of transport operated by any person to carry the materials and the Contractor's Equipment.
- 21.3.3. Upon dispatch of each shipment of materials and the Contractor's Equipment, the Contractor shall notify the Employer by telex, cable, facsimile, or electronic means, of the description of the materials and of the Contractor's Equipment, the point and means of dispatch, and the estimated time and point of arrival in the country where the Site is located, if applicable, and at the Site. The Contractor shall furnish the Employer with relevant shipping documents to be agreed upon between the parties.
- 21.3.4. The Contractor shall be responsible for obtaining, if necessary, approvals from the authorities for transportation of the materials and the Contractor's Equipment to the Site. The Employer shall use its best endeavors in a timely and expeditious manner to assist the Contractor in obtaining such approvals, if requested by the Contractor. The Contractor shall

indemnify and hold harmless the Employer from and against any claim for damage to roads, bridges, or any other traffic facilities that may be caused by the transport of the materials and the Contractor's Equipment to the Site.

21.4. Customs Clearance

The Contractor shall, at its own expense, handle all imported materials and Contractor's Equipment at the point(s) of import and shall handle any formalities for customs clearance, subject to the Employer's obligations under GCC Subclause 14.2, provided that if applicable laws or regulations require any application or act to be made by or in the name of the Employer, the Employer shall take all necessary steps to comply with such laws or regulations. In the event of delays in customs clearance that are not the fault of the Contractor, the Contractor shall be entitled to an extension in the Time for Completion, pursuant to GCC Clause 40.

22. Installation

22.1. Setting Out/Supervision

22.1.1. Benchmark

- a) The Contractor shall be responsible for the true and proper setting-out of the Facilities in relation to bench marks, reference marks, and lines provided to it in writing by or on behalf of the Employer.
- b) If, at any time during the progress of installation of the Facilities, any error shall appear in the position, level, or alignment of the Facilities, the Contractor shall forthwith notify the Project Manager of such error and, at its own expense, immediately rectify such error to the reasonable satisfaction of the Project Manager. If such error is based on incorrect data provided in writing by or on behalf of the Employer, the expense of rectifying the same shall be borne by the Employer.

22.1.2. Contractor's Supervision

The Contractor shall give or provide all necessary superintendence during the installation of the Facilities, and the Construction Manager or its deputy shall be constantly on the Site to provide full-time superintendence of the installation. The Contractor shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.

22.2. Labor

22.2.1. Engagement of Staff and Labor

- a) Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, housing, feeding, and transport.
- b) The Contractor shall provide and employ on the Site in the installation of the Facilities such skilled, semi-skilled, and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located. The Employer will, if requested by the Contractor, use his best endeavors in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.
- d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to the place where they were recruited or to their domicile. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and recover the cost of doing so from the Contractor.

22.2.2. Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labor from amongst the Employer's Personnel.

22.2.3. Labor Laws

- a) The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights.
- b) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous, or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- c) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious, or other customs and all local laws and regulations pertaining to the employment of labor.

22.2.4. Rates of Wages and Conditions of Labor

- a) The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.
- b) The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, and allowances as are chargeable under the Laws for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

22.2.5. Working Hours

- a) No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the SCC, unless
 - i. otherwise stated in the Contract;
 - ii. the Project Manager gives consent; or
 - iii. the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Project Manager.
- b) If and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Time for Completion and requests the Project Manager's consent thereto, the Project Manager shall not unreasonably withhold such consent.
- c) This Subclause shall not apply to any work which is customarily carried out by rotary or double shifts.

22.2.6. Facilities for Staff and Labor

- a) Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.
- b) The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

22.2.7. Health and Safety

- a) The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay, and ambulance

service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

- b) The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the performance of the Contract, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- c) The Contractor shall send to the Project Manager, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety, and welfare of persons, and damage to property, as the Project Manager may reasonably require.

22.2.8. Funeral Arrangements

In the event of the death of any of the Contractor's personnel or accompanying members of their families, the Contractor shall be responsible for making the appropriate arrangements for their return or burial, unless otherwise specified in the SCC.

22.2.9. Records of Contractor's Personnel

The Contractor shall keep accurate records of the Contractor's personnel, including the number of each class of Contractor's Personnel on the Site and the names, ages, gender, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis in a form approved by the Project Manager and shall be available for inspection by the Project Manager until the Contractor has completed all work.

22.2.10. Supply of Foodstuff

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

22.2.11. Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

22.2.12. Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

22.2.13. Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter, or disposal by Contractor's Personnel.

22.2.14. Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

22.2.15. Prohibition of All Forms of Forced or Compulsory Labor

The contractor shall not employ "forced or compulsory labor" in any form. "Forced or compulsory labor" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

22.2.16. Prohibition of Harmful Child Labor

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

22.3. Contractor's Equipment

22.3.1. All Contractor's Equipment brought by the Contractor onto the Site shall be deemed to be intended to be used exclusively for the execution of the Contract. The Contractor shall not remove the same from the Site without the Project Manager's consent that such Contractor's Equipment is no longer required for the execution of the Contract.

22.3.2. Unless otherwise specified in the Contract, upon completion of the Facilities, the Contractor shall remove from the Site all Equipment brought by the Contractor onto the Site and any surplus materials remaining thereon.

22.3.3. The Employer will, if requested, use its best endeavors to assist the Contractor in obtaining any local, state or national government permission required by the Contractor for the export of the Contractor's Equipment imported by the Contractor for use in the execution of the Contract that is no longer required for the execution of the Contract.

22.4. Site Regulations and Safety

The Employer and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Employer, with a copy to the Project Manager, proposed Site regulations for the Employer's approval, which approval shall not be unreasonably withheld.

Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Facilities, gate control, sanitation, medical care, and fire prevention.

22.5. Opportunities for Other Contractors

22.5.1. The Contractor shall, upon written request from the Employer or the Project Manager, give all reasonable opportunities for carrying out the work to any other contractors employed by the Employer on or near the Site.

22.5.2. If the Contractor, upon written request from the Employer or the Project Manager, makes available to other contractors any roads or ways the maintenance for which the Contractor is responsible, permits the use by such other contractors of the Contractor's Equipment, or provides any other service of whatsoever nature for such other contractors, the Employer shall fully compensate the Contractor for any loss or damage caused or occasioned by such other contractors in respect of any such use or service, and shall pay to the Contractor reasonable remuneration for the use of such equipment or the provision of such services.

22.5.3. The Contractor shall also so arrange to perform its work as to minimize, to the extent possible, interference with the work of other contractors. The Project Manager shall determine the resolution of any difference or conflict that may arise between the Contractor and other contractors and the workers of the Employer in regard to their work.

22.5.4. The Contractor shall notify the Project Manager promptly of any defects in the other Contractors' work that come to its notice, and that could affect the Contractor's work. The Project Manager shall determine the corrective measures, if any, required to rectify the situation after inspection of the Facilities. Decisions made by the Project Manager shall be binding on the Contractor.

22.6. Emergency Work

If, by reason of an emergency arising in connection with and during the execution of the Contract, any protective or remedial work is necessary as a matter of urgency to prevent damage to the Facilities, the Contractor shall immediately carry out such work.

If the Contractor is unable or unwilling to do such work immediately, the Employer may do or cause such work to be done as the Employer may determine is necessary in order to prevent damage to the Facilities. In such event the Employer shall, as soon as practicable after the

occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefor. If the work done or caused to be done by the Employer is work that the Contractor was liable to do at its own expense under the Contract, the reasonable costs incurred by the Employer in connection therewith shall be paid by the Contractor to the Employer. Otherwise, the cost of such remedial work shall be borne by the Employer.

22.7. Site Clearance

22.7.1. Site Clearance in Course of Performance

In the course of carrying out the Contract, the Contractor shall keep the Site reasonably free from all unnecessary obstruction, store, or remove any surplus materials, clear away any wreckage, rubbish, or temporary works from the Site, and remove any Contractor's Equipment no longer required for execution of the Contract.

22.7.2. Clearance of Site after Completion

After Completion of all parts of the Facilities, the Contractor shall clear away and remove all wreckage, rubbish, and debris of any kind from the Site, and shall leave the Site and Facilities in a clean and safe condition.

22.8. Watching and Lighting

The Contractor shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper execution and the protection of the Facilities, or for the safety of the owners and occupiers of adjacent property and for the safety of the public.

23. Test and Inspection

23.1. The Contractor shall at its own expense carry out at the place of manufacture and/or on the Site all such tests and/or inspections of the Plant and any part of the Facilities as are specified in the Contract.

23.2. The Employer and the Project Manager or their designated representatives shall be entitled to attend the aforesaid test and/or inspection, provided that the Employer shall bear all costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

23.3. Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the Project Manager. The Contractor shall obtain from any relevant third party

or manufacturer any necessary permission or consent to enable the Employer and the Project Manager or their designated representatives to attend the test and/or inspection.

23.4. The Contractor shall provide the Project Manager with a certified report of the results of any such test and/or inspection.

If the Employer or Project Manager or their designated representatives fails to attend the test and/or inspection, or if it is agreed between the parties that such persons shall not do so, then the Contractor may proceed with the test and/or inspection in the absence of such persons, and may provide the Project Manager with a certified report of the results thereof.

23.5. The Project Manager may require the Contractor to carry out any test and/or inspection not required by the Contract, provided that the Contractor's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of work on the Facilities and/or the Contractor's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Completion and the other obligations so affected.

23.6. If any Plant or any part of the Facilities fails to pass any test and/or inspection, the Contractor shall either rectify or replace such Plant or part of the Facilities and shall repeat the test and/or inspection upon giving a notice under GCC Subclause 23.3.

23.7. If any dispute or difference of opinion shall arise between the parties in connection with or arising out of the test and/or inspection of the Plant or part of the Facilities that cannot be settled between the parties within a reasonable period of time, it may be referred to an Dispute Board for determination in accordance with GCC Subclause 45.3.

23.8. The Contractor shall afford the Employer and the Project Manager, at the Employer's expense, access at any reasonable time to any place where the Plant are being manufactured or the Facilities are being installed, in order to inspect the progress and the manner of manufacture or installation, provided that the Project Manager shall give the Contractor a reasonable prior notice.

23.9. The Contractor agrees that neither the execution of a test and/or inspection of Plant or any part of the Facilities, nor the attendance by the Employer or the Project Manager, nor the issue of any test certificate pursuant to GCC Subclause 23.4, shall release the Contractor from any other responsibilities under the Contract.

23.10. No part of the Facilities or foundations shall be covered up on the Site without the Contractor carrying out any test and/or inspection required under the Contract. The Contractor shall give a reasonable notice to the Project Manager whenever any such parts of the Facilities or foundations are ready or about to be ready for test and/or inspection; such test and/or inspection and notice thereof shall be subject to the requirements of the Contract.

23.11. The Contractor shall uncover any part of the Facilities or foundations, or shall make openings in or through the same as the Project Manager may from time to time require at the Site, and shall reinstate and make good such part or parts.

If any parts of the Facilities or foundations have been covered up at the Site after compliance with the requirement of GCC Subclause 23.10 and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating, and making good the same shall be borne by the Employer, and the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been delayed or impeded in the performance of any of its obligations under the Contract.

24. Completion of the Facilities

24.1. As soon as the Facilities or any part thereof has, in the opinion of the Contractor, been completed operationally and structurally and put in a tight and clean condition as specified in the Employer's Requirements, excluding minor items not materially affecting the operation or safety of the Facilities, the Contractor shall so notify the Employer in writing.

24.2. Within 7 days after receipt of the notice from the Contractor under GCC Subclause 24.1, the Employer shall supply the operating and maintenance personnel specified in the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement for Pre-commissioning of the Facilities or any part thereof.

Pursuant to the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement, the Employer shall also provide, within the said 7-day period, the raw materials, utilities, lubricants, chemicals, catalysts, facilities, services, and other matters required for Pre-commissioning of the Facilities or any part thereof.

24.3. As soon as reasonably practicable after the operating and maintenance personnel have been supplied by the Employer and the raw materials, utilities, lubricants, chemicals, catalysts, facilities, services, and other matters have been provided by the Employer in accordance with GCC Subclause 24.2, the Contractor shall commence Pre-commissioning of the Facilities or the relevant part thereof in preparation for Commissioning, subject to GCC Subclause 25.5.

24.4. As soon as all works in respect of Pre-commissioning are completed and, in the opinion of the Contractor, the Facilities or any part thereof is ready for Commissioning, the Contractor shall so notify the Project Manager in writing.

24.5. The Project Manager shall, within 14 days after receipt of the Contractor's notice under GCC Subclause 24.4, either issue a Completion Certificate in the form specified in the Employer's Requirements (Forms and Procedures), stating that the Facilities or that part thereof have reached Completion as of the date of the Contractor's notice under GCC Subclause 24.4, or notify the Contractor in writing of any defects and/or deficiencies.

If the Project Manager notifies the Contractor of any defects and/or deficiencies, the Contractor shall then correct such defects and/or deficiencies, and shall repeat the procedure described in GCC Subclause 24.4.

If the Project Manager is satisfied that the Facilities or that part thereof have reached Completion, the Project Manager shall, within 7 days after receipt of the Contractor's repeated notice, issue a Completion Certificate stating that the Facilities or that part thereof have reached Completion as of the date of the Contractor's repeated notice.

If the Project Manager is not so satisfied, then it shall notify the Contractor in writing of any defects and/or deficiencies within 7 days after receipt of the Contractor's repeated notice, and the above procedure shall be repeated.

- 24.6. If the Project Manager fails to issue the Completion Certificate and fails to inform the Contractor of any defects and/or deficiencies within 14 days after receipt of the Contractor's notice under GCC Subclause 24.4 or within 7 days after receipt of the Contractor's repeated notice under GCC Subclause 24.5, or if the Employer makes use of the Facilities or part thereof, then the Facilities or that part thereof shall be deemed to have reached Completion as of the date of the Contractor's notice or repeated notice, or as of the Employer's use of the Facilities, as the case may be.
- 24.7. As soon as possible after Completion, the Contractor shall complete all outstanding minor items so that the Facilities are fully in accordance with the requirements of the Contract, failing which the Employer will undertake such completion and deduct the costs thereof from any monies owing to the Contractor.
- 24.8. Upon Completion, the Employer shall be responsible for the care and custody of the Facilities or the relevant part thereof, together with the risk of loss or damage thereto, and shall thereafter take over the Facilities or the relevant part thereof.

25. Commissioning and Operational Acceptance

25.1. Commissioning

- 25.1.1. Commissioning of the Facilities or any part thereof shall be commenced by the Contractor immediately after issue of the Completion Certificate by the Project Manager, pursuant to GCC Subclause 24.5, or immediately after the date of the deemed Completion, under GCC Subclause 24.6.
- 25.1.2. The Employer shall supply the operating and maintenance personnel and all raw materials, utilities, lubricants, chemicals, catalysts, facilities, services, and other matters required for Commissioning.

25.1.3. In accordance with the requirements of the Contract, the Contractor's and Project Manager's advisory personnel shall attend the Commissioning, including the Guarantee Test, and shall advise and assist the Employer.

25.2. Guarantee Test

25.2.1. Subject to GCC Subclause 25.5, the Guarantee Test and repeats thereof shall be conducted by the Contractor during Commissioning of the Facilities or the relevant part thereof to ascertain whether the Facilities or the relevant part can attain the Functional Guarantees specified in the Appendix (Functional Guarantees) to the Contract Agreement. The Employer shall promptly provide the Contractor with such information as the Contractor may reasonably require in relation to the conduct and results of the Guarantee Test and any repeats thereof.

25.2.2. If for reasons not attributable to the Contractor, the Guarantee Test of the Facilities or the relevant part thereof cannot be successfully completed within the period from the date of Completion specified in the SCC or any other period agreed upon by the Employer and the Contractor, the Contractor shall be deemed to have fulfilled its obligations with respect to the Functional Guarantees, and GCC Subclauses 28.2 and 28.3 shall not apply.

25.3. Operational Acceptance

25.3.1. Subject to GCC Subclause 25.4 below, Operational Acceptance shall occur in respect of the Facilities or any part thereof when

- a) the Guarantee Test has been successfully completed and the Functional Guarantees are met; or
- b) the Guarantee Test has not been successfully completed or has not been carried out for reasons not attributable to the Contractor within the period from the date of Completion specified in the SCC, or any other agreed upon period as specified in GCC Subclause 25.2.2 above; or
- c) the Contractor has paid the liquidated damages specified in GCC Subclause 28.3 hereof; and
- d) any minor items mentioned in GCC Subclause 24.7 hereof relevant to the Facilities or that part thereof have been completed.

25.3.2. At any time after any of the events set out in GCC Subclause 25.3.1 have occurred, the Contractor may give a notice to the Project Manager requesting the issue of an Operational Acceptance Certificate in the form provided in the Employer's Requirements (Forms and Procedures) in respect of the Facilities or the part thereof specified in such notice as of the date of such notice.

25.3.3. The Project Manager shall, after consultation with the Employer, and within 7 days after receipt of the Contractor's notice, issue an Operational Acceptance Certificate.

25.3.4. If within 7 days after receipt of the Contractor's notice, the Project Manager fails to issue the Operational Acceptance Certificate or fails to inform the Contractor in writing of the justifiable reasons why the Project Manager has not issued the Operational Acceptance Certificate, the Facilities or the relevant part thereof shall be deemed to have been accepted as of the date of the Contractor's said notice.

25.4. Partial Acceptance

25.4.1. If the Contract specifies that Completion and Commissioning shall be carried out in respect of parts of the Facilities, the provisions relating to Completion and Commissioning including the Guarantee Test shall apply to each such part of the Facilities individually, and the Operational Acceptance Certificate shall be issued accordingly for each such part of the Facilities.

25.4.2. If a part of the Facilities comprises facilities such as buildings, for which no Commissioning or Guarantee Test is required, then the Project Manager shall issue the Operational Acceptance Certificate for such facility when it attains Completion, provided that the Contractor shall thereafter complete any outstanding minor items that are listed in the Operational Acceptance Certificate.

25.5. Delayed Pre-Commissioning and/or Guarantee Test

25.5.1. In the event that the Contractor is unable to proceed with the Pre-commissioning of the Facilities pursuant to Subclause 24.3, or with the Guarantee Test pursuant to Subclause 25.2, for reasons attributable to the Employer either on account of non availability of other facilities under the responsibilities of other contractor(s), or for reasons beyond the Employer's control, the provisions leading to "deemed" completion of activities such as Completion, pursuant to GCC Subclause 24.6, and Operational Acceptance, pursuant to GCC Subclause 25.3.4, and Contractor's obligations regarding Defect Liability Period, pursuant to GCC Subclause 27.2, Functional Guarantee, pursuant to GCC Clause 28, and Care of Facilities, pursuant to GCC Clause 32, and GCC Clause 41.1, Suspension, shall not apply. In this case, the following provisions shall apply.

25.5.2. When the Contractor is notified by the Project Manager that he will be unable to proceed with the activities and obligations pursuant to above Subclause 25.5.1, the Contractor shall be entitled to the following:

- a) the Time of Completion shall be extended for the period of suspension without imposition of liquidated damages pursuant to GCC Subclause 26.2;
- b) payments due to the Contractor in accordance with the provision specified in the Appendix (Terms and Procedures of Payment) to the Contract Agreement, which would not have been payable in normal circumstances due to noncompletion of the subject activities, shall be released to the Contractor against submission of a security in the form

of a bank guarantee of equivalent amount acceptable to the Employer, and which shall become null and void when the Contractor will have complied with its obligations regarding those payments, subject to the provision of Subclause 25.5.3 below;

- c) the expenses towards the above security and extension of other securities under the contract, of which validity needs to be extended, shall be reimbursed to the Contractor by the Employer;
- d) the additional charges towards the care of the Facilities pursuant to GCC Subclause 32.1 shall be reimbursed to the Contractor by the Employer for the period between the notification mentioned above and the notification mentioned in Subclause 25.5.4 below.

The provision of GCC Subclause 33.2 shall apply to the Facilities during the same period.

25.5.3. In the event that the period of suspension under above Subclause 25.5.1 actually exceeds 180 days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor.

25.5.4. When the Contractor is notified by the Project Manager that the plant is ready for Pre-commissioning, the Contractor shall proceed without delay in performing all the specified activities and obligations under the contract.

F. Guarantees and Liabilities

26. Completion Time Guarantee

26.1. The Contractor guarantees that it shall attain Completion of the Facilities (or a part for which a separate time for completion is specified) within the Time for Completion specified in the SCC pursuant to GCC Subclause 8.2, or within such extended time to which the Contractor shall be entitled under GCC Clause 40 hereof.

26.2. If the Contractor fails to attain Completion of the Facilities or any part thereof within the Time for Completion or any extension thereof under GCC Clause 40, the Contractor shall pay to the Employer liquidated damages in the amount specified in the SCC as a percentage rate of the Contract Price or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed the amount specified as "Maximum" in the SCC as a percentage rate of the Contract Price. Once the "Maximum" is reached, the Employer may consider termination of the Contract, pursuant to GCC Subclause 42.2.2.

Such payment shall completely satisfy the Contractor's obligation to attain Completion of the Facilities or the relevant part thereof within the Time for Completion or any extension thereof under GCC Clause 40. The Contractor shall have no further liability whatsoever to the Employer in respect thereof.

However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the Facilities or from any other obligations and liabilities of the Contractor under the Contract.

Save for liquidated damages payable under this GCC Subclause 26.2, the failure by the Contractor to attain any milestone or other act, matter or thing by any date specified in the Appendix (Time Schedule) to the Contract Agreement and/or other program of work prepared pursuant to GCC Subclause 18.2 shall not render the Contractor liable for any loss or damage thereby suffered by the Employer.

26.3. If the Contractor attains Completion of the Facilities or any part thereof before the Time for Completion or any extension thereof under GCC Clause 40, the Employer shall pay to the Contractor a bonus in the amount specified in the SCC. The aggregate amount of such bonus shall in no event exceed the amount specified as "Maximum" in the SCC.

27. Defect Liability

27.1. The Contractor warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials, and workmanship of the Plant supplied and of the work executed.

27.2. The Defect Liability Period shall be 540 days from the date of Completion of the Facilities (or any part thereof) or 1 year from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the SCC pursuant to GCC Subclause 27.10.

If during the Defect Liability Period any defect should be found in the design, engineering, materials, and workmanship of the Plant supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace, or otherwise make good as the Contractor shall determine at its discretion, such defect as well as any damage to the Facilities caused by such defect. The Contractor shall not be responsible for the repair, replacement, or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:

- a) improper operation or maintenance of the Facilities by the Employer,
- b) operation of the Facilities outside specifications provided in the Contract, or
- c) normal wear and tear.

27.3. The Contractor's obligations under this GCC Clause 27 shall not apply to:

- a) any materials that are supplied by the Employer under GCC Subclause 21.2, are normally consumed in operation, or have a normal life shorter than the Defect Liability Period stated herein;
- b) any designs, specifications or other data designed, supplied, or specified by or on behalf of the Employer or any matters for which the Contractor has disclaimed responsibility herein; or
- c) any other materials supplied or any other work executed by or on behalf of the Employer, except for the work executed by the Employer under GCC Subclause 27.7.

27.4. The Employer shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Employer shall afford all reasonable opportunity for the Contractor to inspect any such defect.

27.5. The Employer shall afford the Contractor all necessary access to the Facilities and the Site to enable the Contractor to perform its obligations under this GCC Clause 27.

The Contractor may, with the consent of the Employer, remove from the Site any Plant or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.

27.6. If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Employer may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests.

If such part fails the tests, the Contractor shall carry out further repair, replacement or making good, as the case may be, until that part of the Facilities passes such tests. The tests shall be agreed upon by the Employer and the Contractor.

27.7. If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than 15 days), the Employer may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the Employer in connection therewith shall be paid to the Employer by the Contractor or may be deducted by the Employer from any monies due the Contractor or claimed under the Performance Security.

27.8. If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons.

- 27.9. Except as provided in GCC Clauses 27 and 33, the Contractor shall be under no liability whatsoever and howsoever arising, and whether under the Contract or at law, in respect of defects in the Facilities or any part thereof, the Plant, design, or engineering, or work executed that appear after Completion of the Facilities or any part thereof, except where such defects are the result of the gross negligence, fraud, criminal, or willful action of the Contractor.
- 27.10. In addition, any such component of the Facilities and during the period of time as may be specified in the SCC shall be subject to an extended Defect Liability Period. Such obligation of the Contractor shall be in addition to the Defect Liability Period specified under GCC Subclause 27.2.

28. Functional Guarantees

- 28.1. The Contractor guarantees that during the Guarantee Test, the Facilities and all parts thereof shall attain the Functional Guarantees specified in the Appendix (Functional Guarantees) to the Contract Agreement, subject to, and upon the conditions therein specified.
- 28.2. If, for reasons attributable to the Contractor, the minimum level of the Functional Guarantees specified in the Appendix (Functional Guarantees) to the Contract Agreement are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications, and/or additions to the Plant or any part thereof as may be necessary to meet at least the minimum level of such Guarantees. The Contractor shall notify the Employer upon completion of the necessary changes, modifications, and/or additions, and shall request the Employer to repeat the Guarantee Test until the minimum level of the Guarantees has been met. If the Contractor eventually fails to meet the minimum level of Functional Guarantees, the Employer may consider termination of the Contract, pursuant to GCC Subclause 42.2.2.
- 28.3. If, for reasons attributable to the Contractor, the Functional Guarantees specified in the Appendix (Functional Guarantees) to the Contract Agreement are not attained either in whole or in part, but the minimum level of the Functional Guarantees specified in the said Appendix to the Contract Agreement is met, the Contractor shall, at the Contractor's option, either
- a) make such changes, modifications, and/or additions to the Facilities or any part thereof that are necessary to attain the Functional Guarantees at its cost and expense, and shall request the Employer to repeat the Guarantee Test or
 - b) pay liquidated damages to the Employer in respect of the failure to meet the Functional Guarantees in accordance with the provisions in the Appendix (Functional Guarantees) to the Contract Agreement.
- 28.4. The payment of liquidated damages under GCC Subclause 28.3, up to the limitation of liability specified in the Appendix (Functional Guarantees) to the Contract Agreement, shall completely satisfy the Contractor's guarantees under GCC Subclause 28.3, and the

Contractor shall have no further liability whatsoever to the Employer in respect thereof. Upon the payment of such liquidated damages by the Contractor, the Project Manager shall issue the Operational Acceptance Certificate for the Facilities or any part thereof in respect of which the liquidated damages have been so paid.

29. Patent Indemnity

29.1. The Contractor shall, subject to the Employer's compliance with GCC Subclause 29.2, indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions, or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Employer may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of (a) the installation of the Facilities by the Contractor or the use of the Facilities in the country where the Site is located, and (b) the sale of the products produced by the Facilities in any country.

Such indemnity shall not cover any use of the Facilities or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, any infringement resulting from the use of the Facilities or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Contractor, pursuant to the Contract Agreement.

29.2. If any proceedings are brought or any claim is made against the Employer arising out of the matters referred to in GCC Subclause 29.1, the Employer shall promptly give the Contractor a notice thereof, and the Contractor may at its own expense and in the Employer's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

If the Contractor fails to notify the Employer within 28 days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Employer shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the Employer within the 28-day period, the Employer shall make no admission that may be prejudicial to the defense of any such proceedings or claim.

The Employer shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.

29.3. The Employer shall indemnify and hold harmless the Contractor and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Contractor may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Employer.

30. Limitation of Liability

30.1. Except in cases of criminal negligence or willful misconduct,

- a) the Contractor shall not be liable to the Employer, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Employer, and
- b) the aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed a multiple of the Contract Price specified in the SCC or, if a multiple is not so specified, the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Contractor to indemnify the Employer with respect to patent infringement.

G. Risk Distribution

31. Transfer of Ownership

31.1. Ownership of the Plant (including spare parts) to be imported into the country where the Site is located shall be transferred to the Employer upon loading on to the mode of transport to be used to convey the Plant from the country of origin to that country.

31.2. Ownership of the Plant (including spare parts) procured in the country where the Site is located shall be transferred to the Employer when the Plant are brought on to the Site.

31.3. Ownership of the Contractor's Equipment used by the Contractor and its Subcontractors in connection with the Contract shall remain with the Contractor or its Subcontractors.

31.4. Ownership of any Plant in excess of the requirements for the Facilities shall revert to the Contractor upon Completion of the Facilities or at such earlier time when the Employer and the Contractor agree that the Plant in question are no longer required for the Facilities.

31.5. Notwithstanding the transfer of ownership of the Plant, the responsibility for care and custody thereof together with the risk of loss or damage thereto shall remain with the Contractor pursuant to GCC Clause 32 (Care of Facilities) hereof until Completion of the Facilities or the part thereof in which such Plant are incorporated.

32. Care of Facilities

32.1. The Contractor shall be responsible for the care and custody of the Facilities or any part thereof until the date of Completion of the Facilities pursuant to GCC Clause 24 or, where the Contract provides for Completion of the Facilities in parts, until the date of Completion of the relevant part, and shall make good at its own cost any loss or damage that may occur to the Facilities or the relevant part thereof from any cause whatsoever during such period. The Contractor shall also be responsible for any loss or damage to the Facilities caused by the Contractor or its Subcontractors in the course of any work carried out, pursuant to GCC Clause 27. Notwithstanding the foregoing, the Contractor shall not be liable for any loss or damage to the Facilities or that part thereof caused by reason of any of the matters specified or referred to in paragraphs (a), (b) and (c) of GCC Subclauses 32.2 and 38.1.

32.2. If any loss or damage occurs to the Facilities or any part thereof or to the Contractor's temporary facilities by reason of

- a) insofar as they relate to the country where the Site is located, nuclear reaction, nuclear radiation, radioactive contamination, pressure wave caused by aircraft or other aerial objects, or any other occurrences that an experienced contractor could not reasonably foresee, or if reasonably foreseeable could not reasonably make provision for or insure against, insofar as such risks are not normally insurable on the insurance market and are mentioned in the general exclusions of the policy of insurance, including War Risks and Political Risks, taken out under GCC Clause 34 hereof; or
- b) any use or occupation by the Employer or any third party other than a Subcontractor, authorized by the Employer of any part of the Facilities; or
- c) any use of or reliance upon any design, data, or specification provided or designated by or on behalf of the Employer, or any such matter for which the Contractor has disclaimed responsibility herein,

the Employer shall pay to the Contractor all sums payable in respect of the Facilities executed, notwithstanding that the same be lost, destroyed, or damaged, and will pay to the

Contractor the replacement value of all temporary facilities and all parts thereof lost, destroyed, or damaged. If the Employer requests the Contractor in writing to make good any loss or damage to the Facilities thereby occasioned, the Contractor shall make good the same at the cost of the Employer in accordance with GCC Clause 39. If the Employer does not request the Contractor in writing to make good any loss or damage to the Facilities thereby occasioned, the Employer shall either request a change in accordance with GCC Clause 39, excluding the performance of that part of the Facilities thereby lost, destroyed or damaged, or, where the loss or damage affects a substantial part of the Facilities, the Employer shall terminate the Contract pursuant to GCC Subclause 42.1 hereof.

32.3. The Contractor shall be liable for any loss of or damage to any Contractor's Equipment, or any other property of the Contractor used or intended to be used for purposes of the Facilities, except (i) as mentioned in GCC Subclause 32.2 with respect to the Contractor's temporary facilities, and (ii) where such loss or damage arises by reason of any of the matters specified in GCC Subclauses 32.2 (b) and (c) and 38.1.

32.4. With respect to any loss or damage caused to the Facilities or any part thereof or to the Contractor's Equipment by reason of any of the matters specified in GCC Subclause 38.1, the provisions of GCC Subclause 38.3 shall apply.

33. Loss of or Damage to Property; Accident or Injury to Workers; Indemnification

33.1. Subject to GCC Subclause 33.3, the Contractor shall indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions, or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property other than the Facilities whether accepted or not, arising in connection with the supply and installation of the Facilities and by reason of the negligence of the Contractor or its Subcontractors, or their employees, officers, or agents, except any injury, death, or property damage caused by the negligence of the Employer, its contractors, employees, officers, or agents.

33.2. If any proceedings are brought or any claim is made against the Employer that might subject the Contractor to liability under GCC Subclause 33.1, the Employer shall promptly give the Contractor a notice thereof and the Contractor may at its own expense and in the Employer's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

If the Contractor fails to notify the Employer within 28 days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Employer shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the Employer within

the 28-day period, the Employer shall make no admission that may be prejudicial to the defense of any such proceedings or claim.

The Employer shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.

- 33.3. The Employer shall indemnify and hold harmless the Contractor and its employees, officers, and Subcontractors from any liability for loss of or damage to property of the Employer, other than the Facilities not yet taken over, that is caused by fire, explosion, or any other perils, in excess of the amount recoverable from insurances procured under GCC Clause 34, provided that such fire, explosion, or other perils were not caused by any act or failure of the Contractor.
- 33.4. The party entitled to the benefit of an indemnity under this GCC Clause 33 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.

34. Insurance

- 34.1. To the extent specified in the Appendix (Insurance Requirements) to the Contract Agreement, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified in the said Appendix. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, who should not unreasonably withhold such approval.

a) Cargo Insurance During Transport

Covering loss or damage occurring while in transit from the Contractor's or Subcontractor's works or stores until arrival at the Site, to the Plant (including spare parts therefor) and to the Contractor's Equipment.

b) Installation All Risks Insurance

Covering physical loss or damage to the Facilities at the Site, occurring prior to Completion of the Facilities, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the Defect Liability Period while the Contractor is on the Site for the purpose of performing its obligations during the Defect Liability Period.

c) Third Party Liability Insurance

Covering bodily injury or death suffered by third parties including the Employer's personnel, and loss of or damage to property occurring in connection with the supply and installation of the Facilities.

d) Automobile Liability Insurance

Covering use of all vehicles used by the Contractor or its Subcontractors, whether or not owned by them, in connection with the execution of the Contract.

e) Workers' Compensation

In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed.

f) Employer's Liability

In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed.

g) Other Insurances

Such other insurances as may be specifically agreed upon by the parties hereto as listed in the Appendix (Insurance Requirements) to the Contract Agreement.

34.2. The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Subclause 34.1, except for the Third Party Liability, Workers' Compensation, and Employer's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GCC Subclause 34.1 except for the Cargo Insurance During Transport, Workers' Compensation, and Employer's Liability Insurances. All insurer's rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies.

34.3. The Contractor shall, in accordance with the provisions of the Appendix (Insurance Requirements) to the Contract Agreement, deliver to the Employer certificates of insurance or copies of the insurance policies as evidence that the required policies are in full force and effect. The certificates shall provide that no less than 21 days' notice shall be given to the Employer by insurers prior to cancellation or material modification of a policy.

34.4. The Contractor shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.

34.5. The Employer shall at its expense take out and maintain in effect during the performance of the Contract those insurances specified in the Appendix (Insurance Requirements) to the Contract Agreement, in the sums and with the deductibles and other conditions specified in the said Appendix. The Contractor and the Contractor's Subcontractors shall be named as co-insureds under all such policies. All insurers' rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies. The Employer shall deliver to the Contractor satisfactory evidence that the required

insurances are in full force and effect. The policies shall provide that not less than 21 days' notice shall be given to the Contractor by all insurers prior to any cancellation or material modification of the policies. If so requested by the Contractor, the Employer shall provide copies of the policies taken out by the Employer under this GCC Subclause 34.5.

- 34.6. If the Contractor fails to take out and/or maintain in effect the insurances referred to in GCC Subclause 34.1, the Employer may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Contractor under the Contract any premium that the Employer shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Contractor. If the Employer fails to take out and/or maintain in effect the insurances referred to in GCC 34.5, the Contractor may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Employer under the Contract any premium that the Contractor shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Employer. If the Contractor fails to or is unable to take out and maintain in effect any such insurances, the Contractor shall nevertheless have no liability or responsibility towards the Employer, and the Contractor shall have full recourse against the Employer for any and all liabilities of the Employer herein.
- 34.7. Unless otherwise provided in the Contract, the Contractor shall prepare and conduct all and any claims made under the policies effected by it pursuant to this GCC Clause 34, and all monies payable by any insurers shall be paid to the Contractor. The Employer shall give to the Contractor all such reasonable assistance as may be required by the Contractor. With respect to insurance claims in which the Employer's interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of the Employer. With respect to insurance claims in which the Contractor's interest is involved, the Employer shall not give any release or make any compromise with the insurer without the prior written consent of the Contractor.

35. Unforeseen Conditions

- 35.1. If, during the execution of the Contract, the Contractor shall encounter on the Site any physical conditions other than climatic conditions, or artificial obstructions that could not have been reasonably foreseen prior to the date of the Contract Agreement by an experienced contractor on the basis of reasonable examination of the data relating to the Facilities including any data as to boring tests, provided by the Employer, and on the basis of information that it could have obtained from a visual inspection of the Site if access thereto was available, or other data readily available to it relating to the Facilities, and if the Contractor determines that it will in consequence of such conditions or obstructions incur additional cost and expense or require additional time to perform its obligations under the Contract that would

not have been required if such physical conditions or artificial obstructions had not been encountered, the Contractor shall promptly, and before performing additional work or using additional Plant or Contractor's Equipment, notify the Project Manager in writing of

- a) the physical conditions or artificial obstructions on the Site that could not have been reasonably foreseen;
- b) the additional work and/or Plant and/or Contractor's Equipment required, including the steps which the Contractor will or proposes to take to overcome such conditions or obstructions;
- c) the extent of the anticipated delay; and
- d) the additional cost and expense that the Contractor is likely to incur.

On receiving any notice from the Contractor under this GCC Subclause 35.1, the Project Manager shall promptly consult with the Employer and Contractor and decide upon the actions to be taken to overcome the physical conditions or artificial obstructions encountered. Following such consultations, the Project Manager shall instruct the Contractor, with a copy to the Employer, of the actions to be taken.

35.2. Any reasonable additional cost and expense incurred by the Contractor in following the instructions from the Project Manager to overcome such physical conditions or artificial obstructions referred to in GCC Subclause 35.1 shall be paid by the Employer to the Contractor as an addition to the Contract Price.

35.3. If the Contractor is delayed or impeded in the performance of the Contract because of any such physical conditions or artificial obstructions referred to in GCC Subclause 35.1, the Time for Completion shall be extended in accordance with GCC Clause 40.

36. Change in Laws and Regulations

36.1. If, after the date 28 days prior to the date of Bid submission, in the country where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated, or changed, which shall be deemed to include any change in interpretation or application by the competent authorities, that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the SCC, pursuant to GCC Subclause 11.2.

37. Force Majeure

37.1. "Force Majeure" shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:

- a) war, hostilities, or warlike operations whether a state of war be declared or not, invasion, act of foreign enemy and civil war;
- b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion, and terrorist acts;
- c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority;
- d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine, and plague;
- e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear, and pressure waves or other natural or physical disaster; and
- f) shortage of labor, materials, or utilities where caused by circumstances that are themselves Force Majeure.

37.2. If either party is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 14 days after the occurrence of such event.

37.3. The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered, or delayed. The Time for Completion shall be extended in accordance with GCC Clause 40.

37.4. The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GCC Subclauses 37.6 and 38.5.

37.5. No delay or nonperformance by either party hereto caused by the occurrence of any event of Force Majeure shall

- a) constitute a default or breach of the Contract; or
- b) give rise to any claim for damages or additional cost or expense occasioned thereby, subject to GCC Subclauses 32.2, 38.3 and 38.4

if and to the extent that such delay or nonperformance is caused by the occurrence of an event of Force Majeure.

- 37.6. If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than 60 days or an aggregate period of more than 120 days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other, but without prejudice to either party's right to terminate the Contract under GCC Subclause 38.5.
- 37.7. In the event of termination pursuant to GCC Subclause 37.6, the rights and obligations of the Employer and the Contractor shall be as specified in GCC Subclauses 42.1.2 and 42.1.3.
- 37.8. Notwithstanding GCC Subclause 37.5, Force Majeure shall not apply to any obligation of the Employer to make payments to the Contractor herein.

38. War Risks

- 38.1. "War Risks" shall mean any event specified in paragraphs (a) and (b) of GCC Subclause 37.1 and any explosion or impact of any mine, bomb, shell, grenade, or other projectile, missile, munitions or explosive of war, occurring or existing in or near the country (or countries) where the Site is located.
- 38.2. Notwithstanding anything contained in the Contract, the Contractor shall have no liability whatsoever for or with respect to
- a) destruction of or damage to Facilities, Plant, or any part thereof;
 - b) destruction of or damage to property of the Employer or any third party; or
 - c) injury or loss of life

if such destruction, damage, injury or loss of life is caused by any war risks, and the Employer shall indemnify and hold the Contractor harmless from and against any and all claims, liabilities, actions, lawsuits, damages, costs, charges, or expenses arising in consequence of or in connection with the same.

- 38.3. If the Facilities or any Plant or Contractor's Equipment or any other property of the Contractor used or intended to be used for the purposes of the Facilities shall sustain destruction or damage by reason of any war risks, the Employer shall pay the Contractor for
- a) any part of the Facilities or the Plant so destroyed or damaged to the extent not already paid for by the Employer and so far as may be required by the Employer, and as may be necessary for completion of the Facilities;
 - b) replacing or making good any Contractor's Equipment or other property of the Contractor so destroyed or damaged; and

- c) replacing or making good any such destruction or damage to the Facilities or the Plant or any part thereof.

If the Employer does not require the Contractor to replace or make good any such destruction or damage to the Facilities, the Employer shall either request a change in accordance with GCC Clause 39, excluding the performance of that part of the Facilities thereby destroyed or damaged or, where the loss, destruction, or damage affects a substantial part of the Facilities, shall terminate the Contract, pursuant to GCC Subclause 42.1.

If the Employer requires the Contractor to replace or make good on any such destruction or damage to the Facilities, the Time for Completion shall be extended in accordance with GCC 40.

- 38.4. Notwithstanding anything contained in the Contract, the Employer shall pay the Contractor for any increased costs or incidentals to the execution of the Contract that are in any way attributable to, consequent on, resulting from, or in any way connected with any war risks, provided that the Contractor shall as soon as practicable notify the Employer in writing of any such increased cost.
- 38.5. If during the performance of the Contract any war risks shall occur that financially or otherwise materially affect the execution of the Contract by the Contractor, the Contractor shall use its reasonable efforts to execute the Contract with due and proper consideration given to the safety of its and its Subcontractors' personnel engaged in the work on the Facilities, provided, however, that if the execution of the work on the Facilities becomes impossible or is substantially prevented for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of any war risks, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other.
- 38.6. In the event of termination pursuant to GCC Subclauses 38.3 or 38.5, the rights and obligations of the Employer and the Contractor shall be specified in GCC Subclauses 42.1.2 and 42.1.3.

H. Change in Contract Elements

39. Change in the Facilities

39.1. Introducing a Change

- 39.1.1. Subject to GCC Subclauses 39.2.5 and 39.2.7, the Employer shall have the right to propose, and subsequently require, that the Project Manager order the Contractor from time to time during the performance of the Contract to make any change, modification, addition, or

deletion to, in or from the Facilities hereinafter called “Change,” provided that such Change falls within the general scope of the Facilities and does not constitute unrelated work and that it is technically practicable, taking into account both the state of advancement of the Facilities and the technical compatibility of the Change envisaged with the nature of the Facilities as specified in the Contract.

- 39.1.2. The Contractor may from time to time during its performance of the Contract propose to the Employer with a copy to the Project Manager, any Change that the Contractor considers necessary or desirable to improve the quality, efficiency, or safety of the Facilities. The Employer may at its discretion approve or reject any Change proposed by the Contractor, provided that the Employer shall approve any Change proposed by the Contractor to ensure the safety of the Facilities.
- 39.1.3. Notwithstanding GCC Subclauses 39.1.1 and 39.1.2, no change made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.
- 39.1.4. The procedure on how to proceed with and execute Changes is specified in GCC Subclauses 39.2 and 39.3, and further details and forms are provided in the Employer’s Requirements (Forms and Procedures).

39.2. Changes Originating from Employer

- 39.2.1. If the Employer proposes a Change pursuant to GCC Subclause 39.1.1, it shall send to the Contractor a “Request for Change Proposal,” requiring the Contractor to prepare and furnish to the Project Manager as soon as reasonably practicable a “Change Proposal,” which shall include the following:
- a) brief description of the Change,
 - b) effect on the Time for Completion,
 - c) estimated cost of the Change,
 - d) effect on Functional Guarantees (if any),
 - e) effect on the Facilities, and
 - f) effect on any other provisions of the Contract.
- 39.2.2. Prior to preparing and submitting the “Change Proposal,” the Contractor shall submit to the Project Manager an “Estimate for Change Proposal,” which shall be an estimate of the cost of preparing and submitting the Change Proposal.

Upon receipt of the Contractor’s Estimate for Change Proposal, the Employer shall do one of the following:

- a) accept the Contractor's estimate with instructions to the Contractor to proceed with the preparation of the Change Proposal,
- b) advise the Contractor of any part of its Estimate for Change Proposal that is unacceptable and request the Contractor to review its estimate
- c) advise the Contractor that the Employer does not intend to proceed with the Change.

39.2.3. Upon receipt of the Employer's instruction to proceed under GCC Subclause 39.2.2 (a), the Contractor shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with GCC Subclause 39.2.1.

39.2.4. The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If such rates and prices are inequitable, the parties thereto shall agree on specific rates for the valuation of the Change.

39.2.5. If before or during the preparation of the Change Proposal it becomes apparent that the aggregate effect of compliance therewith and with all other Change Orders that have already become binding upon the Contractor under this GCC Clause 39 would be to increase or decrease the Contract Price as originally set forth in Article 2 (Contract Price) of the Contract Agreement by more than 15%, the Contractor may give a written notice of objection thereto prior to furnishing the Change Proposal as aforesaid. If the Employer accepts the Contractor's objection, the Employer shall withdraw the proposed Change and shall notify the Contractor in writing thereof.

The Contractor's failure to so object shall neither affect its right to object to any subsequent requested Changes or Change Orders herein, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Contractor represents.

39.2.6. Upon receipt of the Change Proposal, the Employer and the Contractor shall mutually agree upon all matters therein contained. Within 14 days after such agreement, the Employer shall, if it intends to proceed with the Change, issue the Contractor with a Change Order.

If the Employer is unable to reach a decision within 14 days, it shall notify the Contractor with details of when the Contractor can expect a decision.

If the Employer decides not to proceed with the Change for whatever reason, it shall, within the said period of 14 days, notify the Contractor accordingly. Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with GCC Subclause 39.2.2.

39.2.7. If the Employer and the Contractor cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Completion, or any other matters identified in the Change Proposal, the Employer may nevertheless instruct the Contractor to proceed with the Change by issue of a "Pending Agreement Change Order."

Upon receipt of a Pending Agreement Change Order, the Contractor shall immediately proceed with effecting the Changes covered by such Order. The parties shall thereafter attempt to reach agreement on the outstanding issues under the Change Proposal.

If the parties cannot reach agreement within 60 days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the Dispute Board in accordance with the provisions of GCC Subclause 45.3.

39.3. Changes Originating from Contractor

39.3.1. If the Contractor proposes a Change pursuant to GCC Subclause 39.1.2, the Contractor shall submit to the Project Manager a written "Application for Change Proposal," giving reasons for the proposed Change and including the information specified in GCC Subclause 39.2.1.

Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GCC Subclauses 39.2.6 and 39.2.7. However, should the Employer choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Application for Change Proposal.

40. **Extension of Time for Completion**

40.1. The Time(s) for Completion specified in the SCC shall be extended if the Contractor is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:

- a) any Change in the Facilities as provided in GCC Clause 39;
- b) any occurrence of Force Majeure as provided in GCC Clause 37, unforeseen conditions as provided in GCC Clause 35, or other occurrence of any of the matters specified or referred to in paragraphs (a), (b) and (c) of GCC Subclause 32.2;
- c) any suspension order given by the Employer under GCC Clause 41 hereof or reduction in the rate of progress pursuant to GCC Subclause 41.2; or
- d) any changes in laws and regulations as provided in GCC Clause 36; or
- e) any default or breach of the Contract by the Employer, or any activity, act or omission of the Employer, or the Project Manager, or any other contractors employed by the Employer; or
- f) any other matter specifically mentioned in the Contract; or

g) any delay on the part of a sub-contractor, provided such delay is due to a cause for which the Contractor himself would have been entitled to an extension of time under this Subclause

by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.

40.2. Except where otherwise specifically provided in the Contract, the Contractor shall submit to the Project Manager a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Employer and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the Employer's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to a Dispute Board, pursuant to GCC Subclause 45.3.

40.3. The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

In all cases where the Contractor has given a notice of a claim for an extension of time under GCC 40.2, the Contractor shall consult with the Project Manager in order to determine the steps (if any) which can be taken to overcome or minimize the actual or anticipated delay. The Contractor shall there after comply with all reasonable instructions, which the Project Manager shall give in order to minimize such delay. If compliance with such instructions shall cause the Contractor to incur extra costs and the Contractor is entitled to an extension of time under GCC 40.1, the amount of such extra costs shall be added to the Contract Price.

41. Suspension

41.1. The Employer may request the Project Manager, by notice to the Contractor, to order the Contractor to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons therefor. The Contractor shall thereupon suspend performance of such obligation, except those obligations necessary for the care or preservation of the Facilities, until ordered in writing to resume such performance by the Project Manager.

If, by virtue of a suspension order given by the Project Manager, other than by reason of the Contractor's default or breach of the Contract, the Contractor's performance of any of its obligations is suspended for an aggregate period of more than 90 days, then at any time

thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the Project Manager requiring that the Employer shall, within 28 days of receipt of the notice, order the resumption of such performance or request and subsequently order a change in accordance with GCC Clause 39, excluding the performance of the suspended obligations from the Contract.

If the Employer fails to do so within such period, the Contractor may, by a further notice to the Project Manager, elect to treat the suspension, where it affects a part only of the Facilities, as a deletion of such part in accordance with GCC Clause 39 or, where it affects the whole of the Facilities, as termination of the Contract under GCC Subclause 42.1.

41.2. If

- a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Appendix (Terms and Procedures of Payment) to the Contract Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GCC Subclause 12.3, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within 14 days after receipt of the Contractor's notice; or
- b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas in accordance with GCC Subclause 10.2, or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities,

then the Contractor may by 14 days' notice to the Employer suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress.

41.3. If the Contractor's performance of its obligations is suspended, or the rate of progress is reduced pursuant to this GCC Clause 41, then the Time for Completion shall be extended in accordance with GCC Subclause 40.1, and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the Employer to the Contractor in addition to the Contract Price, except in the case of suspension order or

reduction in the rate of progress by reason of the Contractor's default or breach of the Contract.

41.4. During the period of suspension, the Contractor shall not remove from the Site any Plant, any part of the Facilities or any Contractor's Equipment, without the prior written consent of the Employer.

42. Termination

42.1. Termination for Employer's Convenience

42.1.1. The Employer may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this GCC Subclause 42.1.

42.1.2. Upon receipt of the notice of termination under GCC Subclause 42.1.1, the Contractor shall, either immediately or upon the date specified in the notice of termination,

- a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition;
- b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii) below;
- c) remove all Contractor's Equipment from the Site, repatriate the Contractor's and its Subcontractors' personnel from the Site, remove from the Site any wreckage, rubbish and debris of any kind, and leave the whole of the Site in a clean and safe condition; and
- d) subject to the payment specified in GCC Subclause 42.1.3,
 - i. deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination;
 - ii. to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Plant as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors; and
 - iii. deliver to the Employer all non-proprietary drawings, specifications and other documents prepared by the Contractor or its Subcontractors as at the date of termination in connection with the Facilities.

42.1.3. In the event of termination of the Contract under GCC Subclause 42.1.1, the Employer shall pay to the Contractor the following amounts:

- a) the Contract Price, properly attributable to the parts of the Facilities executed by the Contractor as of the date of termination;

- b) the costs reasonably incurred by the Contractor in the removal of the Contractor's Equipment from the Site and in the repatriation of the Contractor's and its Subcontractors' personnel;
- c) any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges;
- d) costs incurred by the Contractor in protecting the Facilities and leaving the Site in a clean and safe condition pursuant to paragraph (a) of GCC Subclause 42.1.2; and
- e) the cost of satisfying all other obligations, commitments and claims that the Contractor may in good faith have undertaken with third parties in connection with the Contract and that are not covered by paragraphs (a) through (d) above.

42.2. Termination for Contractor's Default

42.2.1. The Employer, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of termination and its reasons therefor to the Contractor, referring to this GCC Subclause 42.2:

- a) if the Contractor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up, other than a voluntary liquidation for the purposes of amalgamation or reconstruction, a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt;
- b) if the Contractor assigns or transfers the Contract or any right or interest therein in violation of the provision of GCC Clause 43; and
- c) if the Contractor, in the judgment of the Employer has engaged in integrity violations, as defined in GCC Clause 6, in competing for or in executing the Contract.

42.2.2. If the Contractor

- a) has abandoned or repudiated the Contract;
- b) has without valid reason failed to commence work on the Facilities promptly or has suspended, other than pursuant to GCC Subclause 41.2, the progress of Contract performance for more than 28 days after receiving a written instruction from the Employer to proceed;
- c) persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause;
- d) refuses or is unable to provide sufficient materials, services or labor to execute and complete the Facilities in the manner specified in the program furnished under GCC Subclause 18.2 at rates of progress that give reasonable assurance to the Employer

that the Contractor can attain Completion of the Facilities by the Time for Completion as extended;

then the Employer may, without prejudice to any other rights it may possess under the Contract, give a notice to the Contractor, stating the nature of the default and requiring the Contractor to remedy the same. If the Contractor fails to remedy or to take steps to remedy the same within 14 days of its receipt of such notice, then the Employer may terminate the Contract forthwith by giving a notice of termination to the Contractor that refers to this GCC Subclause 42.2.

42.2.3. Upon receipt of the notice of termination under GCC Subclauses 42.2.1 or 42.2.2, the Contractor shall, either immediately or upon such date as is specified in the notice of termination,

- a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition;
- b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) below;
- c) deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination;
- d) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Plant as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors; and
- e) deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Facilities.

42.2.4. The Employer may enter upon the Site, expel the Contractor, and complete the Facilities itself or by employing any third party. The Employer may, to the exclusion of any right of the Contractor over the same, take over and use with the payment of a fair rental rate to the Contractor, with all the maintenance costs to the account of the Employer and with an indemnification by the Employer for all liability including damage or injury to persons arising out of the Employer's use of such equipment, any Contractor's Equipment owned by the Contractor and on the Site in connection with the Facilities for such reasonable period as the Employer considers expedient for the supply and installation of the Facilities.

Upon completion of the Facilities or at such earlier date as the Employer thinks appropriate, the Employer shall give notice to the Contractor that such Contractor's Equipment will be

returned to the Contractor at or near the Site and shall return such Contractor's Equipment to the Contractor in accordance with such notice. The Contractor shall thereafter without delay and at its cost remove or arrange removal of the same from the Site.

42.2.5. Subject to GCC Subclause 42.2.6, the Contractor shall be entitled to be paid the Contract Price attributable to the Facilities executed as of the date of termination, the value of any unused or partially used Plant on the Site, and the costs, if any, incurred in protecting the Facilities and in leaving the Site in a clean and safe condition pursuant to paragraph (a) of GCC Subclause 42.2.3. Any sums due the Employer from the Contractor accruing prior to the date of termination shall be deducted from the amount to be paid to the Contractor under this Contract.

42.2.6. If the Employer completes the Facilities, the cost of completing the Facilities by the Employer shall be determined.

If the sum that the Contractor is entitled to be paid, pursuant to GCC Subclause 42.2.5, plus the reasonable costs incurred by the Employer in completing the Facilities, exceeds the Contract Price, the Contractor shall be liable for such excess.

If such excess is greater than the sums due the Contractor under GCC Subclause 42.2.5, the Contractor shall pay the balance to the Employer, and if such excess is less than the sums due the Contractor under GCC Subclause 42.2.5, the Employer shall pay the balance to the Contractor.

The Employer and the Contractor shall agree, in writing, on the computation described above and the manner in which any sums shall be paid.

42.3. Termination by Contractor

42.3.1. If

- a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Appendix (Terms and Procedures of Payment) to the Contract Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GCC Subclause 12.3, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, fails to remedy the breach or take steps to remedy the breach within 14 days after receipt of the Contractor's notice; or

b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities;

then the Contractor may give a notice to the Employer thereof, and if the Employer has failed to pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within 28 days of such notice, or if the Contractor is still unable to carry out any of its obligations under the Contract for any reason attributable to the Employer within 28 days of the said notice, the Contractor may by a further notice to the Employer referring to this GCC Subclause 42.3.1, forthwith terminate the Contract.

42.3.2. The Contractor may terminate the Contract forthwith by giving a notice to the Employer to that effect, referring to this GCC Subclause 42.3.2, if the Employer becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Employer takes or suffers any other analogous action in consequence of debt.

42.3.3. If the Contract is terminated under GCC Subclauses 42.3.1 or 42.3.2, then the Contractor shall immediately

- a) cease all further work, except for such work as may be necessary for the purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition;
- b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii);
- c) remove all Contractor's Equipment from the Site and repatriate the Contractor's and its Subcontractors' personnel from the Site; and
- d) subject to the payment specified in GCC Subclause 42.3.4,
 - i. deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination;
 - ii. to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Plant as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors; and

- iii. deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Facilities.

42.3.4. If the Contract is terminated under GCC Subclauses 42.3.1 or 42.3.2, the Employer shall pay to the Contractor all payments specified in GCC Subclause 42.1.3, and reasonable compensation for all loss, except for loss of profit, or damage sustained by the Contractor arising out of, in connection with or in consequence of such termination.

42.3.5. Termination by the Contractor pursuant to this GCC Subclause 42.3 is without prejudice to any other rights or remedies of the Contractor that may be exercised in lieu of or in addition to rights conferred by GCC Subclause 42.3.

42.4. In this GCC Clause 42, the expression “Facilities executed” shall include all work executed, Installation Services provided, and all Plant acquired, or subject to a legally binding obligation to purchase, by the Contractor and used or intended to be used for the purpose of the Facilities, up to and including the date of termination.

42.5. In this GCC Clause 42, in calculating any monies due from the Employer to the Contractor, account shall be taken of any sum previously paid by the Employer to the Contractor under the Contract, including any advance payment paid pursuant to the Appendix (Terms and Procedures of Payment) to the Contract Agreement.

43. Assignment

43.1. Neither the Employer nor the Contractor shall, without the express prior written consent of the other party which consent shall not be unreasonably withheld, assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.

I. Claims, Disputes, and Arbitration

44. Contractor’s Claims

44.1. If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall submit a notice to the Project Manager, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Subclause shall apply.

The Contractor shall also submit any other notices, which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Employer's liability, the Project Manager may, after receiving any notice under this Subclause, monitor the record keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim, which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect,

- a) this fully detailed claim shall be considered as interim;
- b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Project Manager may reasonably require; and
- c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Project Manager.

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Project Manager shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within such time.

Each payment certificate shall include such amounts for any claim as have been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the

particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

The Project Manager shall agree with the Contractor or estimate: (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with GCC Clause 40, and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

The requirements of this Subclause are in addition to those of any other Subclause, which may apply to a claim. If the Contractor fails to comply with this or another Subclause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Subclause.

In the event that the Contractor and the Employer cannot agree on any matter relating to a claim, either party may refer the matter to the Dispute Board pursuant to GCC 45 hereof.

45. Disputes and Arbitration

45.1. Appointment of the Dispute Board

Disputes shall be referred to a Dispute Board for decision in accordance with GCC Subclause 45.3. The Parties shall appoint a Dispute Board by the date stated in the SCC.

The Dispute Board shall comprise, as stated in the SCC, either one or three suitably qualified persons (“the members”), each of whom shall be fluent in the language for communication defined in the Contract and shall be a professional experienced in the type of activities involved in the performance of the Contract and with the interpretation of contractual documents. If the number is not so stated and the Parties do not agree otherwise, the Dispute Board shall comprise three persons, one of whom shall serve as chairman.

If the Parties have not jointly appointed the Dispute Board 21 days before the date stated in the SCC and the Dispute Board is to comprise three persons, each Party shall nominate one member for the approval of the other Party. The first two members shall recommend and the Parties shall agree upon the third member, who shall act as chairman.

However, if a list of potential members is included in the SCC, the members shall be selected from those on the list, other than anyone who is unable or unwilling to accept appointment to the Dispute Board.

The agreement between the Parties and either the sole member or each of the three members shall incorporate by reference the General Conditions of Dispute Board Agreement

contained in the Appendix to these General Conditions, with such amendments as are agreed between them.

The terms of the remuneration of either the sole member or each of the three members, including the remuneration of any expert whom the Dispute Board consults, shall be mutually agreed upon by the Parties when agreeing the terms of appointment of the member or such expert (as the case may be). Each Party shall be responsible for paying one-half of this remuneration.

If a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Subclause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the Dispute Board (including each member) shall expire when the Operational Acceptance Certificate has been issued in accordance with GCC Clause 25.3.

45.2. Failure to Agree Dispute Board

If any of the following conditions apply, namely:

- a) the Parties fail to agree upon the appointment of the sole member of the Dispute Board by the date stated in the first paragraph of GCC Subclause 45.1;
- b) either Party fails to nominate a member (for approval by the other Party) of a Dispute Board of three persons by such date;
- c) the Parties fail to agree upon the appointment of the third member (to act as chairman) of the Dispute Board by such date; or
- d) the Parties fail to agree upon the appointment of a replacement person within 42 days after the date on which the sole member or one of the three members declines to act or is unable to act as a result of death, disability, resignation, or termination of appointment;

then the appointing entity or official named in the SCC shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the Dispute Board. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

45.3. Obtaining Dispute Board's Decision

If a dispute (of any kind whatsoever) arises between the Parties in connection with the performance of the Contract, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Project Manager, either Party may refer the dispute in writing to the Dispute Board for its decision, with copies to the other Party and the Project Manager. Such reference shall state that it is given under this Subclause.

For a Dispute Board of three persons, the Dispute Board shall be deemed to have received such reference on the date when it is received by the chairman of the Dispute Board.

Both Parties shall promptly make available to the Dispute Board all such additional information, further access to the Site, and appropriate facilities, as the Dispute Board may require for the purposes of making a decision on such dispute. The Dispute Board shall be deemed to be not acting as arbitrator(s).

Within 84 days after receiving such reference, or within such other period as may be proposed by the Dispute Board and approved by both Parties, the Dispute Board shall give its decision, which shall be reasoned and shall state that it is given under this Subclause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the performance of the Facilities in accordance with the Contract.

If either Party is dissatisfied with the Dispute Board's decision, then either Party may, within 28 days after receiving the decision, give notice to the other Party of its dissatisfaction and intention to commence arbitration. If the Dispute Board fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either Party may, within 28 days after this period has expired, give notice to the other Party of its dissatisfaction and intention to commence arbitration.

In either event, this notice of dissatisfaction shall state that it is given under this Subclause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in GCC Subclauses 45.6 and 45.7, neither Party shall be entitled to commence arbitration of a dispute unless a notice of dissatisfaction has been given in accordance with this Subclause.

If the Dispute Board has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within 28 days after it received the Dispute Board's decision, then the decision shall become final and binding upon both Parties.

45.4. Amicable Settlement

Where notice of dissatisfaction has been given under GCC Subclause 45.3 above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the fifty-sixth day after the day on which notice of dissatisfaction and intention to commence arbitration was given, even if no attempt at amicable settlement has been made.

45.5. Arbitration

Unless settled amicably, any dispute in respect of which the Dispute Board's decision (if any) has not become final and binding shall be finally settled by international arbitration. Unless otherwise agreed by both Parties,

- a) arbitration proceedings shall be conducted as stated in the Special Conditions;
- b) if no arbitration proceedings is so stated, the dispute shall be finally settled by institutional arbitration under the Rules of Arbitration of the International Chamber of Commerce;
- c) the dispute shall be settled by three arbitrators; and
- d) the arbitration shall be conducted in the language for communications defined in GCC Subclause 5.3.

The arbitrator(s) shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Project Manager, and any decision of the Dispute Board, relevant to the dispute. Nothing shall disqualify the Project Manager from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrator(s) to the evidence or arguments previously put before the Dispute Board to obtain its decision, or to the reasons for dissatisfaction given in its notice of dissatisfaction. Any decision of the Dispute Board shall be admissible in evidence in the arbitration.

Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, the Project Manager and the Dispute Board shall not be altered by reason of any arbitration being conducted during the progress of the Works.

45.6. Failure to Comply with Dispute Board's Decision

In the event that a Party fails to comply with a Dispute Board decision which has become final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under GCC Subclause 45.5. GCC Subclauses 45.3 and 45.4 shall not apply to this reference.

45.7. Expiry of Dispute Board's Appointment

If a dispute arises between the Parties in connection with the performance of the Contract, and there is no Dispute Board in place, whether by reason of the expiry of the Dispute Board's appointment or otherwise,

- a) GCC Subclauses 45.3 and 45.4 shall not apply, and
- b) the dispute may be referred directly to arbitration under GCC Subclause 45.5.

APPENDIX A

General Conditions of Dispute Board Agreement

1. Definitions

Each "Dispute Board Agreement" is a tripartite agreement by and between

- a. the "Employer";
- b. the "Contractor"; and
- c. the "Member" who is defined in the Dispute Board Agreement as being
 - i. the sole member of the "Dispute Board" and, where this is the case, all references to the "Other Members" do not apply; or
 - ii. one of the three persons who are jointly called the "Dispute Board" (or "dispute board") and, where this is the case, the other two persons are called the "Other Members".

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Board Agreement, which incorporates this Appendix. In the Dispute Board Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2. General Provisions

Unless otherwise stated in the Dispute Board Agreement, it shall take effect on the latest of the following dates:

- a. the Commencement Date defined in the Contract;
- b. when the Employer, the Contractor and the Member have each signed the Dispute Board Agreement; or
- c. when the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute board agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days' notice of resignation to the Employer and to the Contractor, and the Dispute Board Agreement shall terminate upon the expiry of this period.

3. Warranties

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Project Manager. The Member shall promptly disclose, to each

of them and to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member's representations that he/she is

- a. experienced in the work, which the Contractor is to carry out under the Contract,
- b. experienced in the interpretation of contract documentation, and
- c. fluent in the language for communications defined in the Contract.

4. General Obligations of the Member

The Member shall

- a. have no interest financial or otherwise in the Employer, the Contractor or the Project Manager, nor any financial interest in the Contract except for payment under the Dispute Board Agreement;
- b. not previously have been employed as a consultant or otherwise by the Employer, the Contractor, or the Project Manager, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Board Agreement;
- c. have disclosed in writing to the Employer, the Contractor, and the Other Members (if any), before entering into the Dispute Board Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer, or employee of the Employer, the Contractor, or the Project Manager, and any previous involvement in the overall project of which the Contract forms part;
- d. not, for the duration of the Dispute Board Agreement, be employed as a consultant or otherwise by the Employer, the Contractor, or the Project Manager, except as may be agreed in writing by the Employer, the Contractor, and the Other Members (if any);
- e. comply with the annexed procedural rules and with GCC Subclause 45.3;
- f. not give advice to the Employer, the Contractor, the Employer's Personnel, or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;
- g. not while a Member enter into discussions or make any agreement with the Employer, the Contractor, or the Project Manager regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Board Agreement;
- h. ensure his/her availability for all site visits and hearings as are necessary;

- i. become conversant with the Contract and with the progress of the Facilities (and of any other parts of the project of which the Contract forms part) by studying all documents received, which shall be maintained in a current working file;
- j. treat the details of the Contract and all the Dispute Board's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor, and the Other Members (if any); and
- k. be available to give advice and opinions on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

5. General Obligations of the Employer and the Contractor

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the Dispute Board's activities under the Contract and the Dispute Board Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any)

- a. be appointed as an arbitrator in any arbitration under the Contract;
- b. be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or
- c. be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the Dispute Board under GCC Subclause 45.3, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6. Payment

The Member shall be paid as follows, in the currency named in the Dispute Board Agreement:

- a. a retainer fee per calendar month, which shall be considered as payment in full for
 - i. being available on 28 days' notice for all site visits and hearings;
 - ii. becoming and remaining conversant with all project developments and maintaining relevant files;
 - iii. all office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
 - iv. all services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Board Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by one-third. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Board Agreement is otherwise terminated.

- b. a daily fee, which shall be considered as payment in full for
 - i. each day or part of a day up to a maximum of 2 days' travel time in each direction for the journey between the Member's home and the site, or another location of a meeting with the Other Members (if any);
 - ii. each working day on site visits, hearings, or preparing decisions; and
 - iii. each day spent reading submissions in preparation for a hearing.
- c. all reasonable expenses, including necessary travel expenses (air fare in less than first class, hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, facsimiles, and telexes, and use of the internet: a receipt shall be required for each item in excess of 5% of the daily fee referred to in sub-paragraph (b) of this Clause;
- d. any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Board Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Dispute Board Agreement became effective.

If the parties fail to agree on the retainer fee or the daily fee, the appointing entity or official named in the SCC shall determine the amount of the fees to be used.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Board Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the Dispute Board; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in accordance with GCC Subclause 12.3.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7. Termination

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Board Agreement by giving 42 days' notice to the Member, or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Board Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Board Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8. Default of the Member

If the Member fails to comply with any of his obligations under Clause 4 concerning his impartiality or independence in relation to the Employer or the Contractor, he/she shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the Dispute Board which are rendered void or ineffective by the said failure to comply.

9. Disputes

Any dispute or claim arising out of or in connection with this Dispute Board Agreement, or the breach, termination or invalidity thereof, shall be finally settled by institutional arbitration. If no other arbitration institute is agreed, the arbitration shall be conducted under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

Annex - DISPUTE BOARD GUIDELINES

1. Unless otherwise agreed by the Employer and the Contractor, the Dispute Board shall visit the site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor, and the Dispute Board, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.
2. The timing of and agenda for each site visit shall be as agreed jointly by the Dispute Board, the Employer, and the Contractor, or in the absence of agreement, shall be decided by the Dispute Board. The purpose of site visits is to enable the Dispute Board to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to prevent potential problems or claims from becoming disputes.
3. Site visits shall be attended by the Employer, the Contractor, and the Project Manager and shall be coordinated by the Employer in cooperation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each site visit and before leaving the site, the Dispute Board shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.
4. The Employer and the Contractor shall furnish to the Dispute Board one copy of all documents which the Dispute Board may request, including Contract documents, progress reports, variation instructions, certificates, and other documents pertinent to the performance of the Contract. All communications between the Dispute Board and the Employer or the Contractor shall be copied to the other Party. If the Dispute Board comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.
5. If any dispute is referred to the Dispute Board in accordance with GCC Subclause 45.3, the Dispute Board shall proceed in accordance with GCC Subclause 45.3 and these Guidelines. Subject to the time allowed to give notice of a decision and other relevant factors, the Dispute Board shall
 - a. act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case; and
 - b. adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.
6. The Dispute Board may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.
7. Except as otherwise agreed in writing by the Employer and the Contractor, the Dispute Board shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor, and the

Project Manager, and to proceed in the absence of any party who the Dispute Board is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

8. The Employer and the Contractor empower the Dispute Board, among other things, to
 - a. establish the procedure to be applied in deciding a dispute;
 - b. decide upon the Dispute Board's own jurisdiction, and as to the scope of any dispute referred to it;
 - c. conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Guidelines;
 - d. take the initiative in ascertaining the facts and matters required for a decision;
 - e. make use of its own specialist knowledge, if any;
 - f. decide upon the payment of financing charges in accordance with the Contract;
 - g. decide upon any provisional relief such as interim or conservatory measures;
 - h. open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute; and
 - i. appoint, should the Dispute Board so consider necessary and the Parties agree, a suitable expert at the cost of the Parties to give advice on a specific matter relevant to the dispute.
9. The Dispute Board shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the Dispute Board shall make and give its decision in accordance with GCC Subclause 45.3, or as otherwise agreed by the Employer and the Contractor in writing. If the Dispute Board comprises three persons
 - a. it shall convene in private after a hearing, in order to have discussions and prepare its decision;
 - b. it shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
 - c. if a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision, unless
 - i. either the Employer or the Contractor does not agree that they do so, or
 - ii. the absent Member is the chairman and he/she instructs the other Members to not make a decision.

Section 8: Special Conditions of Contract

Section 8: Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC. The clause number of the SCC is the corresponding clause number of the GCC.

1. Definitions

The Employer is: Tripura State Electricity Corporation Limited, Agartala, Tripura, India

The Project Manager is: The Employer shall appoint and notify the contractor in writing, the name of the Project Manager within 15 days of signing of the contract agreement

The Bank is: Asian Development Bank

Country of Origin: Most recent list of eligible countries as specified in Article 1.1(d) of Contract Agreement

5. Law and Language

5.1 The Contract shall be interpreted in accordance with the laws of: India

5.2 The ruling language is: English

5.3 The language for communications is: English

7. Scope of Facilities

7.3 The Contractor agrees to supply spare parts for AMI System for a period of: As per Clause 4.1.1 in Technical Specifications No. SM-2, Section 6

The Contractor shall carry sufficient inventories to ensure an ex-stock supply of consumable spares for the Plant. Other spare parts and components shall be supplied as promptly as possible, but at the most within 6 months of placing the order and opening the letter of credit. In addition, in the event of termination of the production of spare parts, advance notification will be made to the Employer of the pending termination, with sufficient time to permit the Employer to procure the needed requirement. Following such termination, the Contractor will furnish to the extent possible and at no cost to the Employer the blueprints, drawings and specifications of the spare parts, if requested.

8. Time for Commencement and Completion

8.1 The Contractor shall commence work on the Facilities within 15 days from the Effective Date for determining Time for Completion as specified in the Contract Agreement.

8.2 The Time for Completion of the whole of the Facilities shall be 18 months from the Effective Date as described in the Contract Agreement.

Time for Completion for parts of the Facilities / Contract activities shall be as indicated in Appendix 4 to the Contract Agreement in Section 9.

11. Contract Price

5.1 11.2 This contract is fixed unit rate contract. The quantities of the individual items and services of the works covered under the contract are provisional and may vary on

either side and payment will be allowed as per actual quantities supplied and as per actual work done at quoted unit rates.

13. Securities

5.1.1 13.3.1 The amount of performance security, as a percentage of the Contract Price for the Facility or for the part of the Facility for which a separate Time for Completion is provided, shall be: 10% of Contract Price.

13.3.2 The performance security shall be in the form of the Bank Guarantee as per form included in Section 9 (Contract Forms).

13.3.3 The performance security shall not be reduced on the date of the Operational Acceptance.

18.

Work Program

18.2 Add the following subparagraph:

The Contractor shall submit a detailed month wise programme of supply of various items of plant and completion of various activities of Installation work in the form of "BAR CHART" and "SUB BAR CHARTS" within 28 days after effective date.

18.3 Add the following subparagraphs to Sub-Clause 18.3 of the GCC:

(c) Monitoring of the obligations in Sub-Clauses 21.1, 22.1.1, 22.2.3 (d), 22.2.7 (d), 22.2.15, 22.2.16 and 47.

18.4 Add the following subparagraph:

Progress of Performance would be reviewed through a periodical review meeting between Contractor and Employer. The periodical review meeting shall be held every month before the 10th of the succeeding month to analyze the scheduled and actual progress, targets for the next quarter and to sort out bottlenecks, if any, to ensure completion of work within the Time schedule specified in the contract. The Contractor will attend the above meetings along with necessary information in respect of supply and installation activities

22. Installation

22.2 Labor

22.2.5 Working Hours

(a) Normal working hours are: As per Governing Laws of India- currently at 48 hours per week and not more than 9 hours per day.

22.2.7 Health and Safety

(d) The Contractor shall throughout the contract (including the Defect Liability Period):

(i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Subcontractors and Employer's and Project Manager's employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular;

(ii) provide male or female condoms for all Site staff and labor as appropriate; and

(iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral

to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

The Contractor shall include in the program to be submitted for the execution of the Facilities under Subclause 18.2 an alleviation program for Site staff and labor and their families in respect of STI and STD including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Subclause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related subcontracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for the preparation and implementation this program shall not exceed the amount dedicated for this purpose.

22.2.8 Funeral Arrangements

Funeral arrangements: The funeral arrangements in the unfortunate event of the death of any of the staff engaged by the contractor shall be the sole responsibility of the contractor during the entire implementation as well as operation & maintenance period. The contractor shall meet all expenses related to the funeral, including transportation of the dead body of the staff to his place of residence and / or travel expenses of immediate family members to the site.

22.2.16 Replace Sub-Clause 22.2.16 with the following:

‘The Contractor “shall not employ any child to perform any work, including work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral, or social development. “Child” means a child below the statutory minimum age specified under applicable national, provincial or local law of India

22.2.17 Respectful Work Environment

The Contractor shall ensure that its employees and Subcontractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct, and harassment, including sexual harassment and shall, at all times, behave in a manner that creates an environment free of unethical behavior, bullying, misconduct, and harassment, including sexual harassment. The Contractor shall take appropriate action against any employees or Subcontractors, including suspension or termination of employment or subcontract, if any form of unethical or inappropriate behavior is identified.

The Contractor shall conduct training programs for its employees and Subcontractors to raise awareness on and prevent any form of bullying, discrimination, misconduct, and harassment including sexual harassment, and to promote a respectful work environment. The Contractor shall keep an up to date record of its employees and subcontractors who have attended and completed such training programs and provide such records to the Employer or the Engineer at their first written request.

26. Completion Time Guarantee

26.2—Applicable rate for liquidated damages: @ 0.5% of Contract Price or the relevant part thereof per week

26.2 Maximum deduction for liquidated damages:10% of the Contract Price.

26.3 No bonus will be given for earlier Completion of the Facilities or part thereof.

27. Defect Liability

27.10 The extended defect liability period (in addition to defect liability period as stipulated in GCC clause 27.2) will be as follows:

- (i) Smart meters of all types (direct connected, CT/CT-PT operated) for 3060 days
- (ii) Communication equipment for 540 days, and
- (iii) Computer hardware including servers and workstations for 540 days

30. Limitation of Liability

30.1 (b) The multiplier of the Contract Price is: 1 (one)

45. Disputes and Arbitration

45.1 The Dispute Board shall be appointed within 28 days after the Effective Date.

45.2 Appointment (if not agreed) to be made by the Director Indian Institute of Technology Guwahati

45.5 Rules of procedure for arbitration proceedings:

- (a) Contracts with foreign contractors:

International arbitration shall be conducted in accordance with the Rules of the Singapore International Arbitration Centre (SIAC).

Arbitration shall be administered by SIAC.

The place of arbitration shall be: Singapore.

- (b) Contracts with contractors being nationals of the Employer's country will be referred to the Indian Arbitration and Conciliation Act of 1996.

The place of arbitration shall be: Agartala

46. Eligibility

46.1 The Contractor shall have the nationality of an ADB member country. The Contractor shall be deemed to have the nationality of a country if the Contractor is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the

nationality of proposed subcontractors or suppliers for any part of the Contract including related services.

- 46.2 The materials, equipment and services to be supplied under the Contract shall have their origin in eligible source countries and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, the Contractor may be required to provide evidence of the origin of materials, equipment and services.
- 46.3 For purposes of SCC 46.2, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

Section 9: Contract Forms

Notice of Intention for Award of Contract

[on letterhead paper of the Employer]

[date of notification]

To [name of the Bidder]
 Attention: [insert name of the Bidder's authorized representative]
 Address: [insert address of the Bidder's authorized representative]
 Telephone/Fax numbers: [insert telephone/fax numbers of the Bidder's authorized representative]
 E-mail Address: [insert e-mail address of the Bidder's authorized representative]

This is to notify you of our intention to award the contract [insert name of the contract and identification number, as given in the Bid Data Sheet]. You have [insert number of days as specified in ITB 42.1 of the BDS] days, from the date of this notification to (i) request for a debriefing in relation to the evaluation of your Bid, and/or (ii) submit a bidding-related complaint in relation to the intention for award of contract, in accordance with the procedures specified in ITB 47.1.

The summary of the evaluation are as follows:

1. List of Bidders

Name of Bidder	Bid Price as Read Out at Opening	Evaluated Bid Price

2. Reason/s Why Your Bid Was Unsuccessful

.....

3. The Successful Bidder

Name of Bidder:	
Address:	

Contract Price:	
Duration of Contract:	
Scope of the Contract Awarded:	
Amount Performance Security Required:	

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Notification of Award

[Employer's letterhead]

Letter of Acceptance

[date]

To: [Name and address of the contractor]

This is to notify you that your Bid dated [date] for execution of the [name of the contract and identification number, as given in the Bid Data Sheet] for the Contract Price in the aggregate of [amounts in words and figures] [name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract and any additional security required as a result of the evaluation of your bid, using for that purpose one of the Performance Security Forms included in Section 9 (Contract Forms) of the Bidding Document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

[Employer's letterhead]

THIS AGREEMENT made on the [insert number] day of [insert month], [insert year],

BETWEEN

(1) [name of the employer], a corporation incorporated under the laws of [country of the Employer] and having its principal place of business at [address of the Employer] (hereinafter called "the Employer"), and (2) [name of the contractor], a corporation incorporated under the laws of [country of the contractor] and having its principal place of business at [address of the contractor] (hereinafter called "the Contractor").

WHEREAS the Employer desires to engage the Contractor to design, manufacture, test, deliver, install, complete and commission certain Facilities, viz. [list of facilities] ("the Facilities") and the Contractor have agreed to such engagement upon and subject to the terms and conditions hereinafter appearing.

NOW IT IS HEREBY AGREED as follows:

**Article 1
Contract
Documents**

1.1 Contract Documents (Reference GCC Clause 2)

The following documents shall constitute the Contract between the Employer and the Contractor, and each shall be read and construed as an integral part of the Contract:

- (a) This Contract Agreement and the Appendixes hereto
- (b) Letter of Bid and Price Schedules submitted by the Contractor
- (c) Special Conditions of Contract
- (d) List of Eligible Countries that was specified in Section 5 of the Bidding Document
- (e) General Conditions of Contract
- (f) Specifications
- (g) Drawings
- (h) Other completed Bidding Forms submitted with the Letter of Bid
- (i) Any other documents forming part of the Employer's Requirements
- (j) Any other documents shall be added here²⁴

1.2 Order of Precedence (Reference GCC Clause 2)

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1

²⁴Tables of Adjustment Data may be added if the contract provides for price adjustment (see GCC 11).

(Contract Documents) above.

1.3 Definitions (Reference GCC Clause 1)

Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the General Conditions.

**Article 2
Contract Price
and Terms of
Payment**

2.1 Contract Price (Reference GCC Clause 11)

The Employer hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the aggregate of [amounts of foreign currency in words], [amounts in figures] as specified in Price Schedule No. 5 (Grand Summary), [amounts of local currency in words], [amounts in figures], or such other sums as may be determined in accordance with the terms and conditions of the Contract.

2.2 Terms of Payment (Reference GCC Clause 12)

The terms and procedures of payment according to which the Employer will reimburse the Contractor are given in the Appendix (Terms and Procedures of Payment) hereto.

The Employer shall instruct its bank to issue an irrevocable confirmed documentary credit made available to the Contractor in a bank in the country of the Contractor. The credit shall be for an amount of [amount equal to the total named in Schedule 1 less the advance payment to be made for plant and mandatory spare parts supplied from abroad]; and shall be subject to the Uniform Customs and Practice for Documentary Credits 1993 Revision, ICC Publication No. 500²⁵.

In the event that the amount payable under Schedule No. 1 is adjusted in accordance with GCC 11.2 or with any of the other terms of the Contract, the Employer shall arrange for the documentary credit to be amended accordingly

**Article 3
Effective Date**

3.1 Effective Date (Reference GCC Clause 1)

The Effective Date upon which the period until the Time for Completion of the Facilities shall be counted from is the date when all of the following conditions have been fulfilled:

- (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor.
- (b) The Contractor has submitted to the Employer the performance security and the advance payment guarantee.
- (c) The Employer has paid the Contractor the advance payment.

²⁵Or *Uniform Customs and Practice for Documentary Credits 2007 Revision, ICC Publication No. 600 (or the latest version)*.

- (d) The Contractor has been advised that the documentary credit referred to in Article 2.2 above has been issued in its favor.

Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.

- 3.2 If the conditions listed under 3.1 are not fulfilled within 2 months from the date of this Contract notification because of reasons not attributable to the Contractor, the parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Completion and/or other relevant conditions of the Contract.

**Article 4
Communications**

- 4.1 The address of the Employer for notice purposes, pursuant to GCC 4.1 is: [*Employer's address*].
- 4.2 The address of the Contractor for notice purposes, pursuant to GCC 4.1 is: [*Contractor's address*].

**Article 5.
Appendixes**

- 5.1 The Appendixes listed in the attached List of Appendixes shall be deemed to form an integral part of this Contract Agreement.
- 5.2 Reference in the Contract to any Appendix shall mean the Appendixes attached hereto, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Employer and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by, for and on behalf of the Employer

[*Signature*]

[*Title*]

in the presence of

[*Signature*]

[*Title*]

Signed by, for and on behalf of the Contractor

[*Signature*]

[*Title*]

in the presence of

[*Signature*]

[*Title*]

APPENDIXES

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Appendix 1: Terms and Procedures of Payment

In accordance with the provisions of GCC Clause 12 (Terms of Payment), the Employer shall pay the Contractor in the following manner and at the following times, based on the Price Breakdown given in the section on Price Schedules. Payments will be made in the currencies quoted by the Bidder unless otherwise agreed between the parties. Applications for payment in respect of part deliveries may be made by the Contractor as work proceeds.

(A) Terms of Payment

Schedule No. 1 – Plant and Mandatory Spare Parts Supplied from Abroad

In respect of plant and mandatory spare parts supplied from abroad, the following payments shall be made:

In respect of plant and mandatory spare parts supplied from abroad, the following payments shall be made:

Ten percent (10%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security in the form of bank guarantee for equal amount of the advance in the prescribed format made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the plant and mandatory spare parts delivered to the site, as evidenced by delivery documents.

Sixty percent (60%) of the total or pro rata CIP amount upon Incoterm “CIP”, upon delivery and acceptance at site, within 45 days after receipt of invoice.

Twenty percent (20%) of the total or pro rata CIP amount upon issue of the Completion Certificate, within 45 days after receipt of invoice.

Ten percent (10%) of the total or pro rata CIP amount upon issue of the Operational Acceptance Certificate, within 45 days after receipt of invoice.

Materials will be supplied and installed in phased manner as per erection PERT chart duly approved by the Employer. The measurement certificate shall be jointly signed by the Project Management Agency and duly authorized official of the Employer.

Schedule No. 2 – Plant and Mandatory Spare Parts Supplied from Within the Employer’s Country

In respect of plant and mandatory spare parts supplied from Within the Employer’s Country, the following payments shall be made:

Ten percent (10%) of the total EXW amount as an advance payment against receipt of invoice and an irrevocable advance payment security in the form of bank guarantee for equal amount of the advance in the prescribed format made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the plant and mandatory spare parts delivered to the site, as evidenced by delivery documents.

Sixty percent (60%) of the total or pro rata EXW amount upon Incoterm “Ex-Works”, upon delivery and acceptance at site within 45 days after receipt of invoice.

Twenty percent (20%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within 45 days after receipt of invoice

Ten percent (10%) of the total or pro rata EXW amount upon issue of the Operational Acceptance Certificate, within 45 days after receipt of invoice

Materials will be supplied and installed in phased manner as per erection PERT chart duly approved by the Employer. The measurement certificate shall be jointly signed by the Project Management Agency and duly authorized official of the Employer.

Schedule No. 3 – Design Services

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

Ten percent (10%) of the total design services amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer.

Ninety percent (90%) of the total or pro rata design services amount upon acceptance of completed survey / consumer indexing, revised schedule of quantities for deployment of smart meters, finalized design reports and drawings upon approval of the Project Manager, within 45 days after receipt of invoice.

Schedule No. 4 – Installation and Other Services (4A &4C)

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

Ten percent (10%) of the total installation and other services amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for installation services.

Sixty percent (60%) 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 45 days after receipt of invoice.

Twenty percent (20%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Completion Certificate, within 45 days after receipt of invoice.

Ten percent (10%) of the total or pro rata value of installation 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, within 45 days after receipt of invoice.

(B) Payment of Taxes & Duties:

The following procedure shall be followed for payment of taxes and duties

- (i) The contract shall be treated as single works contract and GST shall be quoted accordingly. In case any concessional taxes are extended by Govt. of India / Govt. of Tripura, these shall be availed by the contractor as specified in this Contract and the benefit passed on to the Employer
- (ii) The minimum progressive bill value for any bill shall be not less than INR 5 crore / USD 700,000.
- (iii) The responsibility for timely payment of applicable "Goods and Services Tax (GST) and any other statutory levy shall rest on the contractor. The Goods and Services Tax (GST) would be paid to the concerned/ reimbursed to the contractor separately by the Employer based on prevailing regulation. To claim payment/ reimbursement, Contractor should ensure that the Goods and Services Tax (GST) amount should be clearly mentioned in each bill of Supply, Installation and civil works
- (iv) In case of delay beyond contractual period /extended period (without penalty), taxes / duties prevailing on the date of actual delivery/execution of work OR the taxes/duties prevailing within the contractual period /extended period (without liquidated damages), whichever is lower shall be payable.
- (v) 1% Building and Other Construction Workers Welfare Cess: 1% cess amount shall be deducted by Project Manager / Engineer In-charge concerned as per the Building and Other Construction Workers Welfare Cess Act, 1996 & Building and Other Construction Workers Welfare Cess Rules, 1998 from the payment to the contractor and shall be deposited to the authority concerned.

(C) Payment Procedures

When applying for certification and making payments, the procedures shall be as follows:

- (i) Upon completion of supply of materials, installation and testing of the facilities or any part thereof at each designated, the Contractor shall notify the Employer in writing.
- (ii) Upon such notification, the Employer/ Employer's representative shall carry out the joint inspection along with the Contractor to verify the quantities and quality of material /work as per the employer's requirement in section 6 and technical specifications.
- (iii) Subsequent to the joint inspection, joint inspection report will be issued with certified quantities of materials and works, and list of any defects and /or deficiencies (snag / defects list), jointly signed by Employer/ Employer's representative and Contractor. The delivery & installation status for payments is presumed to be completed at this stage provided there are no major defects listed.
- (iv) Pursuant to GCC clause 24, Employer will issue completion certificate in respect of the facilities or any part thereof at each designated site, upon rectification of defects/snags by the Contractor to the Employer's satisfaction.
- (v) Pursuant to GCC clause 25, the Contractor shall complete commissioning including commissioning and guarantee tests (if specified) and notify the Employer in writing.
- (vi) Pursuant GCC clause 25, Employer will issue operational acceptance in respect of the facilities or any part thereof at each designated site.
- (vii) The Contractor shall submit the invoices at respective stages for payments according to payment terms as specified in Part (A) and (B), together with submittal of applicable documents including Joint Inspection reports, completion certificates and operational acceptance certificates as applicable, in the office of the Designated Chief Engineer / Project Manager.
- (viii) Payments will be made, within 45 days after receipt of invoices and documentation in the office Managing Director, TSECL, Agartala.

In the event that the Contractor has duly followed the procedure enumerated above and the Employer fails to make any payment on its respective due date, the Employer shall pay to the Contractor interest on the amount of such delayed payment as from the end of the 45 days period on certified amount due but not paid at the end of such period.

- (i) For payment to be made in INR, the State Bank of India six-month MCLR rates
- (ii) For payments to be made in foreign currency, the 180-Day Average SOFR (Secured Overnight Financing Rate)

Appendix 2: Price Adjustment

NOT APPLICABLE

Appendix 3: Insurance Requirements

(A) Types of Insurance to Be Taken Out by the Contractor

In accordance with the provisions of GCC Clause 34, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the types of insurance set forth below in the sums and with the deductibles and other conditions specified. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, such approval not to be unreasonably withheld.

(a) Cargo Insurance

Covering loss or damage occurring, while in transit from the supplier's or manufacturer's works or stores until arrival at the Site, to the Facilities (including spare parts therefore) and to the construction equipment to be provided by the Contractor or its Subcontractors.

Amount [in currency(ies)]	Deductible limits [in currency(ies)]	Parties insured [names]	From [place]	To [place]
110% of (Ex works/CIP Price)	Nil	Contractor and Employer	Location of dispatch	Site location

(b) Installation All Risks Insurance

Covering physical loss or damage to the Facilities at the Site, occurring prior to completion of the Facilities, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the defect liability period while the Contractor is on the Site for the purpose of performing its obligations during the defect liability period.

Amount [in currency(ies)]	Deductible limits [in currency(ies)]	Parties insured [names]	From	To
110% of the Contract Price	Nil	Contractor/Sub-contractor & Employer	Receipt at site	Up to defect liability period

(c) Third Party Liability Insurance

Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property (including the Employer's property and any parts of the Facilities that have been accepted by the Employer) occurring in connection with the supply and installation of the Facilities.

Amount [in Currency(ies)]	Deductible limits [in currency(ies)]	Parties insured [names]	From	To
As per approved safety plan and statutory requirements	Nil	Contractor/Sub Contractor	Commencement of work	Upto defect liability period

(d) Automobile Liability Insurance

Covering use of all vehicles used by the Contractor or its Subcontractors (whether owned by them or not) in connection with the supply and installation of the Facilities. Comprehensive insurance in accordance with statutory requirements.

(e) Workers’ Compensation

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

(f) Employer’s Liability

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

(g) Other Insurance

The Contractor is also required to and maintain at its own cost the following types of insurance:

Details: Nil

The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Subclause 34.1, except for the Third Party Liability, Workers’ Compensation, and Employer’s Liability Insurance, and the Contractor’s Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GCC Subclause 34.1, except for the Cargo, Workers’ Compensation and Employer’s Liability Insurance. All insurer’s rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies.

(B) Types of Insurance to Be Taken Out by the Employer

The Employer shall at its expense take out and maintain in effect during the performance of the Contract the following insurance policies.

Details: Nil

Amount [in currency(ies)]	Deductible limits [in currency(ies)]	Parties insured [names]	From [place]	To [place]

Appendix 4: Time Schedule

The successful bidder shall execute the contract works and complete the facilities within the time schedule indicated below.

#	Item / Facilities	Activities	Time for Completion from effective date (months)
1	Survey/ Consumer Indexing	Survey and design	4 Months
2	Smart meters - all types	Engineering, design, manufacture, inspection and testing, supply, delivery	9 months
3	All other equipment, material and devices	Engineering, design, manufacture, inspection and testing, supply, delivery	9 months
4	Cloud services including HES, MDM with prepaid application	Design, development, installation, testing and commissioning	12 months
5	AMI User interfaces, web and mobile apps.	Design, development, installation, testing and commissioning.	12 months
6	Communications - NAN and WAN Networks	Design, development, installation, testing and commissioning.	12 months
7	System Integration	Design, development, installation, testing and commissioning	12 months
8	Smart meters - all types	Installation, testing and commissioning.	18 months
9	All other equipment, material, and devices	Installation, testing and commissioning.	18 months
6	Completion of all activities as per scope of works for AMI system implementation to establish fully functional smart metering system.	Installation, testing and commissioning.	18 months
7	Operation and maintenance services	AMI System management, operation and maintenance	120 months (from the start date as notified by Employer upon operation go-live)

The Bidder shall submit with its bid a detailed program, normally in the form of a bar chart, showing how and the order in which it intends to perform the contract and showing the key events requiring action or decision by the Employer. In preparing this program, the Bidder shall adhere to the time schedule given above and completion time for all facilities as given in clause 8.2 of section 8 or give its reasons for not adhering thereto. The time schedule submitted by the selected Bidder and amended as necessary prior to award of contract shall be included as appendix to the contract agreement before the contract is signed.

Appendix 7: List of Documents for Approval or Review

Pursuant to GCC Subclause 20.3.1, the Contractor shall prepare, or cause its Subcontractor to prepare, and present to the Project Manager in accordance with the requirements of GCC Subclause 18.2 (Program of Performance), the following documents for

(A) Approval

1. Consumer Indexing Records
2. Updated schedule of quantities for deployment of smart meters
3. Designs and Drawings
4. Equipment specifications
5. General Technical Particulars
6. Schedule of Deviations
7. Test Reports
8. Time Schedule
9. Warranty records
10. Safety plan
11. Training plan
12. As-built drawings
13. Manufacturer / subcontractor information
14. Testing & Commissioning Schedules
15. Any other documents as required in the bid document

(B) Review

1. Statutory clearances and approvals
2. Organization chart
3. Drawings
4. Progress reports
5. Procurement plan
6. Acceptance test schedules & results
7. Calibration certificates
8. Dispatch schedules
9. Operating manuals, technical literature catalogues, samples etc.

Appendix 8: Functional Guarantees

Not Applicable.

Performance Security

[Bank's name, and address of issuing branch or office]

Beneficiary:[Name and address of the Employer].....

Date:

Performance Guarantee No.:

We have been informed that [name of the contractor](hereinafter called "the Contractor") has entered into Contract No. [reference number of the contract]dated [date] with you, for the execution of [name of contract and brief description of plant and services](hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we [name of the bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in words]²⁶ [amount in figures] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, 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(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire no later than the earlier of

- a. 18 months after our receipt of
 - (i) a copy of the Completion Certificate; or
 - (ii) a registered letter from the Contractor, attaching a copy of the notice to the project manager that the Facilities are ready for commissioning, and stating that 14 days have elapsed from receipt of such notice (or 7 days have elapsed if the notice was a repeated notice) and the project manager has failed to issue a Completion Certificate or inform the Contractor in writing of any defects or deficiencies; or
 - (iii) a registered letter from the Contractor stating that no Completion Certificate has been issued but the Employer is making use of the Facilities; or
- b. the [date] day of [month], [year].

Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458 [or ICC Publication No. 758 as applicable], except that subparagraph (ii) of Sub-Article 20(a) is hereby excluded.²⁷

²⁶ The guarantor shall insert an amount representing the percentage of the contract price specified in the contract and denominated either in the currency(ies) of the contract or a freely convertible currency acceptable to the Employer.

²⁷ Or the same or similar to this clause specified in the Uniform Rules for Demand Guarantees, ICC Publication No. 758, where applicable.

.....
[Signature(s) and seal of bank (where appropriate)]

Note:
If the institution issuing the performance security is located outside the country of the Employer, it shall have a correspondent financial institution located in the country of the Employer to make it enforceable.

Advance Payment Security

[Bank's name, and address of issuing branch or office]

Beneficiary:[Name and address of the Employer].....

Date:

Advance Payment Guarantee No.:

We have been informed that [name of the contractor](hereinafter called "the Contractor") has entered into Contract No. [reference number of the contract] dated [date] with you, for the execution of [name of contract and brief description of plant and services](hereinafter called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum [name of the currency and amount in words]²⁸ [amount in figures] is to be made against an advance payment guarantee.

At the request of the Contractor, we [name of the bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in words]²⁹ [amount in figures] 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 because the Contractor:

- (a) used the advance payment for purposes other than the costs of mobilization and cash flow support in respect of the Works; or
- (b) has failed to repay the advance payment when it has become due and payable in accordance with the conditions of the Contract, specifying the amount payable by the Contractor.

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 its account number [contractor's account number] at [name and address of the bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates, which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate, indicating that 80% of the Contract Price has been certified for payment, or on the [date] day of [month], [year],³⁰ whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

²⁸ The guarantor shall insert an amount representing the amount of the advance payment denominated either in the currency(ies) of the advance payment as specified in the contract, or in a freely convertible currency acceptable to the Employer.

²⁹ Footnote 36.

³⁰ 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. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [6 months] [1 year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458 [or ICC Publication No. 758 as applicable].

.....

[Signature(s) and seal of bank (where appropriate)]

[Bank's name, and address of issuing branch or office]

Note:

If the institution issuing the advance payment security is located outside the country of the Employer, it shall have a correspondent financial institution located in the country of the Employer to make it enforceable.

Appendix B: Environmental Management Plan

IND: Tripura Power Distribution Strengthening & Generation Efficiency Improvement Project

Environmental Management Plan for Bidding Document

This Environmental Management Plan (EMP) has been prepared for Civil Works Contract Packages of the proposed Tripura Power Sector Improvement Project. The scope of project included improvement of distribution system consist of installation of new 33/11kV substations, capacity augmentation of existing 33/11kV substations; erection of 33kV and 11 kV new lines, renovation and modernization of 33/11kV substations, and distribution transformer, metering and IT enablement in MBC and Customer service.

The environmental management plan includes mitigation measures (Table 1) and monitoring requirements (Table 2) presented in the matrix form.

This EMP Matrix will form part of the contract document together with General Environment, Health & Safety (EHS) Conditions of Contract (CoC) for all contractors.

This EMP shall be updated based on detailed design and it will form basis for the contractor to prepare site specific Construction environmental management plan (CEMP).

Table 1: Environmental Management Plan (EMP) Matrix

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
PRE-CONSTRUCTION³¹					
Site Clearance	Impacts on ambient air, water and dust	<ul style="list-style-type: none"> A full set of baselines for air, water and noise quality will be collected prior to the mobilization to the sites. 	To verify the data submitted by contractor and share with ADB	To collect the data	1 month prior to mobilization
Equipment specifications and design parameters	Release of toxic pollutants chemicals and gases in receptors (air, water, land)	<ul style="list-style-type: none"> PCBs will not be used in substation transformers and other project facilities or equipment. Processes, equipment and systems not to use chlorofluorocarbons (CFCs), including halon, and their use, if any, in exiting processes and systems 	Tender preparation	Detailed design to comply with specifications	Part of tender specifications for the equipment

³¹Site-specific environmental management plans with quantified impacts and their mitigations will be prepared by contractors and endorsed by TSECL prior to access to the sites permitted.

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Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
		should be phased out and to be disposed of in a manner consistent with the requirements of Government of India.			
Design and Layout of equipment	Exposure to noise	<ul style="list-style-type: none"> Design of equipment to comply with noise regulations and International Finance Corporation (IFC) World Bank Group ‘Environmental, Health, and Safety Guidelines – Electric Power Transmission and Distribution’ (IFC) dated 30 April 2007’. It is required that no construction should be allowed during night time. 	Tender preparation	Detailed design to comply with specifications	Part of equipment design
	Interference with other utilities and traffic	<ul style="list-style-type: none"> Obtain necessary clearances from other utilities that could be affected by the project 	Confirm with relevant agencies	Comply with requirements	Prior to commencement of construction
Interference with drainage patterns/Irrigation channels	Flooding hazards	<ul style="list-style-type: none"> Appropriate siting of facilities and drainage design to avoid channel interference and avoid off-site flooding. Provide culverts enough for accommodating flood flows in the access road of the substations. Ensure timely monitoring, especially if construction works are carried out during the monsoon period. Provision for pumping of congested water, if needed. No discharge to the surface water. 	Audit detailed design	Detailed design to comply with specifications	Part of detailed design layout
Escape of polluting materials	Environmental pollution	<ul style="list-style-type: none"> Equipment designed with oil spill containment systems with 20% extra capacity, and oil, lubricant and fuel storage system, complete with spill cleanup equipment. Facilities to include drainage and sewage disposal systems to avoid offsite land and water pollution. Adequate collection, separation, and storage of waste on site and safe transportation to the disposal sites and disposal methods at designated, licensed, engineered and sanitary landfills shall be provided. 	Audit detailed design	Detailed design to comply with specifications	Part of detailed equipment design /drawings

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Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
Explosions/Fire	Hazards to life	<ul style="list-style-type: none"> Design of facilities to include modern fire control systems/firewalls. Provision of firefighting equipment to be located close to transformers 	Audit detailed design	Detailed design to comply with specifications	Part of detailed layout and design /drawings
Land Acquisition	Land Acquisition and resettlement/Loss of agricultural productivity	<ul style="list-style-type: none"> Alignment designed to be within road reserves, and as much as possible will avoid the need to remove trees Loss of fruit-bearing trees that have economic values shall be compensated in accordance with national requirements 	Confirm with relevant agencies	Comply with requirements	Part of survey and Design Stage
	Loss of agricultural land, temporary disruption of farming activities, damage to crops, bunds, canals and drains.	<ul style="list-style-type: none"> Carefully select the line route to minimize impacts on property and to avoid structures such as bunds, canals and drainage. Schedule the installation of the poles during the dry season. 	Confirm with relevant agencies	Comply with requirements	Part of Survey and Design Stage
Cutting of public trees and clearing of vegetation	Loss of public trees	<ul style="list-style-type: none"> Adjust line alignment to minimize loss of public trees. Compensate loss of public trees as per Forest Department estimation prior to the start of removal of trees/ clearing of vegetation. 	Confirm with Forest Department	Comply with requirements	Part of detailed layout and design /drawings
Ecologically sensitive areas	Encroachment into ecologically sensitive areas	<ul style="list-style-type: none"> Power lines will be routed primarily along existing road reserves and as much as possible avoid the need to remove trees. Consult with relevant stakeholders and authorities responsible for managing the areas and implement any special design requirements imposed by those responsible authorities Obtain approvals from forest department as per national regulatory framework. 	Confirm with relevant agencies	Comply with requirements	Part of detailed layout and design /drawings
Aesthetics / Loss of original landscape beauty	Impact on aesthetics / Loss of original landscape beauty	<ul style="list-style-type: none"> Poles to be sited to minimize visual impacts wherever possible. Siting of poles near areas of high cultural and historical significance requires consultation with responsible authorities. 	Confirm with relevant agencies	Comply with requirements	Part of detailed layout and design /drawings

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
		<ul style="list-style-type: none"> Consult individual households and obtain their consent (in case pole location is in front of private properties) prior to finalizing the design. 			
Mitigation Measures included in design	EMP in bidding documents	<ul style="list-style-type: none"> Ensure EMP is included in the bidding documents and it forms integral part of the contractor's agreement. 	Confirm with Bidding documents	Comply with requirements	Pre-construction
CONSTRUCTION					
Planning for construction environmental management	EMP not effectively properly implemented	<ul style="list-style-type: none"> Prior to mobilization, the Contractor required preparing and submitting a site specific environmental management plan (SSEMP) to TSECL for approval. The SSEMP will include any corrective measures relating to the existing environmental risks associated with wastes exiting at the facilities prior to the new project. SSEMP to provide details on how contractor plans to implement the construction mitigation measures specified in this EMP 	Approve Site Specific EMP	Prepare Site Specific EMP	Prior to mobilization of Contractor to site
Construction Waste	Generation of construction wastes from the construction materials.	<ul style="list-style-type: none"> Use of durable, long-lasting materials that will not need to be replaced as often, thereby reducing the amount of construction waste generated over time. Provision of facilities for handling and storage of construction materials to reduce the amount of waste caused by damage or exposure to the elements. Purchase of perishable construction materials such as paints incrementally to ensure reduced spoilage of unused materials. Use of building materials that have minimal packaging to avoid the generation of excessive packaging waste. Use of construction materials containing recycled content when possible and in accordance with accepted standards. 	Check implementation using checklist	Implement mitigation measures	Construction period
Disposal of hazardous waste (PCB oils) due to	Water and soil pollution, hazard to	<ul style="list-style-type: none"> Soil and groundwater should be tested prior to civil works, and if contaminated, remove and remediate the soil. 	Test for PCBs and coordinate with TSECL on	Comply with State Pollution Control	Construction period

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
decommissioning and disposal of old transformers	human health	<ul style="list-style-type: none"> Oil from all transformers to be replaced will be tested to determine the chlorine content as per IS 6103. Replaced transformers awaiting testing and disposal will be stored in a designated storage area in compliance with national requirements for storage of hazardous chemicals. 	disposal requirements.	Board/TSECL requirements	
Uncontrolled erosion/silt runoff	Soil loss, downstream siltation;	<ul style="list-style-type: none"> Minimize removal of vegetation and topsoil. Limit site clearing to work areas Top soil disturbed during site development to be used to restore the surface of excavated areas (where applicable) Regeneration of vegetation to stabilize works areas on completion (where applicable) Water courses protected from siltation through use of bunds and sediment ponds No discharge to the surface water. 	Check implementation using checklist	Implement mitigation measures	Construction period
Mechanized construction including vehicles transporting materials to site	Noise and vibration	<ul style="list-style-type: none"> Schedule activities during daytime working hours. Construction equipment to be well maintained. As per EHS guidelines, avoid prolonged exposure to noise (produced by equipment) by workers. Regulate use of horns and avoid use of hydraulic horns in project vehicles. Noise levels due to construction activities at sensitive receptors shall not exceed 55dB(A) during daytime hours (0700-2200hrs) or 45 dB(A) during night-time hours (2200- 0700hrs). 	Check implementation using checklist	Implement mitigation measures	Construction period
	Dust/air pollution	<ul style="list-style-type: none"> Water to be sprayed on unpaved roads to suppress dust in the vicinity of communities through which transportation of construction materials passes. Specific training will be focused on minimizing dust and exhaust gas emissions from heavy construction vehicles. Drivers of vehicles used during construction will be under strict instructions to minimize unnecessary trips and minimize idling of engines. Dust suppression 	Check implementation using checklist	Implement mitigation measures	Construction period

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
		facilities (water sprayer) shall be available where earth and cement works are required. <ul style="list-style-type: none"> • Vehicles delivering construction materials shall be covered with tarpaulins. • Vehicles and construction equipment shall be regularly serviced and well maintained. • Vehicles and construction equipment shall comply with statutory emission standards. All vehicles (e.g., trucks, equipment, and other vehicles that support construction works) shall be well maintained and not emit dark or smoky emissions. • Avoid use of equipment such as stone crushers at the sites, which produce significant amount of particulate matter. • N95 masks should be provided to all personnel in areas prone to dust emissions throughout the period of construction. 			
Interference with utilities and blockage of access ways	Disruption of community access to amenities and services	<ul style="list-style-type: none"> • Ensure existing access to public and private amenities are maintained throughout construction period 	Check implementation using checklist	Implement mitigation measures	Construction period
Equipment servicing	Contamination of receptors (land, water, air)	<ul style="list-style-type: none"> • Provision of hard standing areas for equipment servicing, refueling and wash down with drainage directed through oil and grease interceptors. 	Check implementation using checklist	Implement mitigation measures	Construction period
Storage of chemicals and materials	Contamination of receptors (land, water, air)	<ul style="list-style-type: none"> • Fuel and other hazardous materials securely stored above high flood level in hard standing area undercover surrounded by containment bunds. • A log of the disposal of toxic and other waste materials is to be kept by the Contractors. 	Check implementation using checklist	Implement mitigation measures	Construction period
Provision of facilities for construction	Contamination of receptors (land,	<ul style="list-style-type: none"> • Construction workforce facilities to include sanitation, water supply and waste disposal facilities to meet the GoI standards or WB/IFC EHS 	Check implementation	Implement mitigation	Construction period

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
workers	water, air)	Guidelines ³² .	using checklist	measures	
Health and safety	Injury and sickness of workers	<ul style="list-style-type: none"> Contractor to comply with WB/IFC EHS requirements or equivalent for worker and public safety related to electric power infrastructure Contractor to prepare and implement a worker health and safety plan following national and WB/IFC EHS guideline requirements for approval by TSECL prior to access to site granted. Contractor to arrange for health and safety training sessions for workers An experienced Health & Safety (H&S) Manager must be engaged on each works package with appropriate qualifications and experience and not doubling up on any other job by the contractor prior to start of construction. Only permit trained and certified workers to work with any electrical equipment. Safety induction by the H&S Manager should be provided for the workers and visitors before they will be allowed to access the site. Prior to starting work, a tool box meeting should be arranged by the H&S Manager for the workers. First Aid Box and personal protective equipment, PPE (such as safety helmets, safety shoes, eye protection glasses, ear plugs/muffs, waist belts, masks, hand gloves, body protective aprons and insulating boots) must be provided to the workers and ensure their use by the workers. Safety signs, health signs, prohibition signs, warning 	Check implementation using checklist	Implement mitigation measures	Construction period

³²https://www.ifc.org/ourwork/connector/topics_ext/content/orifc_external_corporate_sites/sustainability-at-ifc/policies-standards/ehs-guidelines

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
		signs, mandatory signs, emergency escape signs, first-aid signs, information signs, signboards, supplementary signboards, safety collar, symbol, pictogram, illuminated signs, acoustic signals, verbal communication and hand signals must be fitted at the designated sites of the subproject areas.			
	Injury and sickness of members of the public/community	<ul style="list-style-type: none"> Contractor will be required to develop a community health and safety plan that incorporates best practices and recognized standards for approval by TSECL before access to site. Implement an emergency response and preparedness procedures with communication systems and protocols to report an emergency. Coordinate with district and state emergency and health authorities. Safety barriers and warning signs surrounding the construction site. 	Check implementation using checklist	Implement mitigation measures	Construction period
Physical Cultural Resources	Possibility of damage to Physical Cultural Resources.	<ul style="list-style-type: none"> Chance Find Procedure to be developed following the WB/IFC Guidance Note 8 (on Cultural Heritage, 2012) and GOI regulations. 	Check implementation	Prepare and implement the procedure	Construction period
Inadequate construction stage monitoring	Likely to maximize damages	<ul style="list-style-type: none"> Implementation of effective environmental monitoring and reporting system using checklist of all contractual environmental requirements. Appropriate contact clauses to ensure satisfactory implementation of contractual environmental mitigation measures. 	Comply with monitoring requirements	Reporting of environmental compliance in monthly progress reports	Routinely throughout construction period
OPERATION AND MAINTENANCE					
Oil spillage	Contamination of land/nearby water bodies	<ul style="list-style-type: none"> Oil storage facilities and substation transformers located within secure and impervious bonded areas with a storage capacity of 20% extra capacity. Safe handling and disposal of phased out equipment. 	TSECL to comply with requirements	N/A	During operations

Section 9: Contract Forms

Project Activity / Stage	Potential Impact	Proposed Mitigation Measure	Implementing Responsibility		Implementation Schedule
			TSECL PIU	Contractor	
Inadequate provision of staff/workers health and safety during operations	Injury and sickness of staff /workers	<ul style="list-style-type: none"> Careful design using appropriate technologies to minimize hazards. Safety awareness rising for staff. Preparation of fire emergency action plan and training given to staff on implementing action plan. Provide adequate sanitation and water supply facilities. Keep complaint book in the substation for recording of people’s complaints. 	TSECL to comply with requirements	N/A	Design and operation
Electric Shock Hazards	Injury/mortality to staff and public	<ul style="list-style-type: none"> Careful design using appropriate technologies to minimize hazards. Security fences around facilities. Appropriate warning signs on facilities. Electricity safety awareness raising in project areas. 	TSECL to comply with requirements	N/A	Design and Operation
Operations and maintenance staff skills less than acceptable	Unnecessary environmental losses of various types	<ul style="list-style-type: none"> Adequate training in O&M to all relevant staff of facility maintenance crews. Preparation and training in the use of O&M manuals and standard operating practices. 	TSECL to comply with requirements	N/A	Operation
Inadequate periodic environmental monitoring.	Diminished ecological and social values.	<ul style="list-style-type: none"> TSECL O&M staff to receive training in environmental monitoring of project operations and maintenance activities. 	TSECL to comply with requirements	N/A	Operation

Table 2: Environmental Monitoring Plan (EMoP)

Environmental Features	Aspect to be Monitored	Time and Frequency of Monitoring	Location	Responsible party	
				TSECL PIU	Contractor
PRE-CONSTRUCTION STAGE					
All design related mitigation measures	<ul style="list-style-type: none"> Inclusion in the project design. Tender Design Review 	<ul style="list-style-type: none"> As needed before tendering 	-	Initial review of tender design	N/A
Approval of contractor's CEMP to ensure compliance with EMP and contract document.	<ul style="list-style-type: none"> Document review 	<ul style="list-style-type: none"> One month after signing of construction contract 	-	Initial review of tender design	N/A
Baseline Data	<ul style="list-style-type: none"> Air: NOx, PM Water: pH, BOD₅, COD, NH₃-N, Total Petroleum Hydrocarbons (TPH), coliforms, PO₄ Noise level: The nearest residence where the nearest residence is less than 100m from the construction site. 	<ul style="list-style-type: none"> One month prior to the civil work commencement 	-	Review of Contractor's CEMP and monitoring plan	Pre-construction baseline monitoring
PCB	<ul style="list-style-type: none"> Soil and groundwater 	<ul style="list-style-type: none"> Prior to construction 	-	Review of Contractor's CEMP and monitoring plan	Pre-construction monitoring
CONSTRUCTION STAGE					
All construction related mitigation measures	<ul style="list-style-type: none"> Implementation on site. Observations on/off site; construction records; review of site layout & safety plan; vehicle log records of construction material and waste transport; interviews with people and workers 	<ul style="list-style-type: none"> Monthly during construction 	All construction sites	Monthly site inspections	Checklist of implementation status of CEMP mitigation measures completed on weekly basis
Noise	<ul style="list-style-type: none"> Noise levels due to construction activities at the façade of the nearest residence where the nearest residence is less than 100m from the construction site. 	<ul style="list-style-type: none"> Monthly during the construction period during noisy activities such as platform 	All construction sites	Spot checks to be undertaken by PIU environment	Monthly noise monitoring

Section 9: Contract Forms

Environmental Features	Aspect to be Monitored	Time and Frequency of Monitoring	Location	Responsible party	
				TSECL PIU	Contractor
	<ul style="list-style-type: none"> Noise levels recorded at the nearest residence shall not exceed 55dB(A) during daytime hours (0700-2200hrs) or 45 dB(A) during night-time hours (2200- 0700hrs) 	excavation and delivery of materials to site		specialist	
Health and safety	<ul style="list-style-type: none"> Checking health, use of PPE and first aid facilities, drinking water quality, sanitation and accommodation. Awareness of local people and staying safely away from the project activities. Record of all H&S incidents, any people lost time or fatal must be reported to ADB within 48hrs with corrective action plan. 	<ul style="list-style-type: none"> Semi-annually during construction 	All construction sites	Monthly site inspections	Checklist of implementation status of CEMP mitigation measures completed on weekly basis
OPERATION STAGE					
Noise Level	<ul style="list-style-type: none"> Noise levels on dB (A) scale 	<ul style="list-style-type: none"> 2 times in a year 	Where substations are within 100m of sensitive receptors	TSECL	N/A
Trees and vegetation control	<ul style="list-style-type: none"> Inspect the status of tree and vegetation growth that may damage or threaten the integrity of the lines. 	<ul style="list-style-type: none"> Monthly 	Along the ROW	TSECL	N/A
Health and safety; injury to workers and villagers	<ul style="list-style-type: none"> Inspect integrity of the poles and line in order to maintain and ensure good condition Inspect Warning Signs/Boards 	<ul style="list-style-type: none"> Monthly 	Electric poles	TSECL	N/A