STANDARD BIDDING DOCUMENT

FOR

RURAL ELECTRIFICATION WORKS OF XXXX (NAME OF DISTRICT) DISTRICT OF XXXX (NAME OF STATE)
UNDER RAJIV GANDHI GRAMEEN VIDYUTIKARPAN YOJANA (RGGVY) UNDER XII PLAN

VOLUME-I

(CONTRACT CONDITIONS & SCOPE OF WORKS)

Section-I : Invitation for Bids (IFB)
Section-II : Instruction to Bidders (ITB)
Section-III : Bid Data Sheets (BDS)
Section-IV : General Conditions of Contract (GCC)
Section-V : Special Conditions of Contract (SCC)
Section-VI : Sample Forms and Procedures
Section-VII : Scope of Works for Village Electrification works
Section-VIII : Scope of Works for 33/11 KV substation

SPECIFICATION No.:.........................

DOCUMENT NO.:..........................
VOLUME-I: SECTION - 1

INVITATION FOR BIDS (IFB)
INVITATION FOR BIDS (IFB)

Package-XXXX for Rural Electrification works of XXXX district in XXXX(State name) under Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY)

(DOMESTIC COMPETITIVE BIDDING)

(SINGLE STAGE TWO ENVELOPE BIDDING)

DATE OF ISSUANCE OF IFB: DD.MM.YYYY

SPECIFICATION NO.: XXXX/@@@/$$$$

FUNDING: DOMESTIC

1.0 This invitation for bids follows the procurement notice (Invitation for Bids) for the subject package(s) which appeared in National and Regional Newspapers on DD.MM.YYYY. This shall also be available on XXXXXX (EMPLOYER’s Name) website given at para 11.0 from DD.MM.YYYY.

2.0 XXXX(Short Name of Employer) (hereinafter referred to as ‘XXXX’ (Short Name of Employer)) have been entrusted to execute the Project i.e. Rural Electrification works of XXXX district in XXXX (State Name) under Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY)-12th Plan on behalf of XXXX(DISCOM Name)/Government of XXXX(State Name). The execution of the project shall be funded out of the proceeds of financial assistance to be received by Government of XXXX(State Name)/ (DI SCOM Name) from Rural Electrification Corporation Limited (REC) and the ownership of the project shall remain vested with Government of XXXX(State Name). The project shall be executed by XXXX(Short Name of Employer) on turnkey basis and all eligible payment under the project shall be made from the proceeds of financial assistance to be received by Government of XXXX(State Name)/ (DI SCOM Name). For the purpose of all procurement activities related to the aforesaid project, XXXX(Short Name of Employer) shall be referred to as ‘Employer’ and Government of XXXX(State Name)/ (DI SCOM Name) “the Owner”

3.0 (XXXX) (Short Name of Employer), therefore, invites sealed bids from eligible bidders for the following package(s) for aforesaid project on Domestic Competitive Bidding basis:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Package</th>
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<tbody>
<tr>
<td>1</td>
<td>Package-XXXX for Rural Electrification works of XXXX(District Name) district in XXXX (State Name) [Spec. No.: XXXX/@@@/$$$$]</td>
</tr>
</tbody>
</table>

This Invitation for Bids extended through media, website or written communication or by any other means, and issuance of Bidding Documents
as per para 7.0 below shall not be construed to mean that the prospective bidders to whom the Invitation for Bids has been extended and/or Bidding Documents have been issued is deemed to be an eligible bidder. The eligibility of the bidders shall be determined as per the provisions of Bidding Documents.

3.1 This Specification covers the following scope of works:

The scope of work under the subject package includes site survey, planning, design, engineering, assembly manufacturing, testing, supply, loading, transportation, unloading, insurance, delivery at site, handling, storage, installation, testing, commissioning and documentation of all items/material required to complete the Rural Electrification works in XXXX district which inter-alia include construction of New 33/11 kV Substation, 33 kV bay extension, construction of 33 kV lines, 11 kV & LT line, Installation of distribution transformer and providing service connection to BPL consumer spread all over the district. (to be amended by PIA as per scope of their bid)

The above scope of work is indicative and the detailed scope of work is given in the Bidding Documents.

3.2 The completion period for Package-XXX for Rural Electrification works of XXXX district in XXXX(State) under Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY) shall be the period as specified in ITB Sub-Clause 24.1(c).

3.3 Bidding will be conducted through the domestic competitive bidding procedures as per the provisions of ITB/BDS and the contract shall be executed as per the provisions of the Contract.

4.0 The detailed Qualifying Requirements (QR) are given in the Bidding Document.

5.0 The complete Bidding Documents including tender drawings and technical specifications are available at XXXX(Short Name of Employer) website http://www.***********.com (Name of Website address) Interested bidders can download the Bidding Documents and commence preparation of bids to gain time.

6.0 Interested eligible bidders may obtain further information from and inspect the Bidding Documents at the office of XXXX, (Designation of Officer of Employer) at the address given at para 11.0 below from XXXX hours (IST) to XXXX hours (IST) on all working days till the sale of Bidding Documents is open as per para 7.0 below.

7.0 Interested Bidders will be required to purchase the Bidding Documents from , (for submission of the bid), which will be duly authenticated by the executive issuing the documents. In such case, a complete set of Bidding Documents in English may be purchased by interested Bidder or Bidder's authorised representative on the submission of a written application to the address below and upon payment of a non-refundable fee of INR 25,000/- in the

RGGVY/XII Plan/SBD-R1
form of demand draft in favour of XXXX “Name of Employer”), payable at XXXX (Name of city) on all working days up to DD.MM.YYYY between XXXX hours (IST) to XXXX hours (IST). XXXX (Short Name of Employer) shall not be responsible for any postal delay in respect of request for issuance of Bidding Documents and/or despatch of Bidding Documents and/or submission of bids.

Bid documents can also be downloaded by payment of Rs 25,000/- online or by providing DD details in the web documents. The acceptance of price bid/commercial bid shall be subjected to acceptance of documents fee.

In case of any discrepancy between the documents downloaded by the prospective bidder and the Bidding Documents (hard copy) issued by EMPLOYER official, the latter shall prevail.

The Bidding Documents are meant for the exclusive purpose of bidding against this specification and shall not be transferred to any other party or reproduced or used otherwise for any purpose other than for which they are specifically issued.

8.0 A pre-bid meeting will be held at the office of the Employer at XXXXX (Location of meeting), India on DD.MM.YYYY at XXXX hrs to clarify the bidders various issues raised in accordance with clause 6.4 of ITB.

9.0 A Single Stage Two Envelope Bidding Procedure will be adopted and will proceed as detailed in the Bidding Documents.

9.1 Bids must be delivered in single sealed envelopes to the address below at or before XXXX hours (IST) on DD.MM.YYYY. Price breakup shall be submitted electronically. Late bids will be rejected. First Envelope i.e. Techno Commercial Part shall be opened on the same day i.e. DD.MM.YYYY in the presence of the bidders’ representatives who choose to attend in person at the address below at 1130 hours (IST). Second Envelope i.e. Price part Envelope (excluding price breakup) shall be opened in the presence of the bidders’ representatives who choose to attend at the time and date at the address given in the intimation for opening of Second Envelope in accordance with Clause 25 of ITB.

All bids must be accompanied by a bid security of Rs. XXXXXXX/- (As per Annexure to SECTION-I (IFB), Volume-I).

10.0 EMPLOYER reserves the right to cancel/withdraw this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.

11.0 All correspondence with regard to the above shall be to the following address.

(By Post/In Person)

Name of bid documentation issuance official:
Designation of the officer:
Complete postal Address with Telephone Nos & FAX.

Telephone Nos.: (Direct) 0091-(0)XXX-XXXXXXX
(Thru Board) 0091-(0)XXX-XXXXXXX
Fax No(s).: 0091-(0)XXX-XXXXXXX.

For more information, visit our site at http://www.*************.com

----- End of Section-I (IFB) -----
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<tr>
<th>Sl. No.</th>
<th>Category on the Basis of Tender Value</th>
<th>EMD in Rupees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tendering value upto Rupees Five (5) Crore</td>
<td>INR 5,00,000/-</td>
</tr>
<tr>
<td>2</td>
<td>Tendering value more than Rupees Five (5) crore</td>
<td>INR 10,00,000/-</td>
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INSTRUCTION TO BIDDERS (ITB)
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To be inserted: (*) Name of State    (**) Name of State Power Utility   (***) Name of Central Public Sector Utility

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Preamble:

This part, Instruction to Bidders (INB), Section II of the Bidding Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Employer. It also provides information on bid submission, opening and evaluation and on contract award. INB Section II contains provisions that are to be used unchanged unless part Special Condition of Contract, Section II, which consists of provisions that supplement, amend, or specify in detail, information or requirements included in INB Section II and that are specific to each procurement, states otherwise. If there is a conflict between the provisions of INB Section – II & Special Condition of Contract Section – II, the provisions of Special Condition of Contract Section – II shall prevail.

However, provisions governing the performance of the Contractor, payments under the contract or matters affecting the risks, rights and obligations of the parties under the contract are not included in this section but instead under Section – IV: General Conditions of Contract and/or Section – V: Special Conditions of Contract.

Further in all matters arising out of the provisions of this Section – II and the Section–III of the Bidding Documents, the laws of the Union of India shall be the governing laws and courts of XXXXXXX (name of city is to be mentioned by PIA) shall have exclusive jurisdiction.

(A) Introduction

1.0 General Instructions

1.1 The _______***______, (implementer of the project on behalf of _______**/State Govt.) hereinafter called ‘Employer’ will receive bids in respect of equipment to be furnished and erected as set-forth in the accompanying Specifications. All bids shall be prepared and submitted by bidders in accordance with these instructions.

1.2 Source of funds: The Owner named in the Bidding Documents intends to use the capital subsidy (90% (100% in case of special category states) of cost of the infrastructures in the project and 100% of cost of service connection to BPL consumers) under XII Plan Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY), a Government of India flagship program for extending power supply to all the villages/habitations having population more than 100 and where no infrastructures works were earlier performed through X and XI Plan RGGVY projects XII Plan and balance 10% funding for infrastructures through domestic funding (Owner's Internal Resources/Domestic Borrowings/Bonds) for this project.

Special Condition of Contract Section – II

1.2.1 All the payments under the contract for the package for which this invitation for Bids is issued shall be made by the Employer {who is also named as Project
Implementing Agency (PIA) by Ministry of Power/GoI} named in Biding Documents.

1.3 For the purpose of implementation of subject package, Project Implementation Agency (Central CPSUs/DISCOM/Power Deptt) shall be referred as Employer and the State Government of concerned state where the works are to be executed shall be referred as “The Owner”.

2.0 Eligibility of Bidder:

2.1 This Invitation for Bids, issued by Employer is open to all firms including company(ies), Government Owned Enterprises registered and incorporated in India as per Company Act, 1956 barring Government department as well as foreign bidders/MNCs not registered and incorporated in India and those bidders with whom business is banned by the Employer.

2.2 A Bidder shall not have a conflict of interest. Any Bidders found to be have a conflict of interest shall be disqualified. The bidder may be considered to have conflict of interest with one or more parties in this bidding process, if:

2.2.1 They have a controlling partner in common,

2.2.2 They receive or have received any direct or indirect subsidy from any of them; or

2.2.3 They have the same legal representative for purpose of this bid; or

2.2.4 They have a relationship with each other, directly or through common third parties, that puts them in position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

2.2.5 A bidder submits more than one bid in the bidding process, either individually [including bid submitted as agent /authorised representative on behalf of one or more manufacturer(s) or through Licensee – Licensor route, wherever permitted as per the provision of Qualification requirement for Bidders] or as partner in a joint venture, except for alternative offers permitted under Invitation to Bid. This results in disqualification of all such bids. However, this does not limit the participation of a Bidder as a sub-contractor in another Bid, or of a firm as a sub-contractor in more than one bid; or

2.2.6 A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specification of the Rural electrification materials and services/works that are subject of the bid, or

2.2.7 The Bidder, directly or indirectly shall not be a dependent agency of the Employer.

2.2.8 A prequalification process will be conducted prior to the bidding process, or conducted during process of the bidding, this bidding is open only to prequalified Bidders.
2.3 This bidding is open to any manufacturer or erector who provides satisfactory evidence concerning the following that he:

2.3.1 is a qualified manufacturer or erector who supply, erect, testing and commission of the type specified and has adequate technical knowledge and practical experience;

2.3.2 does not anticipate change in the ownership during the proposed period of work (if such a change is anticipated, the scope and effect thereof shall be defined);

2.3.3 has adequate financial stability and status to meet the financial obligation pursuant to the scope of the works (the Bidders should submit at least 2 copies of their profit and loss account and balance sheet for the last five years);

2.3.4 has adequate field services organisation to provide the necessary field erection and management services required to successfully erect, test and commission the equipment as required by the Specifications and Documents; and

2.3.5 has established quality assurance systems and organisation designed to achieve high levels of equipment reliability, both during his manufacturing and field installation activities.

2.4 The above stated requirements are a minimum and Employer reserves the right to request for any additional information and also reserves the right to reject the Proposal of any Bidder, if in the opinion of Employer, the qualification data is incomplete or the Bidder is found not qualified to satisfactorily perform the Contract.

3.0 Eligible Plant: Equipment and Services

3.1 For the purposes of these Bidding Documents, the words “facilities,” “plant and equipment,” “installation services,” etc., shall be construed in accordance with the respective definitions given to them in the General Conditions of Contract.

3.2 All plant and equipment to be supplied and installed and services carried out under the contract shall have their origin in our country only.

4.0 Cost Of Bidding

4.1 The Bidder shall bear all costs and expenses associated with preparation and submission of its bid including post-bid discussions, technical and other presentations etc, and Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
The Bidding Documents

5.0 Contents of bidding documents:

5.1 The goods and services required, bidding procedures and Contract terms are prescribed in the Bidding Document. The Bidding Document is a compilation of the following and shall include amendments, if any, thereto:

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<thead>
<tr>
<th>VOLUME - I:</th>
<th>Condition of contract:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section I:</td>
<td>Invitation for Bid (Section - IFB)</td>
</tr>
<tr>
<td>Section II:</td>
<td>Instructions to Bidders (Section - ITB)</td>
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<td>Section V:</td>
<td>Special Conditions of Contract (SCC)</td>
</tr>
<tr>
<td>Section VI:</td>
<td>Sample Forms and Procedures (FP)</td>
</tr>
</tbody>
</table>

1. Bid Form & Price Schedule
1.1 Bid Form
1.2 Price Schedule
2. Bid Security Form
3. Form of Notification by the Employer to the Bank
3.a Applicable for forfeiture of Bank Guarantee
3.b Applicable for conditional claim pending extension of Bank Guarantee by the bidder.
4. Form of ‘Notification of Award of Contract’
4(a) Form of ‘Notification of Award of Contract’ for Supply of Plant and equipment
4(b) Form of ‘Notification of Award of Contract’ for Installation of Plant and equipment
5. Form of Contract Agreement
   Alternative A
   Alternative B
5.1 Appendix-1: Terms and Procedures of Payment:
   Grid/Power Substation, and
   11KV, Distribution Transformer, LT and Service connection
5.2 Appendix-2: Price Adjustment
5.3 Appendix-3: Insurance Requirements
5.4 Appendix-4: Time Schedule
5.5 Appendix-5: List of Approved Subcontractors
5.6 Appendix-6: Scope of Works and Supply by the Employer
5.7 Appendix-7: List of Document for Approval or Review
5.8 Appendix-8: Guarantees, Liquidated Damages for Non-Performance
6. Performance Security Form
7. Bank Guarantee Form for Advance Payment
8. Form of Taking over Certificate
9. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in one lot by Employer for performance of its contract.
10. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in instalment by Employer for performance of its contract.

To be inserted: (*) Name of State   (**) Name of State Power Utility   (***) Name of Central Public Sector Utility

RGGVY/XII Plan/SBD-R1
11. Form of Authorisation Letter
12. Form of Trust Receipt for Plant, Equipment and Materials received
13. Form of Extension of Bank Guarantee
14. Form of Power of Attorney for Joint Venture
15. Form of Undertaking by the Joint Venture Partners
16. Format for Evidence of Access to or Availability of Credit/ Facilities
17. Form of Operational Acceptance
18. Form of Safety Plan to be submitted by the Contractor within sixty days of award of contract
19. Form of joint deed of undertaking by the Sub-contractor along with the bidder /contractor
20. Form of Certificate of Financial Parameters for QR

Section VII: General Information & Scope of Village Electrification Works
Section VIII: Scope of 33/11 kV Substation works (REDB),

VOLUME-II: Technical Specifications, Drawings
Section I: Civil Works & Soil Investigation,
Section II: Technical Specifications
Section III: Tender Drawings
Section IV: Project Management System (PMS), 3-Tier Quality Assurance Mechanism (QAM) & Documentation

Volume-III: Bid - Proposal Sheets
Section I: Bid Form
Section II: Guaranteed Technical Particulars (GTP)
Section III: Price Schedule

5.2 Understanding of bid documents: A prospective Bidder is expected to examine all instructions, forms, terms, technical specifications, tender drawings and scope of works in the Bid documents and fully inform himself as to all the conditions and matters which may in any way affect the scope of work or the cost thereof. Failure to furnish all information required in the Bid document or submission of a Bid not substantially responsive to the Bid document in every respect will be at the Bidder’s risk and may result in the rejection of its bid.

6.0 Clarifications on Bid Documents; and Pre-Bid Meeting:

6.1 If the prospective Bidder finds discrepancies or omissions, in specifications and document or is in doubt as to the true meaning of any part, he shall at once make a request, in writing, for an interpretation/clarification, to Employer at his mailing address indicated in Bidding Documents. Similarly, if a Bidder feels that any important provisions in the documents, such as Governing laws, Taxes and Duties, Defect Liability, Limitation of Liability, Settlement of Disputes, Arbitration, Form of Contact Agreement, Price Adjustment, Bid Guarantees, Contract Performance Guarantee, Compensation for Delay, Payments Terms, Schedule of
Execution/Completion of works, will be unacceptable, such an issue should be raised as above. Employer, then, will issue interpretation(s) and clarification(s) as he may think fit in writing or modification of the Bidding Documents that it receives no later than twenty-eight (28) days prior to original deadlines prescribed for submission of bids by Employer. The Employer shall not obliged to respond to any request for clarification received later than the above period. Further, mere request for clarification received from the Bidder shall not be a ground for seeking extension in the deadline for submission of bids. Written copies of Employer's response (including an explanation of the query but not identification of its source) will be sent to all prospective bidders that have received the Bidding Documents.

6.2 Verbal clarification and information given by Employer or his employee(s) or his representative(s) shall not in any way be binding on Employer.

6.3 LOCAL CONDITIONS: It will be imperative on each Bidder to fully inform himself of all local conditions and factors, which may have any effect on the execution of the Contract covered under these documents and specifications. Employer shall not entertain any request for clarifications from the Bidders, regarding such local conditions. It must be understood and agreed that such factors have properly been investigated and considered while submitting the Proposals. No claim for financial adjustment to the Contract, awarded under these specifications and documents, will be entertained by Employer. Neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the Employer, which are based on the lack of such clear information or its effect on the cost of the Works to the Bidder.

6.4 The bidder's designated representative(s) is/are invited to attend a pre-bid meeting, which, if convened, will take place at the venue and time specified in the Bidding Documents. The purpose of the meeting shall be to clarify any issue regarding the Bidding Documents in general and the Technical Specifications in particular. The Bidder is requested, as for as possible to submit any question in writing, to reach the Employer not later than one week before the meeting. Minutes of the Meeting, including the text of the questions raised (without identifying the name of the bidders) and the responses given, together with any responses prepared after the meeting, will be transmitted without any delay to all the purchasers of the Bidding Documents.

6.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

7.0 Amendment to Bidding Document

7.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Document by amendment (s).

7.2 The amendment will be notified in writing or e-mail to all prospective Bidders, which have received the Bidding Document at the address contained in the letter of request for issue of Bidding Document from the Bidders. Bidders are required to immediately acknowledge receipt of any such amendments, and it will be assumed that the information contained therein will have been taken into account by the
Bidder in its bid. The Employer will bear no responsibility or liability arising out of non-receipt of the same in time or otherwise.

7.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bid, in such cases, the Employer shall notify all the bidders in writing of the extended deadline.

7.4 All notifications and clarifications also be uploaded by Employer on his web portal / tender portal.

7.5 Such amendments, clarifications, etc, shall be binding on the Bidders and will be given due consideration by the Bidders while they submit their bids and invariably enclose such documents as a part of the bid.

(C) Preparation of Bids

8.0 Language of Bid

The bid prepared by the Bidder and all correspondences and documents relating to the bid, exchanged by the Bidder and Employer shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages. Failure to comply with this may disqualify a bid. For purposes of interpretation of the bid, the English translation shall govern.

9.0 Documents Comprising The Bid

9.1 The bidding shall be e-tendering basis. On due date of submission of bids, bids shall be submitted by the Bidder under “Single Stage – Bid Envelope” procedure of bidding. Under this procedure, the bid submitted by the Bidder in one envelope – Bid Envelope (also referred to as Techno - Commercial Part). The Bid envelop shall be submitted by bidders at notified date and time in hard copies. Price bid in form of Price schedule shall be uploaded by bidder on schedule date and time of submission of bids. It shall be opened, in presence of eligible bidders on notified date, time and venue.

The price schedule shall be uploaded by the bidder on web portal on which the NIT is floated on due date and time for submission of bids. The locked price bid shall be opened on notified date and time in presence of participating bidders who have qualified technically and commercially. The price breakup shall be uploaded by bidders on-line on web portal on due date of submission of bids. The price bids shall be locked and opened on notified date and time pertains to technically and commercially cleared bidders only in presence of participating bidders. Due intimation shall be given to technically and commercially cleared bidders about date and time of opening of on-line buds. The bids shall comprise of the following documents:
Bid Envelope:

(a) Bid Form (Bid Envelope) duly completed and signed by the Bidder, together with all Attachments (available in Volume-III). All Attachments have been identified in ITB Sub-Clause 9.3 below.

(b) Technical Data Sheets (available in Volume-III), if any, duly completed by the Bidder.

9.2 Alternative bids shall not be accepted,

9.3 Each Bidder shall submit with its Techno - Commercial Part (Bid Envelope) the following attachments:

   a. Attachment 1: Bid Security (If required): A bid security in sealed separate envelope shall be furnished in accordance with ITB Clause 13 & ITB Clause 16.

   b. Attachment 2: Power of Attorney: A power of attorney, duly notarized, indicating that the person(s) signing the bid has (ve) the authority to sign the bid and thus that the bid is binding upon the Bidder during full period of its validity, in accordance with ITB Clause 14.

   c. Attachment 3: Bidder's Eligibility and Qualifications: In the absence of prequalification, documentary evidence establishing that the Bidder is eligible to bid in accordance with ITB Clause 2 and is qualified to perform the contract in accordance with Annexure – A (BDS), if its bid is accepted.

   The documentary evidence of the Bidder's eligibility to bid shall establish to the Employer's satisfaction that the Bidder, at the time of submission of its bid, is eligible as defined in ITB Clause 2.

   The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall establish to the Employer's satisfaction that the Bidder has the financial, technical, production, procurement, shipping, installation and other capabilities necessary to perform the contract, and, in particular, meets the experience and other criteria outlined in the Qualification Requirement for the Bidders in Annexure – A (BDS) and shall also include the complete annual reports together with Audited statement of accounts of the company for last five years of its own (separate) immediately preceding the date of submission of bid.

   [Note I. In the event the Bidder is not able to furnish the above information of its own (i.e., separate), being a subsidiary company and its accounts are being consolidated with its Group/ Holding/
Parent company, the Bidder should submit the audited balance sheet, income statement, other information pertaining to it only (not of its Group/Holding/Parent company) duly certified by any one of the authority [(i) Statutory Auditor of the Bidder/(ii) Company Secretary of the Bidder a (iii) A certified Public Accountant] certifying that such information/documents are based on the audited accounts as the case may be.

Note II. Similarly, if the Bidder happens to be a Group/Holding/Parent company, the Bidder should submit the above documents/information of its own (i.e., exclusive of its subsidiaries) duly certified by any one of the authority mentioned in Note I above certifying that these information/documents are based on audited accounts, as the case may be.

Unless otherwise mentioned in BDS, bids submitted by a joint venture of two or more firms as partners, if allowed as per stipulated Qualification Requirements in Annexure-A (BDS), shall comply with the following requirements:

i. The bid shall include all the information required for Attachment 3 as described above for each joint venture partner.

ii. The bid shall be signed so as to be legally binding on all partners.

iii. One of the partners responsible for performing a key component of the contract shall be designated as leader; this authorization shall be evidenced by submitting with the bid a power of attorney signed by legally authorized signatories as per Form-14 of Volume-I : Section-VI (Sample Forms and Procedures).

iv. The leader shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and the entire execution of the contract, including payment, shall be done exclusively with the leader, provided otherwise requested by the joint venture and agreed between the Employer and the leader.

v. All partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms.

vi. A copy of the agreement entered into by the joint venture partners shall be submitted with the bid as per Form-15 of Volume-I : Section-VI (Sample Forms and Procedures), including interalia delineation of responsibilities and obligations of each partners appended thereto, notwithstanding the joint and several liability.
vii. The joint venture agreement should indicate precisely the responsibility of all members of JV in respect of planning, design, manufacturing, supply, installation, commissioning and training.

viii. All members of JV should have active participation in execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the Employer; and

ix. In order for a joint venture to qualify, each of its partners or combination of partners must meet the minimum criteria listed in the Qualification Requirement for the Bidder in enclosed Annexure-A (BDS) for an individual Bidder for the component of the contract they are designated to perform. Failure to comply with this requirement will result in rejection of the joint venture bid.

x. A firm can be a partner in only one joint venture; bids submitted by joint ventures or consortia including the same firm as partner will be rejected.

xi. In the case of a Bidder who offers to supply and/or install plant and equipment under the contract that the Bidder did not manufacture or otherwise produce and/or install, the Bidder shall (i) have the financial and other capabilities necessary to perform the contract; (ii) have been duly authorized by the manufacturer or producer of the related plant and equipment or component as per proforma in attachment 8 to supply and/or install that item in the Employer's country; and (iii) be responsible for ensuring that the manufacturer or producer complies with the requirements of ITB Sub-Clause 3.2 and meets the minimum criteria listed for an individual Bidder for that item.

d. Attachment 4: Eligibility and Conformity of the Facilities- Documentary evidence established in accordance with ITB Clause 3 that the facilities offered by the Bidder in its bid are eligible and conform to the Bidding Documents.

The documentary evidence of the eligibility of the facilities shall consist of a statement on the country of origin of the plant and equipment offered, which shall be confirmed by a certificate of origin issued at the time of shipment.

e. Attachment 5: Subcontractors Proposed by the Bidder: The Bidder shall include in its bid details of all major items of supply or services that it proposes to purchase or sublet, and shall give details of the name and nationality of the proposed Subcontractor, including vendors, for each of those items. Bidders are free to list more than
one Subcontractor against each item of the facilities. Their participation should be confirmed with a letter of intent between the parties, as needed, in Attachment 8. 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.

The Bidder shall be responsible for ensuring that any Subcontractor proposed complies with the requirements of ITB Clause 2, and that any plant, equipment or services to be provided by the Subcontractor comply with the requirements of ITB Clause 3 and Qualification Requirement for the Bidder, enclosed as Annexure-A(BDS).

The Employer reserves the right to delete any proposed Subcontractor from the list prior to award of contract, and after discussion between the Employer and the Contractor, the Appendix-5 of Volume-I:Section VI - Form of Contract Agreement shall be completed, listing the approved Subcontractors for each item concerned.

f. Attachment 6: Deviations: In order to facilitate evaluation of bids, deviations, if any, from the terms and conditions or Technical Specifications shall be listed in Attachment 6 to the bid. The Bidder is required to provide the cost of withdrawal for such deviations. However, the attention of the bidders is drawn to the provisions of ITB Sub-Clause 22.3 regarding the rejection of bids that are not substantially responsive to the requirements of the Bidding Documents.

Bidder’s attention is also drawn to the provisions of ITB Sub-Clause 22.3.1.

g. Attachment 7: Alternative Bids: Bid with alternative time schedule is not acceptable. Alternate bid shall not be acceptable.

h. Attachment 8: Manufacturer’s Authorisation Form

i. Attachment 9: Work Completion Schedule.

j. Attachment 10: Guarantee Declaration.

k. Attachment 11: Information regarding ex-employees of Employer in Bidder’s firm.

l. Attachment 12: Price Adjustment Data

m. Attachment 13: Declaration regarding Social Accountability

n. Attachment 14: Integrity Pact: The Bidder shall complete the accompanying Integrity Pact, which shall be applicable for bidding as well as contract execution, duly signed on each page by the person
signing the bid and shall be returned by the Bidder in two (2) originals along with the Techno - Commercial Part in a separate envelope, duly superscripted with ‘Integrity Pact’. The Bidder shall submit the Integrity Pact on a non-judicial stamp paper of Rs. 100/-.

If the Bidder is a partnership firm or a consortium, the Integrity Pact shall be signed by all the partners or consortium members.

Bidder’s failure to submit the Integrity Pact duly signed in Original alongside the Bid or subsequently pursuant to ITB Sub-Clause 21.1 shall lead to outright rejection of the Bid.

Attachment 15: Option for Initial Advance (either Interest Bearing Initial Advance or No Initial Advance) and Information for E-payment, PF details and declaration regarding Micro/Small & Medium Enterprises

In this Attachment, the Bidder is required to clearly mention whether the Bidder would opt for Interest bearing initial advance in addition to providing the other information as above.

Attachment 16: Additional Information:
  i. Certificate from their Banker(s) (as per prescribed formats in Form 16, Volume-I : Section-VI (Sample Forms and Procedures)) indicating various fund based/non fund based limits sanctioned to the Bidder and the extent of utilization as on date. Such certificate should have been issued not earlier than three months prior to the date of bid opening. Wherever necessary the Employer may make queries with the Bidders’ Bankers.
  ii. Detailed information on any litigation or arbitration arising out of contracts completed or under execution by it over the last five years. A consistent history of awards involving litigation against the Bidder or any partner of JV may result in rejection of Bid.
  iii. Any other information which the Bidder intends to furnish.

Attachment 17: Declaration for tax exemptions, reductions, allowances or benefits

Attachment 18: Declaration

Attachment 19: Bank Guarantee verification checklist

10.0 Bid Form and Price Schedules:
The Bidder shall complete the Bid Form(s) and submit it in hard copy on due date and time of submission of bid. The appropriate Price Schedules furnished in the...
Bidding Documents as indicated therein, shall be uploaded on web portal on due date and time of submission of bids.

11.0 Bid Prices:

11.1 Unless otherwise specified in the Technical Specifications, bidders shall quote for the entire facilities 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 Documents in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation and completion of the facilities including supply of mandatory spares (if any). This includes all requirements under the Contractor’s responsibilities for testing, precommissioning and commissioning of the facilities and, where so required by the Bidding Documents, 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 Documents, all in accordance with the requirements of the General Conditions of Contract. 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.

11.2 Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the Bidding Documents. If a Bidder wishes to make a deviation, such deviation shall be listed in Attachment 6 of its bid. The Bidder is required to provide the cost of withdrawal for such deviations.

11.3 Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules. Where no Price Schedules are included in the Bidding Documents, Bidders shall present their prices in the following manner:

Separate numbered Schedules shall be uploaded for each of the following elements. The total amount from each Schedule 1 to 4 shall be summarized in a grand summary of Price Proposal (Schedule 5) giving the total bid price(s) to be entered in the Bid Form.

- **Schedule 1**: Plant and Equipment to be supplied
- **Schedule 2**: Transportation, Insurance and other incidental services applicable for supply of Plant & Equipment
- **Schedule 3**: Installation Services for Erection, Testing and Commissioning including Local Transportation,
- **Schedule 4**: Taxes and Duties not included in Schedule 1 to 3
- **Schedule 5**: Grand Summaries (Schedule Nos. 1 to 4)
Bidders shall note that the plant and equipment included in Schedule No. 1 above exclude materials used for civil, building and few other construction/erection works. All such materials shall be included and priced under Schedule No. 2, Installation Services.

11.3.1 It shall be the responsibility of the bidders to pay all statutory taxes, duties and levies to the concerned authorities for such surplus material, which would otherwise have been, lawfully payable. The bidders shall submit an indemnity bond to keep Employer harmless from any liability, before release of such material to the bidder by Employer.

11.3.2 Set/Lot/Lumpsum shall be governed as per the requirement of the corresponding item description read in conjunction with relevant provisions of Technical Specifications.

11.4 In the schedules, Bidder shall give the required details and a break-down of their price as follows:

a. Plant and equipment including mandatory spares shall be quoted on an EXW (ex-factory, ex-works, ex-warehouse or off-the-self, as applicable) basis and to be quoted in Schedule 1.

In respect of direct transaction between the Employer and the Contractor, EXW price shall be inclusive of all cost as well as duties and taxes (viz., customs duties & levies, duties, sales tax/VAT etc.) paid or payable on components, raw materials and any other items used for their consumption incorporated or to be incorporated in the Plant & Equipment.

Sales tax/VAT, excise duty, local tax and other levies for equipment/items under direct transaction including octroi/entry tax as applicable for destination site/state shall not be included in the EXW price but shall be indicated wherever applicable in respective column of Schedule 5.

Whenever EXW price is quoted exclusive of excise duty and/or VAT, then the due credit under the CENVAT (Central Value Added Tax)/VAT scheme as per the relevant Government policies wherever applicable shall be taken into account by the Bidder while quoting bid price.

In respect of bought-out finished items, which shall be dispatched directly from the sub-vendor’s works to the Employer’s site (sale-in-transit), EXW price shall be inclusive of all cost as well as duties and tax (viz., custom duties & levies, duties, sales tax/VAT etc.) paid or payable. While quoting the EXW price, inclusive of excise duty and/or VAT, the due credit under the CENVAT (Central Value Added Tax)/VAT scheme as per the relevant Government policies wherever applicable shall be taken into account by the Bidder.

Imported goods shall not be acceptable. Only indigenous goods shall be acceptable in the contract.
However, octroi/entry tax as applicable for destination site/state shall not be included in the EXW price but shall be indicated separately in respective column of Schedule 5.

Requisite Sales Tax Declaration forms for all the equipments/items to be supplied from within India shall be furnished by the Employer.

b. Local transportation, insurance and other Services incidental to delivery of the Plant and Equipment including mandatory spares to be supplied shall be quoted separately in Schedule 2.

c. Installation Charges shall be quoted separately (Schedule 3) and shall include rates and prices for all labour, Contractor's equipment, temporary works, materials, consumables and all matters and things of whatsoever nature, provision of operations and maintenance manuals, etc. wherever identified in the Bidding Documents as necessary for the proper execution of all installation services except those priced in other Schedules.

d. The break-up of Training Charges shall be furnished separately in Schedule 4 for the training. Similarly, the break-up of Type test charges shall be furnished separately in Schedule 7. - Not Applicable

e. The bidder shall include the Sales Tax/VAT on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax/VAT Act for services to be performed, as applicable in their quoted bid price and Employer would not bear any liability on this account. Employer on behalf of the Owner shall, however, deduct such taxes at source as per the rules and issue Tax Deducted at Source (TDS) Certificate to the bidder.

f. The Bidder shall include Service Tax and surcharge/cess etc. on it as applicable in their quoted bid price and Employer would not bear any liability whatsoever on this account. Employer (or the Employer on behalf of the Owner) shall, however, deduct such tax at source as per the rules and issue necessary Certificate to the Contractor.

g. The Bidder shall include insurance charges in its bid prices as per insurance requirement mentioned in Section - IV: General Conditions of Contract (GCC) and Appendix-3: Insurance Requirements to Form of Contract Agreement as contained in Volume-I : Section VI (Sample Forms and Procedures) of the Bidding Documents. Bidder shall further note that the Employer shall not be liable to make any payment/ reimbursement to the Contractor whatsoever for insurance of Contractor's Plant and Machinery.

Discount(s)/rebate(s) offered by the bidder shall be indicated as a percentage of price component(s). Bidder shall also indicate in his bid, the price component(s) on which the discount is to be applied.
11.5 The prices shall be in accordance with the following:

The prices shall be in accordance with Appendix-2 of section-VI: Sample forms and procedures

12.0 **Bid Currencies**

12.1 Prices shall be quoted in Indian Rupees Only.

13.0 **BID security:**

13.1 The Bidder shall furnish, as part of its bid, a bid security in the amount and currency as stipulated in the Bid Documents. The bid security must be submitted in the form provided in the Bidding Documents.

13.2 The bid security shall, at the bidder’s option, be in the form of a crossed bank draft/pay orders/banks certified cheque in favour of Employer from a reputed commercial bank or a bank guarantee from (i) a **Public Sector Bank located in India**; or (ii) a **Scheduled Commercial Indian Private Bank as per the attached list only** [List is placed at Annexure-I to Section-III (BDS)]. The format of the bank guarantee shall be in accordance with the form of bid security included in the Bidding Documents. Bid security shall remain valid for a period of thirty (30) days beyond the original bid validity period, and beyond any extension subsequently requested under ITB Sub-Clause 14.2.

The Bid Security shall be in favour of XXXXX (Name of Employer) payable at XXXX (Location/City of payment).

13.3 Any bid not accompanied by a bid security or an acceptable bid security shall be rejected by the Employer as being nonresponsive, pursuant to ITB Sub-Clause 22.4. The bid security of a joint venture must be in the name of all the partners in the joint venture submitting the bid.

13.4 The bid securities of unsuccessful bidders will be returned as promptly as possible, but not later than twenty-eight (28) days after the expiration of the bid validity period.

13.5 The successful Bidder shall be required to keep its bid security valid for a sufficient period till the performance security(ies) pursuant to ITB Clause 34 are furnished to the satisfaction of the Employer. The bid security of the successful Bidder will be returned when the Bidder has signed the Contract Agreement, pursuant to ITB Clause 33, and has furnished the required performance security, pursuant to ITB Clause 34.

13.6 The bid security may be forfeited

(a) If the Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form; or
(b) In case the Bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated by him in the bid and/or accept the withdrawals/rectifications pursuant to the declaration/confirmation made by him in Attachment – Declaration of the Bid; or

(c) If a Bidder does not accept the corrections to arithmetical errors identified during preliminary evaluation of his bid pursuant to ITB Sub-Clause 27.2; or

(d) If, as per the requirement of Qualification Requirements the Bidder is required to submit a Deed of Joint Undertaking and he fails to submit the same, duly attested by Notary Public of the place(s) of the respective executant(s), within ten days from the date of intimation of post-bid discussion; or

(e) In the case of a successful Bidder, if the Bidder fails within the specified time limit

(i) to sign the Contract Agreement, in accordance with ITB Clause 33, or

(ii) to furnish the required performance security(ies), in accordance with ITB Clause 34 and/or to keep the bid security valid as per the requirement of ITB Sub-Clause 13.5.

13.7 No interest shall be payable by the Employer on the above Bid Security.

14.0 Period of Validity of Bid

14.1 Bids shall remain valid for the period of six months after the date of opening of Techno-Commercial Part i.e. Bid Envelope, prescribed by the Employer, pursuant to ITB Sub-Clause 20.1. A bid valid for a shorter period shall be rejected by the Employer as being non-responsive.

14.2 In exceptional circumstance, the Employer may solicit the Bidder’s consent to an extension of the bid validity period. The request and responses thereto shall be made in writing or by e-mail. If a Bidder accepts to prolong the period of validity, the bid security shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required or permitted to modify its bid.

15.0 Format and Signing of Bid

15.1 The Bidder shall prepare an original and two number of copies of the bid, clearly marking each one as “Original Bid”, “Copy No. 1”, “Copy No. 2”, as appropriate. In the event of any discrepancy between them, the original shall govern.

15.2 The original and both the copies of the bid, each consisting of the documents listed in ITB Clause 9, shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract.

To be inserted: (*) Name of State  (**) Name of State Power Utility  (***) Name of Central Public Sector Utility

RGGVY/XII Plan/SBD-R1
The latter authorization shall be indicated by written power of attorney accompanying the bid and submitted as Attachment 2 to the Bid under ITB Sub-Clause 9.3. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid and shall be serially numbered.

15.3 The bid shall contain no alterations, omissions or additions, unless such corrections are initialed by the person or persons signing the bid.

(D) Submission of Bids

16.0 Sealing and Marking of Bids

16.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as “Original Bid” and “Copy No. [number]” and each containing two inner separately sealed envelopes marked Bid Envelope (Techno - Commercial Part) containing the documents mentioned at ITB Clause 9 in the following manner. These envelopes shall then be sealed in an outer envelope.

**Bid Envelope (Techno - Commercial Part) Bid consisting inside the following Packets:**

a) Packet No.-I mentioning on the envelope the following: “Packet No.-I: Integrity Pact (Part of Bid Envelope Bid)”

b) Packet No.-II : Bid Price (Cost of bid document, if not paid ON-LINE).

c) Packet No.-III : Bid Security

d) Packet No.-I: Bid Form (Containing Pre-Qualification Requirements’ documents as per 18 Nos. attachments)

e) Packet No.-II : Techno-commercial offers (copy of entire bid document duly signed and stamped as token of unconditional acceptance to the terms and conditions of the contracts, technical specification, scope of contract, tender drawings, etc as per bid documents)

16.2 The inner and outer envelopes shall

(a) be addressed to the Employer at the address given in the BDS, and

(b) bear the contract name indicated in the BDS, the Invitation for Bids title and number indicated in the BDS, and the statement “Do Not Open Before [date],” to be completed with the time and date specified in the BDS, pursuant to ITB Sub-Clause 20.1.
16.3 Bid Securities and the Integrity Pact in original shall be submitted in separate superscribed envelopes (one for Bid Security and another for Integrity Pact) along with Bid Envelope.

All the inner envelopes shall also indicate the name and address of the Bidder so that the bid can be returned unopened in case it is declared “late.”

16.4 If the outer envelope is not sealed and marked as required by ITB Sub-Clause 16.2 above, the Employer will assume no responsibility for the bid’s misplacement or premature opening. If the outer envelope discloses the Bidder’s identity, the Employer will not guarantee the anonymity of the bid submission, but this disclosure will not constitute grounds for bid rejection.

17.0 Deadline for Submission of Bids

17.1 Bids must be received by the Employer at the address specified under ITB Sub-Clause 16.2 no later than the time and date stated in the BDS. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the bids will be received up to the appointed time on the next working day. Bids once received by the Employer shall not be returned except otherwise provided in the Bidding Documents.

17.2 The Employer may, at its discretion, extend this deadline for submission of bids by amending the Bidding Documents in accordance with ITB Sub-Clause 7.3 for the reasons specified therein at any time prior to opening of bids by the Employer pursuant to ITB Clause 20, in which case all rights and obligations of Employer and bidders will thereafter be subject to the deadline as extended.

18.0 Late Bids

18.1 Any bid received by the Employer after the bid submission deadline prescribed by the Employer, pursuant to ITB Clause 17, will be rejected and returned unopened to the Bidder.

19.0 Modification and Withdrawal of Bids

19.1 The Bidder may modify or withdraw its bid after submission, provided that modification or written notice of withdrawal is received by the Employer prior to the deadline prescribed for bid submission.

19.2 The Bidder’s modifications shall be prepared, sealed, marked and dispatched as follows:

(a) The Bidders shall provide an original and two number of copies of any modifications to its bid, clearly identified as such, in two inner envelopes duly marked “Bid Modifications ...... Envelope —Original” and “Bid
Modifications …… Envelope — Copies.” The inner envelopes shall be sealed in an outer envelope, which shall be duly marked “Bid Modifications.”

(b) Other provisions concerning the marking and dispatch of bid modifications shall be in accordance with ITB Sub-Clauses 16.2, 16.3 and 16.4.

19.3 A Bidder wishing to withdraw its bid shall notify the Employer in writing prior to the deadline prescribed for bid submission. The notice of withdrawal shall

(a) be addressed to the Employer at the address named in the BDS, and

(b) bear the contract name, the IFB number, and the words “Bid Withdrawal Notice.” Bid withdrawal notices received after the bid submission deadline will be ignored, and the submitted bid will be deemed to be a validly submitted bid.

19.4 No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period specified in ITB Clause 14. Withdrawal of a bid during this interval may result in the Bidder’s forfeiture of its bid security, pursuant to ITB Sub-Clause 13.6.

(E). Bid Opening and Evaluation

20.0 Opening of Bid Envelope by Employer

20.1 The Employer will open the Bid Envelope i.e. Techno – Commercial Part in public, including withdrawals and modifications made pursuant to ITB Clause 19, in the presence of bidders’ designated representatives who choose to attend, at the time, date, and location stipulated in the BPS. The bidders’ representatives who are present shall sign a register evidencing their attendance. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the bids will be received up to the appointed time on the next working day.

20.2 Envelopes marked “Withdrawal” shall be opened first and the name of the Bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to ITB Clause 19 shall be returned unopened.

20.3 For all other Bids, the bidders’ names, deviation having cost of withdrawal, if any, the presence of bid security, Integrity Pact and any such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. Subsequently, all envelopes marked “Modification” shall be opened and the submissions therein read out in appropriate detail. No bid shall be rejected at bid opening except for late bids pursuant to ITB Clause 18. Such bids shall be returned to the Bidder unopened. However, opening of bid, whether or not accompanied with the bid security and/or Integrity Pact, shall not be construed to imply its acceptability.
which shall be examined in detail pursuant to the provisions contained in this Section-II.

On behalf of Employer, the Integrity Pact will be signed by its representative at the time of Bid Opening. One original of the Integrity Pact will be retained by Employer and the other original will be returned to the representative of the bidders present during bid opening. If the Bidder’s representative is not present during the Bid Opening, the other original shall be sent to the bidder by post/courier.

20.4 The Employer shall prepare minutes of the bid opening in the form of Bid Opening Statement, including the information disclosed to those present in accordance with ITB Sub-Clause 20.3.

20.5 Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances and shall be returned to the Bidder unopened.

21.0 Clarification of Bids

21.1 During bid evaluation, the Employer may, at its discretion, ask the Bidder for a clarification of its bid. In case of erroneous/non submission of documents related to/identified in ITB Sub-Clause 9.3 (b), (n) and (r) or Deed of Joint Undertaking pursuant to ITB Sub-Clause 9.3 (c) & (e), required to be submitted by the Bidder as per the provisions of the Bidding Documents, the Employer may give the Bidder not more than 7 working days notice to rectify/furnish such documents, failing which the bid shall be rejected. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted.

22.0 Preliminary Examination of Bid Envelope

22.1 The Employer will examine the bids to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

22.2 The Employer may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, whether or not identified by the Bidder in Attachment 6 to its bid, and that does not prejudice or affect the relative ranking of any Bidder as a result of the technical and commercial evaluation, pursuant to ITB Clause 24.

22.3 Prior to the detailed evaluation, the Employer will determine whether each bid is of acceptable quality, is complete and is substantially responsive to the Bidding Documents. Any deviations, conditionality or reservation introduced in Attachment-6 and/or in the Bid Form, Technical Data Sheets and covering letter, or in any other part of the bid will be reviewed to conduct a determination of the substantial responsiveness of the bidder’s bid. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations, objections, conditionalities or
reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality or performance of the contract; (ii) that limits in any substantial way, inconsistent with the Bidding Documents, the Employer’s rights or the successful Bidder’s obligations under the contract; or (iii) whose rectification would unfairly affect the competitive position of other bidders who are presenting substantially responsive bids.

22.3.1 Bids containing deviations from critical provisions relating to GCC Clauses 2.14 (Governing Law), 8 (Terms of Payment), 9.3 (Performance Security), 10 (Taxes and duties), 21.2 (Completion Time Guarantee), 22 (Defect Liability), 23 (Functional Guarantee), 25 (Patent Indemnity), 26 (Limitation of Liability), 38 (Settlement of Disputes), 39 (Arbitration) and Appendix 2 to the Form of Contract Agreement (Price Adjustment) will be considered as non-responsive.

22.3.2 Regarding deviations, conditionality or reservations introduced in the bid, which will be reviewed to conduct a determination of substantial responsiveness of the Bidder’s bid as stated in ITB Sub-Clause 22.3, the order of precedence of these documents to address contradictions, if any, in the contents of the bid, shall be as follows:

I. Covering Letter
II. Bid Form
III. Attachment-6 : Deviations
IV. Technical Data Sheet

Contents of the document at Sr. No. I above will have overriding precedence over other documents (Sr. No. II to V above). Similarly, contents of document at Sr. No. II above will have overriding precedence over other documents (Sr. No. III to IV above), and so on.

22.4 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by the Bidder by correction of the nonconformity. The Employer’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

23.0 Qualification

23.1 The Employer will ascertain to its satisfaction whether Bidders determined having submitted substantially responsive bids are qualified, as per the Qualification Requirement specified in Annexure A (BDS) to satisfactorily perform the contract. The Employer shall be the sole judge in this regard and the Employer's interpretation of the Qualification Requirement shall be final and binding.

23.2 The determination will take into account the Bidder’s financial, technical capabilities including production capabilities, in particular the Bidder’s contract work in hand, future commitments & current litigation and past performance including fatal accidents during execution of contracts that have been awarded by the Employer on the Bidder. It will be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder in Attachment 3 to the bid, as well as
such other information as the Employer deems necessary and appropriate. This shall, however, be subject to assessment that may be carried out, if required, by the Employer as per the provisions of Annexure-A (BDS). Subsequent to Bidder's involvement in three cumulative fatal accidents during any financial year, bids submitted by such bidder during next three months period reckoned from the date of the last accident, shall be considered non-responsive. However, if there is no bid from such bidder during the said three months period, any one bid submitted after three months will be considered non-responsive. The Employer shall be the sole judge in this regard.

23.3 The Employer may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, affecting the capability of the Bidder to perform the Contract.

23.4 An affirmative determination will be a prerequisite for the Employer to evaluate the Techno-Commercial Part and to intimate successful bidders to be present on new date, time & location to open the online price schedules of the Bidder. A negative determination will result in rejection of the Bidder’s bid.

23.5 Any Bid subsequent to Bidder's involvement in three cumulative fatal accidents during any financial year will be considered non-responsive. The employer shall be the sole judge in this regard.

24.0 Evaluation of Techno-Commercial Part (Bid envelop)

24.1 The Employer will carry out a detailed evaluation of the bids of the qualified bidders in order to determine whether the technical aspects are in accordance with the requirements set forth in the Bidding Documents. In order to reach such a determination, the Employer will examine the information supplied by the bidders, pursuant to ITB Clause 9, and other requirements in the Bidding Documents, taking into account the following factors:

(a) overall completeness and compliance with the Technical Specifications and Drawings; deviations from the Technical Specifications as identified in Attachment 6 to the bid and those deviations not so identified; suitability of the facilities 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 acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.

(b) Achievement of specified performance criteria by the facilities

(c) Compliance with the time schedule called for in the corresponding Appendix to the Form of Contract Agreement and evidenced as needed in a milestone schedule provided in the bid;
Time schedule (program of performance)

The plant and equipment covered by this bidding shall have the ‘Taking Over’ by the Employer after successful Completion within the period specified in BDS. Bidders are required to base their prices on the time schedule given in Appendix 4 [Volume-I : Section-VI (Sample Forms and Procedures)] to the Form of Contract Agreement (Time Schedule) or, where no time schedule is given in Appendix 4, on the Completion date(s) given above. No credit will be given to earlier completion. Bids offering completion beyond the specified period are liable to be rejected.

(d) Type, quantity and long-term availability of mandatory and recommended spare parts and maintenance services

(e) Any other relevant technical factors that the Employer deems necessary or prudent to take into consideration.

(f) Any deviations to the commercial and contractual provisions stipulated in the Bidding Documents.

(g) Details furnished by the bidder in response to the requirements specified in Volume-II of the Bidding Documents.

(h) The acceptability of the vendors and subcontractors proposed in Attachment 5 to be used by the Bidder will be evaluated. Should a vendor or subcontractor, for the items other than those covered under Annexure-A (BDS), be determined to be unacceptable, the bid will not be rejected, but the Bidder will be required to substitute an acceptable vendor or subcontractor without any change to the bid price.

(i) Capitalisation of losses and evaluation of bids: The guaranteed values of no load loss and load loss shall be mentioned by the bidder while submitting technical bid. The guaranteed losses given by bidder shall be examined at the time of technical scrutiny of the package.

The no load and load losses of transformer shall not exceed the values given below. In case, given Guaranteed Technical Losses found to be more than 5% of values given below, transformers shall not be acceptable and offer shall be rejected.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Voltage rating</th>
<th>No load losses (watt)</th>
<th>Load losses at 75 degree centigrade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Ph, 16 KVA</td>
<td>11/0.250 KV</td>
<td>45 W</td>
<td>250 W</td>
</tr>
<tr>
<td>3-Ph, 16 KVA</td>
<td>11/0.433 KV</td>
<td>90 W</td>
<td>325 W</td>
</tr>
<tr>
<td>3-Ph, 25 KVA</td>
<td>11/0.433 KV</td>
<td>100 W</td>
<td>685 W</td>
</tr>
<tr>
<td>3-Ph, 63 KVA</td>
<td>11/0.433 KV</td>
<td>180 W</td>
<td>1235 W</td>
</tr>
<tr>
<td>3-Ph, 100 KVA</td>
<td>11/0.433 KV</td>
<td>260 W</td>
<td>1760 W</td>
</tr>
<tr>
<td>3-Ph, 3.15 MVA</td>
<td>11/0.433 KV</td>
<td>4500 W</td>
<td>23000 W</td>
</tr>
<tr>
<td>3-Ph, 5 MVA</td>
<td>11/0.433 KV</td>
<td>6500 W</td>
<td>34000 W</td>
</tr>
</tbody>
</table>
The capitalisation of the guaranteed losses of the transformers shall be calculated and considered while evaluating the bids provided they are within 5% of the above values. The liquidated damages will be applied to successful bidder for not achieving the quoted guaranteed figures. The rate of capitalisation of losses shall be as per values given below:

1) For 33/11 KV Power Transformers:
   - No-load loss: Rs 2,61,713/kW,
   - Load losses: Rs 1,18,643/kW

2) For 33/0.433 KV Station Transformers:
   - No-load loss: Rs 2,65,506/kW,
   - Load losses: Rs 1,14,698/kW

3) For 11/0.433 KV or 11/0.25 KV Distribution Transformers:
   - No-load loss: Rs 2,65,506/kW,
   - Load losses: Rs 1,14,698/kW

25.0 Opening of Price Schedules (ON-LINE) by Employer

25.1 Price Part of only those Bidders shall be opened on-line who are determined as having submitted substantially responsive bids and are ascertained to be qualified to satisfactorily perform the Contract, pursuant to ITB Clause 23 and 24. Such Bidders shall be intimated about the date and time for opening of Price Part by the Employer. A negative determination of the bids pursuant to ITB Clause 23 and 24, shall be notified by the Employer to such Bidders and the price bid uploaded by them shall not be opened.

25.2 The Employer will on-line open Price Bid at the specified time and date in the presence of bidders’ designated representatives who choose to attend, at the time, date, and location stipulated in the intimation for opening of price bid. The bidders’ representatives who are present shall sign a register evidencing their attendance.

25.3 The bidders’ names, the Bid Prices or any discounts, and any such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. The prices and details as may be read out during the bid opening and recorded in the Bid Opening Statement would not be construed to determine the relative ranking amongst the Bidders, or the successful Bidder, and would not confer any right or claim whatsoever on any Bidder. The successful Bidder (also referred to as the L1 Bidder) shall be determined as per the provisions of this Section – II and considered for award of contract as provided in ITB Clause 30.

25.4 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with ITB Sub-Clause 25.3.

25.5 Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.
26.0 Conversion to Single Currency

26.1 This shall not be applicable as domestic firms are required to quote the prices in Indian Rupees only.

27.0 Evaluation of Price Bids

27.1 The Employer will examine the Price Bids to determine whether they are complete, whether any computational errors have been made and whether the bids are generally in order.

The Price Bids containing any deviations and omissions from the contractual and commercial conditions and the Technical Specifications which have not been identified in the Bid Envelope are liable to be rejected.

27.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity specified by the Employer, or between subtotals and the total price, the unit or subtotal price shall prevail, and the quantity and the total price shall be corrected. However, in case of items quoted without indicating any quantity or the items for which the quantities are to be estimated by the Bidder, the total price quoted against such items shall prevail. If there is a discrepancy between words and figures, the amount in words will prevail.

The prices of all such item(s) against which the Bidder has not quoted rates/amount (viz., items left blank or against which ‘-’ is indicated) in the Price Schedules will be deemed to have been included in other item(s).

If the discount(s)/rebate(s) offered by the Bidder is a percentage discount and the price component(s) on which the said discount is not indicated in the bid, the same shall be considered on the total bid price [i.e. proportionately on each price component], in the event of award. However, if lump-sum discount is offered, the same shall be considered in full on the Ex-works price component (by proportionately reducing Ex-works price of individual items), in case of award. Further, Conditional discounts/rebates, if any, offered by the bidder shall not be taken into consideration for evaluation. It shall, however, be considered in case of award.

In respect of taxes, duties and other levies indicated by the Bidder in the Bid, which are reimbursable in line with the provisions of the Bidding Documents, the applicable rate and amount thereof shall be ascertained by the Employer based on which, if required, necessary rectification and arithmetical correction shall be carried out by the Employer. The rate and amount so ascertained by the Employer shall prevail.

The subtotal, total price or the total bid price to be identified in Bid Form for this purpose, irrespective of the discrepancy between the amount for the same indicated in words or figures shall be rectified in line with the procedure explained above.
If the Bidder does not accept the correction of errors as per this clause, its bid will be rejected and the amount of Bid Security forfeited.

The Bidder should ensure that the prices furnished in various price schedules are consistent with each other. In case of any inconsistency in the prices furnished in the specified price schedules to be identified in Bid Form for this purpose, the Employer shall be entitled to consider the highest price for the purpose of evaluation and for the purpose of award of the Contract use the lowest of the prices in these schedules.

27.3 The comparison shall be on the total price in Price Schedule No. 5 Grand Summary (Total of Schedule Nos. 1 to 4).

The comparison shall also include the applicable taxes, duties and other levies, which are reimbursable in line with the provisions of the Bidding Documents.

The Employer's comparison will also include the costs resulting from application of the evaluation procedures described in ITB Sub-Clause 27.4 & 27.5.

27.4 The Employer's evaluation of a bid will take into account, in addition to the bid prices indicated in Price Schedule Nos. 1 through 4 (online price schedules), the following costs and factors that will be added to each Bidder's bid price in the evaluation using pricing information available to the Employer, in the manner and to the extent indicated in ITB Sub-Clause 27.5 and in the Technical Specifications:

(a) the cost of all quantifiable deviations and omissions from the contractual and commercial conditions and the Technical Specifications as identified in the evaluation of Bid Envelope, and other deviations and omissions not so identified;

(b) the functional guarantees of the facilities offered;

Bidders shall state the functional guarantees (e.g., performance, efficiency, consumption) of the proposed facilities in response to the Technical Specifications. Plant and equipment offered shall have a minimum (or a maximum, as the case may be) level of functional guarantees specified in the Technical Specifications to be considered responsive. Bids offering plant and equipment with functional guarantees less (or more) than the minimum (or maximum) specified shall be rejected.

(c) the performance of the equipment offered;

Bidder shall state the guaranteed performance or efficiency of the Equipments, named in the BPS, in response to the Technical Specifications. Equipment offered shall have a minimum (or a maximum, as the case may be) level of guarantees specified in the Technical Specifications to be considered responsive. Bids offering plant and equipment with guarantees less (or more) than the minimum (or maximum) specified shall be rejected.

(d) the extra cost of work, services, facilities, etc., required to be provided by the Employer or third parties;
(e) any other relevant factors listed in BPS.

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.

27.5 Pursuant to ITB Sub-Clause 27.4, the following evaluation methods will be followed:

(a) Contractual and commercial deviations

The evaluation shall be based on the evaluated cost of fulfilling the contract in compliance with all commercial, contractual and technical obligations under this Bidding Documents. In arriving at the evaluated cost, towards deviations identified in the evaluation of bid, the cost of withdrawal indicated by the bidder in Attachment-6 of the Bid Form will be used. If such a price is not given, the Employer will make its own assessment of the cost of such a deviation for the purpose of ensuring fair comparison of bids.

(b) Functional Guarantees of the facilities

For the purposes of evaluation, the adjustment specified in the Technical Specifications will be added to the bid price for each drop (or excess) in the responsive functional guarantees offered by the Bidder, below (or above) either a norm of one hundred (100) or the value committed in the responsive bid with the most performing functional guarantees, as specified in the Technical Specifications.

(c) Performance Guarantees of the Equipments

For the purposes of evaluation, the adjustment specified in the BDS will be added to the bid price.

(d) Work, services, facilities, etc., to be provided by the Employer

Where bids include the undertaking of work or the provision of services or facilities by the Employer in excess of the provisions allowed for in the Bidding Documents, the Employer shall assess the costs of such additional work, services and/or facilities during the duration of the contract. Such costs shall be added to the bid price for evaluation.

27.6 Any adjustments in price that result from the above procedures shall be added, for purposes of comparative evaluation only, to arrive at an “Evaluated Bid Price.” Bid prices quoted by bidders and rectified as per ITB Sub Clause 27.2 shall remain unaltered.

28.0 Purchase/ Domestic preference:

No preference shall be given to any bidder
29.0 Confidentiality and Contacting the Employer

29.1 After the public opening of bids, information relating to the examination, clarification, and evaluation of bids and recommendations concerning awards shall not be disclosed to Bidders or other persons not officially concerned with this process until the publication of contract award. 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 its bid, it should do so in writing.

29.2 Any effort by a Bidder to influence the Employer in the Employer’s bid evaluation, bid comparison or contract award decisions may result in rejection of the Bidder’s bid. The Employer shall be the sole judge in this regard.

(F). Award of Contract

30.0 Award Criteria

30.1 Subject to ITB Clause 31, the Employer will award the contract to the successful Bidder (also referred to as the L₁ Bidder) whose bid has been determined to be substantially responsive and to be the lowest evaluated bid, further provided that the Bidder is determined to be qualified, as per the Qualification Requirement specified in Annexure-A (BDS) to perform the contract satisfactorily.

30.2 The Employer may request the Bidder to withdraw any of the deviations listed in the winning bid.

At the time of Award of Contract, if so desired by the Employer, the bidder shall withdraw the deviations listed in Attachment 6 to the Bid Form at the cost of withdrawal stated by him in the bid. In case the bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated by him in the bid, his bid will be rejected and his bid security forfeited.

Bidder would be required to comply with all other requirements of the Bidding Documents except for those deviations which are accepted by the Employer.

30.3 The Employer reserves the right to vary the quantity of any of the spares and/or delete any items of spares altogether at the time of Award of Contract.

30.4 The mode of contracting with the successful bidder will be as per stipulation outlined in GCC Sub-Clause 2.1 and briefly indicated below:

30.4.1 The award shall be made as follows:

(i) First Contract: For Ex-Works supply of all equipment and materials.
(ii) Second Contract: For providing all services i.e. inland transportation for delivery at site, insurance, unloading, storage, handling at site, installation, Testing and Commissioning including performance testing in respect of all the equipment supplied under the “First Contract” and any other services specified in the Contract Documents.
Both contracts will contain a cross fall breach clause specifying that breach of one will constitute breach of the other.

31.0 Employer’s Right to Accept any Bid and to Reject any or all Bids

31.1 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 award of contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer’s action.

32.0 Notification of Award

32.1 Prior to the expiration of the period of bid validity, the Employer will notify the successful Bidder in writing, that its bid has been accepted. The notification of award will constitute the formation of the contract.

32.2 The Employer shall publish the results on its website, identifying the bid and Specification numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with above, requests in writing the grounds on which its bid was not selected.

32.3 Upon the successful Bidder’s furnishing of the performance security pursuant to ITB Clause 34, the Employer will promptly discharge the bid securities, pursuant to ITB Sub-Clause 13.4 & 13.5.

33.0 Signing the Contract Agreement

33.1 At the same time as the Employer notifies the successful Bidder that its bid has been accepted, the Employer in consultation with the Bidder will prepare the Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.

33.2 The Contract Agreement shall be prepared within twenty-eight (28) days of the Notification of Award and the successful Bidder and the Employer shall sign and date the Contract Agreement immediately thereafter.
34.0 Performance Security

34.1 Within twenty-eight (28) days after receipt of the Notification of Award, the successful Bidder shall furnish the performance security for 15% (Fifteen percent) of the contract price plus additional performance securities for meters and distribution transformers, if any, in line with the requirement of Qualification Requirements, in the amount given in the BDS and in the form provided in Volume-I: Section VI, Sample Forms and Procedures, of the Bidding Documents. The performance security of a joint venture shall be in the name of joint venture.

34.2 Failure of the successful Bidder to comply with the requirements of ITB Clause 33 or Clause 34 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Employer may make the award to the next lowest evaluated Bidder or call for new bids.

35.0 Fraud and Corruption

It is the Employer's policy that requires the Bidders, suppliers and contractors and their subcontractors under the contracts to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Employer:

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

(i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) “fraudulent practice” is 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) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) “coercive practice” is 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;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Employer’s investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from...
disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation;

or

(bb) acts intended to materially impede the exercise of the Employer’s inspection and audit rights.

(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 in competing for the contract in question;

(c) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

(d) will have the right to require that the provision be included in Bidding Documents and in contracts, requiring Bidders, suppliers, and contractors and their sub-contractors to permit the Employer to inspect their accounts and records and other documents relating to bid submission and contract performance and to have them audited by auditors appointed by the Employer.

----- End of Section-II (ITB) ----
VOLUME-I: SECTION - III
BID DATA SHEETS (BDS)
**BID DATA SHEETS (BDS)**

The following bid specific data for the Plant and Equipment to be procured shall amend and/or supplement the provisions in the Instruction to Bidders (ITB):

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>ITB Clause Ref. No.</th>
<th>Bid Data Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ITB 1.1</td>
<td>The Owner is: XXXXX (Name and Address of Owner)</td>
</tr>
<tr>
<td>2.</td>
<td>ITB 1.1</td>
<td>The Employer is: XXXXX (Name and Address of Employer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kind Attn.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone Nos.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax No.:</td>
</tr>
<tr>
<td>3.</td>
<td>ITB 1.1</td>
<td>Supplementing ITB 1.1 with the following: For the purpose of execution of the contract, the contractual activities shall be performed by the Employer “for and on behalf of the Owner” except in cases where the Owner itself is statutorily required to do so.</td>
</tr>
<tr>
<td>4.</td>
<td>ITB 2.1, 2.2, 2.3 &amp; 3.2</td>
<td>Replace the word “Employer” with “Employer/Owner”.</td>
</tr>
<tr>
<td>5.</td>
<td>ITB 6.1</td>
<td>Address of the Employer:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kind Attn.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone Nos.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax No.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email Address:</td>
</tr>
<tr>
<td>6.</td>
<td>ITB 6.4</td>
<td>Venue, date and time for Pre-bid Meeting:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Bidder’s designated representative is invited to attend a pre-bid meeting, which will take place at the venue and time as given below:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Venue: XXXXX (Name and Address of Employer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kind Attn.:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone Nos.:</td>
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<td></td>
<td>Mobile:</td>
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<td></td>
<td></td>
<td>Fax No.:</td>
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<td></td>
<td></td>
<td>Email Address:</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>ITB Clause Ref. No.</td>
<td>Bid Data Details</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>ITB 9.2</td>
<td>Alternative bids shall not be permitted</td>
</tr>
<tr>
<td>8</td>
<td>ITB 9.3 (p)</td>
<td>Supplementing ITB clause 9.3(p) with the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Bidder shall also furnish information/documentation in support that the Bidder have adequate design infrastructure and erection facilities and capacity and procedures including quality control related to the work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) The Bidder shall furnish the CV and experience details of a project manager with 15 years’ experience in executing such contract of comparable nature including not less than five years as manager</td>
</tr>
<tr>
<td>9</td>
<td>ITB 13.1</td>
<td>Amount of Bid Security:</td>
</tr>
<tr>
<td>10</td>
<td>ITB 16.2(a), ITB 16.2(b), ITB 17.1, ITB 19.3 (a) and ITB 20.1</td>
<td>Address for submission of Bids and its modification and withdrawal, if any;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Address in Person or by Post:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>XXXXX (Name of Employer’s representative along with full address)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deadline for submission of Bids and its modification and withdrawal, if any</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upto ............ (time of submission) on .......... (Date of submission) (Indian Standard Time)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Address for Bid Opening:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>XXXXX (Name of Employer with address)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time and date for Bid Opening - Bid Envelope:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Date :</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time: (Indian Standard Time)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(a) Bid Title:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>............ (insert Name of the Package &amp; Specification No.) ..................</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>ITB Clause Ref. No.</td>
<td>Bid Data Details</td>
</tr>
<tr>
<td>--------</td>
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<td>-----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>BID ENVELOPE</strong></td>
</tr>
<tr>
<td></td>
<td>(b)  Do not open before .......... hours (Indian Standard Time) on <em><strong>/</strong></em>/20___.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>ITB 16.3</td>
<td>Supplementing ITB clause 16.3 with the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In case, pursuant to Ministry of Finance, GOI’s Circular dated 17th July, 2012, the Bank Guarantee is issued using SFMS Platform by the bank’s located in India, the copy of such Bank Guarantee shall be submitted by the bidder along with the Bid Envelope.</td>
</tr>
<tr>
<td>12.</td>
<td>ITB 24.1 (c)</td>
<td>The Time for Completion for all the Packages shall be <strong>24 (Twenty Four) months</strong> from the date of Notification of Award.</td>
</tr>
<tr>
<td>13.</td>
<td>ITB 27.2</td>
<td>Supplementing ITB clause 27.2 with the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The total charges for Supply, F&amp;I, Erection, Testing &amp; Commissioning for BPL service connection including Taxes &amp; Duties should not be more than Rs. 3000/- per connection. In case, the charges quoted for the above exceed Rs. 3000/- per service connection then payment shall be restricted to Rs. 3000/-, which shall also be considered in evaluation.</td>
</tr>
<tr>
<td>14.</td>
<td>ITB 27.4 (b)</td>
<td>Deleted as Functional Guarantees are not applicable.</td>
</tr>
<tr>
<td>15.</td>
<td>ITB 27.4(c)</td>
<td>Applicable for 5/3.15 MVA 33/11kV, 3 ph. Power Transformer, 100/63/25 KVA, 11/0.433kV, 3 ph. Station Transformer and 16 KVA, 11/0.250kV, 1-phase Distribution Transformer.</td>
</tr>
<tr>
<td>16.</td>
<td>ITB 27.5 (b)</td>
<td>Deleted as Functional Guarantees are not applicable.</td>
</tr>
<tr>
<td>17.</td>
<td>ITB 27.5 (c)</td>
<td>Differential Price Factors for Evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The factors and the respective Indian Rupees value per unit of differential loss (applicable for each item/unit of the facilities) for purpose of calculating differential price for evaluation shall be as stipulated below:</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>ITB Clause Ref. No.</td>
<td>Bid Data Details</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td><strong>Parameter to be taken for applying differential price factor (F)</strong></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Differential Load loss (KW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Differential No load Loss (KW)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Differential Load loss (KW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Differential No load Loss (KW)</td>
</tr>
</tbody>
</table>

The best parameter of loss quoted at rated voltage, rated frequency, rated current at 75°C for each equipment/unit of the facilities, under each Equipment Category quoted by any technically responsive bidder shall be taken as basis and the difference between this best parameter and that quoted by the particular bidder multiplied with the total no. of those items/units of the facilities, shall be used to arrive at differential price to be applied for the bid.

However, the bids quoted with higher value of losses than the specified value in the technical specifications for Distribution Transformer, will be treated as non-responsive.

18. ITB 34.1 In addition to the Performance Security of 15% of the Contract Price, the successful bidder is required to furnish additional performance security(ies), if applicable, as per Clause no. 4 of Joint Deed of Undertaking mentioned at Sl. No. 19 of Section - VI : Sample Forms and Procedures.

----- End of Section-III (BDS) ----
QUALIFICATION OF THE BIDDER for Rural Electrification works of XXXXXXXX (name of district) district in XXXXX (Name of State) under Rajiv Gandhi Grämeen Vidyutikaran Yojana (RGGVY)

Qualification of bidder will be based on meeting the minimum pass/fail criteria specified in 1.0 Pre-qualifying criteria Part-A below regarding the Bidder’s technical experience and financial position as demonstrated by the Bidder’s responses in the corresponding Bid Schedules.

The bidder shall also be required to furnish the information specified in 2.0 Pre-qualifying criteria Part-B in their Bid. Subcontractors’ technical experience and financial resources shall not be taken into account in determining the Bidder’s compliance with the qualifying criteria. The bid can be submitted by an Indian individual firm or by Joint Venture firm having Indian partner firms.

Notwithstanding anything stated herein above, the Employer reserves the right to assess the capacity and capability of the bidder, should the circumstances warrant such assessment in an overall interest of the Employer. The employer reserves the right to waive minor deviations if they do not materially affect the capability of the Bidder to perform the contract.

1.0 Pre-qualification criteria - Part A:

1.01 Technical:

1) Package I: Supply, Erection, Testing & Commissioning of 33/11KV or 66/11 KV substation and its associated 33 or 66 KV Lines

i. The bidder must have successfully erected, tested and commissioned substation of 33 KV/11 KV or 66/11KV voltage class and its associated 33 KV/66 KV lines(as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 50% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power

---

1 Depending on the state practice to use 66 KV or 33 KV as sub-transmission voltage gradient
transformers proposed in the present bid) and 50% of length of 33 KV lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Or

ii. The bidder must have successfully erected, tested and commissioned substation of 33 KV/11 KV or 66/11KV voltage class and its associated 33 KV/66 KV lines (as the case may be in bid) in **TWO turnkey contracts** in last 7 years as on the date of bid opening, each having installation of at least 40% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers proposed in the present bid) and 40% of length of 33 KV lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Or

iii. The bidder must have successfully erected, tested and commissioned substation of 33 KV/11 KV or 66/11KV voltage class and its associated 33 KV/66 KV lines (as the case may be in bid) in **THREE turnkey contracts** in last 7 years as on the date of bid opening, each having installation of at least 30% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers proposed in the present bid) and 30% of length of 33 KV lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

iv. Bids may also be submitted by joint venture firms (having not more than three partners with one partner as lead partner) wherein

a) All the partners should jointly meet qualification requirements set forth in para I(i) or I(ii) or I (iii) above,

AND

b) The lead partner should have successfully erected, tested and commissioned electrical works of 33 KV/11 KV or 66 KV/11 KV substation and its associated 33 KV/ 66 KV lines (as the case may be in bid) in a single turnkey contract in

RGGVY/XII Plan/SBD-R1
QUALIFICATION OF THE BIDDER

last 7 years as on the date of bid opening, having installation of at least 40% of the transformation capacity considered in proposed bid for 33/11 KV or 66/11KV substation (i.e. Sum of KVA ratings of Power transformers proposed in the present bid) and 40% of length of 33 KV lines / 66 KV lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

AND

c) Each of the other partners should have successfully erected, tested and commissioned electrical works of 33 KV / 11 KV or 66 KV / 11 KV substation and its associated 33 KV / 66 KV lines (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 25% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers proposed in the present bid) and 25% of length of 33 KV lines / 66 KV lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Bidder's experience in higher voltage capacity substation or line will also be considered fit for above calculation. That means, if a Bidder is having experience of erection, testing and commissioning, through turnkey contract in past 7 years of 200 Kms 132 KV lines and 50 MVA capacity EHT substation, he shall be eligible for 33/11 KV or 66/11 KV substation package of up-to 100 MVA capacity and lines of 200 kms length.

(II) Package II: Supply, Erection, Testing and Commissioning of New 22 KV or 11 KV & LT Lines, New 11/0.4 KV Distribution Transformer S/ s and Single Point Electricity Connections including Service Line & Internal House wiring for BPL Households

i. The bidder must have successfully erected, tested & commissioned transmission lines/feeders 22 KV or 11 KV voltage class (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 50% of the Distribution Transformer Capacity considered in proposed bid (i.e. Sum of KVA ratings of Distribution
transformers proposed in the present bid) and 50% of length of lines considered in proposed bid (i.e. sum of 22 / 11 KV and LT lines proposed in the bid), and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Or

ii. The bidder must have successfully erected, tested & commissioned transmission lines/feeders 22 KV or 11 KV voltage class (as the case may be in bid) in **TWO turnkey contracts** in last 7 years as on the date of bid opening, each having installation of at least 40% of the Distribution Transformer Capacity considered in proposed bid (i.e. Sum of KVA ratings of Distribution transformers proposed in the present bid) and 40% of length of lines considered in proposed bid (i.e. sum of 22 / 11 KV and LT lines proposed in the bid), and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

OR

iii. The bidder must have successfully erected, tested & commissioned transmission lines/feeders 22 KV or 11 KV voltage class (as the case may be in bid) in **THREE turnkey contracts** in last 7 years as on the date of bid opening, each having installation of at least 30% of the Distribution Transformer Capacity considered in proposed bid (i.e. Sum of KVA ratings of Distribution transformers proposed in the present bid) and 30% of length of lines considered in proposed bid (i.e. sum of 22 / 11 KV and LT lines proposed in the bid), and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Bids may also be submitted by joint venture firms (having not more than three partners with one partner as lead partner) wherein

a) All the partners should jointly meet qualification requirements set forth in para II (i) or II (ii) or II (iii) above,

AND
b) The lead partner should have successfully erected, tested & commissioned transmission lines/feeders of 22 KV or 11 KV voltage class (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 40% of the Distribution Transformer Capacity considered in proposed bid (i.e. Sum of KVA ratings of Distribution transformers proposed in the present bid) and 40% of length of lines considered in proposed bid (i.e. sum of 11 or 22 KV and LT lines proposed in the bid), and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid.

AND

c) Each of the other partners should have successfully erected, tested & commissioned transmission lines/feeders of 22 KV or 11 KV voltage class (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 25% of the Distribution Transformer Capacity considered in proposed bid (i.e. Sum of KVA ratings of Distribution transformers proposed in the present bid) and 25% of length of lines considered in proposed bid (i.e. sum of 11 or 22 KV and LT lines proposed in the bid), and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Bidder's experience in higher voltage capacity substation or line will also be considered fit for above calculation. That means, if a Bidder is having experience of erection, testing and commissioning, through turnkey contract in past 7 years of 200 Kms 132 KV lines and 50 MVA capacity EHT substation, he shall be eligible for 11/0.4 KV Distribution substation package having sum of transforming capacity of up-to 100 MVA capacity and 11 KV + LT lines length of 200 kms.

(III) Package III: Combined Package of Package-I & II above

i. The bidder must have successfully erected, tested & commissioned Sub-Station & transmission lines/feeders of [33 KV or 66 KV class] and [11 KV or 22 KV class] (as the case may be in bid) in a single turnkey contract in last 7 years
as on the date of bid opening, having installation of at least 50% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers for 33 KV/66 KV class and Sum of KVA ratings of Distribution transformers for 11 KV/22 KV class, as proposed in the present bid) and 50% of length of [33 KV/66 KV lines] and [sum of {11KV or 22KV and LT lines}], considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

**OR**

ii. The bidder must have successfully erected, tested & commissioned Sub-Station & transmission lines/feeders of [33 KV or 66 KV class] and [11 KV or 22 KV class] (as the case may be in bid) in **TWO turnkey contract** in last 7 years as on the date of bid opening, each having installation of at least 40% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers for 33 KV/66 KV class and Sum of KVA ratings of Distribution transformers for 11 KV/22 KV class, as proposed in the present bid) and 40% of length of [33 KV/66 KV lines] and [sum of {11KV or 22KV and LT lines}], considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

**OR**

iii. The bidder must have successfully erected, tested & commissioned Sub-Station & transmission lines/feeders of [33 KV or 66 KV class] and [11 KV or 22 KV class] (as the case may be in bid) in **THREE turnkey contracts** in last 7 years as on the date of bid opening, each having installation of at least 30% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers for 33 KV/66 KV class and Sum of KVA ratings of Distribution transformers for 11 KV/22 KV class, as proposed in the present bid) and 30% of length of [33 KV/66 KV lines] and [sum of {11KV or 22KV and LT lines}], considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,
i. Bids may also be submitted by joint venture firms (having not more than three partners with one partner as lead partner) wherein

All the partners should jointly meet qualification requirements set forth in para III (i) or III (ii) above

AND

The lead partner should have successfully erected, tested and commissioned substation & transmission line/feeder of [33 KV or 66 KV] and [11 KV or 22 KV class] (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 40% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers for 33 KV/66 KV class and Sum of KVA ratings of Distribution transformers for 11 KV/22 KV class, as proposed in the present bid) and 40% of length of [33 KV/66 KV lines] and [sum of {11KV or 22KV and LT lines}] lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

AND

each of the other partner(s) should have successfully erected, tested and commissioned sub-station & transmission line/feeder of [33 KV or 66 KV] and [11 KV or 22 KV class] (as the case may be in bid) in a single turnkey contract in last 7 years as on the date of bid opening, having installation of at least 25% of the transformation capacity considered in proposed bid (i.e. Sum of KVA ratings of Power transformers for 33 KV/66 KV class and Sum of KVA ratings of Distribution transformers for 11 KV/22 KV class, as proposed in the present bid) and 25% of length of [33 KV/66 KV lines] and [sum of {11KV or 22KV and LT lines}] lines considered in proposed bid, and the system so created must be in satisfactory operation for at least two (2) years as on date of opening of bid,

Bidder's experience in higher voltage capacity substation or line will also be considered fit for above calculation. That means, if a Bidder is having experience of erection, testing and commissioning, through turnkey contract in past 7 years
of 200 Kms 132 KV lines and 50 MVA capacity EHT substation, he shall be eligible for sum of transformation capacities under 33/11 KV or 66/11 KV substation or 11/0.415 KV distribution transformer package up-to 100 MVA and 66KV or 33KV or 11KV or LT lines length of 200 kms.

1.01.1 For Bidder to qualify for more than one package, the sum of requirements of individual packages (Power Transformer transformation capacities, DTR transformation capacity and line length) shall be considered as the requirement of the individual bid. Accordingly, bidder has to consider total quantities of all the packages as requirement for the individual package.

1.01.2 The bidder should possess "A" Class license issued by the Electrical inspectorate of Govt of (...)²/Central Inspectorial organization of Govt. of India/ other state Govt. In case bid submitted joint venture firm, any of partner should possess "A" class electrical license as stated above.

1.02 Commercial:
For the purpose of this bid, the bidder shall meet the following requirements:

1.02.1 For the purpose of this particular bid, bidder shall meet the following minimum commercial criteria in past 5 years (up to 31.03.2013):

i. Experience in single completed work of projects execution in electrical Transmission or sub-transmission & distribution sector costing not less than the amount equal to 50% of the estimated amount of the project.

Or

ii. Experience in two completed work of projects execution each in electrical Transmission or sub-transmission & distribution sector costing not less than the amount equal to 40% of the estimated amount of the project individually.

Or

² Name of state where work is to be executed.
iii. Experience in **three completed work** of projects execution each in electrical Transmission or sub-transmission & distribution sector costing not less than the amount equal to 30% of the estimated amount of the project individually.

1.02.2 Net Worth for the **each of the** last three Financial Years should be **positive**. Net worth means the sum total of the paid up capital and free reserves (excluding reserves created out of revaluation) reduced by aggregate value of accumulated losses (including debit balance in profit and loss account for current year) and intangible assets.

1.02.3 Minimum Average Annual Turnover (MAAT) for best three years out of last five financial years of the bidder should not be less than Rs._____Lakhs i.e. 30% of the estimated cost of the package.

1.02.4 Bidder shall have liquid assets (LA) and/ or evidence of access to or availability of fund based credit facilities of not less than Rs._______ Lakhs i.e. 10% of the estimated cost of the package and the Banker should confirm that the Credit facility is earmarked for the Work specified under Bid on receipt of the Bid. **Liquid assets** would include cash (and equivalents), bank deposits, securities that can be freely traded and receivables which has general certainty of getting received.

1.02.5 In case a bid is submitted by a Joint Venture (JV), all the partners of the JV shall meet, individually, the qualification set forth at para 1.02.1 & 1.02.2 above and collectively the requirement of para 1.02.3 & 1.02.4 above. The figures for each of the partner of the joint venture shall be added together to determine the bidder’s compliance with the minimum qualifying criteria set out in para 1.02.3 & 1.02.4 above; however in order for a joint venture to qualify, the partner(s) of joint venture must meet the following minimum criteria:

1.02.5.1 At least one partner shall meet, not less than 40% of the minimum criteria given at Para 1.02.3 & 1.02.4 above

**AND**

1.02.5.2 Each of the other partner(s) shall meet not less than 25% of the criteria given at Para 1.02.3 & 1.02.4 above
1.02.6 Failure to comply with this requirement will result in rejection of the joint venture’s bid. Sub contractors’ experience and resources shall not be taken into account in determining the bidder’s compliance with qualifying criteria.

1.02.7 One of the partners shall be nominated as lead partner, and the lead partner shall be authorized to incur liabilities and receive instruction for and on behalf of any and all partners of the joint venture and the entire execution of the contract including receipt of payment shall be done exclusively through the lead partner. This authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners as per proforma in section “Annexure” of Special Conditions of Contract-IA.

1.02.8 All partner of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms and a copy of the agreement entered into by the joint venture partners having such a provision shall be submitted with the bid.

1.02.9 A statement to this effect shall be included in the authorization mentioned under para 1.02.6 above as well as in the Bid Form and in the Contract Form (in case of a successful bid);

2.0 Pre-qualification criteria - Part B:

The Bidder shall also furnish following documents/details with its bid:

2.01.1 A certificate from banker (as per format) indicating various fund based/non fund based limits sanctioned to the bidder and the extent of utilization as on date. Such certificate should have been issued not earlier than three months prior to the date of bid opening. Wherever necessary, the employer may make queries with the Bidders’ bankers.

2.01.2 The complete annual reports together with Audited statement of accounts of the company for last five years of its own (separate) immediately preceding the date of submission of bid.
2.01.3 Note:

2.01.3.1 In the event the bidder is not able to furnish the information of its own (i.e. separate), being a subsidiary company and its accounts are being consolidated with its group/holding/parent company, the bidder should submit the audited balance sheets, income statements, other information pertaining to it only (not of its group/Holding/Parent Company) duly certified by any one of the authority [(i) Statutory Auditor of the bidder /(ii) Company Secretary of the bidder or (iii) A certified Public Accountant] certifying that such information/documents are based on the audited accounts as the case may be.

2.01.3.2 Similarly, if the bidder happens to be a Group/Holding/Parent Company, the bidder should submit the above documents/information of its own (i.e. exclusive of its subsidiaries) duly certified by any one of the authority mentioned in Note - 2.01.3.1 above certifying that these information/ documents are based on the audited accounts, as the case may be.

2.01.4 Litigation History:

2.01.4.1 The bidder should provide detailed information on any litigation or arbitration arising out of contracts completed or under execution by it over the last five years. A consistent history of awards involving litigation against the Bidder or any partner of JV may result in rejection of Bid.

2.01.4.2 Notwithstanding anything stated hereinaabove, the Employer reserves the right to assess the capacity and capability of the bidder, should the circumstances warrant such assessment in an overall interest of the Employer. The Employer reserves the right to waive minor deviations if they do not materially affect the capability of the Bidder to perform the contract.
# List of Eligible Banks

## List of Eligible Scheduled Commercial Private Indian Banks

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<tr>
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<td>HDFC Bank Ltd.</td>
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<tr>
<td>2</td>
<td>Axis Bank Ltd.</td>
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<tr>
<td>3</td>
<td>Kotak Mahindra Bank Ltd.</td>
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<td>4</td>
<td>Federal Bank Ltd.</td>
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<td>5</td>
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<td>ING Vysya Bank Ltd.</td>
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<td>8</td>
<td>Karnataka Bank Ltd.</td>
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<tr>
<td>10</td>
<td>Ratnakar Bank Ltd.</td>
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<td>South Indian Bank Ltd.</td>
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<td>12</td>
<td>Yes Bank Ltd.</td>
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Preamble

The Section-IV of the Bidding Documents is named as General Conditions of Contract (GCC) and provides all the rights and obligations of the parties under the Contract. This Section contains provisions which are to be used unchanged unless Section - V named as Special Conditions of Contract (SCC) states otherwise as any changes in GCC or any complementary information that may be needed has been shown in SCC. If there is a conflict between the provisions of Section - IV & Section - V, the provisions of Section - V shall prevail.
A. Definitions and Interpretation

1. Definitions

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

(a) “Arbitrator” means the person or persons 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 Sub-Clause 39.1 (Arbitration) hereof.

(b) “Associate” means a party who has been conjoined by the Contractor to independently execute a pre-selected part of facilities of the contract and grant him the associated contractual rights and obligations, without diluting the overall responsibility of the contractor in respect of the Facilities under the contract.

(c) “Collaborator” or “Parent Company” means the firms/corporations who has provided technological support to the manufacturer for establishing production line for the specific Equipment.

(d) “Commissioning” means operation of the Facilities or any part thereof, if any, as per GCC Sub-Clause 1.1(e) by the Contractor as specified in the Technical Specifications, which operation is to be carried out by the Contractor as provided in GCC Sub-Clause 20.1.3 (Commissioning), for the purpose of Trial - Operation (GCC Sub-Clause 20.1.4).

(e) “Completion” means that the Facilities (or a specific part thereof where specific parts are specified in the SCC) have been completed operationally and structurally and put in a tight and clean condition and that all works in respect of pre-commissioning of the Facilities (or a specific part thereof where specific parts are specified in the SCC) has been completed (wherever required, as per Technical Specifications) and Commissioning followed by Trial - Operation has been completed, as provided in GCC Sub-Clause 20.1 (Completion of Facilities) hereof.

(f) “Contract” means the Contract Agreement entered into between the Employer and the Contractor together with the Contract Documents referred to therein.

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(g) “Contract Documents” means the documents listed in Clause 1.1 of Article 1 (Contract Documents) of the Form of Contract Agreement (including any amendments thereto); Volume-I:Section-VI.

(h) “Contract Price” means the sum specified in Clause 2.1 of Article 2 (Contract Price) of the Contract Agreement, subject to such additions or deductions therefrom, as may be made pursuant to the Contract. For the purpose of Liquidated Damages and Contract Performance Guarantee, the “Contract Price” means the sum specified in Clause 2.1 of Article 2 (Contract Price) of the Contract Agreement.

(i) “Contractor” means the firms whose bid to perform the Contract has been accepted by the Employer and is named in the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor.

(j) “Contractor’s Equipment” means all plant, 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 and Equipment, or other things intended to form or forming part of the Facilities.

(k) “Contractor’s Representative” means any person nominated by the Contractor and approved by the Employer in the manner provided in GCC Sub-Clause 13.2 (Contractor’s Representative and Construction Manager) hereof to perform the duties delegated by the Contractor.

(l) “Day” means calendar day of the Gregorian Calendar.

(m) “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, if any, as per GCC Sub-Clause 1.1(e), during which the Contractor is responsible for defects with respect to the Facilities (or the relevant part thereof) as provided in GCC Clause 22 (Defect Liability) hereof.

(n) “Effective Date” means the date of Notification of Award from which the Time for Completion shall be determined.

(o) “Employer” means the firm/corporation/ government entity, named in the SCC, who is responsible for getting the Facilities implemented.
The Employer may be Owner himself or an agency appointed by the Owner and shall include the legal successors or permitted assigns of the Employer.

(p) “Facilities” means the Plant and Equipment to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor under the Contract.

(q) “GCC” means the General Conditions of Contract hereof.

(r) “Guarantee Test(s)” means the test(s) specified in the Technical Specifications to be carried out to ascertain whether the Facilities or a specified part thereof is able to attain the Functional Guarantees specified in the Technical Specifications in accordance with the provisions of GCC Sub-Clause 20.2.1 (Guarantee Test) hereof during/after successful Commissioning followed by Trial - Operation.

(s) “Installation Services” means all those services ancillary to the supply of the Plant and Equipment for the Facilities, to be provided by the Contractor under the Contract; e.g., 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, pre-commissioning, commissioning, operations, maintenance, the provision of operations and maintenance manuals, training, etc.

(t) “Month” means calendar month of the Gregorian Calendar.

(u) “Notification of Award” means the official notice issued by the Employer notifying the Contractor that his bid has been accepted.

(v) “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 Sub-Clause 20.2.2 (Operational Acceptance) hereof after successful Commissioning followed by Trial - Operation.
(w) “Owner” means the firm/corporation/government entity, named in the SCC, who has decided to set up the Facilities and shall includes the legal successors or permitted assigns of the Owner.

(x) “Plant and Equipment” 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 Sub-Clause 3.3 hereof), but does not include Contractor's Equipment.

(y) “Pre-commissioning” means the testing, checking and other requirements specified in the Technical Specifications that are to be carried out by the Contractor in preparation for Commissioning as provided in GCC Sub-Clause 20.1.2 (Pre-Commissioning) hereof.

(z) “Project Manager” or “Engineer” or “Engineer - in Charge” means the person appointed by the Employer in the manner provided in GCC Sub-Clause 13.1 hereof to perform the duties delegated by the Employer.

(aa) “SCC” means the Special Conditions of Contract.

(bb) “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.

(cc) “Subcontractor”/“vendor”/“sub-vendor” means firms/corporations/government entities to whom execution of any part of the Facilities, including preparation of any design or supply of any Plant and Equipment, is sub-contracted directly or indirectly by the Contractor with the consent of the Employer in writing, and includes its legal successors or permitted assigns.

(dd) “Taking Over” means the Employer’s written acceptance of the Facilities under the Contract, after successful Trial – Operation for the specified period in accordance with the Contract, as provided in GCC Sub-Clause 20.1.5.

(ee) “Time for Completion” means the time within which Completion of the Facilities is to be attained in accordance with the scope of work and specifications, as a whole (or of a part of the Facilities where a separate Time for Completion of such part has been prescribed in the SCC) and “Taking Over” by the Employer is to be attained.
2. Interpretation

2.1 Contract
The Contracts to be entered into with the successful Bidder shall be as defined in SCC.

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

2.3 Language
The ruling language of the Contract and the language for communications shall be English.

2.4 Singular and Plural
The singular shall include the plural and the plural the singular, except where the context otherwise requires.

2.5 Headings
The headings and marginal notes in the General Conditions of Contract are included for ease of reference, and shall neither constitute a part of the Contract nor affect its interpretation.

2.6 Entire Agreement
Subject to GCC Sub-Clause 12.4 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.

2.7 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.

2.8 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.

2.9 Joint Venture

If the Contractor is a joint venture of two or more firms, all such firms shall be jointly and severally bound to the Employer for the fulfillment of the provisions of the Contract and shall designate one of such firms to act as a leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior written consent of the Employer.

2.10 Non-Waiver

2.10.1 Subject to GCC Sub-Clause 2.10.2 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.

2.10.2 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.
2.11 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.

2.12 Country of Origin

“Origin” means the place where the materials, equipment and other supplies for the Facilities are mined, grown, produced or manufactured, and from which the services are provided. Plant and equipment are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

2.13 Notices

2.13.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, special courier, telegraph, facsimile or Electronic Data Interchange (EDI) to the address of the relevant party set out in the Contract Agreement, with the following provisions:

(a) Any notice sent by telegraph, facsimile or EDI shall be confirmed within two (2) days after dispatch by notice sent by special courier, except as otherwise specified in the Contract.

(b) Any notice sent by special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by special courier. Provided further that whenever the postal authorities or courier service provide a proof of delivery, the same shall also be applicable for presenting the fact of dispatch.

(c) Any notice delivered personally or sent by telegraph, facsimile or EDI shall be deemed to have been delivered on date of its dispatch.
(d) Either party may change its postal, facsimile or EDI address or addressee for receipt of such notices by ten (10) days’ notice to the other party in writing.

2.13.2 Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.

2.14 Governing Law & its Jurisdiction
The Contract shall be governed by and interpreted in accordance with laws of Union of India and the Courts of **XXXX** (High Court of concerned state) shall have exclusive jurisdiction in all matters arising under this Contract.

B. Subject Matter of Contract

3. Scope of Facilities

3.1 Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligation shall include the provision of all Plant and Equipment and the performance of all Installation Services required for the design, the manufacture (including procurement, quality assurance, construction, installation, associated civil works, Precommissioning and delivery) of the Plant and Equipment and the installation, completion, commissioning and performance testing of the facilities in accordance with the plans, procedures, specifications, drawings, codes and any other documents as specified in the Technical specifications. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labour, materials, equipment, spare parts (as specified in GCC Sub-Clause 3.3 below) and accessories; Contractor's Equipment; construction utilities and supplies; temporary materials, structures and facilities; transportation (including without limitation, custom clearance, port handling, unloading and hauling to, from and at the Site); storage and training except for those supplies, works and services that will be provided or performed by the Employer, as set forth in Appendix-6 (Scope of Works and Supply by the Employer) to the Contract Agreement.

3.2 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.
3.3 The supply of Mandatory Spare Parts, if any, shall be included in the Contract. Beside the aforesaid Mandatory Spares parts, the Contractor shall ensure the availability of spare parts required for the operation and maintenance of the Facilities to the Employer/Owner for a minimum period of 15 years from Completion of the Facilities. The Contractor shall carry sufficient inventories to ensure an ex-stock supply of consumable spares for the plant and equipment. If so desired by the Employer/Owner, the Contractor shall submit the specifications, price and the terms and conditions relating to the supply thereof for such spares identified by the Employer/Owner with validity period of 6 months within 30 days of receipt of request from Employer/Owner for its consideration and placement of order.

3.4 The Contractor shall guarantee that in the event of termination of production of spare parts by the Contractor or his Sub-Contractor:

(i) The Contractor shall send advance notification to the Employer/Owner of the pending termination, with 2 (two) years time to permit the Employer/Owner to procure needed requirements, and

(ii) Following such termination, the Contractor shall furnish at no cost to the Employer/Owner the blueprints, drawings and specification of the spare parts, if requested.

3.5 In case the Contractor fails to supply the spares parts in accordance with the terms stipulated above, the Employer/Owner shall sanction the Contractor declaring them ineligible for a stated period of time for future projects.

4. **Time for Commencement and Completion**

4.1 The Contractor shall commence work on the Facilities from the Effective Date of Contract and without prejudice to GCC Sub-Clause 21.2 hereof, the Contractor shall thereafter proceed with the Facilities in accordance with the time schedule specified in the corresponding Appendix – 4 (Time Schedule) to the Contract Agreement of Volume-I : Section-VI (Sample Forms and Procedures).

4.2 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 under Time for Completion or within such extended time to which the Contractor shall be entitled under GCC Clause 34 hereof.

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5. **Contractor’s Responsibilities**

5.1 The Contractor shall design, manufacture (including associated purchases and/or subcontracting), install and complete the Facilities with due care and diligence in accordance with the Contract.

5.2 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 twenty-eight (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.

5.3 The Contractor shall acquire in its name 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 that 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 Sub-Clause 6.3 hereof and that are necessary for the performance of the Contract.

5.4 The Contractor shall comply with all laws in force in India. 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 Sub-Clause 6.1 hereof.

5.5 Any Plant, Material and Services that will be incorporated in or be required for the Facilities and other supplies shall have their origin as specified under GCC Sub-Clause 2.12 (Country of Origin).

5.6 The Contractor shall permit the Employer to inspect the Contractor’s accounts and records relating to the performance of the Contractor.
5.7 First-aid: The Contractor shall provide necessary first-aid facilities for all his employees, representatives and workmen working at the Site. Enough number of Contractor’s personnel shall be trained in administering first-aid.

5.8 Cleanliness: The Contractor shall be responsible for keeping the entire area allotted to him clean and free from rubbish, debris etc. during the period of Contract. The Contractor shall employ enough number of special personnel to thoroughly clean his work-area atleast once in a day. All such rubbish and scrap material shall be stacked or disposed off in a place to be identified by the Engineer. Materials and stores shall be so arranged to permit easy cleaning of the area. In areas where equipment might drip oil and cause damage to the floor surface, a suitable protective cover of a flame resistant, oil proof sheet shall be provided to protect the floor from such damage.

Similarly the labour colony, the offices and the residential areas of the Contractor’s employees and workmen shall be kept clean and neat to the entire satisfaction of the Engineer. Proper sanitary arrangement shall be provided by the Contractor, in the work-areas, office and residential areas of the Contractor.

5.9 Fire Protection: The work procedures that are to be used during the erection shall be those, which minimize fire hazards to the extent practicable. Combustible materials, combustible waste and rubbish shall be collected and removed from the Site at least once each day. Fuels, oils and volatile or inflammable materials shall be stored away from the construction and equipment and materials storage areas in safe containers. Untreated materials shall not at all be used at Site for any other purpose unless otherwise specified. If any such materials are received with the equipment at the Site, the same shall be removed and replaced with acceptable materials before moving into the construction or storage area.

Similarly, corrugated paper fabricated cartons etc. will not be permitted in the construction area either storage or for handling of materials. All such materials used shall be of waterproof and flame resistant type. All other materials such as working drawings, plans etc., which are combustible but are essential for the works to be executed shall be protected against combustion resulting from welding sparks, cutting flames and other similar fire sources.

All the Contractor’s supervisory personnel and sufficient number of workers shall be trained for firefighting and shall be assigned specific fire protection
duties. Enough of such trained personnel must be available at the Site during the entire period of the Contract.

The Contractor shall provide enough fire protection equipment of the types and numbers for the warehouses, office, temporary structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all times.

5.10 Security: The Contractor shall have total responsibility for all equipment and materials in his custody/stores, loose, semi-assembled and/or erected by him at Site. The Contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss. All materials of the Contractor shall enter and leave the project site only with the written permission of the Engineer in the prescribed manner.

5.11 Contractor's Area Limits: The Engineer will mark-out the boundary limits of access roads, parking spaces, storage and construction areas for the Contractor and the Contractor shall not trespass the areas not so marked out for him. The Contractor shall be responsible to ensure none of his personnel move out of the areas marked out for his operations. In case of such a need for the Contractor's personnel to work out of the areas marked out for him, the same shall be done only with the written permission of the Engineer.

5.12 Contractor's Co-Operation with the Employer: In case where the performance of the erection work by the Contractor affects the operation of the system facilities of the Employer, such erection work of the Contractor shall be scheduled to be performed only in the manner stipulated by the Engineer and the same shall be acceptable at all times to the Contractor. The Engineer may impose such restrictions on the facilities provided to the Contractor such as electricity, water, etc. as he may think fit in the interest of the Employer and the Contractor shall strictly adhere to such restrictions and co-operate with the Engineer. It will be the responsibility of the Contractor to provide all necessary temporary instrumentation and other measuring devices required during start-up and operation of the equipment systems, which are erected by him. The Contractor shall also be responsible for flushing and initial filling of all the oil and lubricants required for the equipment furnished and erected by him, so as to make such equipment ready for operation. The Contractor shall be responsible for supplying such flushing oil and other lubricants unless otherwise specified elsewhere in the document and specifications.
6. **Employer's Responsibilities**

6.1 The Employer shall ensure the accuracy of all information and/or data to be supplied by the Employer as described in the corresponding Appendix - 6 (Scope of Works and Supply by the Employer) to the Contract, except when otherwise expressly stated in the Contract.

6.2 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 corresponding Appendix - 6 (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.

6.3 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 such authorities or undertakings require the Employer to obtain them in the Employer's name, are necessary for the execution of the Contract (they include those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract), including those specified in Appendix 6 (Scope of Works and Supply by the Employer) to the Contract Agreement.

6.4 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.

6.5 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, to enable the Contractor to properly carry out Commissioning, all in accordance with the provisions of Appendix 6 (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 Sub-Clause 14.2 (Program of
6.6 The Employer shall be responsible for the continued operation of the Facilities after Taking Over, in accordance with GCC Sub-Clause 20.1.5.

6.7 All costs and expenses involved in the performance of the obligations under this GCC Clause 6 shall be the responsibility of the Employer.

6.8 facilities to be provided by the employer:

   a) Space: Land for Contractor’s Office, Store, Workshop etc. - The Project Manager shall at his discretion and for the duration of execution of the Contract make available at site, land for construction of Contractor’s field office, workshop, stores, magazines for explosives in isolated locations, assembling yard, etc. required for execution of the Contract. Any construction of temporary roads, offices, workshop, etc. as per plan approved by the Engineer shall be done by the Contractor at his cost.

   b) Electricity (Construction Power supply): Where power supply is available with the Employer for construction purpose the same will be provided at the job site at one point of the distribution system on chargeable basis for consumption in works. Electricity provided for construction site will be of 440 volts, 3 phase, 50 cycles and 230 volts, 1 phase, 50 cycles. Contractor shall provide and install all necessary switchgears, wiring fixtures, bulbs and other temporary equipment for further distribution and utilization of energy for power and lighting and shall remove the same on completion of the work. Should, however, electricity be used in the Contractor’s labour/staff colony, the power so consumed shall be charged at the prevailing tariff rate of State as prevalent for that area at the time of its use; the supply may be withdrawn if the power is used for purposes other than for the work of the project.

   c) Water: Free supply of water will be made available for the construction purpose wherever water is available and the same shall be given at an agreed single point at the Site. Any further distribution will be the responsibility of the Contractor. Free drinking water, if available, will also be provided at one agreed point in the Site. Further distribution either to his labour colony
or his work Site or to his office shall be the responsibility of the Contractor. If water source is not available with the employer at site for construction works, the contractor at his own cost shall arrange the water supply.

6A. **Contract Closing:**

On completion of handing over formality and successfully completion of defect liability / guarantee period, the contract shall be closed on completion of following formality:

I. Material reconciliation,

II. Payment reconciliations, submission and verifications that reconciliation of payment toward statutory provisions like CST/VAT/Entry Tax/Excise Duty, any other dues etc.

III. Approval for extension of Completion period, with or without compensation, as required.

IV. Certification from agency regarding payment of dues to its workers/contract laborers, payment of statutory dues toward Provident Funds, wages etc as required.

V. Certification of Engineer & agency to the effect that erection, testing and commissioning of the equipment have been completed as per specifications laid down in the contract and defects noted at the time of commissioning and notified to the agency have been liquidated to the satisfaction of owner.

VI. Removal of construction meant for site stores, hutment, labour colony etc. in the premises of OWNER.

VII. Certificate from Engineer in charge regarding final amendment of drawings and detailed of such amendments,

VIII. Drawing receipt certificate by the Engineer in Charge,

IX. Receipt of compliance report on 3-tier quality Assurance mechanism along with photograph, Assurance documents by Engineer in Charge

X. Shortfall in equipment / Line performance Certificate issued by Engineer in Charge,
XI. No demand certificate issued by contractor,

XII. Certificate about completion of Defect Liability Period of the package by Engineer in Charge,

XIII. Certificate regarding return of BGs / Indemnity Bond by Engineer in Charge/ Finance deptt.

C. Payment

7. Contract Price

7.1 The Contract Price shall be as specified in Article 2 (Contract Price and Terms of Payment) of the Form of Contract Agreement.

7.2 The Contract Price shall be subject to adjustment in accordance with the provisions of Appendix 2 (Price Adjustment) to the Contract Agreement. The Contract Price shall be increased or reduced on account of variation in quantity in accordance with Clause 33 of GCC.

7.3 Subject to GCC Sub-Claus 5.2 and 6.1 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.

8. Terms of Payment

8.1 The Contract Price shall be paid as specified in the corresponding Appendix - 1 (Terms and Procedures of Payment) to the Contract Agreement of Volume-I: Section-VI (Sample Forms and Procedures). The procedures to be followed in making application for and processing payments shall be those outlined in the same Appendix.

8.1.1 The mounting accessories/structure supplied along with any material like circuit breaker, Lightening arrestor, Capacitor Bank, Control Panel, Isolator, AB Switch, CT/PT etc. as part of main equipment shall not be paid extra under Price Schedules. The equipment price in all such cases shall be inclusive of its mounting accessories/structure. For example: if Circuit Breaker has been supplied along with its mounting structure, the contractor shall not be paid separately for accessories associate with Circuit Breaker.
8.2 All payments shall be made in Indian Rupees under the Contract.

9. Securities

9.1 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.

9.2 Advance Payment Security

9.2.1 The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the corresponding Appendix - 1 (Terms and Procedures of Payment) to the Contract Agreement, and in the same currency(ies) with initial validity of up to ninety (90) days beyond the date of Completion of the Facilities in accordance with GCC Sub-Clause 20.1. The same shall be extended by the Contractor time to time till ninety (90) days beyond the actual date of Completion of the Facilities, as may be required under the Contract.

9.2.2 The security shall be in the Form of unconditional Bank Guarantee attached hereto in Volume-I: Section VI - Sample Forms and Procedures. The security shall be discharged after completion of the facilities or relevant part thereof.

- Procedure for submission, reduction of Advance Payment Security is detailed in Appendix-1: Terms and Procedures of payments (refer Volume-I : Section-VI (Sample Forms and Procedures)

9.3 Performance Security

9.3.1 The Contractor shall, within twenty-eight (28) days of the notification of award, provide a performance security for the due performance of the Contract in the amount equivalent to Fifteen percent (15%) of the Contract Price, with a validity upto ninety (90) days beyond the Defect Liability Period. The same shall be extended by the Contractor time to time till ninety (90) days beyond the actual Defect Liability Period, as may be required under the Contract. Also, the bidder has to furnish additional performance security of 15% (Fifteen percent) of the total cost of DTRs & Energy Meters.
Apart from the Contractor’s performance security, the Contractor shall be required to arrange additional performance securities, as specified in SCC, within twenty-eight (28) days of the notification of award in favour of the Employer in the form acceptable to the Employer.

9.3.2 The performance security shall be in the Form of unconditional Bank Guarantee attached hereto in the Volume-I : Section VI - Sample Forms and Procedures.

9.3.3 Reduction in the security pro rata to the Contract Price of any part of the Facilities is not admissible. However, if the Defects Liability Period has been extended on any part of the Facilities pursuant to GCC Sub-Clause 22.8 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 Sub-Clause 22, is liable for an extended warranty obligation, the performance security shall be reduced to fifteen percent (15%) of the value of the component covered by the extended warranty.

9.3.4 In case of award of the contract to a Joint Venture, the Bank Guarantees for performance security and the Bank Guarantee for advance payment shall be submitted in the name of all the partner(s) of the Joint Venture.

9.4 Issuing Banks

The Bank Guarantee for Advance Payment Security and Performance Security are to be provided by the Contractor, which should be issued either:

(a) by a Public Sector Bank located in India, or

(b) a scheduled Indian Bank having paid up capital (net of any accumulated losses) of Rs. 1,000 Million or above (the latest annual report of the Bank should support compliance of capital adequacy ratio requirement) as per attached list only [List is placed at Annexure-I to Section-V (SCC)], or

9.5 Indemnity

9.5.1 For the equipment/material to be provided by the Contractor, it will be the responsibility of the Contractor to take delivery, unload and store the
materials at Site and execute an Indemnity Bond and obtain authorisation letter from Employer as per proforma enclosed at Serial No. 9 - ‘Form for Indemnity Bond to be executed by the Contractor’ of Volume-I : Section VI (Sample Forms and Procedures), in favour of the Employer against loss, damage and any risks involved for the full value of the materials. This Indemnity Bond shall be furnished by the Contractor before commencement of the supplies and shall be valid till the scheduled date of Taking Over of the equipment by the Employer.

9.5.2 In case of divisible Contracts, where the Employer hands over his equipment to the Contractor for executing the Contract, then the Contractor shall, at the time of taking delivery of the equipment through Bill of Landing or other dispatch documents, furnish trust Receipt for Plant, Equipment and Materials and also execute an Indemnity Bond in favour of the Employer in the form acceptable to the Employer for keeping the equipment in safe custody and to utilize the same exclusively for the purpose of the said Contract. Samples of proforma for the Trust receipt and Indemnity Bond are enclosed at Serial No. 10 of Volume-I : Section VI (Sample Forms and Procedures). The Employer shall also issue a separate Authorization Letter to the Contractor to enable him to take physical delivery of plant, equipment and materials from the Employer as per proforma enclosed under Section VI (Sample Forms and Procedures).

10. **Taxes and Duties**

10.1 The Contractor shall be entirely responsible for payment of all taxes, duties, license fees and other such levies legally payable/incurred until delivery of the contracted supplies to the Employer.

If it is statutory requirement to make deductions towards such taxes and duties or any other applicable taxes and duties, the same shall be made by the Employer and a certificate for the same shall be issued to the Contractor.

10.2 The Contractor shall be solely responsible for the taxes that may be levied on the Contractor's persons or on earnings of any of his employees and shall hold the Employer indemnified and harmless against any claims that may be made against the Employer. The Employer does not take any responsibility whatsoever regarding taxes under Indian Income Tax Act, for the Contractor or his personnel. If it is obligatory under the provisions of the
Indian Income Tax Act, deduction of Income Tax at source shall be made by the Employer.

10.3 In respect of direct transaction between the Employer and the Contractor, the EXW price is exclusive of all cost as well as duties and tax (viz., custom duties & levies, duties, sales tax/VAT etc.) paid or payable on components, raw materials and any other items used for their consumption incorporated or to be incorporated in the Plant & Equipment.

Sales tax/VAT, excise duty, local tax and other levies for the Equipment/items under ‘direct transaction’ including octroi/entry tax as applicable for destination site/state are not included in the EXW price. These amounts will be payable (along with subsequent variation if any), by the Employer on the supplies made by the Contractor but limited to the tax liability on the transaction between the Employer and the Contractor. The requisite Sales Tax declaration forms shall be issued as under:

a) When project implementing agency or employer is a Central Public Sector Undertaking, form shall be issued by State Distribution Company to Employer for onward issuance to contractor

b) When State Distribution Company is Employer, the form shall be issued by them.

In respect of bought-out finished items, which shall be dispatched directly from the sub-vendor’s works to the Project site (sale-in-transit), the EXW price is inclusive of all cost as well as duties and taxes (viz., custom duties & levies, duties, sales tax/VAT etc.) paid or payable and any such taxes, duties, levies additionally payable will be to Contractor's account and no separate claim on this behalf will be entertained by the Employer. The requisite Sales Tax declaration forms shall be issued as under:

a) When project implementing agency or employer is a Central Public Sector Undertaking, form shall be issued by State Distribution Company to Employer for onward issuance to contractor

b) When State Distribution Company is Employer, the form shall be issued by them.

Further, the EXW price of (i) bought-out finished Equipments/items as ‘Off the Self’ items or dispatched directly from the Contractor's works are exclusive of all cost as well as duties and taxes (viz., custom duties & levies, duties, sales tax/VAT etc.) paid or payable and no separate claim on this
behalf will be entertained by the Employer. Employer shall, however, issue requisite sales tax declaration form. 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 such tax savings to the maximum allowable extent.

For payment/reimbursement of Sales Tax, wherever applicable, in respect of despatches made directly from Contractor's works, invoices raised by the Contractor shall be accepted as documentary evidence and for payment/reimbursement of VAT, VATABLE invoices raised by the Contractor shall be accepted as documentary evidence. Similarly, pre-numbered invoices duly signed by authorized signatory shall be considered as evidence for payment of Excise Duty.

10.4 Octroi/entry tax as applicable for destination site/state on all items of supply including bought-out finished items, which shall be dispatched directly from the sub-vendor's works to the Employer's site (sale-in-transit) are not included in the Contract price. The applicable octroi/entry tax in respect of all the items of supply would be reimbursed to the Contractor separately by the Employer subject to furnishing of documentary proof.

10.5 Employer would not bear any liability on account of Service Tax. Employer shall, however, deduct such tax at source as per the rules and issue necessary Certificate to the Contractor.

10.6 Sales Tax/VAT on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax/VAT Act for services to be performed in India, as applicable is included in Contract Price and Employer would not bear any liability on this account. Employer shall, however, deduct such taxes at source as per the rules and issue Tax Deduction at Source (TDS) Certificate to the Contractor.

10.7 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 seven (07) days prior to the last date of bid submission (hereinafter called “Tax” in this GCC Sub-clause 10.7). 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 the Contract, which was or will be assessed on the Contractor 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 31 (Changes in Laws and Regulations) hereof. However, these adjustments would be restricted to direct transactions between the Employer and the Contractor for which the taxes and duties are reimbursable by the Employer as per the Contract. These adjustments shall not be applicable on procurement of raw materials, intermediary components etc by the Contractor and also not applicable on the bought out items dispatched directly from sub-vendor’s works to site.

In respect of raw materials, intermediary components etc and bought out items, neither the Employer nor the Contractor shall be entitled to any claim arising due to increase or decrease in the rate of Tax, introduction of a new Tax or abolition of an existing Tax in the course of the performance of the Contract.

D. Intellectual Property

11. Copy Right

11.1 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 supplies of materials, the copyright in such materials shall remain vested in such third party.

The Employer shall however be free to reproduce all drawings, documents and other material furnished to the Employer for the purpose of the Contract including, if required, for operation and maintenance.

11.2 The copyright in all drawings, documents and other materials containing data and information furnished to the Contractor by the Employer herein shall remain vested in the Employer.

12. Confidential Information

12.1 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 12.

12.2 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 and Equipment, construction or such other work and services as are required for the performance of the Contract.

12.3 The obligation of a party under GCC Sub-Clauses 12.1 and 12.2 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
(c) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

12.4 The above provisions of this GCC Clause 12 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.

12.5 The provisions of this GCC Clause 12 shall survive termination, for whatever reason, of the Contract.

E. Execution of the Facilities

13. Representatives

13.1 If the Project Manager is not named in the Contract, then within fourteen (14) days of the Effective Date, the Employer shall appoint and notify the Contractor
in writing of the name of 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 a notice of the name of such other
person to the Contractor without delay. The Employer shall take all reasonable
care to see that no such appointment is made at such a time or in such a
manner as to impede the progress of work on the Facilities. The Project
Manager shall represent and act for the Employer at all times during the
currency 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.

13.2 Contractor’s Representative & Construction Manager

13.2.1 If the Contractor’s Representative is not named in the Contract, then within
fourteen (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 fourteen (14) days, the Contractor’s Representative shall
be deemed to have been approved. If the Employer objects to the
appointment within fourteen (14) days giving the reason therefor, then the
Contractor shall appoint a replacement within fourteen (14) days of such
objection, and the foregoing provisions of this GCC Sub-Clause 13.2.1 shall
apply thereto.

13.2.2 The Contractor’s Representative shall represent and act for the Contractor at
all times during the currency 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 Sub-Clause
13.2.1.
13.2.3 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 Sub-Clause 13.2.3 shall be deemed to be an act or exercise by the Contractor's Representative.

13.2.3.1 Notwithstanding anything stated in GCC Sub-Clause 13.1 and 13.2.1 above, for the purpose of execution of Contract, the Employer and the Contractor shall finalize and agree to a Contract Co-ordination Procedure and all the communication under the Contract shall be in accordance with such Contract Coordination Procedure.

13.2.4 From the commencement of installation of the Facilities at the Site until Operational Acceptance, the Contractor's Representative shall appoint a suitable person as the construction manager, (hereinafter referred to 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, a suitable person shall be appointed to act as his or her deputy.

13.2.5 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 Sub-Clause 18.3. The Employer shall provide evidence of the same, whereupon the Contractor shall remove such person from the Facilities.

13.2.6 If any representative or person employed by the Contractor is removed in accordance with GCC Sub-Clause 13.2.5, the Contractor shall, where required, promptly appoint a replacement.
14. **Work Program**

14.1 **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. The chart shall include the identities of the key personnel together with the curricula vitae of such key personnel to be employed within twenty-one (21) days of the Effective Date. The Contractor shall promptly inform the Employer and the Project Manager in writing of any revision or alteration of such an organization chart.

14.2 **Program of Performance**

Within twenty-eight (28) days after the date of Notification of Award, the Contractor shall prepare and submit to the Project Manager a detailed program of performance of the Contract (L2 Network) in the form of the Critical Path Method (CPM), the PERT network, or other internationally used programs and showing the sequence in which it proposes to design, manufacture, transport, assemble, install and pre-commissioning 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 Appendix-4 (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 under GCC Sub-Clause 4.2 and any extension granted in accordance with GCC Clause 34, and shall submit all such revisions to the Project Manager.

14.3 **Progress Report**

The Contractor shall monitor progress of all the activities specified in the program referred to in GCC Sub-Clause 14.2 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.

14.4 Progress of Performance

If at any time the Contractor’s actual progress falls behind the program referred to in GCC Sub-Clause 14.2, or it becomes apparent that it will so fall behind, the Contractor shall, at the request of the Employer or 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 Sub-Clause 4.2, any extension thereof entitled under GCC Sub-Clause 34.1, or any extended period as may otherwise be agreed upon between the Employer and the Contractor.

14.5 Work Procedures

The Contract shall be executed in accordance with the Contract Documents and the procedures given in the section on Sample Forms and Procedures of the Contract Documents.

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.

15. Subcontracting

The Contractor may, after informing the Engineer and getting his written approval, assign or sub-let the Supply Contract or any part thereof other than for raw material, for minor details or for any part of the plant for which makes are identified in the Contract. Suppliers of the equipment not identified in the Contract or any change in the identified suppliers shall be subjected to approval by the Engineer. The experience list of equipment vendors under consideration by the Contractor for this Contract shall be furnished to the Engineer for approval prior to procurement of all such items/equipment.

Field execution of the contract shall not be sub-contracted without written permission of the owner/employer. On case to case basis, if employer gets satisfied with, permission for sub-contracting entire or part project execution work may be permitted (level-1). However, further sub-letting of field execution works by sub-contractor (Level-2) shall not be acceptable by
employer. In case of further sub-letting of contract, it would be construed as non-performance and breach of the contract. Contractual action shall then be initiated as per provisions of the contract.

Such assignment/sub-letting shall not relieve the Contractor of any obligation, duty or responsibility under the Contract.

15.1 The corresponding Appendix (List of Approved Subcontractors) to the Contract Agreement specifies major items of supply or services and a list of approved Subcontractors against each item, including vendors. 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.

15.2 For items or parts of the Facilities not specified in the corresponding Appendix (List of Approved Subcontractors) to the Contract Agreement for Supply Contract(s), the Contractor may employ such Subcontractors as it may select, at its discretion.

16. Design and Engineering

16.1 Specifications and Drawings

16.1.1 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.
16.1.2 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.

16.2 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 twenty-eight (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 after approval by the Employer and shall be treated in accordance with GCC Clause 33.

16.3 Approval/Review of Technical Documents by Project Manager

16.3.1 The Contractor shall prepare (or cause its Subcontractors to prepare) and furnish to the Project Manager the documents listed in Appendix-7 (List of Documents for Approval or Review) to the Contract Agreement for its approval or review as specified and as in accordance with the requirements of GCC Sub-Clause 14.2 (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 Sub-Clauses 16.3.2 through 16.3.7 shall apply to those documents requiring the Project Manager's approval, but not to those furnished to the Project Manager for its review only.

16.3.2 Within twenty one (21) days after receipt by the Project Manager of any document requiring the Project Manager's approval in accordance with GCC Sub-Clause 16.3.1, 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.
16.3.3 The Project Manager shall not disapprove any document, except on the grounds that the document does not comply with some specified provision of the Contract or that it is contrary to good engineering practice.

16.3.4 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 Sub-Clause 16.3.2. If the Project Manager approves the document subject to modification(s), the Contractor shall make the required modification(s), and upon resubmission with the required modifications the document shall be deemed to have been approved.

The procedure for submission of the documents by the Contractor and their approval by the Project Manager shall be discussed and finalized with the Contractor.

16.3.5 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 an Arbitrator for determination in accordance with GCC Sub-Clause 39 hereof. If such dispute or difference is referred to an Arbitrator, 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 Arbitrator upholds the Contractor's view on the dispute and if the Employer has not given notice under GCC Sub-Clause 39 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 Arbitrator shall decide, and the Time for Completion shall be extended accordingly.

16.3.6 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.

16.3.7 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 Sub-Clause 16.3. If the Project Manager requests
any change in any already approved document and/or in any document based thereon, the provisions of GCC Clause 33 shall apply to such request.

17. **Plant and Equipment**

17.1 **Subject to GCC Sub-Clause 10.2**, the Contractor shall manufacture or procure and transport all the Plant and Equipment in an expeditious and orderly manner to the Site.

17.2 **Employer-Supplied Plant, Equipment, and Materials**

If the corresponding Appendix – 6 (Scope of Works and Supply by the Employer) to the Contract Agreement provides that the Employer shall furnish any specific items of machinery, equipment or materials to the Contractor, the following provisions shall apply:

17.2.1 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 Sub-Clause 14.2, unless otherwise mutually agreed.

17.2.2 The equipment & materials to be furnished by the Employer shall be supplied to the Contractor at the depots established by the Contractor or the Employer. The Lorry Receipts for the materials will be handed over to the Contractor by the representative of the Employer as and when the same are received. The Contractor shall be responsible for taking delivery of these materials from the railways/road transporter, unloading them from the transporter, carting them to different stores built by him for the purpose, the unloading and cartage being at the cost of the Contractor. However, any octroi or toll tax if legally payable by the Contractor shall be reimbursed to him at actuals, subject to production of documentary evidence. All wharfage and demurrage charges incurred due to delay in taking delivery will be to the Contractor's account, except those due to reasons beyond his control in which case the Contractor shall immediately intimate the Engineer for settling the claims. The Contractor shall be responsible for proper handling and storage of these materials from the time of receipt upto the time of Taking Over of the Facilities by the Employer.
17.2.3 Yards and store provided by the Contractor for stacking and storage of materials shall be open for inspection by the Employer as and when required. The cost of handling and storage shall be to the Contractor's account.

17.2.4 Upon receipt of such item, the Contractor shall inspect the same visually and notify the Project Manager of any detected shortage, defect or default. For the material being arranged by the Employer and supplied to the Contractor for erection, are received short, broken or damaged, an entry shall be made in the delivery register of the railway authorities/road transporter as far as possible and a report of the same giving full details of shortage and damages along with a copy of report entered in the delivery register of the road transporter/railways shall be submitted by the Contractor to the Project Manager and Employer's consignee immediately. 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 Sub-Clause 17.2.4 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.

17.2.5 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 22 or under any other provision of Contract.

17.3 Transportation

17.3.1 The Contractor shall at its own risk and expense transport all the Plant and Equipment and the Contractor's Equipment to the Site by the mode of transport that the Contractor judges most suitable under all the circumstances.

17.3.2 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 Plant and Equipment and the Contractor's Equipment.

17.3.3 Upon dispatch of each shipment of the Plant and Equipment and the Contractor's Equipment, the Contractor shall notify the Employer by telex,
facsimile or Electronic Data Interchange (EDI) of the description of the Plant and Equipment 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.

17.3.4 The Contractor shall be responsible for obtaining, if necessary, approvals from the authorities for transportation of the Plant and Equipment 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 Plant and Equipment and the Contractor's Equipment to the Site.

17.4 Delivery and Documents

17.4.1 Delivery Documents

Upon shipment, the Contractor shall notify the Employer with full details of the dispatch and shall furnish the documents as specified in the corresponding Appendix - 1 (Terms and Procedures of Payment) to the Contract Agreement.

17.4.2 Packing

17.4.2.1 The Contractor shall provide such packing of the Goods as it is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.

17.4.2.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract and, subject to any subsequent instruction ordered by the Employer consistent with the requirements of the Contract.
17.4.3 Materials Handling and Storage:

All the equipment furnished under the Contract and arriving at Site shall be promptly received, unloaded, transported and stored in the storage spaces by the Contractor.

Contractor shall be responsible for examining all the shipment and notify the Engineer immediately of any damages, storage, discrepancy etc, for the purpose of Engineer’s information only. The Contractor shall submit to the Engineer every week a report detailing all the receipts during the week. However, 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 to the account of the Contractor.

The Contractor shall maintain an accurate and exhaustive record detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the Engineer in-charge.

All equipment shall be handled very carefully to prevent any damage or loss. No bare wire ropes, slings, etc. shall be used for unloading and/or handling of the equipment without the specific written permission of the Engineer. The equipment stored shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at Site.

All electrical panels, control gears, motors and such other devices shall be properly dried by heating before they are installed and energized. Motor bearings, slip ring, commutators and other exposed parts shall be protected against moisture ingress and corrosion during storage and periodically inspected.

All the electrical equipment such as motors, generators, etc. shall be tested for insulation resistance at least once in three months from the date of receipt till the date of commissioning and a record of such measured insulation values maintained by the Contractor. Such records shall be opened for inspection by the Engineer.
The Contractor shall ensure that all the packing materials and protection devices, used for various equipment during transit and storage, are removed before the equipment are installed.

The consumable and other supplies likely to deteriorate due to storage must be thoroughly protected and stored in a suitable manner to prevent damage or deterioration in quality by storage.

All the materials stored in the open or dusty location must be covered with suitable weatherproof and flame proof covering material wherever applicable.

If the materials belonging to the Contractor are stored in areas other than those earmarked for him, the Engineer will have the right to get it moved to the area earmarked for the Contractor at the Contractor's cost.

The Contractor shall be responsible for making suitable indoor storage facilities to store all equipment, which require indoor storage. Normally all the electrical equipment such as motors, control gears, generators, exciters and consumables like electrodes, lubricants etc. shall be stored in the closed storage space. The Engineer, in addition, may direct the Contractor to move certain other materials, which in his opinion will require indoor storage, to indoor storage areas, which the Contractor shall strictly comply with.

18. Installation

18.1 Setting Out/Supervision/Labor

18.1.1 Bench Mark: 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.

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.

18.1.2 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.

18.1.3 Labor:

(a) 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.

(b) Unless otherwise provided in the Contract, the Contractor at its own expense shall be responsible for the recruitment, transportation, accommodation and catering of all labor, local or expatriate, required for the execution of the Contract and for all payments in connection therewith.

(c) 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.

(d) 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.

18.2 Contractor’s Equipment

18.2.1 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.

18.2.2 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.

18.2.3 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.

18.3 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.

18.3.1 Compliance with Labour Regulations

18.3.1.1 During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all applicable existing labour enactments and rules made thereunder, regulations notifications and byelaws of the State or Central Government or local authority and any other labour law (including rules), regulations bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The employees of the Contractor and the Sub-contractor in no case shall be treated as the employees of the Employer at any point of time.

18.3.1.2 The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of
contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments.

18.3.1.3 If the Employer is caused to pay under any law as principal employer such amounts as may be necessary to cause or observe, or for non observance of the provisions stipulated in the notifications/ byelaws/Acts/ Rules/regulations including amendments, if any, on the part of the Contractor, the Employer shall have the right to deduct any money due to the Contractor under this contract or any other contract with the employer including his amount of performance security for adjusting the aforesaid payment. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

Notwithstanding the above, the Contractor shall furnish to the Employer the details/documents evidencing the Contractor's compliance to the laws applicable to establishments engaged in building and other construction works, as may be sought by the Employer. In particular the Contractor shall submit quarterly certificate regarding compliance in respect of provisions of Employees’ Provident Fund and Misc. Provisions Act 1952 or latest to the Employer.

18.3.1.4 Salient features of some major laws applicable to establishments engaged in building and other construction works:

(a) Workmen Compensation Act 1923 or latest: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

(b) Payment of Gratuity Act 1972 or latest: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

(c) Employee P.F. and Miscellaneous Provision Act 1952 or latest: The Act provides for monthly contribution by the employer plus workers @10% or 8.33%. The benefits under the Act are:

(i) Pension or family pension on retirement or death, as the case may be.
(ii) Deposit linked insurance on death in harness of the worker.
(iii) Payment of P.F. accumulation on retirement/death etc.

(d) Maternity Benefit Act 1951 or latest: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

(e) Contract Labour (Regulation & Abolition) Act 1970 or latest: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by law. The Principal Employer is required to take Certification of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more labour contract labour.

(f) Minimum Wages Act 1948 or latest: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provision of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.

(g) Payment of Wages Act 1936 or latest: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

(h) Equal Remuneration Act 1979 or latest: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

(i) Payment of Bonus Act 1965 or latest: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus is to be paid to employees getting Rs. 2500/- per month or above upto Rs. 3500/- per month shall be worked out by taking wages as Rs. 2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances.
Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

(j) Industrial Dispute Act 1947 or latest: the Act lays down the machinery the procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(k) Industrial Employment (Standing Orders) Act 1946 or latest: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

(l) Trade Unions Act 1926 or latest: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.


(n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service Act Act 1979 or latest: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.

(o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 or latest and the Cess Act of 1996 or latest: All the establishments who carry on any building or other construction work and employ 10 or more workers
are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the government.

(p) Factories Act 1948 or latest: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

18.3.2 Protection of Environment

The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as consequence of his methods of operation.

During continuance of the Contract, the Contractor and his Sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974 or latest, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water.
(whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981 or latest, This provides for prevention, control and abatement of air pollution. ‘Air Pollution’ means the presence in the atmosphere of any ‘air pollutant’, which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986 or latest, This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. ‘Environment’ includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991 or latest, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under Environment (Protection) Act, 1986 or latest, and exceeding such quantity as may be specified by notification by the Central Government.

18.3.3 Safety Precautions

18.3.3.1 The Contractor shall observe all applicable regulations regarding safety on the Site.

Unless otherwise agreed, the Contractor shall, from the commencement of work on Site until Taking Over, provide:

a) fencing, lighting, guarding and watching of the Works, and
b) temporary roadways, footways, guards and fences which may be necessary for the accommodation and protection of Employer / his representatives and occupiers of adjacent property, the public and others.

18.3.3.2 The Contractor shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or to Employer or to others, working at the Site. The Contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislations and the Project Manager, as he may deem necessary.

18.3.3.3 The Contractor will notify well in advance to the Project Manager of his intention to bring to the Site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals which may involve hazards. The Project Manager shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the Contractor shall strictly adhere to and comply with such instructions. The Project Manager shall have the right at his sole discretion to inspect any such container or such construction plant/equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by the Employer and the Employer shall not entertain any claim of the Contractor towards additional safety provisions/conditions to be provided for/constructed as per the Project Manager's instructions.

Further, any such decision of the Project Manager shall not, in any way, absolve the Contractor of his responsibilities and in case, use of such a container or entry thereof into the Site area is forbidden by the Project Manager, the Contractor shall use alternative methods with the approval of the Project Manager without any cost implication to the Employer or extension of work schedule.

18.3.3.4 Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying-out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934 or latest, Explosives Act, 1948 or latest and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Project Manager. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.
18.3.3.5 All equipment used in construction and erection by Contractor shall meet Indian/International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the Contractor in accordance with manufacturer’s Operation Manual and safety instructions and as per Guidelines/rules of Employer in this regard.

18.3.3.6 Periodical examinations and all tests for all lifting/hoisting equipment & tackles shall be carried-out in accordance with the relevant provisions of Factories Act 1948 or latest or latest, Indian Electricity Act 2003 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by the Project Manager or by the person authorised by him.

18.3.3.7 The Contractor shall be fully responsible for the safe storage of his and his Sub-Contractor’s radioactive sources in accordance with BARC/DAE Rules and other applicable provisions. All precautionary measures stipulated by BARC/DAE in connection with use, storage and handling of such material will be taken by the Contractor.

18.3.3.8 The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by the Project Manager who will also have right to examine these safety equipment to determine their suitability, reliability, acceptability and adaptability.

18.3.3.9 Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced, qualified and competent person strictly in accordance with the Code of Practice/Rules framed under Indian Explosives Act pertaining to handling, storage and use of explosives.

18.3.3.10 The Contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, good and standard quality of material only shall be used by the Contractor.
18.3.3.11 The Contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Employer or other Contractors under any circumstances, whatsoever, unless expressly permitted in writing by Employer to handle such fuses, wiring or electrical equipment.

18.3.3.12 Before the Contractor connects any electrical appliances to any plug or socket belonging to the other Contractor or Employer, he shall:

   a. Satisfy the Project Manager that the appliance is in good working condition;

   b. Inform the Project Manager of the maximum current rating, voltage and phases of the appliances;

   c. Obtain permission of the Project Manager detailing the sockets to which the appliances may be connected.

18.3.3.13 The Project Manager will not grant permission to connect until he is satisfied that:

   a. The appliance is in good condition and is fitted with suitable plug;

   b. The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.

18.3.3.14 No electric cable in use by the Contractor/Employer will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.

18.3.3.15 No repair work shall be carried out on any live equipment. The equipment must be declared safe by the Project Manager and a permit to work shall be issued by the Project Manager before any repair work is carried out by the Contractor. While working on electric lines/equipment, whether live or dead, suitable type and sufficient quantity of tools will have to be provided by the Contractor to electricians/workmen/officers.

18.3.3.16 The Contractors shall employ necessary number of qualified, full time electricians/electrical supervisors to maintain his temporary electrical installation.
18.3.3.17 The Contractor employing more than 250 workmen whether temporary, casual, probationer, regular or permanent or on contract, shall employ at least one full time officer exclusively as safety officer to supervise safety aspects of the equipment and workmen, who will coordinate with the Project Safety Officer. In case of work being carried out through Sub-Contractors, the Sub-Contractor’s workmen/employees will also be considered as the Contractor's employees/workmen for the above purpose.

The name and address of such Safety Officers of the Contractor will be promptly informed in writing to Project Manager with a copy to Safety Officer-In-charge before he starts work or immediately after any change of the incumbent is made during currency of the Contract.

18.3.3.18 In case any accident occurs during the construction/erection or other associated activities undertaken by the Contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the Project Manager in prescribed form and also to all the authorities envisaged under the applicable laws.

18.3.3.19 The Project Manager shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/or property, and/or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Project Manager within 3 days of such stoppage of work and decision of the Project Manager in this respect shall be conclusive and binding on the Contractor.

18.3.3.20 The Contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in GCC Sub-Clause 18.3.3.19 above and the period of such stoppage of work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.

18.3.3.21 It is mandatory for the Contractor to observe during the execution of the works, requirements of Safety Rules which would generally include but not limited to following:
Safety Rules

a) Each employee shall be provided with initial indoctrination regarding safety by the Contractor, so as to enable him to conduct his work in a safe manner.

b) No employee shall be given a new assignment of work unfamiliar to him without proper introduction as to the hazards incident thereto, both to himself and his fellow employees.

c) Under no circumstances shall an employee hurry or take unnecessary chance when working under hazardous conditions.

d) Employees must not leave naked fires unattended. Smoking shall not be permitted around fire prone areas and adequate fire fighting equipment shall be provided at crucial location.

e) Employees under the influence of any intoxicating beverage, even to the slightest degree shall not be permitted to remain at work.

f) There shall be a suitable arrangement at every work site for rendering prompt and sufficient first aid to the injured.

g) The staircases and passageways shall be adequately lighted.

h) The employees when working around moving machinery, must not be permitted to wear loose garments. Safety shoes are recommended when working in shops or places where materials or tools are likely to fall. Only experienced workers shall be permitted to go behind guard rails or to clean around energized or moving equipment.

i) The employees must use the standard protection equipment intended for each job. Each piece of equipment shall be inspected before and after it is used.

j) Requirements of ventilation in underwater working to licensed and experienced divers, use of gum boots for working in slushy or in inundated conditions are essential requirements to be fulfilled.
k) In case of rock excavation, blasting shall invariably be done through licensed blasters and other precautions during blasting and storage/transport of charge material shall be observed strictly.

18.3.3.22 The Contractor shall follow and comply with all Employer Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservations. In case of any discrepancy between statutory requirement and Employer Safety Rules referred above, the latter shall be binding on the Contractor unless the statutory provisions are more stringent.

18.3.3.23 If the Contractor fails in providing safe working environment as per Employer Safety Rules or continues the work even after being instructed to stop work by the Project Manager as provided in GCC Sub-Clause 18.3.3.19 above, the Contractor shall promptly pay to Employer, on demand by the Employer, compensation at the rate of Rs. 5,000/- per day of part thereof till the instructions are complied with and so certified by the Project Manager. However, in case of accident taking place causing injury to any individual, the provisions contained in GCC Sub-Clause 18.3.3.24 shall also apply in addition to compensation mentioned in this Clause.

18.3.3.24 If the Contractor does not take adequate safety precautions and/or fails to comply with the Safety Rules as prescribed by the Employer or under the applicable law for the safety of the equipment and plant or for the safety of personnel or the Contractor does not prevent hazardous conditions which cause injury to his own employees or employees of other Contractors or Employer’s employees or any other person who are at Site or adjacent thereto, then the Contractor shall be responsible for payment of a sum as indicated below to be deposited with the Employer, which will be passed on by the Employer to such person or next to kith and kin of the deceased:

<table>
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<tr>
<th></th>
<th>Fatal injury or accident causing death</th>
<th>Rs. 1,000,000/- per person</th>
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<tr>
<td>a</td>
<td>Major injuries or accident causing 25% or more permanent disablement</td>
<td>Rs. 100,000/- per person</td>
</tr>
</tbody>
</table>

Permanent disablement shall have same meaning as indicated in Workmen’s Compensation Act. The amount to be deposited with Employer and passed on to the person mentioned above shall be in addition to the compensation payable under the relevant provisions of the Workmen’s Compensation Act and rules framed there under or any other applicable
laws as applicable from time to time. In case the Contractor does not deposit the above mentioned amount with Employer, such amount shall be recovered by Employer from any monies due or becoming due to the Contractor under the contract or any other on-going contract.

18.3.3.25 If the Contractor observes all the Safety Rules and Codes, Statutory Laws and Rules during the currency of Contract awarded by the Employer and no accident occurs then Employer may consider the performance of the Contractor and award suitable ‘ACCIDENT FREE SAFETY MERITORIOUS AWARD’ as per scheme as may be announced separately from time to time.

18.3.3.26 The Contractor shall also submit ‘Safety Plan’ as per proforma specified in Section – Sample Forms and Procedures of the Bidding Documents alongwith all the requisite documents mentioned therein and as per checklist contained therein to the Engineer In-Charge for its approval within 60 days of award of Contract.

Further, one of the conditions for release of first progressive payment / subsequent payment towards Services Contract shall be submission of ‘Safety Plan’ alongwith all requisite documents and approval of the same by the Engineer In-Charge.

18.4 Opportunities for Other Contractors

18.4.1 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.

18.4.2 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.

18.4.3 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.

18.4.4 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.

18.5 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. In case such work is not in the scope of the Contractor, the cost of such remedial work shall be borne by the Employer.

18.6 Site Clearance

18.6.1 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.

18.6.2 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 clean and safe.

18.7 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.

18.8 Work at Night and on Holidays

18.8.1 Unless otherwise provided in the Contract, no work shall be carried out during the night and on public holidays of the country where the Site is located without prior written consent of the Employer, except where work is necessary or required to ensure safety of the Facilities or for the protection of life, or to prevent loss or damage to property, when the Contractor shall immediately advise the Project Manager, provided that provisions of this GCC Sub-Clause 18.8.1 shall not apply to any work which is customarily carried out by rotary or double-shifts.

18.8.2 Notwithstanding GCC Sub-Clauses 18.8.1 or 18.1.3, 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 Employer’s consent thereto, the Employer shall not unreasonably withhold such consent.

19. Test and Inspection

19.1 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 Equipment and any part of the Facilities as are specified in the Contract.

19.2 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.

19.3 Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give four weeks 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.

19.4 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.

19.5 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.

19.6 If any Plant and Equipment or any part of the Facilities fails to pass any test and/or inspection, the Contractor shall either rectify or replace such Plant and Equipment or part of the Facilities and shall repeat the test and/or inspection upon giving a notice under GCC Sub-Clause 19.3.

19.7 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 and Equipment or part of the Facilities that cannot be settled between the parties within a reasonable period of time, it may be referred to an Arbitrator for determination in accordance with GCC Sub-Clause 39.

19.8 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 and Equipment 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.

19.9 The Contractor agrees that neither the execution of a test and/or inspection of Plant and Equipment 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 Sub-Clause 19.4, shall release the Contractor from any other responsibilities under the Contract.

19.10 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 part 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.

19.11 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 Sub-Clause 19.10 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.

20. Completion of the Facilities and Operational Acceptance

20.1 Completion of the Facilities

20.1.1 Physical Completion

20.1.1.1 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 Technical Specifications, excluding minor items not materially affecting the operation or safety of the Facilities, the Contractor shall so notify the Employer in writing.

20.1.2 Pre-Commissioning

20.1.2.1 Within seven (7) days after receipt of the notice from the Contractor under GCC Sub-Clause 20.1.1.1, the Project Manager shall deploy the operating
and maintenance personnel and other material if so specified in the corresponding Appendix – 6 (Scope of Works and Supply by the Employer) to the Contract Agreement for Precommissioning of the Facilities or any part thereof.

20.1.2.2 As soon as reasonably practicable after the operating and maintenance personnel have been deployed by the Employer and other materials have been provided by the Employer in accordance with GCC Sub-Clause 20.1.2.1, the Contractor shall commence Precommissioning of the Facilities or the relevant part thereof, in presence of the Employer’s representatives, as per procedures detailed in Technical Specifications in preparation for Commissioning.

20.1.2.3 As soon as all works in respect of Precommissioning are successfully completed and, in the opinion of the Contractor, the Facilities or any part thereof is ready for Commissioning, the Contractor shall notify the Project Manager in writing.

20.1.2.4 The Project Manager shall, within fourteen (14) days after receipt of the Contractor’s notice under GCC Sub-Clause 20.1.2.3, notify the Contractor in writing of any defects and/or deficiencies.

20.1.2.5 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 Sub-Clause 20.1.2.2. If in the opinion of the Contractor, the Facilities or any part thereof is now ready for Commissioning, the Contractor shall again notify the Project Manager in writing. If further defects and/or deficiencies are not notified by the Project Manager and if the Project Manager is satisfied that the Precommissioning of Facilities or that part thereof have been successfully completed, the Project Manager shall, within seven (7) days after receipt of the Contractor’s such notice, advise the Contractor to proceed with the Commissioning of the Facilities or part thereof.

20.1.2.6 If the Project Manager fails to inform the Contractor of any defects and/or deficiencies within fourteen (14) days after receipt of the Contractor’s notice under GCC Sub-Clause 20.1.2.4 or within seven (7) days after receipt of the Contractor’s notice on completion of repeat procedure under GCC Sub-Clause 20.1.2.5, then the Precommissioning of the Facilities or that part thereof shall be considered to have been successfully completed as of the date of the Contractor’s notice.
20.1.2.7 As soon as possible after Precommissioning, 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.

20.1.2.8 In the event that the Contractor is unable to proceed with the Precommissioning of the Facilities pursuant to Sub-Clause 20.1.2 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 following provisions shall apply:

When the Contractor is notified by the Project Manager that he will be unable to proceed with the activities and obligations pursuant to above GCC Sub-Clause 20.1.2.8, 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 Sub-Clause 21.2.

b) payments due to the Contractor in accordance with the provisions specified in Appendix I (Terms and Procedures of Payment) to the Contract Agreement, which would have not been payable in normal circumstances due to non-completion of the said activities and obligations, 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 these payments, subject to the provisions of GCC Sub-Clause 21.2.9 below.

c) the expenses payable by the Contractor to the Bankers toward the extension of above security and extension of other securities under the Contract, of which validity need to be extended, shall be reimbursed to the Contractor by the Employer against documentary evidence.

d) the additional charges toward the care of the Facilities pursuant to GCC Sub-Clause 28.1 shall be reimbursed to the Contractor by the Employer for the period between the notification mentioned above and the notification mentioned in GCC Sub-Clause 20.1.2.10 below.
The provisions of GCC Sub-Clause 29.2 shall apply to the Facilities during the same period.

20.1.2.9 In the event that the period of suspension under GCC Sub-Clause 20.1.2.8 actually exceeds one hundred eighty (180) days, the Employer and the Contractor shall mutually agree to any additional compensation payable to the Contractor.

20.1.2.10 As and when, after the period of suspension under GCC Sub-Clause 20.1.2.8, the Contractor is notified by the Project Manager that the Facilities are ready for Precommissioning, the Contractor shall proceed without delay in performing all activities and obligations under the Contract.

20.1.3 Commissioning

20.1.3.1 Commissioning of the Facilities or any part thereof shall be commenced by the Contractor immediately after being advised by the Project Manager, pursuant to GCC Sub-Clause 20.1.2.5 or immediately after the Precommissioning is considered to be completed under GCC Sub-Clause 20.1.2.6.

20.1.3.1.1 Commissioning of the Facilities or any part thereof shall be completed by the Contractor as per procedures detailed in bid documents.

20.1.3.2 The Employer shall, to the extend specified in Appendix - 6 (Scope of works and supply by the Employer), deploy the operating and maintenance personnel and supply all raw materials, utilities, lubricants, chemicals, catalysts, facilities, services and other materials required for commissioning.

20.1.3.3 In the event that the Contractor is unable to proceed with the Commissioning of the Facilities pursuant to Sub-Clause 20.1.3 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 of GCC Sub-Clause 20.1.2.8 to 20.1.2.9 shall apply.

20.1.3.4 As and when, after the period of suspension under GCC Sub-Clause 20.1.2.8, the Contractor is notified by the Project Manager that the Facilities are ready for Commissioning, the Contractor shall proceed without delay in performing all activities and obligations under the Contract.
20.1.4 Trial - Operation

20.1.4.1 Trial - Operation of the Facilities or any part thereof shall be commenced by the Contractor immediately after the Commissioning is completed pursuant to GCC Sub-Clause 20.1.3.1.1.

20.1.4.2 Trial - Operation of the Facilities or any part thereof shall be completed by the Contractor for the period specified in Technical Specification (or for a continuous period of 24 hours where such period in not specified in Technical Specification) and as per procedures detailed in Technical Specifications.

20.1.4.3 At any time after the events set out in GCC Sub-Clause 20.1.4.2 have occurred, the Contractor may give a notice to the Project Manager requesting the issue of an Taking Over Certificate in the form provided in the Bidding Documents or in another form acceptable to the Employer in respect of the Facilities or the part thereof specified in such notice as of the date of such notice.

20.1.4.4 The Project Manager shall within twenty-one (21) days after receipt of the Contractor's notice, issue an Taking Over Certificate.

20.1.5 Taking Over

20.1.5.1 Upon successful Trial - Operation of the Facilities or any part thereof, pursuant to GCC Sub-Clause 20.1.4, the Project Manager shall issue to the Contractor a Taking Over Certificate as a proof of the acceptance of the Facilities or any part thereof. Such certificate shall not relieve the Contractor of any of his obligations which otherwise survive, by the terms and conditions of Contract after issue of such certificate.

20.1.5.2 If within twenty one (21) days after receipt of the Contractor's notice, the Project Manager fails to issue the Taking Over Certificate or fails to inform the Contractor in writing of the justifiable reasons why the Project Manager has not issued the Taking Over Certificate, the Facilities or the relevant part thereof shall be deemed to have been Taken Over as at the date of the Contractor's said notice.

20.1.5.3 Upon Taking Over of the Facilities or any part thereof, 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.

20.2 Operational Acceptance

20.2.1 Guarantee Test

20.2.1.1 The Guarantee Test (and repeats thereof), if any specified in the SCC and/or the Technical Specification, shall be conducted by the Contractor after successful Trial - Operation 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 Contract Documents or if otherwise required as per the Technical Specifications. The Contractor's and Project Manager's advisory personnel may witness the Guarantee Test. The Contractor shall promptly provide the Employer with such information as the Employer may reasonably require in relation to the conduct and results of the Guarantee Test (and any repeats thereof).

20.2.1.2 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 time stipulated in the Technical Specifications the period for completing the same shall be as agreed upon by the Employer and the Contractor.

20.2.2 Operational Acceptance

20.2.2.1 Operational Acceptance shall occur in respect of the Facilities or any part thereof as mentioned below:

(I) In case no Functional Guarantees are applicable, Operational Acceptance shall occur when the Facilities or part thereof have been successfully Commissioned and Trial - Operation for the specified period have been successfully completed

(II) In case Functional Guarantees are applicable, Operational Acceptance shall occur when the Functional Guarantees are met or the Contractor has paid liquidated damages specified in GCC Sub-Clause 23.3 hereof; or

20.2.2.2 At any time after any of the events set out in GCC Sub-Clause 20.2.2.1 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 Bidding Documents or in another form acceptable to the Employer in respect of the Facilities or the part thereof specified in such notice as of the date of such notice.

20.2.2.3 The Project Manager shall within twenty-one (21) days after receipt of the Contractor's notice, issue an Operational Acceptance Certificate.

20.2.2.4 Upon Operational Acceptance, pursuant to GCC Sub-Clause 20.2.2.2, the Project Manager shall issue to the Contractor a Operational Acceptance Certificate as a proof of the final acceptance of the Plant and Equipment. Such certificate shall not relieve the Contractor of any of his obligations which otherwise survive, by the terms and conditions of Contract after issue of such certificate.

20.2.2.5 If within twenty one (21) 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 at the date of the Contractor's said notice.

20.3 Partial Acceptance

20.3.1 If the Contract specifies that Commissioning shall be carried out in respect of parts of the Facilities, the provisions relating to Commissioning including the Trial – Operation and 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.

20A. Quantity Variation

I. The quantity of all equipment/materials given in the Bid Proposal Sheets, Volume-IB of the bidding documents are provisional. The variation in quantity shall be limited to plus/minus (+/-) twenty percent (20%) for the individual items, total variations in all items under the contract shall be limited to ten percent (10%) of the contract price. For quantity variation of the individual items beyond twenty percent (20%), the matter shall be referred to the Employer for mutually agreed rates.

II. However, in case of highly quoted rate of individual item as compared to its estimated cost, efforts shall be made so that no
positive deviation in quantity during execution shall be permitted to its award quantity. However, in case, deviations are found inevitable, present market rate analysis of the item shall be made.

III. The Contractor shall be responsible for supply and execution of such final quantities for completion of the project and they shall be paid for such finalized quantity within plus ten percent (+) 10% overall deviation limit.

20B. Electrical Inspector inspection:

After successful completion of the work permission from State Electrical Inspectorate is required. Necessary fee etc. shall be paid by the Owner. However if Contractor pays such fee it shall be reimbursed on actual basis on documentary evidence. Defects / incomplete works notified by Electrical Inspectorate shall be completed by the agency at no extra cost implication to owner.

F. Guarantees and Liabilities

21. Completion Time Guarantee

21.1 The Contractor guarantees that it shall attain Completion of the Facilities (or a part for which a separate time for completion is specified in the SCC) within the Time for Completion specified in the SCC pursuant to GCC Sub-Clause 4.2, or within such extended time to which the Contractor shall be entitled under GCC Clause 34 hereof.

21.2 If the Contractor fails to comply with the Time for Completion in accordance with Clause GCC 21 for the whole of the facilities, (or a part for which a separate time for completion is agreed) then the Contractor shall pay to the Employer a sum equivalent to half percent (0.5%) of the Contract Price for the whole of the facilities, (or a part for which a separate time for completion is agreed) as liquidated damages for such default and not as a penalty, without prejudice to the Employer's other remedies under the Contract, for each week or part thereof which shall elapse between the relevant Time for Completion and the date stated in Taking Over Certificate of the whole of the Works (or a part for which a separate time for completion is agreed) subject to the limit of five percent (5%) of Contract Price for the whole of the facilities, (or a part for which a separate time for completion is agreed). The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from

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any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.

21.3 No bonus will be given for earlier Completion of the Facilities or part thereof.

21A. **Pre-dispatch Inspection:**

Pre-dispatch inspection shall be performed on various materials at manufacturer's work place for which contractor shall be required to raise requisition giving at least 7-day time. Depending on requirement, inspection shall be witnessed by representatives of Employer, TPIA and/or RQM/REC/MoP.

The turnkey contractor shall ensure that pre-dispatch inspection for materials are intimated only when the material is completely ready for inspection. On due date of inspection, if it is found that materials are not ready in required quantities, all expenditures incurred on deployment of various inspecting officials along with a fine of Rs 50,000/- shall be recovered from the bills of the agency. 2\textsuperscript{nd} such situation at same manufacturer/supplier shall result in rejection of name of manufacturer from list of approved vendors/sub-vendors.

22. **Defect Liability**

22.1 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 and Equipment supplied and of the work executed.

22.1.1 Volume of concreting: If it was observed by employer, quality monitoring agencies (TPIA, RQM, NQM) and/or REC/MoP that volume and quality of concreting used in foundation of support, equipment foundation, gantry structure foundation, stay set etc. are not as per requirement specified in the scope of work/technical specifications, the contractor has to dismantle the supports, foundation and redo the concreting of all the supports in that particular section of line/redo all the foundations in that particular substation at his own cost. To ensure this, the employer reserves the right to withhold the payment of contractor for such defective works till such time the contractor conforms to scope of works, technical specification and tender drawings.
22.1.2 Galvanization of metallic structure: All metallic structure including GI wire, steel structure etc. must be galvanized. In case any metallic item found rusted during execution of works, the contractor has to redo the galvanization of item used at all places. For ex. If GI wire found rusted at any location/village, the contractor has to remove such defective material and to install good quality materials at his own cost. To ensure this, the employer reserves the right to withhold the payment of contractor for such works till such time the contractor conforms to scope of works, technical specification and tender drawings.

22.2 The Defect Liability Period shall be twelve (12) months from the date of Taking Over /Completion of Facilities (or any part thereof).

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant and Equipment 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, at its discretion, determine) 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

(c) normal wear and tear.

22.3 The Contractor’s obligations under this GCC Clause 22 shall not apply to

(a) any materials that are supplied by the Employer under GCC Sub-Clause 17.2, 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
22.4 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.

22.5 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 22. The Contractor may, with the consent of the Employer, remove from the Site any Plant and Equipment 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.

22.6 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.

22.7 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 fifteen (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.

22.8 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.
Upon correction of the defects in the Facilities or any part thereof by repair/replacement, such repair/replacement shall have the Defect Liability Period extended by a period mentioned in GCC Sub-Clause 22.2 from the time of such replacement/repair of the facilities or any part thereof.

22.8.1 At the end of the Defect Liability Period, the Contractor's Liability ceases except for latent defects. The Contractor's liability for latent defects warranty shall be limited to period of ten (10) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently lying within the material or arising out of design deficiency, which do not manifest themselves during the Defect Liability Period defined in this GCC Clause 22, but later.

22.9 Except as provided in GCC Clauses 22 and 29, 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 and Equipment, design or engineering or work executed that appear after Defect Liability Period except for the liability towards obligations that may survive in terms of the Contract after Defect Liability Period, except where such defects are the result of the gross negligence, fraud, criminal or willful action of the Contractor.

23. **Functional Guarantees**

23.1 The Contractor guarantees that the Facilities and all parts thereof shall attain the Functional Guarantees specified in the Technical Specifications, subject to and upon the conditions therein specified.

23.2 If, for reasons attributable to the Contractor, the minimum level of the Functional Guarantees specified in the Technical Specifications 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 Sub-Clause 36.2.2 and recover the payments already made to the Contractor.
23.3 If, for reasons attributable to the Contractor, the Functional Guarantees specified in the Technical Specifications are not attained either in whole or in part, but the minimum level of the Functional Guarantees specified in the Technical Specifications 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 within a mutually agreed time 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 SCC.

23.4 In case the Employer exercises its option to accept the equipment after levy of liquidated damages, the payment of liquidated damages under GCC Sub-Clause 23.3, up to the limitation of liability specified in the SCC, shall completely satisfy the Contractor's guarantees under GCC Sub-Clause 23.3, 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.

24. Equipment Performance Guarantees

24.1 The Contractor guarantees that the Equipments, named in the SCC, shall attain the rating and performance requirements specified in Appendix – 8 (Guarantees, Liquidated Damages for Non – Performance) to the Contract Agreement, subject to and upon the conditions therein specified.

24.2 If the guarantees specified in Appendix – 8 (Guarantees, Liquidated Damages for Non – Performance) to the Contract Agreement are not established, then the Employer shall, at the Employer's discretion either

(a) reject the equipment, or

(b) accept the equipment after assessing liquidated damages in accordance with the provision in the SCC against the Contractor and such amounts shall be deducted from the Contract Price or otherwise recovered from the Contractor.
24.3 In case the Employer exercises its option to reject the equipment, the Contractor shall at its cost and expense make such changes, modifications and/or additions to the equipment or any part thereof as may be necessary to meet the specified 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 Test until the level of the specified guarantee has been met.

24.4 Whenever the Employer exercises its option to accept the equipment after levy of liquidated damages, the payment of liquidated damages under GCC Sub-Clause 24.2, upto the limitation of liability specified in the SCC, shall completely satisfy the Contractor's guarantees under GCC Sub-Clause 24.2, and the Contractor shall have no further liability whatsoever to the Employer in respect thereof.

25. Patent Indemnity

25.1 The Contractor shall, subject to the Employer's compliance with GCC Sub-Clause 25.2, 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.

25.2 If any proceedings are brought or any claim is made against the Employer arising out of the matters referred to in GCC Sub-Clause 25.1, 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 twenty-eight (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 twenty-eight (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.

25.3 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.

26. Limitation of Liability

26.1 Except in cases of gross negligence or willful misconduct,
   (a) the Contractor and the Employer shall not be liable to the other party 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 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

27. Transfer of Ownership

27.1 Imported finished items are not covered under the contract. Only indigenous finished items are covered under the contract.

27.2 Ownership of the Plant and Equipment (including spare parts) procured in India, shall be transferred to the Employer upon loading on to the mode of transport to be used to carry the Plant and Equipment from the works to the site and upon endorsement of the despatch documents in favour of the Employer.

27.3 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.

27.4 Ownership of any Plant and Equipment 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 and Equipment in question are no longer required for the Facilities provided quantity of any Plant and Equipment specifically stipulated in the Contract shall be the property of the Employer whether or not incorporated in the Facilities.

27.5 Notwithstanding the transfer of ownership of the Plant and Equipment, 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 28 (Care of Facilities) hereof until Completion of the Facilities and Taking Over pursuant to GCC Clause 20 or the part thereof, if any, as per GCC Sub-Clause 1.1(e) in which such Plant and Equipment are incorporated.

28. Care of Facilities

28.1 The Contractor shall be responsible for the care and custody of the Facilities or any part thereof until the date of Taking Over Certificate pursuant to GCC Clause 20 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 22. Notwithstanding the foregoing, the Contractor shall not be liable for any loss or damage to the Facilities or that part thereof caused by 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.

29. **Loss of or Damage to Property; Accident or Injury to Workers; Indemnification**

29.1 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.

29.2 If any proceedings are brought or any claim is made against the Employer that might subject the Contractor to liability under GCC Sub-Clause 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 twenty-eight (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 twenty-eight (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 Notwithstanding anything in this Contract to the contrary, it is agreed that neither the Contractor nor the Employer shall be liable to the other party for loss of production, loss of profit, loss of use or any other indirect or consequential damages.

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30. **Insurance**

30.1 To the extent specified in the corresponding Appendix-3 (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) Marine Cargo Policy/Transit Insurance Policy:

(I)(i) Marine Cargo policy for imported equipment

Since imported finished materials are not permitted under the contract, this policy shall not be applicable,

(I)(ii) Transit Insurance Policy for indigenous equipment

Transit Insurance Policy shall be taken wherein only inland transit is involved for the movement of Plant and Equipment including mandatory Spares supplied from within India. The policy shall cover movement of Plant and Equipment including mandatory Spares from the manufacturer’s works to the project’s warehouse at final destination site. Inland Transit Clause (ITC) ‘A’ along with war & Strike Riots & Civil Commotion (SRCC) extension cover shall be taken. The policy shall cover movement of Plant and Equipment including mandatory Spares from the manufacturer’s works to the project’s warehouse at final destination site. The policy shall cover all risk for loss or damage that may occur during transit of Plant and Equipment including mandatory Spares from the Contractor/sub-Contractor’s works or stores until arrival at project’s warehouse/ store at final destination. Institute Cargo Clause (ICC) ‘A’ along with war & Strike Riots & Civil Commotion (SRCC) cover shall be taken.

(II) If during the execution of Contract, the Employer requests the Contractor to take any other add-on cover(s)/ supplementary cover(s) in aforesaid insurance, in such a case, the Contractor
shall promptly take such add-on cover(s)/ supplementary cover(s) and the charges towards such premium for such add-on cover(s)/ supplementary cover(s) shall be reimbursed to the Contractor on submission documentary evidence of payment to the Insurance company. Therefore, charges towards premium for such add-on cover(s)/ supplementary cover(s) are not included in the Contract Price.

(III) The Contractor shall take the policy in the joint names of Employer and the Contractor. The policy shall indicate the Employer as the beneficiary. However, if the Contractor is having an open policy for its line of business, it should obtain an endorsement of the open cover policy from the insurance company indicating that the dispatches against this Contract are duly covered under its open policy and include the name of the Employer as jointly Insured in the endorsements to the open policy.

(b) Erection All Risk Policy/Contractor All Risk Policy:

(I) The policy should cover all physical loss or damage to the facility at site during storage, erection and commissioning covering all the perils as provided in the policy as a basic cover and the add on covers as mentioned at Sl. No. (III) below.

(II) The Contractor shall take the policy in the joint name of Employer and the Contractor. All these policies shall indicate Employer as the beneficiary. The policy shall be kept valid till the date of the Operational Acceptance of the project and the period of the coverage shall be determined with the approval of the Employer.

If the work is completed earlier than the period of policy considered, the Contractor shall obtain the refund as per provisions of the policy and pass on the benefit to Employer. In case no refund is payable by the insurance company then the certificate to that effect shall be submitted to Employer at the completion of the project.

(III) The following add-on covers shall also be taken by the Contractor:
i) Earthquake

ii) Terrorism

iii) Escalation cost (approximately @10% of sum insured on annual basis)

iv) Extended Maintenance cover for Defect Liability Period

v) Design Defect

vi) Other add-on covers viz., 50-50 clause, 72 hours clause, loss minimization clause, waiver of subrogation clause (for projects of more than 100 crores, cover for offsite storage/fabrication (over 100 crores).

(IV) Third Party Liability cover with cross Liability within Geographical limits of India as on ADD-on cover to the basic EAR cover:

The third party liability add-on cover shall cover 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 which have been accepted by the Employer) occurring in connection with supply and installation of the Facilities.

(V) As per para 30.8 below, the cost of insurance premium is to be reimbursed to the Contractor for Owner Supplied Materials (OSM) for which the insurer is to be finalized by the Contractor as detailed therein. Alternatively, the Contractor may take a single policy covering the entire cost of the project including the cost of OSM. For this purpose, the Contractor shall submit documentary evidence for the premium paid for the entire project to the Employer and Employer shall reimburse to the Contractor the proportion of premium equal to value of OSM to total sum insured.

(VI) If during the execution of Contract, the Employer requests the Contractor to take any other add-on cover(s)/ supplementary cover(s) in aforesaid insurance, in such a case, the Contractor shall promptly take such add-on cover(s)/ supplementary cover(s) and the charges towards such premium for such add-on cover(s)/ supplementary cover(s) shall be reimbursed to the Contractor on submission documentary evidence of
payment to the Insurance company. Therefore, charges towards premium for such add-on cover(s)/ supplementary cover(s) are not included in the Contract Price.

(c) Automobile Liability Insurance

The Contractor shall ensure that all the vehicles deployed by the Contractor or its Subcontractors (whether or not owned by them) in connection with the supply and installation of the Facilities in the project are duly insured as per RTA act. Further the Contractor or its Subcontractors may also take comprehensive policy (own damage plus third party liability) of each individual vehicles deployed in the project on their own discretion in their own name to protect their own interest.

(d) Workmen Compensation Policy:

(I) Workmen Compensation Policy shall be taken by the Contractor in accordance with the statutory requirement applicable in India. The Contractor shall ensure that all the workmen employed by the Contractor or its Subcontractors for the project are adequately covered under the policy.

(II) The policy may either be project specific covering all men of the Contractor and its Subcontractors. The policy shall be kept valid till the date of Operational Acceptance of the project.

Alternatively, if the Contractor has an existing 'Workmen Compensation Policy' for all its employees including that of the Subcontractor(s), the Contractor must include the interest of the Employer for this specific Project in its existing 'Workmen Compensation Policy'.

(III) Without relieving the Contractor of its obligations and responsibilities under this Contract, before commencing work the Contractor shall insure against liability for death of or injury to persons employed by the Contractor including liability by statute and at common law. The insurance cover shall be maintained until all work including remedial work is completed including the Defect Liability Period. The insurance shall be
extended to indemnify the Principal for the Principal’s statutory liability to persons employed by the Contractor.

The Contractor shall also ensure that each of its Subcontractors shall effect and maintain insurance on the same basis as the ‘Workmen Compensation Policy’ effected by the Contractor.

(e) Contractor’s Plant and Machinery (CPM) Insurance

The Employer (including without limitation any consultant, servant, agent or employee of the Employer) shall not in any circumstances be liable to the Contractor for any loss of or damage to any of the Contractor’s Equipment or for any losses, liabilities, costs, claims, actions or demands which the Contractor may incur or which may be made against it as a result of or in connection with any such loss or damage.

30.2 The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 30.1, except for the Third Party Liability, Workmen Compensation Policy Insurances, and the Contractor’s Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 30.1 except for the Cargo Insurance During Transport, Workmen Compensation Policy 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.

30.3 The Contractor shall, in accordance with the provisions of the corresponding Appendix – 3 (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 twenty-one (21) days’ notice shall be given to the Employer by insurers prior to cancellation or material modification of a policy.

30.4 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.

30.5 The Employer shall at its expense take out and maintain in effect during the performance of the Contract those insurances specified in the corresponding Appendix – 3 (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 twenty-one (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 Sub-Clause 30.5.

30.6 If the Contractor fails to take out and/or maintain in effect the insurances referred to in GCC Sub-Clause 30.1, 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 30.5, 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.

30.7 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 30, and the monies payable by any insurers under all the insurance except Third Party Liability Insurance and Workmen Compensation Policy, shall be paid to the joint account of the Employer and the Contractor as mutually agreed and such amounts paid shall be apportioned between the Employer and the Contractor in accordance with the respective responsibilities under the Contract. 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.

30.8 Further all equipment and materials being supplied by Employer for the erection (as per Technical Specification) shall be kept insured by the Contractor against any loss, damage, pilferage, theft, fire, etc. from the point of unloading up to the time of taking over by Employer including handling, transportation, storage, erection, testing and commissioning etc. The premium paid to the Insurance company by the Contractor for such insurance shall be reimbursed by Employer to the Contractor. The Contractor shall obtain competitive quotation for such insurance and shall take prior approval from Employer before taking the insurance. The insurable value of the equipment being supplied by Employer shall be intimated to the Contractor for arranging the insurance.

30.9 It will be the responsibility of the Contractor to lodge, pursue and settle all claims with the insurance company in case of any damage, loss, theft, pilferage or fire during execution of Contract and Employer shall be kept informed about it. The Contractor shall replace the lost/damaged materials promptly irrespective of the settlement of the claims by the underwriters and ensure that the work progress is as per agreed schedules. The losses, if any, in such replacement will have to be borne by the Contractor.

31. **Change in Laws and Regulations**

31.1 If, after the date seven (07) days prior to the date of Bid Opening, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed in India (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. However, these adjustments would be restricted to direct transactions between the Employer and the Contractor and not on procurement of raw materials, intermediary components etc. by the Contractor for which the Employer shall be the sole judge. 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 Appendix-2 to the Contract Agreement.

32. **Force Majeure**

32.1 “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 war be declared or not), invasion, act of foreign enemy and civil war,

(b) rebellion, revolution, insurrection, mutiny, usurpation of government, conspiracy, riot and civil commotion,

(c) earthquake, landslide, volcanic activity, flood or cyclone, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster.

32.2 Neither party shall be considered to be in default or in breach of his obligations under the Contract to the extent that performance of such obligation is prevented by any circumstances of Force majeure, which arises after date of Notification of Award.

32.3 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 fourteen (14) days after the occurrence of such event.

32.4 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 34.
H. Change in Contract Elements

33. Change in the Facilities

33.1 Introducing a Change

33.1.1 Subject to GCC Sub-Clause 33.2.5, 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.

33.1.2 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.

33.1.3 Changes made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be not be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.

33.1.4 The procedure on how to proceed with and execute Changes is specified in GCC Sub-Clauses 33.2 and 33.3.

33.2 Changes Originating from Employer

33.2.1 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.

33.2.2 The Contract Price for (i) the items for which quantities have been indicated as lumpsum or lot or set and/or (ii) where the quantities are to be estimated
by the Contractor shall remain constant unless there is change made in the Scope of Work by Employer. The quantities and unit prices (i) subsequently arrived while approving the Bill of Quantities (BOQ)/Billing breakup of lumpsum quantities/lot/Set and/or (ii) estimated by the Contractor shall be for on account payment purpose only. In case additional quantities, over and above the quantities in BOQ/billing breakup and/or estimated by the Contractor, are required for successful completion of the scope of work as per Technical Specification, the Contractor shall execute additional quantities of these items for which no additional payment shall be made over and above the lumpsum Contract Price. In case quantities of these items supplied at site are in excess of that required for successful completion of scope of work, such additional quantities shall be the property of the Contractor and they shall be allowed to take back the same from the site for which no deduction from the lumpsum Contract Price shall be made. Further, in case actual requirement of quantities for successful completion of scope of work is less than the quantities identified in the approved BOQ/billing breakup and/or estimated by the Contractor, the lumpsum contract price shall remain unchanged and no deduction shall be made from the lumpsum price due to such reduction of quantities.

It shall be the responsibility of the Contractor to pay all statutory taxes, duties and levies to the concerned authorities for such surplus material which would otherwise have been, lawfully payable in case of non-deemed export contracts. The Contractor shall submit an indemnity bond to keep Employer harmless from any liability, before release of such material to the Contractor by Employer.

Set/Lot/Lumpsum shall be governed as per the requirement of the corresponding item description read in conjunction with relevant provisions of Technical Specifications and the Billing breakup referred to above shall be issued by the Employer based on Contractor’s request, if and as may be required during the currency of the Contract.

33.2.3 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 33 would be to increase or decrease the Contract Price as originally set forth in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement by more than the percentage specified in SCC, the Employer and the Contractor shall mutually agree on specific rates for valuation of the Change beyond the specified percentage.
For the said purpose, the Contract Price means the Contract Price of the Facilities notwithstanding the Construction of the Contract.

33.2.4 If rates and prices of any change are not available in the Contract, the parties thereto shall agree on specific rates for the valuation of the change and all matters therein related to the change. Based on the same, the Employer shall, if it intends to proceed with the Change, issue the Contractor with a Change Order.

33.2.5 The Employer shall issue the Contractor with a Change Order pursuant to GCC Sub-Clause 33.2 by way of amendment to the Contract or in any other manner deemed appropriate. Even 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 related to the Change Proposal, the Employer may nevertheless instruct the Contractor to proceed with the Change by issue of a “Pending Agreement Change Order” (“Pending Agreement Amendment”).

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 sixty (60) days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the Arbitrator in accordance with the provisions of GCC Clause 38 & 39.

33.3 Changes Originating from Contractor

33.3.1 If the Contractor proposes a Change pursuant to GCC Sub-Clause 33.1.2, the Contractor shall submit to the Project Manager a written “Request for Change Proposal”, giving reasons for the proposed Change and 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 any other provisions of the Contract.

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Upon receipt of the Request for Change Proposal, the parties shall follow the procedures outlined in GCC Sub-Clauses 33.2.1 and 33.2.5. However, should the Employer choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Request for Change Proposal.

33A. Surplus Materials

a. On completion of the works all such materials supplied by contractor for erection that remain unutilized, if any, shall be taken back by Contractor after detailed materials and payment reconciliations.

b. The Contractor, within two (2) months from the taking over of the equipment/ materials under the package, shall submit payment and materials account for the reconciliations, failing which necessary recoveries will be made from the outstanding bills of the Contractor for the cost of the materials left unaccounted as decided by the Engineer.

34. Extension of Time for Completion

34.1 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 33

(b) any occurrence of Force Majeure as provided in GCC Clause 32

(c) any suspension order given by the Employer under GCC Clause 35 hereof or reduction in the rate of progress pursuant to GCC Sub-Clause 35.2 or

(d) any changes in laws and regulations as provided in GCC Clause 31 or

(e) any other matter specifically mentioned in the Contract

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.

34.2 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 Arbitration, pursuant to GCC Sub-Clause 39.

34.3 The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

35. Suspension

35.1 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 ninety (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 twenty-eight (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 33, 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 33 or, where it affects the whole of the Facilities, as termination of the Contract under GCC Sub-Clause 36.1.

35.2 If the Contractor’s performance of its obligations is suspended or the rate of progress is reduced pursuant to this GCC Clause 35, then the Time for Completion shall be extended in accordance with GCC Sub-Clause 34.1, 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.

35.3 During the period of suspension, the Contractor shall not remove from the Site any Plant and Equipment, any part of the Facilities or any Contractor’s Equipment, without the prior written consent of the Employer.

36. Termination

36.1 Termination for Employer’s Convenience

36.1.1 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 Sub-Clause 36.1.

36.1.2 Upon receipt of the notice of termination under GCC Sub-Clause 36.1.1, 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

(d) In addition, the Contractor, subject to the payment specified in GCC Sub-Clause 36.1.3, shall

(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 and Equipment as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors

(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.

36.1.3 In the event of termination of the Contract under GCC Sub-Clause 36.1.1, 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 Sub-Clause 36.1.2

(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.

36.2 Termination for Contractor’s Default

36.2.1 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 Sub-Clause 36.2:
(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 37.

(c) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this Sub-Clause:

“corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

“fraudulent practice” is 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;

“collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

“coercive practice” is 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;

“obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Employer’s investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its
knowledge of matters relevant to the investigation or from pursuing the investigation;

or

(bb) acts intended to materially impede the exercise of the Employer's inspection and audit rights.

In persuasions of its policy, the Employer will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract.

36.2.2 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 Sub-Clause 35.2) the progress of Contract performance for more than twenty-eight (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 Sub-Clause 14.2 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 fourteen (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 Sub-Clause 36.2.

36.2.3 Upon receipt of the notice of termination under GCC Sub-Clauses 36.2.1 or 36.2.2, 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 and Equipment as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors

(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.

36.2.4 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.

36.2.5 Subject to GCC Sub-Clause 36.2.6, 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 and Equipment 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 Sub-Clause 36.2.3. Any sums due to 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.

36.2.6 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 Sub-Clause 36.2.5, plus the reasonable costs incurred by the Employer in completing the Facilities, exceeds the Contract Price or the entire Facilities if entire Facilities have been completed or the price for part of the Facilities if part of the Facilities have been completed, the Contractor shall be liable for such excess.

If such excess is greater than the sums due the Contractor under GCC Sub-Clause 36.2.5, the Contractor shall pay the balance to the Employer, and if such excess is less than the sums due the Contractor under GCC Sub-Clause 36.2.5, the Employer shall pay the balance to the Contractor. For facilitating such payment the Employer shall encash the Bank Guarantees of the Contractor available with the Employer and retain such other payments due to the Contractor under the Contract in question or any other Contract that the Employer may have with 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.

36.3 In this GCC Clause 36, the expression “Facilities executed” shall include all work executed, Installation Services provided, and all Plant and Equipment 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.
36.4 In this GCC Clause 36, 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 corresponding Appendix (Terms and Procedures of Payment) to the Contract Agreement.

37. Assignment

37.1 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. Resolution of Disputes

38. Settlement of Disputes

38.1 If any dispute of any kind whatsoever shall arise between the Employer and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Facilities, whether during the progress of the Facilities or after their completion and whether before or after the termination, abandonment or breach of the Contract, the parties shall seek to resolve any such dispute or difference, to the extent possible, amicably by mutual consultation.

38.2 If the parties fail to resolve such a dispute or difference by mutual consultation at the execution site level, then the dispute shall be referred by the Contractor to the Project Manager, who, within a period of thirty (30) days after being requested by Contractor to do so, shall give written notice of his decision.

38.2.1 The decision/instruction of the Project Manager shall be deemed to have been accepted by the Contractor unless notified by the Contractor of his intention to refer the matter for Arbitration within thirty (30) days of such decision/instruction.

38.2.2 In the event the Project Manager fails to notify his decision as aforesaid within thirty (30) days, the Contractor, if he intends to go for Arbitration, shall notify his intention to the Project Manager within 30 days of expiry of
the first mentioned period of thirty days failing which it shall be deemed that there are no dispute or difference between the Employer and the Contractor.

38.3 In case of dispute or difference between the Employer and the Contractor, if the Employer intends to go for Arbitration, he shall notify such intention to the Contractor.

39. **Arbitration**

39.1 All disputes or differences in respect of which the decision, if any, of the Project Manager and/or the Head of the Implementing Authority has not become final or binding as aforesaid shall be settled by arbitration in the manner provided herein below:

39.2 The arbitration shall be conducted by three arbitrators, one each to be nominated by the Contractor and the Employer and the third to be appointed by both the arbitrators in accordance with the Indian Arbitration Act. If either of the parties fails to appoint its arbitrator within sixty (60) days after receipt of a notice from the other party invoking the Arbitration clause, the arbitrator appointed by the party invoking the arbitration clause shall become the sole arbitrator to conduct the arbitration.

39.3 The language of the arbitration proceedings and that of the documents and communications between the parties shall be English. The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof. The venue of arbitration shall be New Delhi.

39.4 The decision of the majority of the arbitrators shall be final and binding upon the parties. In the event of any of the aforesaid arbitrators dying, neglecting, resigning or being unable to act for any reason, it will be lawful for the party concerned to nominate another arbitrator in place of the outgoing arbitrator.

39.5 During settlement of disputes and arbitration proceedings, both parties shall be obliged to carry out their respective obligations under the Contract.
40. **Up-front intimation of approved manufacturers and criterion for Fresh Vendor approval:**

Employer shall up-front intimate list containing name of already approved vendors/manufacturers of various sub-transmission and distribution materials. Employer shall up-load the list on their web portal. Turnkey contractor shall choose one or more than one vendors from the pre-approved lists depending upon capacity and capability of vendors to supply the materials for RGGVY works. No separate approval for vendor shall be required from Employer.

Also, normal procedure being followed for empanelment of new vendors shall be uploaded and up-front intimated to all turnkey contractors. In case Turnkey Contractor desires to add new vendor, up-front intimation shall be available on criterion and procedure for selection of vendors.

41. **Up-front intimation of Guaranteed Technical Particulars:**

Technical Specifications are enclosed with the bid documents. Employer shall up-front intimate acceptable Guaranteed Technical Particulars of various materials through their web portal.

Turnkey contractor will examine these documents and supply only those materials which meets the above acceptable criterion. In case there are Employer’s approved vendor(s) (one or more) through which Turnkey Contractor wish to procure the materials and are complying with the acceptable GTP parameters of Employer as available on their web portal, there would not be any formality needed like approval of sub-vendor or approval of GTP again.

In event of change in name of vendor or change in GTP parameter, separate approval of Employer shall be sought by successful turnkey contractor.

42. **Turnkey Contractor’s Store at Project site:**

“Project wise separate Site Stores shall be maintained and manned by turnkey contractor. Same store shall not be used for more than one projects even if neighboring districts’ projects are awarded to the same agency. The turnkey contractor shall deploy his own manpower in stores for round the clock security and for its day to day operation through trained Store-ki-per.

Since materials received in this stores are owned by Employer and are pre-dispatch inspected by Employer’s representative, materials in a lot shall not be issued to the sub-contractor for physical execution by Turnkey Contractor.
Instead, day to day requirements shall be issued to the working teams of sub-vendors by authorized store-keeper. In exceptional cases, on prior written permission of Employer, materials for a week time may be issued to working team of sub-vendor. Daily accounting of materials receipt, materials issues, materials in custody of sub-vendors are to be maintained by Turnkey Contractor. Handing of Stores shall, in no circumstances, be off loaded.

In no case, inter-project transfer of materials shall be permitted.

----- End ----
VOLUME-I : SECTION - V

SPECIAL CONDITIONS OF CONTRACT (SCC)
SPECIAL CONDITIONS OF CONTRACT (SCC)

The following bid specific data for the Plant and Equipment to be procured shall amend and/or supplement the provisions in the General Conditions of Contract (GCC)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>GCC Clause Ref. No.</th>
<th>Amendment/Supplement to GCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GCC 1.1(o)</td>
<td><strong>Supplementing Sub-Clause GCC 1.1(o)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Employer is:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Name &amp; Postal Address of the Employer with Contact Number, Fax, Email etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For the purpose of execution of the contract, the contractual activities shall be performed by the Employer “for and on behalf of the Owner” except in cases where the Owner itself is statutorily required to do so.</td>
</tr>
<tr>
<td>2</td>
<td>GCC 1.1(w)</td>
<td><strong>Supplementing Sub-Clause GCC 1.1(w)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Owner is:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government of XXXX(State Name)</td>
</tr>
<tr>
<td>3</td>
<td>GCC 1.1 (ee)</td>
<td><strong>Supplementing Sub-Clause GCC 1.1(ee)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time for Completion:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Sl. No.</strong></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>Taking Over by the Employer upon successful Completion of:</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Package-XXX for Rural Electrification works of XXXX(Project/District Name) in XXXX(State Name) under RGGVY [Spec. No.:..........................].</td>
</tr>
<tr>
<td>4</td>
<td>GCC 2.1</td>
<td><strong>GCC 2.1.1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- First Contract: For Ex-Works supply of all equipments and materials (Ex-Works Supply Contract)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Second Contract: For providing all services i.e. inland transportation for delivery at site, insurance, unloading, storage, handling at site, installation, Testing and Commissioning including performance testing in respect of all the equipments supplied under the &quot;First Contract&quot;, and any other services specified in the Contract Documents (Services Contract).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>GCC 2.1.2</strong></td>
</tr>
<tr>
<td>Sl. No.</td>
<td>GCC Clause Ref. No.</td>
<td>Amendment/ Supplement to GCC</td>
</tr>
<tr>
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<td>----------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>way dilute the responsibility of the Contractor for the successful completion of the facilities as per Specification and a breach in one Contract shall automatically be construed as a breach of the other Contract(s) which will confer a right on the Employer to terminate the other Contract(s) also at the risk and the cost of the Contractor.</td>
</tr>
<tr>
<td></td>
<td>GCC 2.1.3</td>
<td>The Contract will be signed in two originals and the Contractor shall be provided with one signed original and the second will be retained by the Employer.</td>
</tr>
<tr>
<td></td>
<td>GCC 2.1.4</td>
<td>The Contractor shall provide free of cost to the Employer all the engineering data, drawing and descriptive materials submitted with the bid, in at least two (2) copies to form a part of the Contract immediately after Notification of Award.</td>
</tr>
<tr>
<td></td>
<td>GCC 2.1.5</td>
<td>Subsequent to signing of the Contract, the Contractor at his own cost shall provide the Employer with at least Twenty (20) true copies of Contract Agreement within fifteen (15) days after signing of the Contract.</td>
</tr>
<tr>
<td>5.</td>
<td>GCC 8.3</td>
<td><strong>Addition of following new Sub-Clause after GCC 8.2:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All the payments upto 90% (or 100% for special category states) of project cost of infrastructure and 100% cost of BPL service connections to the Contractor shall be made by XXXX (Name of Employer) strictly out of the funds received from REC on behalf of the Owner. Balance 10% infrastructure cost shall be arranged by owner from REC loan/loan from other FIs/own resources.</td>
</tr>
<tr>
<td>6.</td>
<td>GCC 9.3.1</td>
<td><strong>Supplementing Sub-Clause GCC 9.3.1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In addition to the above, the Contractor shall arrange to provide additional Performance Security(ies), if applicable, as per Clause no. 4 of Joint Deed of Undertaking mentioned at Sl. No. 19 of Volume-I : Section–VI (Sample Forms and Procedures). The said security(ies) shall be required to be extended time to time till ninety (90) days beyond the actual Defect Liability Period, as may be required under the Contract.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Performance Security(ies) to be furnished by the Contractor under the Contract shall be in favour of the Employer. The Owner shall also be entitled to enforce these performance security(ies).</td>
</tr>
<tr>
<td>7.</td>
<td>GCC 10.3</td>
<td><strong>Supplementing Sub-Clause GCC 10.3</strong></td>
</tr>
</tbody>
</table>
|        |                     | The requisite Sales Tax declaration forms shall be issued as under:
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>GCC Clause Ref. No.</th>
<th>Amendment/ Supplement to GCC</th>
</tr>
</thead>
</table>
| 8.     | GCC 10.6           | **Supplementing the Clause GCC 10.6**  
In case Employer is Central Public Sector Undertaking, the recovery of TDS under CST/VAT/WCT/Income Tax Act and any other acts as per Govt. regulation related to this work shall be done by XXXXX (Name of Employer) on behalf of XXXXX(DISCOM Name)/State Govt.. TDS so deducted by XXXXX (Employer Name) on behalf of the XXXX (Name of DISCOM)/State Govt. shall be deposited with the relevant tax authorities and TDS certificates shall be issued on behalf of XXXXX (DISCOM Name)/State Govt. using PAN, TIN, TAN of XXXXX(DISCOM Name). Relevant challans and copies of the TDS certificates shall be forwarded to XXXXX(DISCOM Name) for filling necessary returns. In case, wherever E-filling system is applicable, the relevant information would be given to the Owner for issuing TDS certificate, filling returns, etc. |
| 9.     | GCC 11             | At all places in the clause, replace the word “Employer” with “Employer/Owner/State Distribution Utility in case employer is a Central Public Undertaking.” |
| 10.    | GCC 22.4, 22.5, 22.6 & 22.7 | At all places in the clause, replace the word “Employer” with “Employer/Owner/State Distribution Utility in case employer is a Central Public Undertaking.” |
| 11.    | GCC 24.1           | **Supplementing Clause GCC 24.1**  
Applicable for 5/3.15 MVA 33/11kV, 3-Phase Power Transformer, 100 KVA, 11/0.433kV, 3-phase Station Transformer and 100/63/25 KVA 3-phase and 16 KVA, 11/0.250kV, 1-phase Distribution Transformers only, |
| 12.    | GCC 24.2 (b) & GCC 24.3 | **Supplementing Clause GCC 24.2 (b)**  
**LD for Non-Performance of the Equipment**  
The guaranteed loss at rated voltage for each equipment shall be corrected in accordance with IS2026, Part-I for the purpose of comparison of guaranteed losses with measured losses for levy of liquidated damages. However, the equipment (i.e. Power Transformer/Station Transformer) under no circumstances shall be accepted if the measured losses are more than +15 percent of the guaranteed losses at rated voltage, specified in Appendix – 8 (Guarantees, Liquidated Damages for Non - Performance) to the Contract Agreement.
In case of Distribution Transformer, the equipment under no circumstances shall be accepted if the total losses exceed the max. limit specified in Technical Specifications.

**Differential Price Factors for Liquidated Damages**

The factors and the respective Indian Rupees value per unit of differential loss (applicable for each item/unit of facilities) for purpose of calculation of liquidated damages shall be as stipulated below:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Equipment</th>
<th>Parameter to be taken for applying differential price factor (F)</th>
<th>Value of F in Indian Rupees (applicable for each item/unit of the facilities) per unit of parameter differential per KW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5/3.15 MVA 33/11kV, 3 ph. Power Transformer</td>
<td>Differential Copper loss (KW)</td>
<td>Rs. 1,18,643/- (Indian Rupees One Lakh Eighteen Thousand Six Hundred Forty Three only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Differential Iron Loss (KW)</td>
<td>Rs. 2,61,713/- (Indian Rupees Two Lakh Sixty One Thousand Seven Hundred Thirteen only)</td>
</tr>
<tr>
<td>2</td>
<td>100/63/25 KVA, 11/0.433kV, 3 phase Station &amp; Distribution Transformer/ 16 KVA, 11/0.250kV, 1 or 3 phase Distribution Transformer</td>
<td>Differential Copper loss (KW)</td>
<td>Rs. 1,14,698/- (Indian Rupees One Lakh Fourteen Thousand Six Hundred Ninety Eight only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Differential Iron Loss (KW)</td>
<td>Rs. 2,65,506/- (Indian Rupees Two Lakh Sixty Five Thousand Five Hundred Six only)</td>
</tr>
</tbody>
</table>

The amount of liquidated damages so recoverable shall be as per the aforesaid ceiling and shall not prejudice the contractor's other liabilities under the Contract in any manner. The liquidated damages for shortfall in guaranteed parameters and for delay in completion are independent of each other and shall be levied separately and concurrently.

13. GCC 33.2.3  
**Supplementing Sub-Clause GCC 33.2.3**

Percentage for the Change Proposal under this Clause shall be limited to Ten (10) percent.

14. Appendix-I to SCC  
**Enclosed herewith**

----- End of Section-V (SCC) -----

---

RGGVY/XII Plan/SBD-R1
## LIST OF ELIGIBLE SCHEDULED COMMERCIAL PRIVATE INDIAN BANKS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HDFC Bank Ltd.</td>
</tr>
<tr>
<td>2</td>
<td>Axis Bank Ltd.</td>
</tr>
<tr>
<td>3</td>
<td>Kotak Mahindra Bank Ltd.</td>
</tr>
<tr>
<td>4</td>
<td>Federal Bank Ltd.</td>
</tr>
<tr>
<td>5</td>
<td>Indusind Bank Ltd.</td>
</tr>
<tr>
<td>6</td>
<td>Development Credit Bank Ltd.</td>
</tr>
<tr>
<td>7</td>
<td>ING Vysya Bank Ltd.</td>
</tr>
<tr>
<td>8</td>
<td>Karnataka Bank Ltd.</td>
</tr>
<tr>
<td>9</td>
<td>Karur Vysya Bank Ltd.</td>
</tr>
<tr>
<td>10</td>
<td>Ratnakar Bank Ltd.</td>
</tr>
<tr>
<td>11</td>
<td>South Indian Bank Ltd.</td>
</tr>
<tr>
<td>12</td>
<td>Yes Bank Ltd.</td>
</tr>
</tbody>
</table>
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SAMPLE FORMS AND PROCEDURES (FORMS)

Preamble

This Section (Section -VI) of the Bidding Documents [named as Sample Forms and Procedures (FORMS)] provides proforma to be used by the bidders at the time of their bid preparation and by the Contractor subsequent to the award of Contract.

The Bidder shall complete, sign and submit with its bid the relevant FORMS to be used unamended, in accordance with the requirements included in the Bidding Documents.

The Bidder shall provide the Bid Security, either in the form included hereafter or in another form acceptable to the Employer, pursuant to the provisions in the instructions to Bidders.

The Form of Contract Agreement shall be used unamended, except for the need to complete Article 1.1 (Contract Documents), as appropriate and as may be required to suit the specific requirement of the Contract. The form shall also include the Appendices listed, as required, which should be completed according to the instructions for their completion provided at the beginning of each Appendix. The Price Schedule deemed to form part of the contract shall be modified according to any corrections or modifications to the accepted bid resulting from price corrections, pursuant to the provisions of the Instructions to Bidders.

The Performance Security(ies) and Bank Guarantee for Advance Payment forms should not be completed by the bidders at the time of their bid preparation. Only the successful Bidder will be required to provide the Performance Security(ies) and Bank Guarantee for Advance Payment, according to one of the forms indicated herein or in another form acceptable to the Employer and pursuant to the provisions of the General and Special Conditions of Contract, respectively.

Depending on specific facts and circumstances related to the Bid, other specific agreement, if any, and the contract, the text of the Forms herein may need to be modified to some extent. The Employer reserves the right to make such modifications in conformity with such specific facts and circumstances and rectify and consequent discrepancies, if any. However, modifications, if any, to the text of the Forms that may be required in the opinion of the Bidder/Contractor shall be effected only if the same is approved by the Employer. The Employer’s decision in this regard shall be final and binding.
1. **BID FORMS AND PRICE SCHEDULES**

1.1 **Bid Form**

Please see Volume - III.

1.2 **Price Schedule**

Please see Volume - III
2. **BID SECURITY FORM**

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper should be in the name of the issuing Bank)

Bank Guarantee No.: ................................
Date: ........................................

To: (insert Name and Address of Employer)

WHEREAS M/s. .... (insert name of Bidder)...... having its Registered/Head Office at ..... (insert address of the Bidder) ............ (hereinafter called "the Bidder") has submitted its Bid for the performance of the Contract for.............(insert name of the Package).............under.............(insert Specification No)............. (hereinafter called "the Bid")

KNOW ALL PERSONS by these present that WE ........ (insert name & address of the issuing bank) ........ having its Registered/Head Office at ..........(insert address of registered office of the bank)......... (hereinafter called "the Bank"), are bound unto ......(insert name of Employer)..... (hereinafter called "the Employer") in the sum of .................(insert amount of Bid Security in figures & words)........................... for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this ............. day of .............. 20....

THE CONDITIONS of this obligation are:

(1) If the Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form; or

(2) In case the Bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated by him in the bid and/or accept the withdrawals/rectifications pursuant to the declaration/confirmation made by him in Attachment – Declaration of the Bid; or

(3) If the Bidder does not accept the corrections to arithmetical errors identified during preliminary evaluation of his bid pursuant to ITB Clause 27.2; or

(4) If, as per the requirement of Qualification Requirements the Bidder is required to submit a Deed of Joint Undertaking and he fails to submit the same, duly attested by
Notary Public of the place(s) of the respective executant(s) or registered with the Indian Embassy/High Commission in that Country, within ten days from the date of intimation of post-bid discussion; or

(5) in the case of a successful Bidder, if the Bidder fails within the specified time limit

(i) to sign the Contract Agreement, in accordance with ITB Clause 33, or

(ii) to furnish the required performance security, in accordance with ITB Clause 34.

or

(6) In any other case specifically provided for in ITB.

WE undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer will note that the amount claimed by it is due to it, owing to the occurrence of any of the above-named CONDITIONS or their combination, and specifying the occurred condition or conditions.

This guarantee will remain in full force up to and including .......... (insert date, which shall be the date 30 days after the period of bid validity)........., and any demand in respect thereof must reach the Bank not later than the above date.

For and on behalf of the Bank

[Signature of the authorised signatory(ies)]

Signature_______________________

Name__________________________

Designation_____________________

POA Number_____________________

Contact Number(s): Tel.____________ Mobile____________

Fax Number_____________________

email __________________________

Common Seal of the Bank________________________

Witness:

Signature_______________________

RGGVY/XII Plan/SBD-R1
Name_______________________

Address________________________________________

Contact Number(s): Tel.______________Mobile______________

e-mail ____________________________

Note:

1. In case the bid is submitted by a Joint Venture, the bid security shall be in the name of the Joint Venture and not in the name of the Lead Partner or any other Partner(s) of the Joint Venture.

2. The Bank Guarantee should be in accordance with the proforma as provided. However, in case the issuing bank insists for additional paragraph for limitation of liability, the following may be added at the end of the proforma of the Bank Guarantee [i.e., end paragraph of the Bank Guarantee preceding the signature(s) of the issuing authority(ies) of the Bank Guarantee]:

Quote

“Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed _________ (value in figures)____________ [_____________________ (value in words)____________].

2. This Bank Guarantee shall be valid upto ________(validity date)__________.

3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only & only if we receive a written claim or demand on or before _________ (validity date) __________.

Unquote
3a. FORM OF NOTIFICATION BY THE EMPLOYER TO THE BANK
(Applicable for Forfeiture of Bank Guarantee)

To: (insert Name and Address of the issuing Bank)

Ref: Forfeiture of Bid Security Amount against Bank Guarantee No. ...... ............... dated ............. for ............... , issued by you on behalf of M/s. .......(insert name of the Bidder) ..........

Dear Sirs,

Please refer to the subject Bank Guarantee executed by you in our favour for ....................... as Bid Security for the bid submitted by M/s. .......(insert name of the Bidder) ............ against ..... (insert name of the Package) ........ ; Specification No. ......................

As per the terms of the said guarantee, the bank has guaranteed and undertaken to pay immediately on demand by the Employer the amount of ............... without any reservation, protest, demur and recourse. Further, any demand made by the Employer shall be conclusive and binding on the Bank irrespective of any dispute or difference raised by the Bidder.

In terms of the said guarantee, we hereby submit our claim/demand through this letter for remittance of Bid Security amount to .... (insert name of the Employer) ........ owing to the occurrence of the condition referred to at Sl. No. ........ The Bank is requested to remit the full guaranteed sum ......................... towards proceeds of the bid security in the form of Demand Draft in favour of ‘.... (insert name of the Employer) ........’, payable at ....(insert place of the Employer)....’.

Thanking you,

For...............(Name of the Employer)

(AUTHORISED SIGNATORY)

Copy to:
.....(Registered Office of the Bank)....
3b. **FORM OF NOTIFICATION BY THE EMPLOYER TO THE BANK**
(Applicable for conditional claim pending extension of Bank Guarantee by the Bidder)

To: (insert Name and Address of the issuing Bank)

Ref.: Conditional Claim against Bank Guarantee No. ...... ............... dated ............... for ................. valid up to ................. issued by you on behalf of M/s. ...........(insert name of the Bidder) ...........

Dear Sirs,

Please refer to the subject Bank Guarantee executed by you in our favour on behalf of M/s. ...........(insert name of the Bidder) ..........., who have submitted this Bank Guarantee to us towards Bid Security against ..... (insert name of the Package) ........ ; Specification No. ................................

We, ........ (insert name of the Employer) ............ do hereby request you to lodge our claim/demand against the subject Bank Guarantee for full guaranteed sum. Kindly note that this claim/demand against the subject Bank Guarantee is without any further notice in case the amendment to Bank Guarantee No. ............... dated ............... extending its validity upto ................. is not got arranged by ...........(insert name of the Bidder) ............ in our favour and are not received by us upto ............... In such an event you are requested to remit the full guaranteed amount in terms of the subject guarantee in its letter and spirit and proceeds of this Bank Guarantee shall be forwarded to us in form of demand draft in favour of ‘.... (insert name of the Employer) ......., payable at ....(insert place of the Employer)....’. 

This is without prejudice to our right under this guarantee and under the law.

Thanking you,

For.................(Name of the Employer)

(AUTHORISED SIGNATORY)

Copy to:
(insert Name and Address of the Bidder)

- You are requested to do the needful so that the amendment to the subject Bank Guarantee extending the validity up to ............... is received by us by .................
FORM OF ‘NOTIFICATION OF AWARD OF CONTRACT’

4a. FORM OF ‘NOTIFICATION OF AWARD OF CONTRACT’ FOR SUPPLY OF PLANT AND EQUIPMENT

Ref. No. :

Date :

...............(insert Contractor's Name & Address)...........
........................................................................................................
........................................................................................................
........................................................................................................
[in case of Joint Venture, the aforesaid details shall be of the Lead Partner and the following shall also be included:
(Lead Partner of the Joint Venture of M/s. ................. and M/s. .........................)]

Attn : Mr......................................

Sub. : Notification of Award for Ex-works Supply Contract for ............ (insert name of the Package) ........ Specification No.: ................. Domestic Competitive Bidding. (Project Funding: Domestic).

Dear Sir,

1.0 REFERENCE

This has reference to the following:

1.1 Our Invitation for Bids (IFB) dated ...........

1.2 Bidding documents for the subject package issued to you vide our letter Ref. No. ................. dated ..........., comprising the following:

a) Conditions of Contract Volume-I
   (Document Code No. ......................)

b) Technical Specifications Volume-II
   (Document Code No. ......................)

c) Bid Form, Price Schedules Volume-III
   & Technical Data Sheets
   (Document Code No. ......................)

1.2.1 Amendment/Errata No. ...... to Bidding Documents issued to you vide our letter no. ............. dated ............

RGGVY/XII Plan/SBD-R1
1.2.2 Clarifications to the Bidding Documents, pursuant to pre-bid conference held on ............... issued to you vide our letters no. ............. dated ............. (Use as applicable)
(Applicable only if any clarification to the Bidding Documents has been issued subsequently)

(INCLUDE AS FURTHER SUB-PARAGRAPHS ANY OTHER CORRESPONDENCE MADE TO THE BIDDER AFTER ISSUANCE OF BIDDING DOCUMENTS UP TO BID OPENING)

1.3 First envelope of your Bid submitted/the Bid submitted by the Joint Venture (JV) of M/s. ......................... (Lead Partner) and M/s. ......................... (Other Partner) for the subject package under Proposal reference no. ............... dated ............... was opened on ............... (Use as applicable)

1.4 Intimation for Opening of Price Schedule issued to you vide our letter no. ............... dated ............... 

1.5 Your Bid/the Bid by the Joint Venture (JV) of M/s. ......................... (Lead Partner) and M/s. ......................... (Other Partner) under proposal reference no. ............... dated ............... was opened on ............... (Use as applicable)

1.6 Post bid discussions we had with you on various dates from ............... to ............... resulting into the Minutes of Meeting/ Record Notes of Post Bid Discussions enclosed as APPENDIX (NOA)-1 with this Notification of Award.

2.0 AWARD OF CONTRACT AND ITS SCOPE

2.1 We confirm having accepted your Bid/Bid of the Joint Venture (JV) of M/s. ......................... (Lead Partner) and M/s. ......................... (Other Partner) (Use as applicable) (referred to at para 1.3 & 1.5 above) read in conjunction with all the specifications, terms & conditions of the Bidding Documents (referred to at para 1.2, 1.2.1 & 1.2.2 [modify as applicable] above) and specific confirmations recorded in the Record Notes of Post Bid Discussions (referred to at para 1.6 above), and award on you/the JV (use as applicable) the ‘Ex-works Supply Contract’ (also referred to as the ‘First Contract’) covering inter-alia Ex-works supply of all equipment and materials including Type Testing to be conducted, required for the complete execution of the ...... (insert name of Package alongwith name of the Project) ......., as detailed in the documents referred hereinabove. The scope of work inter-alia includes the following:

....................... (Indicate brief Scope of Work) ....................... 

RGGVY/XII Plan/SBD-R1
The scope of work under this Notification of Award (NOA) shall also include all such items which are not specifically mentioned in the Bidding Documents and/or your bid but are necessary for the successful completion of your scope under the Contract for the construction of ...... (insert name of Package alongwith name of the Project) ......, unless otherwise specifically excluded in the Bidding Documents or in this NOA.

2.1.1 You, the Lead Partner of the JV, along with M/s. .........................., the Other Partner of JV, shall be liable jointly and severally for the execution of the Contract in accordance with terms and conditions of the Contract. As per the Power of Attorney furnished in your favour by the Joint Venture, as enclosed with Bid Proposal of the JV, you shall act as the Partner In-charge (Lead Partner) of the above Joint Venture for execution of the Contract. (This provision shall be included only in case the Bidder is a Joint Venture)

2.2 The notification for award of Contract for performance of all other activities, as set forth in the Bidding Documents, viz.

............................ (Indicate brief scope of work of the Second Contract)

............................

has been issued on you vide our NOA no. ............ dated ............ (hereinafter called the “Second Contract” or “Services Contract”).

Notwithstanding the award of work under two separate Contracts in the aforesaid manner, you/the JV (use as applicable) shall be overall responsible to ensure the execution of both the Contracts to achieve successful completion and taking over of the works under the package by the Employer as per the requirements stipulated in the Bidding Documents. It is expressly understood and agreed by you/the JV (use as applicable) that any default or breach under the ‘Second Contract’ shall automatically be deemed as a default or breach of this ‘First Contract’ also and vice-versa, and any such default or breach or occurrence giving us a right to terminate the ‘Second Contract’, either in full or in part, and/or recover damages there under, shall give us an absolute right to terminate this Contract, at your/JV’s (use as applicable) risk, cost and responsibility, either in full or in part and/or recover damages under this ‘First Contract’ as well. However, such default or breach or occurrence in the ‘Second Contract’, shall not automatically relieve you/the JV (use as applicable) of any of your/JV’s (use as applicable) obligations under this ‘First Contract’. It is also expressly understood and agreed by you/the JV (use as applicable) that the equipment/materials supplied by you/the JV (use as applicable) under this ‘First Contract’, when erected, installed & commissioned by you under the ‘Second Contract’ shall give satisfactory performance in accordance with the provisions of the Contract.
3.0 **CONTRACT PRICE**

3.1 The total Contract Price for the entire scope of work under this Contract shall be ............... (Specify the currency and the amount in figures & words) ............. as per the following break-up:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Price Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ex-Works Price component</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Type Test Charges</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Total for Ex-works Supply Contract**

3.2 Notwithstanding the break-up of the Contract Price, the Contract shall, at all times, be construed as a single source responsibility Contract and any breach in any part of the Contract shall be treated as a breach of the entire Contract.

4.0 You/The JV (use as applicable) are/is required to furnish at the earliest a Performance Security(ies), as per the Bidding Documents, for an amount of .......... (Specify the value) .......... i.e. equal to 15% (Fifteen percent) of the Contract Price, and valid upto and including ..................... and any other securities as per the Bidding Documents.

(In case any other performance security is required to be furnished, the same is to be mentioned here)

5.0 For release of advance payment (admissible as per the Bidding Documents) equal to .......% of the Ex-works Price component of the Contract Price, you are, inter-alia, required to furnish a Bank Guarantee for the equivalent advance amount. The validity of the Advance Bank Guarantee shall be up to and including .......... Further, please note that furnishing of all the Contract Performance Securities under the ‘First Contract’ and ‘Second Contract’ shall be one of the conditions precedent to release of advance under this Contract.

6.0 All the bank guarantees shall be furnished from an eligible bank as described in the Bidding Documents.

7.0 The schedule for Taking Over/Completion of Facilities by the Employer upon successful completion of the ...... (insert name of Package alongwith name of the Project) .... shall be ... (indicate the completion schedule) .... months from the date of issue of this Notification of Award for all contractual purposes.

8.0 This Notification of Award constitutes formation of the Contract and comes into force with effect from the date of issuance of this Notification of Award.
9.0 You shall enter into a Contract Agreement with us within twenty-eight (28) days from the date of this Notification of Award.

10.0 This Notification of Award is being issued to you in duplicate. We request you to return its duplicate copy duly signed and stamped on each page including the enclosed Appendix as a token of your acknowledgement.

Please take the necessary action to commence the work and confirm action.

Yours faithfully,

For and on behalf of

...............(Name of the Employer).............

(Authorised Signatory)

Enclosures:

APPENDIX (NOA) – 1 - Record Notes of Post - Bid Discussions held on various dates from ............... to ....................
4b. FORM OF ‘NOTIFICATION OF AWARD OF CONTRACT’ FOR INSTALLATION OF PLANT AND EQUIPMENT

Ref. No. :

Date :
............(insert Contractor's Name & Address)............
........................................................................
........................................................................
........................................................................
[in case of Joint Venture, the aforesaid details shall be of the Lead Partner and the following shall also be included:
(Lead Partner of the Joint Venture of M/s. .................. and M/s. .........................)]

Attn : Mr.................................

Sub. : Notification of Award for Services Contract for ........... (insert name of the Package)
........... Specification No.: .................. Domestic Competitive Bidding. (Project Funding: Domestic).

Dear Sir,

1.0 REFERENCE

This has reference to the following:

1.1 Our Invitation for Bids (IFB) dated ............

1.2 Bidding documents for the subject package issued to you vide our letter Ref. No. ................. dated ............, comprising the following:

   a) Conditions of Contract Volume-I
      (Document Code No. ..................)

   b) Technical Specifications Volume-II
      (Document Code No. ..................)

   c) Bid Form, Price Schedules Volume-III
      & Technical Data Sheets
      (Document Code No. ..................)

1.2.1 Amendment/Errata No. ...... to Bidding Documents issued to you vide our letter no. ............ dated ............
(Applicable only if any Errata/Amendment to the Bidding Documents has been issued subsequently)
1.2.2 Clarifications to the Bidding Documents, pursuant to pre-bid conference held on .........., issued to you vide our letters no. .......... dated .......... (Use as applicable)
(Applicable only if any clarification to the Bidding Documents has been issued subsequently)

(INCLUDE AS FURTHER SUB-PARAGRAPHS ANY OTHER CORRESPONDENCE MADE TO THE BIDDER AFTER ISSUANCE OF BIDDING DOCUMENTS UP TO BID OPENING)

1.3 First envelope of your Bid submitted/the Bid submitted by the Joint Venture (J V) of M/s. ................................ (Lead Partner) and M/s. ................................ (Other Partner) for the subject package under Proposal reference no. .......... dated ....................... was opened on ............... (Use as applicable)

1.4 Intimation for Opening of Price Schedule issued to you vide our letter no. ............. dated .............

1.5 Your Bid/the Bid by the Joint Venture (J V) of M/s. ................................ (Lead Partner) and M/s. ................................ (Other Partner) under proposal reference no. ................... dated ........... was opened on ............... (Use as applicable)

1.6 Post bid discussions we had with you on various dates from ............ to ............ resulting into the Minutes of Meeting/ Record Notes of Post Bid Discussions enclosed as APPENDIX (NOA)-1 with this Notification of Award.

2.0 AWARD OF CONTRACT AND ITS SCOPE

2.1 We confirm having accepted your Bid/Bid of the Joint Venture (J V) of M/s. ................................ (Lead Partner) and M/s. ................................ (Other Partner) (Use as applicable) (referred to at para 1.3 & 1.5 above) read in conjunction with all the specifications, terms & conditions of the Bidding Documents (referred to at para 1.2, 1.2.1 & 1.2.2 [modify as applicable] above) and specific confirmations recorded in the Record Notes of Post Bid Discussions (referred to at para 1.6 above), and award on you/the JV(use as applicable) the ‘Services Contract’ (also referred to as the ‘Second Contract’) for performance of all other activities, as set forth in the documents, viz. ....................... (Indicate brief scope of work) ................................. for the ...... (insert name of Package alongwith name of the Project)....

The scope of work under this Notification of Award (NOA) shall also include all such items which are not specifically mentioned in the Bidding Documents and/or your bid but are necessary for the successful completion of your scope under the Contract for the construction of ...... (insert name of Package alongwith name of the Project) ......., unless otherwise specifically excluded in the Bidding Documents or in this NOA.
2.1.1 You, the Lead Partner of the JV, along with M/s. .................., the Other Partner of JV, shall be liable jointly and severally for the execution of the Contract in accordance with terms and conditions of the Contract. As per the Power of Attorney furnished in your favour by the Joint Venture, as enclosed with Bid Proposal of the JV, you shall act as the Partner In-charge (Lead Partner) of the above Joint Venture for execution of the Contract. (This provision shall be included only in case the Bidder is a Joint Venture)

2.2 The notification for award of Contract for Ex-works Supply of all equipment and materials including Type Testing to be conducted, as set forth in the – documents, viz.

.................................. (Indicate brief scope of work of the First Contract)
..................................

has been issued on you vide our NOA no. ............. dated ............... (hereinafter called the “Ex-works Supply Contract” or “First Contract”).

Notwithstanding the award of work under two separate Contracts in the aforesaid manner, you/the JV (use as applicable) shall be overall responsible to ensure the execution of both the Contracts to achieve successful completion and taking over of the works under the package by the Employer as per the requirements stipulated in the Bidding Documents. It is expressly understood and agreed by you/the JV(use as applicable) that any default or breach under the ‘First Contract’ shall automatically be deemed as a default or breach of this ‘Second Contract’ also and vice-versa, and any such default or breach or occurrence giving us a right to terminate the ‘First Contract’, either in full or in part, and/or recover damages there under, shall give us an absolute right to terminate this Contract, at your/JV’s (use as applicable) risk, cost and responsibility, either in full or in part and/or recover damages under this ‘Second Contract’ as well. However, such default or breach or occurrence in the ‘First Contract’, shall not automatically relieve you/the JV(use as applicable) of any of your obligations under this ‘Second Contract’. It is also expressly understood and agreed by you/the JV(use as applicable) that the equipment/materials supplied by you/the JV(use as applicable) under the ‘First Contract’, when erected, installed & commissioned by you/the JV(use as applicable) under this ‘Second Contract’ shall give satisfactory performance in accordance with the provisions of the Contract.

3.0 CONTRACT PRICE

3.1 The total Contract Price for the entire scope of work under this Contract shall be ............. (Specify the currency and the amount in figures & words) ............. as per the following break-up:
Sample Forms and Procedures

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Price Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Local Transportation, Insurance and other Incidental Services (including port clearance etc)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Installation Services</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Training Charges</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Total for Services Contract**

3.2 Notwithstanding the break-up of the Contract Price, the Contract shall, at all times, be construed as a single source responsibility Contract and any breach in any part of the Contract shall be treated as a breach of the entire Contract.

4.0 You/the JV(use as applicable) are/is required to furnish at the earliest a Performance Security(ies), as per the Bidding Documents, for an amount of ...... (Specify the value) ........... i.e. equal to 15% (Fifteen percent) of the Contract Price, and valid upto and including .................... and any other securities as per the Bidding Documents.

(In case any other performance security is required to be furnished, the same is to be mentioned here)

5.0 All the bank guarantees shall be furnished from an eligible bank as described in the Bidding Documents.

6.0 The schedule for Taking Over/Completion of Facilities by the Employer upon successful completion of the ...... (insert name of Package along with name of the Project) .... shall be ... (indicate the completion schedule) .... months from the date of issue of this Notification of Award for all contractual purposes.

7.0 This Notification of Award constitutes formation of the Contract and comes into force with effect from the date of issuance of this Notification of Award.

8.0 You shall enter into a Contract Agreement with us within twenty-eight (28) days from the date of this Notification of Award.

9.0 This Notification of Award is being issued to you in duplicate. We request you to return its duplicate copy duly signed and stamped on each page including the enclosed Appendix as a token of your acknowledgement.

Please take the necessary action to commence the work and confirm action.

Yours faithfully,

For and on behalf of

RGGVY/XII Plan/SBD-R1
(Name of the Employer)

(Authorised Signatory)

Enclosures:
APPENDIX (NOA) - 1 - Record Notes of Post - Bid Discussions held on various dates from ............ to ..................

Note:
(1) Instructions indicated in italics in this notification of award are to be taken care of by the issuing authority. The Forms may be modified appropriately to suit the specific requirement of the Contract.
5. **FORM OF CONTRACT AGREEMENT**

[Alternative - a]

EX-WORKS SUPPLY CONTRACT AGREEMENT BETWEEN .................. (Name of Employer) .................. AND M/s. .................. (Name of Contractor) ................../JOINT VENTURE (JV) OF M/s. ........ (Name of Lead Partner). .. (THE LEAD PARTNER OF THE JV) AND M/s. ......(Name of Other Partner)...... (THE PARTNER OF THE JV) [Use as applicable]

THIS CONTRACT AGREEMENT No. .................. (also referred to as 'Ex-Works Supply Contract/the First Contract') is made on the ..... day of ............... 20.....

BETWEEN

(1) .................. (Name of Employer).................. a company incorporated under the laws of Companies Act 1956 and having its Registered Office at ..........(registered address of the Employer) .................. and its Corporate Office at ..........(address of the Employer)............... (hereinafter called "the Employer" and also referred to as “.....(insert abbreviated name of the Employer) ........")

and

(2) M/s ............ (Name of Contractor) ............, a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Contractor) .................................. and Registered Office at ...........(Registered address of Contractor) ............ (hereinafter called "the Contractor" and also referred to as “.....(insert abbreviated name of the Contractor) ........")

or

Joint Venture (JV) of M/s ............ (Name of Lead Partner) ............ (the Lead Partner of JV), a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Lead Partner) .................. and Registered Office at ...........(Registered address of Lead Partner) .................. and M/s ............ (Name of Other Partner) ............ (the Partner of JV), a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Other Partner) .................. and Registered Office at ...........(Registered address of Other Partner) ............ (hereinafter called "the Contractor" and also referred to as “Joint Venture”/the ‘JV”)

(Applicable only in case of Joint Venture)

WHEREAS the Employer desires to engage the Contractor for the Ex-works supply of all equipment and materials including Type Testing to be conducted inter-alia including .................. (Indicate brief scope of work) .................. for the complete
execution of the …… (insert name of Package alongwith name of the Project)……. as
detailed in the Contract Document ("the Facilities"), and the Contractor has 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 2.2)**

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:

**VOLUME – A**

1. This Contract Agreement and the Appendices thereto.
2. Notification of Award Ref. No. ……………………….. dated ……………..

**VOLUME – B**

3. “Bidding Documents” comprising of the following:

   The Bidding Document is a compilation of the following and shall include
   amendments…. to ……, if any, thereto:

**a. VOLUME – I: Condition of contract** (Document Code No.: ……………..):

   Section I: Invitation for Bid (Section - IFB)
   Section II: Instructions to Bidders (Section – ITB)
   Section III: Bid Data sheets (BDS)
   Section IV: General Conditions of Contract (GCC)
   Section V: Special Conditions of Contract (SCC)
   Section VI: Sample Forms and Procedures (FP)

   1. Bid Form & Price Schedule
      1.1 Bid Form
      1.2 Price Schedule
   2. Bid Security Form
   3. Form of Notification by the Employer to the Bank
      3.a Applicable for forfeiture of Bank Guarantee
      3.b Applicable for conditional claim pending extension of Bank Guarantee by the
         bidder.
   4. Form of ‘Notification of Award of Contract’
4(a) Form of ‘Notification of Award of Contract’ for Supply of Plant and equipment
4(b) Form of ‘Notification of Award of Contract’ for Installation of Plant and equipment

5. Form of Contract Agreement
   Alternative A
   Alternative B

5.1 Appendix-1: Terms and Procedures of Payment: Grid/Power Substation, and 11KV, Distribution Transformer, LT and Service connection
5.2 Appendix-2: Price Adjustment
5.3 Appendix-3: Insurance Requirements
5.4 Appendix-4: Time Schedule
5.5 Appendix-5: List of Approved Subcontractors
5.6 Appendix-6: Scope of Works and Supply by the Employer
5.7 Appendix-7: List of Document for Approval or Review
5.8 Appendix-8: Guarantees, Liquidated Damages for Non-Performance

6. Performance Security Form
7. Bank Guarantee Form for Advance Payment
8. Form of Taking over Certificate
9. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in one lot by Employer for performance of its contract
10. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in installments by Employer For performance of its contract
11. Form of Authorisation Letter
12. Form of Trust Receipt for Plant, Equipment and Materials received
13. Form of Extension of Bank Guarantee
14. Form of Power of Attorney for Joint Venture
15. Form of Undertaking by the Joint Venture Partners
16. Format for Evidence of Access to or Availability of Credit/ Facilities
17. Form of Operational Acceptance
Sample Forms and Procedures

18. Form of Safety Plan to be submitted by the Contractor within sixty days of award of contract
19. Form of joint deed of undertaking by the Sub-contractor along with the bidder / contractor
20. Form of Certificate of Financial Parameters for QR

Section VII: General Information & Scope of Village Electrification Works
Section VIII: Scope of 33/11 kV Substation works (REDB)

b. VOLUME-II: Technical Specifications, Drawings (Document Code No.: 
........................):
   Section I: Civil Works & Soil Investigation,
   Section II: Technical Specifications
   Section III: Tender Drawings
   Section IV: Project Management System (PMS), 3-Tier Quality Assurance
              Mechanism (QAM) & Documentation

c. Volume-III: Bid - Proposal Sheets (Document Code No.: .................):
   Section I: Bid Form
   Section II: Guaranteed Technical Particulars (GTP)
   Section III: Price Schedule

VOLUME - C

4. Bid Submitted by the Contractor.

(Only relevant extracts are attached herewith for easy reference. Should the circumstances warrant, the original Bid along with the enclosures thereof, shall be referred to.).

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 (Contract Documents) above.

1.3 Definitions (Reference GCC Clause 1/SCC Clause 1)

1.3.1 Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the General Conditions of Contract/Special Conditions of Contract.

Article 2. Contract Price and Terms of Payment
2.1 Contract Price (Reference GCC Clause 7)

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 ....... (amount in words) ................. (.............(amount in figures) ...... .........), or such other sums as may be determined in accordance with the terms and conditions of the Contract. The break-up of the Contract price is as under:

<table>
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<tr>
<th>Sl. No.</th>
<th>Price Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ex-Works Price Component</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Type Test Charges</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Total for Ex-Works Supply Contract</td>
<td></td>
</tr>
</tbody>
</table>

The detailed break-up of Contract Price is given in the relevant Appendices hereto.

2.2 Terms of Payment (Reference GCC Clause 8)

The terms and procedures of payment according to which the Employer will reimburse the Contractor are given in Appendix 1 (Terms and Procedures of Payment) hereto.

Article 3. Effective Date for Determining Time for Completion

3.1 Effective Date (Reference GCC Clause 1)

The Time of Completion of Facilities shall be determined from the date of the Notification of Award i.e., from .................

Article 4. Appendices

The Appendices listed in the List of Appendices, as mentioned below, shall be deemed to form an integral part of this Contract Agreement.

Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

List of Appendices

Appendix 1 Terms and Procedures of Payment
Appendix 2 Price Adjustment
Appendix 3 Insurance Requirements
Appendix 4 Time Schedule

RGGVY/XII Plan/SBD-R1
Article 5.

The Contract Agreement No. …………………….. has also been made on the ....... day of ............ 20...., between the Employer and the Contractor for the Services Contract (hereinafter referred to as the “Second Contract”) for the subject package which includes performance of all the services interalia including ......................... (Indicate brief scope of work) ......................... for the complete execution of the ...... (insert name of Package alongwith name of the Project)....... 

Notwithstanding the award of contract under two separate contracts in the aforesaid manner, the Contractor shall be overall responsible to ensure the execution of both the contracts to achieve successful completion and taking over of the facilities by the Employer as per the requirements stipulated in the Contract. It is expressly understood and agreed by the Contractor that any default or breach under the ‘Second Contract’ shall automatically be deemed as a default or breach of this ‘First Contract’ also and vice-versa and any such breach or occurrence or default giving the Employer a right to terminate the ‘Second Contract’ either in full or in part, and/or recover damages there under that Contract, shall give the Employer an absolute right to terminate this Contract at the Contractor’s risk, cost and responsibility, either in full or in part and /or recover damages under this ‘First Contract’ as well. However, such breach or default or occurrence in the ‘Second Contract’ shall not automatically relieve the Contractor of any of its responsibility/ obligations under this ‘First Contract’. It is also expressly understood and agreed by the Contractor that the equipment /materials supplied by the Contractor under this ‘First Contract’ when installed and commissioned by the Contractor under the ‘Second Contract’ shall give satisfactory performance in accordance with the provisions of the Contract.

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

Signed by for and on behalf of the Contractor

........................................
Signature

........................................
Title

in the presence of
5. **FORM OF CONTRACT AGREEMENT**

[Alternative - b]

SERVICES CONTRACT AGREEMENT BETWEEN ................ (Name of Employer) ............... AND M/s. ................. (Name of Contractor) .................. /JOINT VENTURE (JV) OF M/s. ........ (Name of Lead Partner).... (THE LEAD PARTNER OF THE JV) AND M/s. ......(Name of Other Partner)...... (THE PARTNER OF THE JV) [Use as applicable]

THIS CONTRACT AGREEMENT No. .................. (also referred to as ‘Services Contract/the Second Contract’) is made on the ..... day of ............. 20.....

BETWEEN

(1) .................... (Name of Employer).................. a company incorporated under the laws of Companies Act 1956 and having its Registered Office at ........(registered address of the Employer) .............. and its Corporate Office at ..........(address of the Employer).............. (hereinafter called “the Employer” and also referred to as “.....(insert abbreviated name of the Employer) .......”)

and

(2) M/s .............. (Name of Contractor) ..........., a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Contractor) ........................ and Registered Office at ..........(Registered address of Contractor) ........................ (hereinafter called “the Contractor” and also referred to as “.....(insert abbreviated name of the Contractor) .......”)

or

Joint Venture (JV) of M/s ............... (Name of Lead Partner) ................. (the Lead Partner of JV), a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Lead Partner) ........................ and Registered Office at ..........(Registered address of Lead Partner) ........................ and M/s ............... (Name of Other Partner) .................. (the Partner of JV), a company incorporated under the laws of Companies Act 1956 and having its Principal place of business at ...........(Address of Other Partner) ........................ and Registered Office at ...........(Registered address of Other Partner) ........................ (hereinafter called “the Contractor” and also referred to as “Joint Venture”/the ‘JV’”)

(Applicable only in case of Joint Venture)

WHEREAS the Employer desires to engage the Contractor for providing all the services inter-alia including ..................... (Indicate brief scope of work) ..................... for the
complete execution of the ...... (insert name of Package alongwith name of the Project)....... as detailed in the Contract Document ("the Facilities"), and the Contractor has 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 2.2)

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:

VOLUME – A

1. This Contract Agreement and the Appendices thereto.
2. Notification of Award Ref. No. ......................... dated .................

VOLUME – B

3. “Bidding Documents” comprising of the following:

The Bidding Document is a compilation of the following and shall include amendments.... to ......, if any, thereto:

a. VOLUME – I: Condition of contract (Document Code No.: .................):

Section I: Invitation for Bid (Section - IFB)
Section II: Instructions to Bidders (Section – ITB)
Section III: Bid Data sheets (BDS)
Section IV: General Conditions of Contract (GCC)
Section V: Special Conditions of Contract (SCC)
Section VI: Sample Forms and Procedures (FP)

1. Bid Form & Price Schedule
   1.1 Bid Form
   1.2 Price Schedule
2. Bid Security Form
3. Form of Notification by the Employer to the Bank
   3.a Applicable for forfeiture of Bank Guarantee
   3.b Applicable for conditional claim pending extension of Bank Guarantee by the bidder.
4. Form of ‘Notification of Award of Contract’
4(a) Form of ‘Notification of Award of Contract’ for Supply of Plant and equipment
4(b) Form of ‘Notification of Award of Contract’ for Installation of Plant and equipment

5. Form of Contract Agreement
   Alternative A
   Alternative B

5.1 Appendix-1: Terms and Procedures of Payment: Grid/Power Substation, and 11KV, Distribution Transformer, LT and Service connection
5.2 Appendix-2: Price Adjustment
5.3 Appendix-3: Insurance Requirements
5.4 Appendix-4: Time Schedule
5.5 Appendix-5: List of Approved Subcontractors
5.6 Appendix-6: Scope of Works and Supply by the Employer
5.7 Appendix-7: List of Document for Approval or Review
5.8 Appendix-8: Guarantees, Liquidated Damages for Non-Performance

6. Performance Security Form
7. Bank Guarantee Form for Advance Payment
8. Form of Taking over Certificate
9. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in one lot by Employer for performance of its contract
10. Form of Indemnity Bond to be executed by the Contractor for the Equipment handed over in installments by Employer for performance of its contract
11. Form of Authorisation Letter
12. Form of Trust Receipt for Plant, Equipment and Materials received
13. Form of Extension of Bank Guarantee
14. Form of Power of Attorney for Joint Venture
15. Form of Undertaking by the Joint Venture Partners
16. Format for Evidence of Access to or Availability of Credit/Facilities
17. Form of Operational Acceptance
18. Form of Safety Plan to be submitted by the Contractor within sixty days of award of contract
19. Form of joint deed of undertaking by the Subcontractor along with the bidder/contractor
20. Form of Certificate of Financial Parameters for QR

Section VII: General Information & Scope of Village Electrification Works
Section VIII: Scope of 33/11 kV Substation works (REDB),

b. VOLUME-II: **Technical Specifications, Drawings** (Document Code No.: ........................):
   Section I: Civil Works & Soil Investigation,
   Section II: Technical Specifications
   Section III: Tender Drawings
   Section IV: Project Management System (PMS), 3-Tier Quality Assurance Mechanism (QAM) & Documentation

c. **Volume-III:** **Bid - Proposal Sheets** (Document Code No.: ........................):
   Section I: Bid Form
   Section II: Guaranteed Technical Particulars (GTP)
   Section III: Price Schedule

VOLUME - C

4. Bid Submitted by the Contractor.

(Only relevant extracts are attached herewith for easy reference. Should the circumstances warrant, the original Bid along with the enclosures thereof, shall be referred to.).

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 (Contract Documents) above.

1.3 Definitions (Reference GCC Clause 1/SCC Clause 1)

1.3.1 Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the General Conditions of Contract/Special Conditions of Contract.
Article 2. Contract Price and Terms of Payment

2.1 Contract Price (Reference GCC Clause 7)

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 ....... (amount in words) ................. (..............(amount in figures) .... ........), or such other sums as may be determined in accordance with the terms and conditions of the Contract. The break-up of the Contract price is as under:

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<th>Sl. No.</th>
<th>Price Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Local Transportation, Insurance and other Incidental Services</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Installation Services</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Training Charges (if required)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Total for Services Contract</td>
<td></td>
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</table>

The detailed break-up of Contract Price is given in the relevant Appendices hereto.

2.2 Terms of Payment (Reference GCC Clause 8)

The terms and procedures of payment according to which the Employer will reimburse the Contractor are given in Appendix 1 (Terms and Procedures of Payment) hereto.

Article 3. Effective Date for Determining Time for Completion

3.1 Effective Date (Reference GCC Clause 1)

The Time of Completion of Facilities shall be determined from the date of the Notification of Award i.e., from .................

Article 4. Appendices

The Appendices listed in the List of Appendices, as mentioned below, shall be deemed to form an integral part of this Contract Agreement.

Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.
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Appendix 1  Terms and Procedures of Payment
Appendix 2  Price Adjustment
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Appendix 4  Time Schedule
Appendix 5  List of Approved Subcontractors
Appendix 6  Scope of Works and Supply by the Employer
Appendix 7  List of Document for Approval or Review
Appendix 8  Guarantees, Liquidated Damages for Non-Performance

Article 5.

The Contract Agreement No. ....................... has also been made on the ....... day of ............ 20...., between the Employer and the Contractor for the Ex-Works Supply Contract (hereinafter referred to as the “First Contract”) for the subject package which includes Ex-works supply of all equipment and materials including Type Testing to be conducted interalia including ...................... (Indicate brief scope of work) ...................... for the complete execution of the ...... (insert name of Package alongwith name of the Project)....... 

Notwithstanding the award of contract under two separate contracts in the aforesaid manner, the Contractor shall be overall responsible to ensure the execution of both the contracts to achieve successful completion and taking over of the facilities by the Employer as per the requirements stipulated in the Contract. It is expressly understood and agreed by the Contractor that any default or breach under the ‘First Contract’ shall automatically be deemed as a default or breach of this ‘Second Contract’ also and vice-versa and any such breach or occurrence or default giving the Employer a right to terminate the ‘First Contract’ either in full or in part, and/or recover damages there under that Contract, shall give the Employer an absolute right to terminate this Contract at the Contractor's risk, cost and responsibility, either in full or in part and/or recover damages under this ‘Second Contract’ as well. However, such breach or default or occurrence in the ‘First Contract’ shall not automatically relieve the Contractor of any of its responsibility/obligations under this ‘Second Contract’. It is also expressly understood and agreed by the Contractor that the equipment/materials supplied by the Contractor under the ‘First Contract’ when installed and commissioned by the Contractor under this ‘Second Contract’ shall give satisfactory performance in accordance with the provisions of the Contract.

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

Signed by for and
on behalf of the Contractor

RGGVY/XII Plan/SBD-R1
(Separate Contract Agreements shall be executed by the Employer and the Contractor in accordance with the Construction of the Contract stipulated at BDS Clause [ITB 30.4]. The forms of Contract under both Alternative i.e., a & b shall be used).
Appendix-1 : TERMS AND PROCEDURES OF PAYMENT

I. A list of key items termed as “Billable Items” are worked out and attached to Price Schedule. Items otherwise required to execute the work as per scope of work & requirement for completion of work but not listed in the Price Schedule shall also be in the scope of the contractor. The costs of such “Non-billable Items” may be included in the quoted price of “Billable Items” by the bidder in the Price Schedule. The payment shall be made on billable item wise basis only as indicated in Price Schedule i.e. the Contractor is eligible for payment in respect of item of work.

II. The payment to the Contractor under the contract will be made by the Employer in line with Clause 8, Section GCC, Vol.-I and as per the guidelines and conditions specified hereunder.

III. Engineer shall decide Nos. of villages in a cluster which shall be considered fit for release of progressive payments against erection, testing and commissioning. Cluster may be of 2 villages, 3 villages, 5 villages, 10 villages or more villages. However, progressive payments against SUPPLY as well ERECTION contracts shall be released when works like 11KV lines, Distribution Transformers, LT lines and Service Connections in all villages (including all habitations associated with them) of a cluster are completed, tested and commissioned with existing network.

IV. Payments against all running bills towards supply and erection contracts shall be linked with compliance of observations noticed by 3-Tier Quality Assurance Team within a period of one month from date of receipt of communication to that effect. Pending observations may be of village(s) other than villages for which payments are processed.

V. Turnkey contractor shall prepare and upload village-wise single line diagram of existing as well as proposed assets being created under RGGVY XII scheme. SLD as well as village-wise details of materials consumed shall be prepared by turnkey contractor and shall be uploaded while seeking payment against executed work. This SLD shall be used by 3-tier Quality Assurance Mechanism inspectors as a reference documents to commence inspection at site.

VI. All progressive payments shall be released on certification of validity of Bank Guarantees against Initial Advance & Contract Performance Guarantees.

VII. The interest rate on advance payment shall be SBI’s BPLR (State Bank of India's Benchmark Prime Lending Rate) rate on the date of disbursement of advance payment.
VIII. The detailed payments conditions against following Rural Electrifications works are as under:

A. Village Electrification work including New 11KV Lines, distribution Substation, LT Lines and Service Connection
B. New 33/11 KV grid sub-station (or 66/11KV Substation)
C. New 33 KV or 66 KV feeder/section, and

A. Village Electrification Works including New 11KV lines, DTR Substation, LT Lines and Service Connection package:

Upon award of the contract, contractor shall be free to take on the work at all the fronts or at specified fronts as advised by Engineer. Payments shall be made under following criterions under 11KV lines, DTR Substation, LT Lines and Service Connection package:

1. Advance payment (Optional):

i. For Supply of materials, initial interest bearing adjustable Mobilization Advance of 15% of EXW contract cost excluding taxes and duties shall be released for all the materials in two tranches of 7.5% each, First installment of 7.5% of EXW price component shall be released on presentation of the following:

   a. Unconditional acceptance of the Letter of Award and signing of contract agreement by the Contractor.
   b. Contractor's detailed invoice.
   c. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment and shall be extended in case the installment of mobilization advance has not been returned to the employer.
   d. An unconditional & irrevocable Bank Guarantee for fifteen percent (15%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.
   e. Detailed PERT Network/Bar chart and its approval by the Employer.
The bidder must utilize first advance installment of 7.5% of EXW price component before requesting for second advance installment. Second installment of 7.5% shall be released on presentation of contractor’s invoice and satisfactory utilization certificate of first advance installment.

ii. For **Erection, Testing and Commissioning works**, initial interest bearing adjustable Mobilization Advance of 10% of erection contract price excluding taxes and duties shall be released for all the works in two tranches of 5% each. First installment of 5% of total erection price shall be released on presentation of the following:

a. Submission of detailed invoice for advance payment.

b. Establishment of Contractor’s site offices and certification by Engineer that satisfactory mobilization for erection exists.

c. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment and shall be extended in case the installment of mobilization advance has not been returned to the employer.

d. Submission of an unconditional & irrevocable Bank Guarantee in favor of Employer for **fifteen percent (15%)** of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with Clause 34.1 of Section-ITB, Vol.-I and as per proforma attached with Section-VI of Volume-I (Conditions of Contract). The said Bank Guarantee shall be initially valid upto 90 (ninety) days after the expiry of warranty period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

The bidder must utilize first advance installment of 5% of total erection price before requesting for second advance installment. Second installment of 5% shall be released on presentation of contractor’s invoice and satisfactory utilization certificate of first advance installment.
2. **Payment against supply:**

50% cost of supply and 100% cost of statutory payments against ED, CST, VAT etc shall be released on documentary evidences, receipt and acceptance of following key items by Engineer:

i. Supports (all type of poles),
ii. BPL kits including meter, service cables, supporting wire, LED lamp etc.

For this, Employer shall finalize billing break-up extracting cost of these materials from respective item of Price Schedule. The payments so released shall be adjusted while releasing 1st Supply or 1st Erection payments upon erection, testing and commissioning of cluster wise works.

3. **Progressive payments (Supply & Erection):**

3.1. **First Installment (90%)**: Ninety percent (90%) payments against Supply and Erection contracts including Excise Duty, Taxes etc as reimbursable shall be paid on receipt, erection, testing and commissioning of the cluster wise works on submission of documents of all villages in a cluster (as decided by Engineer) indicated herein under:

a. An unconditional & irrevocable Bank Guarantee for Fifteen percent (15%) of the total Erection Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

b. Evidence of dispatch (R/R or receipted L/R)

c. Contractor's detailed invoice & packing list identifying contents of each shipment.

d. Invoice certifying payments of ED, Taxes for the direct transaction between Employer and Contractor,

e. Copy of Certificate to the effect of payments of State/ Central taxes, duties, levies etc have been made against supply of materials through sub-vendors under the contract.


g. Manufacturer's/Contractor's guarantee certificate of Quality.

h. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by authorized officer of Employer.
i. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity of the lot of villages
j. Buyer's copy of challan
k. Certificate of engineer on compliance on all the observations of 3-tier quality assurance mechanism pending for more than one month.

15% Mobilization Advance against Supply & 10% Mobilization Advance against Erection shall be 100% adjusted while making cluster wise payments of this installment. The payments against supply at A(2) above shall also be 100% adjusted against payment of this installment. In case of delay of project, the entire mobilization advance should get recovered from the contractor as per supply and erection contracts’ works completion schedule respectively.

3.2. Second and Final Installment (10%):

a. The balance ten percent (10%) of payment against Supply and Erection contracts including Excise Duty, Taxes etc as reimbursable shall be released on successful commissioning of the Sub-transmission, Distribution Transformer, LT Line, LT Service connections works in the project and issuance of Taking over Certificate of the project. At this time, 100% compliance to the 3-tier quality assurance observations shall be ensured.

b. However, in case, for any reason solely attributable to the Owner/Employer, the commissioning of equipment/materials is delayed beyond 120 days of successful completion of final checking and testing of line for the purpose of commissioning as defined in bid documents, the balance 10% payment shall be released against an unconditional & irrevocable bank guarantee of equivalent amount initially valid till 6 months from the readiness of transmission lines/distribution transformer/service connections for commissioning and charging at rated voltage, to be extended till 90 days beyond actual commissioning & taking over.

c. ‘Commissioning’ for the purpose of payments shall mean satisfactory completion of all supplies, erection, commissioning checks and successful completion of all site tests and continuous energisation of the equipment/materials at rated voltage as per the Contract and to the satisfaction/approval of the Employer.

d. submission of the certificate by the Employer’s representative that the item(s) have been received,
e. on submission of an unconditional & irrevocable Bank Guarantee for full 15% amount initially valid till scheduled date of completion of testing & commissioning of the distribution line/ distribution transformer/ service connections, taking over of entire assets by the Employer, reconciliation of materials / payments and preparation and submission of village wise assets created details under the project and assets handed over to Employer.

f. The BG shall be extended from time to time till the actual date of successful completion of testing & commissioning of project and its taking over by the Employer. Bills shall be submitted for such payment only once in three months commencing from the date of receipt of first lot of materials/items. The Bank Guarantee shall be furnished along with the first invoice of final payment.

B. New 33/11 KV grid sub-station (or 66/11KV Substation)

1. Advance payment (Optional):

   i. For **Supply of materials**, initial interest bearing adjustable Mobilization Advance of 15% of EXW contract cost excluding taxes and duties shall be released for all the materials in two tranches of 7.5% each, First installment of 7.5% of EXW price component shall be released on presentation of the following:

   a. Unconditional acceptance of the Letter of Award and signing of contract agreement by the Contractor.
   b. Contractor’s detailed invoice.
   c. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per pro forma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment as per clause 1.1 below and shall be extended in case the installment of mobilization advance has not been returned to the employer.
   d. An unconditional & irrevocable Bank Guarantee for fifteen percent (15%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per pro forma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety
(90) days beyond successful completion of warranty period, as may be required under the Contract.
e. Detailed PERT Network/Bar chart and its approval by the Employer.

The bidder must utilize first advance installment of 7.5% of EXW price component before requesting for second advance installment. Second installment of 7.5% shall be released on presentation of contractor’s invoice and satisfactory utilization certificate of first advance installment.

ii. For **Erection, Testing and Commissioning works**, initial interest bearing adjustable Mobilization Advance of 10% of erection contract price excluding taxes and duties shall be released for all the works in two tranches of 5% each. First installment of 5% of total erection price shall be released on presentation of the following:

e. Submission of detailed invoice for advance payment.
f. Establishment of Contractor’s site offices and certification by Engineer that satisfactory mobilization for erection exists.
g. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment as per clause 1.1 below and shall be extended in case the installment of mobilization advance has not been returned to the employer.

h. Submission of an unconditional & irrevocable Bank Guarantee in favor of Employer for **fifteen percent (15%)** of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with Clause 34.1 of Section-ITB, Vol.-I and as per proforma attached with Section-VI of Volume-I (Conditions of Contract). The said Bank Guarantee shall be initially valid upto 90 (ninety) days after the expiry of warranty period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

The bidder must utilize first advance installment of 5% of total erection price before requesting for second advance installment. Second installment of 5% shall be released on presentation of contractor’s invoice and satisfactory utilization certificate of first advance installment.
1.1. 15% Mobilization advance against Supply as well as 10% Mobilization Advance already released against Erection contracts shall also be 100% adjusted as under:

i. Supply mobilization advance:
   a. 20% against 1\textsuperscript{st} instalment, and
   b. 40% against 2\textsuperscript{nd} instalment.
   c. 40% against 3\textsuperscript{rd} instalment.

ii. Erection mobilization advance:
   a. 50% against 1\textsuperscript{st} instalment, and
   b. 50% against 2\textsuperscript{nd} instalment.

In case of delay of project, the entire mobilization advance should get recovered from the contractor as per supply and erection contracts’ works completion schedule respectively.

2. Progressive Payments (Supply Contract):

Following mile-stones shall be required to process stage payments under supply contract of 33/11KV (or 66/11KV Substation) Grid/Power Substation:

2.1. First installment (5%) :

a. On completion of foundations of substation building, foundation for substation fencing, foundations of fencing gate, outdoor & indoor cable trenches, foundations for substation equipment, laying of earth mat, placement & acceptance of orders by suppliers for main substation equipments like Power Transformer, Station Transformer, Power and Control Cables, Capacitor Bank, CTs, PTs, Vacuum Circuit Breakers, Earthing materials, Isolators, AB Switch, Insulators, Conductors, Battery & Battery Chargers and ACDB & DCDB boards,

b. Unconditional acceptance of the Letter of Award and signing of Contract Agreement by the Contractor.

c. An unconditional & irrevocable Bank Guarantee for Fifteen percent (15\%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section 1TB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

d. Evidence of release of land for substation, leveling of land, approach road readiness, construction of retaining wall and approval of layout of substation,

e. Evidence of placement and acceptance of orders by the suppliers,
f. Contractor's detailed invoice,

2.2. Second installment (10%):  

a. On readiness of substation building to house control panels, battery, battery charger, ACDB/DCDB Boards, Erection of substation gantry structures, Erection of insulators, Erection of Bus bars, completion of underground earthing mat work, completion of fencing work, Fire wall between power transformer, water drainage including sump pit,
b. Contractor's detailed invoice,
c. Evidence of receipt (copy of R/R or L/R, Challan etc) of gantry materials, bus bar materials, Insulators, and Earthing materials enclosing packing list identifying contents of each shipment,
d. Invoice certifying payments of ED, Taxes for the direct transaction between Employer and Contractor,
e. Copy of Certificate to the effect of payments of State/ Central taxes, duties, levies etc have been made against supply of materials through sub-vendors under the contract.
g. Manufacturer's/Contractor's guarantee certificate of Quality.
h. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by authorized officer of Employer
i. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

2.3. Third installment (65%):  

a. On erection of all substation equipment like power transformer, station transformer, breakers, CTs, PT, Isolators, LAs, battery bank, battery chargers, ACDB and DCDB Board on their respective foundations, electrical connection through Power/Control cables or conductors, equipment's body earthing,
b. Contractor's detailed invoice

c. Evidence of receipt (copy of R/R or L/R, Challan etc) of power transformer, station transformer, breakers, CTs, PT, Isolators, LAs, battery bank, battery chargers, ACDB and DCDB Board power transformer, station transformer, breakers, CTs, PT, Isolators, LAs, battery bank, battery chargers, Cables and ACDB/DCDB Board materials enclosing packing list identifying contents of each shipment.
d. Invoice certifying payments of ED, Taxes for the direct transaction between Employer and Contractor,
e. Copy of Certificate to the effect of payments of State/ Central taxes, duties, levies etc have been made against supply of materials through sub-vendors under the contract.
g. Manufacturer's/Contractor's guarantee certificate of Quality.

h. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer’s works. MDCC/DI shall be issued by authorized officer of Employer

i. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity

j. Buyer's copy of challan

k. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

2.4. Fourth installment (10%):

a. On testing and commissioning of substation equipment including power & station transformer, outgoing feeder bays, capacitor bank, substation internal and external lighting, fencing and entrance gate, installation of safety items, installation of sign boards, marking & safety color coding on equipment, completion of substation building, station lighting works, supply of T&Ps, installation of substation diagram, completion of all civil works,

b. Contractor’s detailed invoice

c. Evidence of receipt (copy of R/R or L/R, Challan etc) of materials of substation internal and external lighting, fencing and entrance gate, safety items, sign boards, fencing and entrance gate, installation of sign boards materials enclosing packing list identifying contents of each shipment.

d. Invoice certifying payments of ED, Taxes for the direct transaction between Employer and Contractor,

e. Copy of Certificate to the effect of payments of State/ Central taxes, duties, levies etc have been made against supply of materials through sub-vendors under the contract.


g. Manufacturer's/Contractor's guarantee certificate of Quality.

h. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by authorized officer of Employer

i. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity

j. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

2.5. Fifth and Final installment (10%):

a. On formal energisation of substation (at least 25% Electrical loading on all the equipments), compliance of all commissioning observations and 3 tier quality assurance observations, Handing over of substation.

b. Contractor's detailed invoice,
c. Compliance of observations made at the time of commissioning,
d. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism.
e. Evidence of Taking over of substation by the Employer,

3. **Progressive Payments (Erection Contract):** Following mile-stones shall be required to process stage payments under Erection contract of 33/11KV (or 66/11KV Substation) Grid/Power Substation:

3.1. **First installment (10%):**
   a. On completion of foundations of substation building, foundation for substation fencing, foundations of fencing gate, outdoor & indoor Cable trenches, foundations for substation equipment, laying of earth mat, placement & acceptance of orders by suppliers for main substation equipment like Power Transformer, Station Transformer, Power and Control Cables, Capacitor Bank, CTs, PTs, Vacuum Circuit Breakers, Earthing materials, Isolators, AB Switch, Insulators, Conductors, Battery & Battery Chargers and ACDB & DCDB boards,
   b. Unconditional acceptance of the Letter of Award and signing of Contract Agreement by the Contractor.
   c. An unconditional & irrevocable Bank Guarantee for Fifteen percent (15%) of the total Erection Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.
   d. Evidence of release of land for substation and approval of layout of substation,
   e. Evidence of placement and acceptance of orders by the suppliers,
   f. Contractor’s detailed invoice,

3.2. **Second installment (20%):**
   a. On readiness of substation building to house control panels, battery, battery charger, ACDB/DCDB Boards, Erection of substation gantry structures, Erection of insulators, Erection of Bus bars, completion of underground earthing mat work, completion of fencing work, Fire wall between power transformer, water drainage including sump pit,
   b. Contractor’s detailed invoice,
   d. Erection of substation gantry structures, Erection of insulators, Erection of Bus bars, completion of underground earthing mat work and completion of fencing work
e. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity
f. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

3.3. Third installment (50%):
   a. On erection of substation equipment like power transformer, station transformer, breakers, CTs, PT, Isolators, LAs, battery bank, battery chargers, ACDB and DCDB Board on their respective foundations, electrical connection through Power/Control cables or conductors, equipment’s body earthing,
   b. Contractor’s detailed invoice
   c. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer’s works. MDCC/DI shall be issued by authorized officer of Employer
   d. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity
   e. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

3.4. Fourth installment (10%):
   a. On testing and commissioning of substation equipment including power & station transformer, outgoing feeder bays, capacitor bank, substation station lighting, fencing and entrance gate, installation of safety items, installation of sign boards, marking & safety color coding on equipment, completion of substation building, station lighting works, supply of T&Ps, installation of substation diagram, completion of all civil works,
   b. Contractor’s detailed invoice
   c. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity
   d. Commissioning of all substation equipment,
   e. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

3.5. Fifth and Final installment (10%): 10% on formal energisation of substation (at least 25% Electrical loading on all the equipment), compliance of all commissioning observations and 3 tier quality assurance observations, Handing over of substation.

C. New 33 KV or 66 KV feeder/section package: Upon award of the contract, contractor shall be free to take on the work at all the fronts or at specified fronts as advised by Engineer. Payments shall be made under following four criterion:
1. **Advance payment (Optional):**

   i. For **Supply of materials**, initial interest bearing adjustable Mobilization Advance of 15% of EXW contract cost excluding taxes and duties shall be released for all the materials in two tranches of 7.5% each. First installment of 7.5% of EXW price component shall be released on presentation of the following:

   f. Unconditional acceptance of the Letter of Award and signing of contract agreement by the Contractor.
   g. Contractor's detailed invoice.
   h. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment as per clause 1.1 below and shall be extended in case the installment of mobilization advance has not been returned to the employer.
   i. An unconditional & irrevocable Bank Guarantee for fifteen percent (15%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.
   j. Detailed PERT Network/Bar chart and its approval by the Employer.

   The bidder must utilize first advance installment of 7.5% of EXW price component before requesting for second advance installment. Second installment of 7.5% shall be released on presentation of contractor's invoice and satisfactory utilization certificate of first advance installment.

   ii. For **Erection, Testing and Commissioning works**, initial interest bearing adjustable Mobilization Advance of 10% of erection contract price excluding taxes and duties shall be released for all the works in two tranches of 5% each. First installment of 5% of total erection price shall be released on presentation of the following:

   i. Submission of detailed invoice for advance payment.
   j. Establishment of Contractor's site offices and certification by Engineer that satisfactory mobilization for erection exists.
k. Submission of unconditional & irrevocable part Bank Guarantees (as many number as proposed recovery installments and should be of 110% amount of each installment) in favor of employer with total amounting to 110% of total advance amount as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said Bank Guarantees shall be initially valid upto end of ninety (90) days after the scheduled month of recoveries of each installment as per clause 1.1 below and shall be extended in case the installment of mobilization advance has not been returned to the employer.

l. Submission of an unconditional & irrevocable Bank Guarantee in favor of Employer for fifteen percent (15%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with Clause 34.1 of Section-ITB, Vol.-I and as per proforma attached with Section-VI of Volume-I (Conditions of Contract). The said Bank Guarantee shall be initially valid upto 90 (ninety) days after the expiry of warranty period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

The bidder must utilize first advance installment of 5% of total erection price before requesting for second advance installment. Second installment of 5% shall be released on presentation of contractor’s invoice and satisfactory utilization certificate of first advance installment.

1.1.15% Mobilization advance against Supply as well as 10% Mobilization Advance already released against Erection contracts shall also be 100% adjusted as under:

i. Supply mobilization advance:
   d. 95% against 1st instalment, and
   e. 5% against 2nd instalment.

ii. Erection mobilization advance:
   c. 80% against 1st instalment, and
   d. 20% against 2nd instalment.

In case of delay of project, the entire mobilization advance should get recovered from the contractor as per supply and erection contracts’ works completion schedule respectively.

2. Progressive Payments (Supply Contract): Following mile-stones shall be required to process stage payments under supply contract of 33 KV or 66 KV feeder/section:
2.1. First Installment (75%) : Seventy Five percent (75%) of the Supply price component of 33 KV or 66 KV line feeder/section including Excise Duty, Taxes etc as reimbursable shall be paid on receipt, erection, testing and commissioning of 5 kms or more of 33 KV or 66 KV line feeder/section associated with sub-station and on submission of documents indicated herein under:

a. An unconditional & irrevocable Bank Guarantee for Fifteen percent (15%) of the total Erection Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma attached with Section-VI of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

b. Evidence of dispatch (R/R or receipted L/R)

c. Contractor’s detailed invoice & packing list identifying contents of each shipment.

d. Invoice certifying payments of ED, Taxes for the direct transaction between Employer and Contractor,

e. Copy of Certificate to the effect of payments of State/ Central taxes, duties, levies etc have been made against supply of materials through sub-vendors under the contract.


g. Manufacturer’s/Contractor’s guarantee certificate of Quality.

h. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) for dispatch of materials from the manufacturer’s works. MDCC/DI shall be issued by authorized officer of Employer

i. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity of 5 kms or more of 33 KV/66 KV lines associated with sub-station

j. Buyer’s copy of challan

k. Certificate of engineer on compliance of all the observations of 3-tier quality assurance mechanism pending for more than one month.

2.2. Second Installment (15%) : On supply, erection, testing and commissioning of complete 33 KV or 66 KV feeder/section works in a Block:

a. 15% Supply price component of 33 KV or 66 KV feeder/section shall be released upon completion of all the 33 KV or 66 KV feeder/section works in a block.

b. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity of the blocks.

c. Certificate of engineer on compliance of observations of 3-tier quality assurance mechanism pending for more than one month.
2.3. Third and Final Installment (10\%): 

a. The balance ten percent (10\%) of the Supply price component shall be paid on successful commissioning of the 33 KV or 66 KV feeder/section works in the project and issuance of Taking over Certificate of the project. At this time, 100\% compliance to the 3-tier quality assurance observations shall be ensured.

b. However, in case, for any reason solely attributable to the Owner/Employer, the commissioning of equipment/materials is delayed beyond 120 days of successful completion of final checking and testing of line for the purpose of commissioning as defined in bid documents, the balance 10\% payment shall be released against an unconditional & irrevocable bank guarantee of equivalent amount initially valid till 6 months from the readiness of transmission lines for commissioning and charging at rated voltage, to be extended till 90 days beyond actual commissioning & taking over.

c. 'Commissioning' for the purpose of payments shall mean satisfactory completion of all supplies, erection, commissioning checks and successful completion of all site tests and continuous energisation of the equipment/ materials at rated voltage as per the Contract and to the satisfaction/approval of the Employer.

d. submission of the certificate by the Employer’s representative that the item(s) have been received,

e. on submission of an unconditional & irrevocable Bank Guarantee for full 10\% amount initially valid till scheduled date of completion of testing & commissioning of the distribution line/ distribution transformer/ service connections, taking over of entire assets by the Employer, reconciliation of materials / payments and preparation and submission of village wise assets created details under the project and assets handed over to Employer.

f. The BG shall be extended from time to time till the actual date of successful completion of testing & commissioning of project and its taking over by the Employer. Bills shall be submitted for such payment only once in three months commencing from the date of receipt of first lot of materials/items. The Bank Guarantee shall be furnished along with the first invoice of final payment.

3. Progressive Payments (Erection Price Component including transportation, insurance and Civil Works):

3.1. First Installment (80\%): 80\% of the erection price component will be paid on erection, testing and commissioning of 5 kms or more of 33 KV or 66 KV feeder/section works pertaining to a sub-station and on submission of documents indicated herein under:

a. An unconditional & irrevocable Bank Guarantee for Fifteen percent (15\%) of the total Erection Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of Clause 34.1, Section ITB and as per proforma
attached with Section-Annex of Vol.-I (Conditions of Contract). The said bank guarantee shall be initially valid upto ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.

b. Invoice covering 80% (Eighty percent) of the erection price component for 33 KV or 66 KV feeder/section works,
c. Single line diagram of village wise 33KV/66KV line infrastructure installed,
d. Details of pole wise materials used
e. Test certificate
f. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity of 5 kms or more of 33 KV/66 KV lines associated with sub-station
g. Certificate of engineer on compliance on all observations of 3-tier quality assurance mechanism pending for more than one month.

3.2. Second Installment (10%): 10% (Ten Percent) of the erection price component will be paid on erection, testing and commissioning of complete 33 KV or 66 KV feeder/section works in a Block on submission of documents indicated herein under:

a. Invoice covering 10% (Ten percent) of the erection price component,
b. Single line diagram of Block wise 33 KV/66 KV line infrastructure installed including Pole wise materials reconciliation,
c. Test certificate of 33 KV/66 KV Line,
d. Material reconciliation statement consisting of the materials utilized for erection, testing & commissioning vis-à-vis erection activity of the blocks
e. Certificate of engineer on compliance of observations of 3-tier quality assurance mechanism pending for more than one month.

3.3. Third and Final Installment (10%): Final 10% (Ten Percent) of the erection price component shall be paid after successful commissioning of the 33 KV or 66 KV feeder/section works in the project and issuance of Taking over Certificate of the project. At this time, 100% compliance to the 3-tier quality assurance observations shall be ensured.

However, in case, for any reason solely attributable to the Owner/Employer, the commissioning of equipment/materials is delayed beyond 120 days of successful completion of final checking and testing of line for the purpose of commissioning as defined in Technical Specification, Volume-II of the bidding documents, the balance 10% payment shall be released against an unconditional & irrevocable bank guarantee of equivalent amount initially valid till 6 months from the readiness of transmission lines/ distribution transformer/ service connections for commissioning and charging at rated voltage, to be extended till 90 days beyond actual commissioning & taking over.
Appendix-2 : PRICE ADJUSTMENT

The prices for execution of the entire works covered under the scope of this Specification shall be quoted by the Bidder in the manner specified, in the BPS. The Ex-works price component, less advance will be subject to price adjustment, only for equipment/materials/items of work specifically stated under clause 1.0 below, (for which the bidder shall quote a base price), based on separate formulae as per price adjustment provisions given herein.

Prices for Ex-works price component for all other equipment/items except specified at Clause 1.0 below, Erection Charges, Charges for Inland Freight & Insurance etc shall be FIRM and no price adjustment shall be applicable for these components for the entire duration of the Contract.

No price adjustment shall be applicable on the portion of the Contract Price payable to the Contractor as advance payment.

1.0 Line Materials

1.0.1 For ACSR Conductor

The price adjustment on the Ex-works price component, less advance, of Conductor shall be as follows:

\[
dECc = ECc \left[ 0.80 \times \frac{(A_1 - A_0)}{A_0} + 0.05 \times \frac{(L_1 - L_0)}{L_0} \right]
\]

Where,

\[dECc = \text{Price adjustment amount payable on Ex-works price of Conductor, shipment-wise (if it works out negative, that would mean the amount to be recovered by the employer from the contractor).}\]

\[ECc = \text{Ex-works price for Conductor, shipment wise, less advance (Quoted Price)}\]

\[A = \text{Published price indices for EC grade aluminum ingots as published by IEEMA}\]

\[L = \text{All India consumer price index for industrial workers as published by Labour Bureau, Shimla (Govt. of India)}\]

Fixed portion of the ex-works price component shall be 0.15. This shall not be subject to any adjustment.
1.0.2 **For Station/ Power Transformer (Copper Wound)**

The price adjustment on the Ex-works price component, less advance, of Transformers shall be as follows:

1.0.2.1 For power transformer (Copper wound)

\[ dP = P_0 \times [0.15 + 0.23 \times (C_1/C_0) + 0.26 \times (ES_1/ES_0) + 0.08 \times (IS_1/IS_0) + 0.05 \times (IM_1/IM_0) + 0.11 \times (TB_1/TB_0) + 0.12 \times (L_1/L_0)] - P_0 \]

1.0.2.2 For station (Copper wound) (of rating up to 160 kVA and voltage up to 33 kV)

\[ dP = P_0 \times [0.13 + 0.27 \times (C_1/C_0) + 0.31 \times (ES_1/ES_0) + 0.09 \times (IS_1/IS_0) + 0.02 \times (IM_1/IM_0) + 0.06 \times (TB_1/TB_0) + 0.12 \times (L_1/L_0)] - P_0 \]

**Where,**

- \( dP \) = Price adjustment amount shipmentwise,
- \( P_0 \) = Ex-works price component of Transformer (Quoted Price),
- C, ES, IS, IM, TB & L are the price indices for material and labour as below,
- C = Price of copper wire bars, in Rupees per MT, as published by IEEMA,
- ES = Price of Electrical steel sheets, C&F price of M4 grade Electrical Steel Sheets in Rupees per MT, as published by IEEMA,
- IS (Iron & Steel) = Wholesale Price Index Number for ‘Iron & Steel’ (Base 1993-94 = 100), as published by IEEMA,
- IM (Insulating Materials) = Price of Insulating Materials, as published by IEEMA,
- TB = Price of Transformer Oil Base Stock (TOBS) in Rs./KL, as published by IEEMA,
- L = All India Average Consumer Price Index Number, for Industrial Workers (base 1982=100) as published / declared by Labour Bureau, Shimla, GOI and circulated by IEEMA.
1.0.3 **Station / Distribution Transformer (Aluminium Wound)**

The price adjustment on the Ex-works price component, less advance, of Transformers shall be as follows:

1.0.3.1 For station/distribution transformer (Aluminium wound) (of rating up to 160 kVA and voltage up to 33 kV)

\[
dP = P_0 \times \left[0.13 + 0.27 \times (A_1/A_0) + 0.31 \times (ES_1/ES_0) + 0.09 \times (IS_1/IS_0) + 0.02 \times (IM_1/IM_0) + 0.06 \times (TB_1/TB_0) + 0.12 \times (L_1/L_0)\right] - P_0
\]

**Where,**

\[
\begin{align*}
dP & = \text{Price adjustment amount shipmentwise}, \\
P_0 & = \text{Ex-works price component of Transformer (Quoted Price)}, \\
A & = \text{Published price indices for EC grade aluminum ingots as published by IEEMA}, \\
ES & = \text{Price of Electrical steel sheets, C&F price of M4 grade Electrical Steel Sheets in Rupees per MT, as published by IEEMA}, \\
IS (\text{Iron & Steel}) & = \text{Wholesale Price Index Number for ‘Iron & Steel’ (Base 1993-94 = 100), as published by IEEMA}, \\
IM (\text{Insulating Materials}) & = \text{Price of Insulating Materials, as published by IEEMA}, \\
TB & = \text{Price of Transformer Oil Base Stock (TOBS) in Rs./KL, as published by IEEMA}, \\
L & = \text{All India Average Consumer Price Index Number, for Industrial Workers (base 1982=100) as published / declared by Labour Bureau, Shimla, GOI and circulated by IEEMA}.
\end{align*}
\]
1.0.4 **Cables**

The price adjustment on the Ex-works price component, less advance, of Cables shall be as follows:

\[ dP = P_0 \times \{0.85 + 0.15 \times (A_1/A_0)\} - P_0 + (M_1 - M_0), \]

*Where,*

\[ dP = \text{Price Adjustment amount per kilometer of cable}, \]
\[ P_0 = \text{Ex-works price per kilometer of cable (Quoted Price)} \]
\[ A = \text{Price Index for PVC / XLPE as published by IEEMA}, \]
\[ M_1-M_0 = \text{Change in metal component of the ex-works price of particular type and size of cable}, \]
\[ M = \text{(Weight in MT of metal per kilometer of cable) x (published price index of metals per MT as published by IEEMA)} \]

The bidder has to specify in his bid the metal component per km for each type and size of cable.

1.0.5 Price Adjustment for the ex-works price component of the conductor, cable and transformers will be without any ceiling.

1.0.6 *In the above price adjustment formulae:*

*Subscript '0' refers to indices as on 30 days prior to date of bid opening (referred to as base date indices),*  
*Subscript '1' refers to indices as on 60 days prior to date of shipment.*

1.0.7 For the purpose of price adjustment for Ex-works price component, the date of shipment for goods shall mean the scheduled date of shipment or actual date of shipment, whichever is earlier. Scheduled date of shipment will be ex-works date of dispatch, governed by the approved Bar Chart.

1.0.8 No price increase shall be allowed beyond the original delivery dates unless specifically stated in the Time Extension letter, if any, issued by the Employer. The Employer will, however, be entitled to any decrease in the Contract price which may be caused due to lower price adjustment amount in case of delivery beyond the original delivery dates. Therefore, in case of delivery of goods beyond the original delivery dates, the liability of the Employer shall be limited to the lower of the price...
adjustment amount which may be worked out either on scheduled date or actual date of dispatch of goods.

1.0.9 In case of non-publication of applicable indices on a particular date, which happens to be the applicable date for price adjustment purposes, the published indices prevailing immediately prior to the particular date shall be applicable.

1.0.10 If the price adjustment amount works out to be positive, the same is payable to the Contractor by the Employer and if it works out to be negative, the same is to be recovered by the Employer from the Contractor.

1.0.11 The Contractor shall promptly submit the price adjustment invoices for the supplies made/works done, positively within three (3) months from the date of shipment/work done whether it is positive or negative.

1.0.12 Bids shall conform to the price adjustment provisions detailed above. Bids specifying prices for items mentioned at 5.1.2 on variable basis run the risk of rejection. A bid submitted on a fixed price basis will not be rejected but the price adjustment will be treated as zero.
A) Insurances to be taken out by the Contractor

In accordance with the provisions of GCC Clause 30, 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. 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. The inability of the insurers to provide insurance cover in the sums and with the deductibles and other conditions as set forth below, shall not absolve the Contractor of his risks and liabilities under the provisions of GCC Clause 30. However, in such a case the Contractor shall be required to furnish to the Employer documentary evidence from the insurer in support of the insurer’s inability as aforesaid.

(a) Marine Cargo Policy/ Transit Insurance Policy:

(I)(i) Marine Cargo policy for imported equipment

The Contractor shall take the Marine Cargo Policy for Plant and Equipment including mandatory Spares to be supplied from abroad wherein export/import including inland transit is involved for the movement of the Plant and Equipment including mandatory Spares. The policy shall cover movement of Plant and Equipment including mandatory Spares from the manufacturer’s works to the project’s warehouse at final destination site. The policy shall cover all risk for loss or damage that may occur during transit of Plant and Equipment including mandatory Spares from the Contractor/sub-Contractor’s works or stores until arrival at project’s warehouse/ store at final destination. Institute Cargo Clause (ICC) ‘A’ along with war & Strike Riots & Civil Commotion (SRCC) cover shall be taken.

(I)(ii) Transit Insurance Policy for indigenous equipment

Similarly, Transit Insurance Policy shall be taken wherein only inland transit is involved for the movement of Plant and Equipment including mandatory Spares supplied from within India. The policy shall cover movement of Plant and Equipment including mandatory Spares from the manufacturer’s works to the project’s warehouse at final destination site. Inland Transit Clause (ITC) ‘A’ along with war & Strike Riots & Civil Commotion (SRCC) extension cover shall be taken.
## Sample Forms and Procedures

<table>
<thead>
<tr>
<th>Amount</th>
<th>Deductible Limits</th>
<th>Parties insured</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>120% of CIP Entry Border Point Price /CIF Indian Port of Entry Price of all the Plant and Equipment including mandatory Spares to be supplied from abroad plus customs duties on merit rate and 120% of Ex-work Price of all the Plant and Equipment including mandatory Spares to be supplied from within India plus Excise Duty and Sales Tax/ VAT etc., if additionally payable.</td>
<td>Nil</td>
<td>Contractor &amp; Employer</td>
<td>Mfrs warehouse</td>
<td>Project’s warehouse store at final destination</td>
</tr>
</tbody>
</table>

(II) If during the execution of Contract, the Employer requests the Contractor to take any other add-on cover(s)/ supplementary cover(s) in aforesaid insurance, in such a case, the Contractor shall promptly take such add-on cover(s)/ supplementary cover(s) and the charges towards such premium for such add-on cover(s)/ supplementary cover(s) shall be reimbursed to the Contractor on submission documentary evidence of payment to the Insurance company. Therefore, charges towards premium for such add-on cover(s)/ supplementary cover(s) are not included in the Contract Price.

(III) The Contractor shall take the policy in the joint names of Employer and the Contractor. The policy shall indicate the Employer as the beneficiary. However, if the Contractor is having an open policy for its line of business, it should obtain an endorsement of the open cover policy from the insurance company indicating that the dispatches against this Contract are duly covered under its open policy and include the name of the Employer as jointly Insured in the endorsements to the open policy.

(b) **Erection All Risk Policy/ Contractor All Risk Policy:**

(I) The policy should cover all physical loss or damage to the facility at site during storage, erection and commissioning covering all the perils as provided in the policy as a basic cover and the add on covers as mentioned at Sl. No. (III) below.
<table>
<thead>
<tr>
<th>Amount</th>
<th>Deductible limits</th>
<th>Parties insured</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>105% of CIP Entry Border Point Price /CIF Indian Port of Entry Price</td>
<td>Nil</td>
<td>Contractor &amp; Employer</td>
<td>Receipt at site of first lot of the Plant and Equipment including mandatory Spares</td>
<td>Up to Operational Acceptance</td>
</tr>
<tr>
<td>of all the Plant and Equipment including mandatory Spares to be supplied from abroad plus customs duties on merit rate and 105% of Ex-work Price of all the Plant and Equipment including mandatory Spares to be supplied from within India plus Excise Duty and Sales Tax/ VAT etc., if additionally payable. and 100% of erection price component</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(II) The Contractor shall take the policy in the joint name of Employer and the Contractor. All these policies shall indicate Employer as the beneficiary. The policy shall be kept valid till the date of the Operational Acceptance of the project and the period of the coverage shall be determined with the approval of the Employer.

If the work is completed earlier than the period of policy considered, the Contractor shall obtain the refund as per provisions of the policy and pass on the benefit to Employer. In case no refund is payable by the insurance company then the certificate to that effect shall be submitted to Employer at the completion of the project.

(III) The following add-on covers shall also be taken by the Contractor:

i) Earthquake

ii) Terrorism

iii) Escalation cost (approximately @10% of sum insured on annual basis)
iv) Extended Maintenance cover for Defect Liability Period
v) Design Defect
vi) Other add-on covers viz., 50-50 clause, 72 hours clause, loss minimization clause, waiver of subrogation clause (for projects of more than Rs.100 crores, cover for offsite storage/fabrication (over Rs.100 crores).

(IV) **Third Party Liability cover with cross Liability within Geographical limits of India as on ADD-on cover to the basic EAR cover:**

The third party liability add-on cover shall cover 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 which have been accepted by the Employer) occurring in connection with supply and installation of the Facilities.

<table>
<thead>
<tr>
<th>Amount</th>
<th>Deductible limits</th>
<th>Parties insured</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>• For projects upto Rs. 100 crores, the third party liability limit shall be 10% of the project value for single occurrence/multiple occurrences in aggregate during the entire policy period.</td>
<td>Nil</td>
<td>Contractor/Sub-contractor</td>
<td>Receipt at site</td>
<td>Upto Defect Liability Period.</td>
</tr>
<tr>
<td>• For projects from Rs. 100 crores to Rs. 500 crores, the third party liability limit shall be Rs. 10 crores for single occurrence/multiple occurrences in aggregate during entire policy period. For projects of more than Rs.500 crores, the third party liability limit shall be Rs. 25 crores for single occurrence/multiple occurrences in aggregate during entire policy period.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(V) As per GCC Clause 30.8, the cost of insurance premium is to be reimbursed to the Contractor for Owner Supplied Materials (OSM) for which the insurer is
to be finalized by the Contractor as detailed therein. Alternatively, the Contractor may take a single policy covering the entire cost of the project including the cost of OSM. For this purpose, the Contractor shall submit documentary evidence for the premium paid for the entire project to the Employer and Employer shall reimburse to the Contractor the proportion of premium equal to value of OSM to total sum insured.

If during the execution of Contract, the Employer requests the Contractor to take any other add-on cover(s)/ supplementary cover(s) in aforesaid insurance, in such a case, the Contractor shall promptly take such add-on cover(s)/ supplementary cover(s) and the charges towards such premium for such add-on cover(s)/ supplementary cover(s) shall be reimbursed to the Contractor on submission documentary evidence of payment to the Insurance company. Therefore, charges towards premium for such add-on cover(s)/ supplementary cover(s) are not included in the Contract Price.

(c) **Automobile Liability Insurance**

The Contractor shall ensure that all the vehicles deployed by the Contractor or its Subcontractors (whether or not owned by them) in connection with the supply and installation of the Facilities in the project are duly insured as per RTA act. Further the Contractor or its Subcontractors may also take comprehensive policy(own damage plus third party liability) of each individual vehicles deployed in the project on their own discretion in their own name to protect their own interest.

(d) **Workmen Compensation Policy:**

(I) Workmen Compensation Policy shall be taken by the Contractor in accordance with the statutory requirement applicable in India. The Contractor shall ensure that all the workmen employed by the Contractor or its Subcontractors for the project are adequately covered under the policy.

(II) The policy may either be project specific covering all men of the Contractor and its Subcontractors. The policy shall be kept valid till the date of Operational Acceptance of the project.

Alternatively, if the Contractor has an existing ‘Workmen Compensation Policy’ for all its employees including that of the Subcontractor(s), the Contractor must include the interest of the Employer for this specific Project in its existing ‘Workmen Compensation Policy’.

(III) Without relieving the Contractor of its obligations and responsibilities under this Contract, before commencing work the Contractor shall insure against liability for death of or injury to persons employed by the Contractor including liability by statute and at common law. The insurance cover shall be
maintained until all work including remedial work is completed including the Defect Liability Period. The insurance shall be extended to indemnify the Principal for the Principal's statutory liability to persons employed by the Contractor.

The Contractor shall also ensure that each of its Subcontractors shall effect and maintain insurance on the same basis as the 'Workmen Compensation Policy' effected by the Contractor.

(e) **Contractor’s Plant and Machinery (CPM) Insurance**

The Employer (including without limitation any consultant, servant, agent or employee of the Employer) shall not in any circumstances be liable to the Contractor for any loss of or damage to any of the Contractor’s Equipment or for any losses, liabilities, costs, claims, actions or demands which the Contractor may incur or which may be made against it as a result of or in connection with any such loss or damage.

The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 30.1, except for the Third Party Liability, Workmen Compensation Policy Insurances, and the Contractor’s Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 30.1 except for the Cargo Insurance During Transport and Workmen Compensation Policy 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.

### B) Insurances 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 insurances.

<table>
<thead>
<tr>
<th>Amount</th>
<th>Deductible limits</th>
<th>Parties Insured</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______</td>
<td>NIL</td>
<td>_______</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-- End --
## Appendix-4: TIME SCHEDULE

1. **The Project Completion Schedule shall be as follows:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activities</th>
<th>Duration in Months from the effective date of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Taking Over by the Employer upon successful Completion of:</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Rural Electrification works of XXXXXXXX (name of district) district in XXXX (Name of State) under Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) [Specification No.: XXXXXXXX].</td>
<td><strong>24 (Twenty Four)</strong> 25% work should get completed within 9 months, 25% balance works should get completed in next 5 months, 25% balance works should get completed in next 5 months and final 25% balance works should get completed in next 5 months.</td>
</tr>
</tbody>
</table>

1.1 The activity(ies) under the Contractor’s programme for Project Completion shall be in the form of a master network (MNW) and shall identify the various activities like design, engineering, manufacturing, supply, installation, factory testing, transportation to site, site testing and commissioning, trial operation and Taking Over etc. of the Facilities or specific part thereof (where specific parts are specified in SCC). The network shall conform to the above Project Completion Schedule.

This master network will be discussed and agreed before Award in line with above, engineering drawing and data submission schedule shall also be discussed and finalised before Award. Liquidated damages for delay in successful Completion of the Facilities or specific part thereof (where specific parts are specified in SCC) and Operational Acceptance at rates specified in Clause 21 of GCC shall be applicable beyond the date specified above.

1.2 The Employer reserves the right to request minor changes in the work schedule at the time of Award of Contract to the successful Bidder.

1.3 The successful Bidder shall be required to prepare detailed Network(s) and project implementation plans & programmes and finalise the same with the Employer as per the requirement specified in Technical Specifications and scope of works, which shall from a part of the Contract.
Appendix-5: LIST OF APPROVED SUBCONTRACTORS

Prior to award of Contract, the following details shall be completed indicating those subcontractors proposed by the Bidder by Attachment to its bid that are approved by the Employer for engagement by the Contractor during the performance of the contract.

The following Subcontractors are approved for carrying out the item of the facilities indicated. Where more than one Subcontractor is listed, the Contractor is free to choose between them, but it must notify the Employer of its choice in good time prior to appointing any selected Subcontractor. In accordance with GCC Sub-Clause 15.1, the Contractor is free to submit proposals for Subcontractors for additional items from time to time. No Subcontracts shall be placed with any such Subcontractors for additional items until the Subcontractors have been approved in writing by the Employer and their names have been added to this list of Approved Subcontractors.

<table>
<thead>
<tr>
<th>Item of Facilities</th>
<th>Approved Subcontractors</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further, erection portion of the contract shall not be subcontracted without the prior approval of the Employer. However, such approval shall not be necessary for engaging labour.
Appendix-6 : SCOPE OF WORKS AND SUPPLY BY THE EMPLOYER

The following personnel, facilities, works and supplies will be provided/supplied by the Employer, and the provisions of GCC 6, 16, 17 and 20 as well as Employer responsibilities stated in technical specifications shall apply as appropriate.

All personnel, facilities, works and supplies will be provided by the Employer in good time so as not to delay the performance of the Contractor in accordance with the approved Time Schedule and Program of Performance pursuant to GCC Sub-Clause 14.2.

Unless otherwise indicated, all personnel, facilities, works and supplies will be provided free of charge to the Contractor.

Personnel
Charge to Contractor – None

-----------------------NIL----------------------------------------

Facilities
Charge to Contractor - None except as noted

Electricity and Water
Charge to Contractor - as noted

The Contractor shall be entitled to use for the purposes of the facilities such supplies of electricity and water as may be available on the Site and shall provide any apparatus necessary for such use. The Contractor shall pay the Employer at the applicable tariff plus Employer’s overheads, if any, for such use. Where such supplies are not available, the Contractor shall make his own arrangement for provision of any supplies he may require.

Works
Charge to Contractor - None

-----------------------NIL----------------------------------------

Supplies
Charge to Contractor – None

-----------------------NIL----------------------------------------
Appendix-7 : LIST OF DOCUMENTS FOR APPROVAL OR REVIEW

Pursuant to GCC Sub-Clause 16.3.1, the Contractor shall prepare, or cause its Subcontractor to prepare, and present to the Project Manager in accordance with the requirements of GCC Sub-Clause 14.2 (Program of Performance), the following documents for:

A. Approval
   1.
   2.
   3.

B. Review
   1.
   2.
   3.

Note:
Bidder shall furnish the exhaustive list, which shall be discussed and finalised for incorporation into the Contract Agreement.
Appendix-8 : GUARANTEES, LIQUIDATED DAMAGES FOR NON-PERFORMANCE

1. The equipment offered shall meet the rating and performance requirements stipulated in Technical Specification for various equipment or indicated in Data requirement.

2. The ratings and performance figures of the below mentioned equipments are guaranteed by you.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Guaranteed Loss (kW)</th>
<th>Rate of Liquidated Damages in Indian Rupees per kW of differential loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>5/3.15 MVA 33/11kV, 3 ph. Power Transformer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Copper loss (kW) at 75°C at rated current</td>
<td></td>
<td>Rs. 1,18,643/- (Indian Rupees One Lakh Eighteen Thousand Six Hundred Forty Three only)</td>
</tr>
<tr>
<td>2.</td>
<td>Iron Loss (kW) at rated voltage &amp; frequency</td>
<td></td>
<td>Rs. 2,61,713/- (Indian Rupees Two Lakh Sixty One Thousand Seven Hundred Thirteen only)</td>
</tr>
<tr>
<td>B.</td>
<td>100/63/25 KVA, 11/0.433kV, 3 phase Station &amp; Distribution Transformer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Copper loss (kW) at 75°C at rated current</td>
<td></td>
<td>Rs. 1,14,698/- (Indian Rupees One Lakh Fourteen Thousand Six Hundred Ninety Eight only)</td>
</tr>
<tr>
<td>2.</td>
<td>Iron Loss (kW) at rated voltage &amp; frequency</td>
<td></td>
<td>Rs. 2,65,506/- (Indian Rupees Two Lakh Sixty Five Thousand Five Hundred Six only)</td>
</tr>
<tr>
<td>C.</td>
<td>16KVA, 11/0.250kV, 1 or 3 phase Distribution Transformer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Copper loss (kW) at 75°C at rated current</td>
<td></td>
<td>Rs. 1,14,698/- (Indian Rupees One Lakh Fourteen Thousand Six Hundred Ninety Eight only)</td>
</tr>
<tr>
<td>2.</td>
<td>Iron Loss (kW) at rated voltage &amp; frequency</td>
<td></td>
<td>Rs. 2,65,506/- (Indian Rupees Two Lakh Sixty Five Thousand Five Hundred Six only)</td>
</tr>
</tbody>
</table>

3. If the aforementioned guarantees are not established at factory tests, then the Employer at his discretion may reject or accept the equipment after assessing the liquidated damages as per table above against the Contract and such amounts shall
be deducted from the Contract Price or otherwise recovered from the Contractor. However, the equipment (i.e. Power Transformer/Station Transformer) under no circumstances shall be accepted if the measured losses are more than +15 percent of the guaranteed losses at rated voltage indicated by you in your Bid. In case of Distribution Transformer, the equipment under no circumstances shall be accepted if the total losses exceed the max. limit specified in Technical Specifications.
6. PERFORMANCE SECURITY FORM

Bank Guarantee No. .................. Date..................

Contract No......................................

...............[Name of Contract]......................

To: [Name and address of Employer]

Dear Ladies and/or Gentlemen,

We refer to the Contract ("the Contract") signed on ............(insert date of the Contract)........ between M/s. XXXXX (Name of Employer), having its Registered Office at XXXXX (Registered Address of employer) ("the Employer"/" XXXXX (Name of Employer)") on behalf of XXXX (Name of owner) (hereinafter referred to as ‘XXXX (Short Name of Owner)’ / 'Owner'), and M/s .................. (Name of Contractor) .................., having its Principal place of business at ............(Address of Contractor) ................................ and Registered Office at ............(Registered address of Contractor) ............................................................................... ("the Contractor") concerning ................................ (Indicate brief scope of work) ...................... for the complete execution of the ...... (insert name of Package along with name of the Project)...........................[Applicable for Bank Guarantees issued by Contractor/Associate for those Contracts awarded to them]

Or

We refer to the Contract signed on ............(insert date of the Contract)........ between M/s. XXXXX (Name of Employer), having its Registered Office at XXXXX (Registered Address of employer) ("the Employer"/" XXXXX (Name of Employer)") on behalf of XXXX (Name of owner) (hereinafter referred to as ‘XXXX (Short Name of Owner)’ / 'Owner'), and M/s .................. (Name of Contractor) .................., having its Principal place of business at ............(Address of Contractor) ................................ and Registered Office at ............(Registered address of Contractor) ............................................................................... ("the Contractor") and the Contract ("the Contract") signed on ............(insert date of the Contract)........ between XXXXX (Name of Employer) on behalf of Owner and M/s .............. (Name of Associate) .............., having its Principal place of business at ............(Address of Associate) ...................... and Registered Office at ............(Registered address of Associate) ........................................................................, the Associate of the Contractor for executing the Facilities concerning ...................... (Indicate brief scope of work) ...................... for the complete execution of the ...... (insert name of
Package alongwith name of the Project)........ [Applicable for Bank Guarantees to be issued by Contractor against those Contracts awarded to their Associate]

By this letter we, the undersigned, ........(insert name & address of the issuing bank) ........, a Bank (which expression shall include its successors, administrators, executors and assigns) organized under the laws of ........................................... and having its Registered/Head Office at ............(insert address of registered office of the bank)........... do hereby irrevocably guarantee payment to the Employer up to ........................................... i.e., Fifteen percent (15%) of the Contract Price until ninety (90) days beyond the Defect Liability Period i.e., upto and inclusive of ............... (dd/mm/yy).

We undertake to make payment under this Letter of Guarantee upon receipt by us of your first written demand signed by the Employer duly authorized officer or the authorized officer of Owner declaring the Contractor to be in default under the Contract and without cavil or argument any sum or sums within the above named limits, without your need to prove or show grounds or reasons for your demand and without the right of the Contractor to dispute or question such demand.

Our liability under this Letter of Guarantee shall be to pay to the Employer whichever is the lesser of the sum so requested or the amount then guaranteed hereunder in respect of any demand duly made hereunder prior to expiry of the Letter of Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This letter of Guarantee shall remain in full force and shall be valid from the date of issue until ninety (90) days beyond the Defect Liability Period of the Facilities i.e. upto and inclusive of .................. (dd/mm/yy) and shall be extended from time to time for such period (not exceeding one year), as may be desired by M/s. ...................... on whose behalf this Letter of Guarantee has been given.

Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation.

Our liability under this Letter of Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made hereunder after such expiry or after the aggregate of the sums paid by us to the Employer shall equal the sums guaranteed hereunder, whichever is the earlier.

All notices to be given under shall be given by registered (airmail) posts to the addressee at the address herein set out or as otherwise advised by and between the parties hereto.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released or discharged by mutual agreement between you and the Contractor, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notices to us and without the
necessity for any additional endorsement, consent or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased.

No action, event or condition which by any applicable law should operate to discharge us from liability hereunder shall have any effect and we hereby waive any right we may have to apply such law so that in all respects our liability hereunder shall be irrevocable and, except as stated herein, unconditional in all respects.

For and on behalf of the Bank

[Signature of the authorised signatory(ies)]

Signature_______________________

Name_______________________

Designation_______________________

POA Number_______________________

Contact Number(s): Tel.______________Mobile______________

Fax Number_______________________

email_______________________

Common Seal of the Bank_______________________

Witness:

Signature_______________________

Name_______________________

Address_______________________

Contact Number(s): Tel.______________Mobile______________

email_______________________

Note:

1. For the purpose of executing the Bank Guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank who issues the ‘Bank Guarantee’.
2. The Bank Guarantee shall be signed on all the pages by the Bank Authorities indicating their POA nos. and should invariably be witnessed.

3. The Bank Guarantee should be in accordance with the proforma as provided. However, in case the issuing bank insists for additional paragraph for limitation of liability, the following may be added at the end of the proforma of the Bank Guarantee [i.e., end paragraph of the Bank Guarantee preceding the signature(s) of the issuing authority(ies) of the Bank Guarantee]:

Quote

“Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed __________ (value in figures) __________ [_____________________ (value in words) __________].

2. This Bank Guarantee shall be valid upto __________ (validity date) __________.

3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only & only if we receive a written claim or demand on or before __________ (validity date) __________.”

Unquote
7. BANK GUARANTEE FORM FOR ADVANCE PAYMENT

Bank Guarantee No. ......................... Date......................

Contract No........................................

...............[Name of Contract]....................

To: [Name and address of the Employer]

Dear Ladies and/or Gentlemen,

We refer to the Contract ("the Contract") signed on ............(insert date of the Contract)........ between you and M/s .................. (Name of Contractor) .................., having its Principal place of business at ............(Address of Contractor) ............................ and Registered Office at ............(Registered address of Contractor) ............................ ("the Contractor") concerning ........................................ (Indicate brief scope of work) ............................ for the complete execution of the ...... (insert name of Package along with name of the Project)......

Whereas, in accordance with the terms of the said Contract, the Employer has agreed to pay or cause to be paid to the Contractor an Advance Payment in the amount of ...................(Amount in figures and words)...................

By this letter we, the undersigned, ...........(insert name & address of the issuing bank) ..........., a Bank (which expression shall include its successors, administrators, executors and assigns) organized under the laws of ............................. and having its Registered/Head Office at ............(insert address of registered office of the bank)..........., do hereby irrevocably guarantee repayment of the said amounts upon the first demand of the Employer without cavil or argument in the event that the Contractor fails to commence or fulfill its obligations under the terms of the said Contract, and in the event of such failure, refuses to repay all or part (as the case may be) of the said advance payment to the Employer.

Provided always that the Bank's obligation shall be limited to an amount equal to the outstanding balance of the advance payment, taking into account such amounts, which have been repaid by the Contractor from time to time in accordance with the terms of payment of the said Contract as evidenced by appropriate payment certificates.

This Guarantee shall remain in full force from the date upon which the said advance payment is received by the Contractor upto ninety (90) days beyond the date on which the
entire advance so advanced alongwith the interest if any due thereon has been fully adjusted in terms of the Contract i.e., upto of ninety (90) days beyond the date of Completion of the Facilities under the Contract. This Guarantee may be extended from time to time, as may be desired by M/s. ……………………… on whose behalf this Guarantee has been issued.

Any claims to be made under this Guarantee must be received by the Bank during its period of validity, i.e. upto ninety (90) days beyond the date of Completion of the Facilities by the Employer i.e. upto and inclusive of ……………. (dd/mm/yy).

For and on behalf of the Bank

[Signature of the authorised signatory(ies)]

Signature_______________________

Name_______________________

Designation_______________________

POA Number_______________________

Contact Number(s): Tel.______________Mobile______________

Fax Number_______________________

email ____________________________

Common Seal of the Bank______________________

Witness:

Signature_______________________

Name_______________________

Address______________________________

Contact Number(s): Tel.______________Mobile______________

email ____________________________
Note:

1. For the purpose of executing the Bank Guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank who issues the 'Bank Guarantee'.

2. The Bank Guarantee shall be signed on all the pages by the Bank Authorities indicating their POA nos. and should invariably be witnessed.

3. The Bank Guarantee should be in accordance with the proforma as provided. However, in case the issuing bank insists for additional paragraph for limitation of liability, the following may be added at the end of the proforma of the Bank Guarantee [i.e., end paragraph of the Bank Guarantee preceding the signature(s) of the issuing authority(ies) of the Bank Guarantee]:

   Quote

   “Notwithstanding anything contained herein:

   1. Our liability under this Bank Guarantee shall not exceed _________ (value in figures)__________ [________________________ (value in words)____________].

   2. This Bank Guarantee shall be valid upto _________ (validity date)__________.

   3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only & only if we receive a written claim or demand on or before _________ (validity date)__________.”

   Unquote
8. FORM OF TAKING OVER CERTIFICATE

Date..................
Name of Contract..........................................
Contract No..............................................

To :

(Name and address of the Contractor)

Dear Ladies and/or Gentlemen,

Pursuant to GCC 20 (Completion of the Facilities) of the General Conditions of the Contract entered into between yourselves and the Employer dated ................. relating to the ...................... (insert 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 ............................................................
2. Date of Completion :.................................

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 Defects Liability Period.

Very truly yours,

Title
(Project Manager)
9. **FORM OF INDEMNITY BOND TO BE EXECUTED BY THE CONTRACTOR FOR THE EQUIPMENT HANDED OVER IN ONE LOT BY .....(abbreviated name of the Employer)...... FOR PERFORMANCE OF ITS CONTRACT**

**INDEMNITY BOND**

THIS INDEMNITY BOND is made this................ day of ........ 20..... by ................................ a Company registered under the Companies Act, 1956/Partnership firm/ proprietary concern having its Registered Office at...............(hereinafter called as 'Contractor' or "Obligor" which expression shall include its successors and permitted assigns) in favour of ........... (insert name of the Employer)........, a Company incorporated under the Companies Act, 1956 having its Registered Office at ..........(insert registered address of the Employer) and its project at ................. (hereinafter called ".....(abbreviated name of the Employer)........" which expression shall include its successors and assigns):

WHEREAS ......(abbreviated name of the Employer)....... has awarded to the Contractor a Contract for......... ........vide its Notification of Award/Contract No.................... dated............. and its Amendment No. ................. (applicable when amendments have been issued) (hereinafter called the "Contract") in terms of which ......(abbreviated name of the Employer)....... is required to hand over various Equipment to the Contractor for execution of the Contract.

And WHEREAS by virtue of Clause No.............of the said Contract, the Contractor is required to execute an Indemnity Bond in favour of ......(abbreviated name of the Employer)....... for the Equipment handed over to it by ......(abbreviated name of the Employer)....... for the purpose of performance of the Contract/Erection portion of the contract (hereinafter called the "Equipment").

AND THEREFORE, This Indemnity Bond witnesseth as follows:

1. That in consideration of various Equipment as mentioned in the Contract, valued at (amount in words..................................................) handed over to the Contractor for the purpose of performance of the Contract, the Contractor hereby undertakes to indemnify and shall keep ......(abbreviated name of the Employer)....... indemnified, for the full value of the Equipment. The Contractor hereby acknowledges receipt of the Equipment as per despatch title documents handed over to the Contractor duly endorsed in their favour and detailed in the Schedule appended hereto. It is expressly understood by the Contractor that handing over of the despatch title documents in respect of the said Equipments duly endorsed by ......(abbreviated name of the Employer)....... in favour of the Contractor shall be construed as handing over of the Equipment purported to be covered by such title documents and the Contractor shall hold such Equipment in trust as a Trustee for and on behalf of ......(abbreviated name of the Employer).......
2. That the Contractor is obliged and shall remain absolutely responsible for the safe transit/protection and custody of the Equipment at ......(abbreviated name of the Employer)....... project Site against all risks whatsoever till the Equipment are duly used/erected in accordance with the terms of the Contract and the Plant/Package duly erected and commissioned in accordance with the terms of the Contract, is taken over by ......(abbreviated name of the Employer)....... The Contractor undertakes to keep ......(abbreviated name of the Employer)....... harmless against any loss or damage that may be caused to the Equipment.

3. The Contractor undertakes that the Equipment shall be used exclusively for the performance/execution of the Contract strictly in accordance with its terms and conditions and no part of the equipment shall be utilised for any other work of purpose whatsoever. It is clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purpose including legal/penal consequences.

4. That ......(abbreviated name of the Employer)....... is and shall remain the exclusive Employer of the Equipment free from all encumbrances, charges or liens of any kind, whatsoever. The equipment shall at all times be open to inspection and checking by the Employee or Employer's Representative in this regard. Further, ......(abbreviated name of the Employer)....... shall always be free at all times to take possession of the Equipment in whatever form the equipment may be, if in its opinion, the Equipment are likely to be endangered, misutilised or converted to uses other than those specified in the Contract, by acts of omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds himself and undertakes to comply with the directions of demand of ......(abbreviated name of the Employer)....... to return the equipment without any demur or reservation.

5. That this indemnity Bond is irrevocable. If at any time any loss or damage occurs to the Equipment or the same or any part thereof is misutilised in any manner whatsoever, then the Contractor hereby agrees that the decision of the Employer's Representative as to assessment of loss or damage to the Equipment shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and/or damaged Equipment at his own cost and/or shall pay the amount of loss to ......(abbreviated name of the Employer)....... without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to ......(abbreviated name of the Employer)....... against the Contractor under the Contract and under this Indemnity Bond.

6. NOW THE CONDITION of this Bond is that if the Contractor shall duly and punctually comply with the terms and conditions of this Bond to the satisfaction of
...(abbreviated name of the Employer)........., THEN, the above Bond shall be
void, but otherwise, it shall remain in full force and virtue.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorized
representative under the common seal of the Company, the day, month and year first above
mentioned.

SCHEDULE

<table>
<thead>
<tr>
<th>Particulars of the Equipment handed over</th>
<th>Quantity</th>
<th>Particulars of Despatch title Documents</th>
<th>Value of the Equipment</th>
<th>Signature of the Attorney in token of receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RR/GR No. date of lading Carrier</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For and on behalf of
M/s..........................................

WITNESS

1. Signature................................ Signature.................................
   Name........................................ Name.................................
   Address................................... Address.............................

2. Signature................................ Authorised representative
   Name........................................ (Common Seal)
   Address................................... (In case of Company)

Indemnity Bonds are to be executed by the authorised person and (i) in case of
contracting Company under common seal of the Company or (ii) having the power of
attorney issued under common seal of the company with authority to execute Indemnity
Bonds, (iii) In case of (ii), the original Power of Attorney if it is specifically for this
Contract or a Photostat copy of the Power of Attorney if it is General Power of Attorney and
such documents should be attached to Indemnity Bond.
10. **FORM OF INDEMNITY BOND TO BE EXECUTED BY THE CONTRACTOR FOR THE EQUIPMENT HANDED OVER IN INSTALMENTS BY ......(abbreviated name of the Employer)....... FOR PERFORMANCE OF ITS CONTRACT**

**INDEMNITY BOND**

THIS INDEMNITY BOND is made this .................... day of ............ 20...... by .................................. a Company registered under the Companies Act, 1956/Partnership firm/proprietary concern having its Registered Office at .........................(hereinafter called as ‘Contractor’ or ‘Obligor’ which expression shall include its successors and permitted assigns) in favour of ......(insert name of the Employer)....... a company incorporated under the Companies Act, 1956 having its Registered Office at ......(insert registered address of the Employer)....... and its project at ............................ (hereinafter called "......(abbreviated name of the Employer)......." which expression shall include its successors and assigns):

WHEREAS ......(abbreviated name of the Employer)....... has awarded to the Contractor a Contract for .................vide its Notification of Award/Contract No. .................... dated ..................and Amendment No. .................. (applicable when amendments have been issued) (hereinafter called the "Contract") in terms of which ......(abbreviated name of the Employer)....... is required to handover various Equipment to the Contractor for execution of the Contract.

AND WHEREAS by virtue of Clause No...........of the said Contract, the Contractor is required to execute an Indemnity Bond in favour of ......(abbreviated name of the Employer)....... for the Equipment handed over to it by ......(abbreviated name of the Employer)....... for the purpose of performance of the contract/Erection portion of the Contract (hereinafter called the "Equipment").

NOW THEREFORE, This Indemnity Bond witnesseseth as follows:

1. That in consideration of various Equipments as mentioned in the Contract, valued at (amount in words ____________________) to be handed over to the Contractor in instalments from time to time for the purpose of performance of the contract, the Contractor hereby undertakes to indemnify and shall keep ......(abbreviated name of the Employer)....... indemnified, for the full value of Equipment. The Contractor hereby acknowledges receipt of the initial installment of the equipment per details in the schedule appended hereto. Further, the Contractor agrees to acknowledge receipt of the subsequent installments of the Equipment as required by ......(abbreviated name of the Employer)....... in the form of Schedules consecutively numbered which shall be attached to this Indemnity bond so as to form integral parts of this Bond. It is expressly understood by the Contractor that handing over the despatch title documents in respect of the said Equipments duly endorsed by ......(abbreviated name of the Employer)....... in favour of the Contractor shall be
construed as handing over the Equipment purported to be covered by such title documents and the Contractor shall hold such Equipments in trust as a Trustee for and on behalf of ......(abbreviated name of the Employer)........

2. That the Contractor is obliged and shall remain absolutely responsible for the safe transit/protection and custody of the Equipment at ......(abbreviated name of the Employer)....... project Site against all risks whatsoever till the Equipment are duly used/erected in accordance with the terms of the Contract and the Plant/Package duly erected and commissioned in accordance with the terms of the Contract, is taken over by ......(abbreviated name of the Employer)....... The Contractor undertakes to keep ......(abbreviated name of the Employer)....... harmless against any loss or damage that may be caused to the Equipment.

3. The Contractor undertakes that the Equipment shall be used exclusively for the performance/execution of the Contract strictly in accordance with its terms and conditions and no part of the equipment shall be utilised for any other work or purpose whatsoever. It is clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purpose including legal/penal consequences.

4. That ......(abbreviated name of the Employer)....... is and shall remain the exclusive Employer of the Equipment free from all encumbrances, charges or liens of any kind, whatsoever. The equipment shall at all times be open to inspection and checking by the Employer or Employer's Representative in this regard. Further, ......(abbreviated name of the Employer)....... shall always be free at all times to take possession of the Equipment in whatever form the Equipment may be, if in its opinion, the Equipment are likely to be endangered, misutilised or converted to uses other than those specified in the Contract, by any acts of omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds himself and undertakes to comply with the directions of demand of ......(abbreviated name of the Employer)....... to return the equipment without any demur or reservation.

5. That this indemnity Bond is irrevocable. If at any time any loss or damage occurs to the Equipment or the same or any part thereof is misutilised in any manner whatsoever, then the Contractor hereby agrees that the decision of the Employer's Representative as to assessment of loss or damage to the Equipment shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and/or damaged Equipment at its own cost and/or shall pay the amount of loss to ......(abbreviated name of the Employer)....... without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to ......(abbreviated name of the Employer)....... against the Contractor under the Contract and under this Indemnity Bond.
6. NOW THE CONDITION of this Bond is that if the Contractor shall duly and punctually comply with the terms and conditions of this Bond to the satisfaction of .......(abbreviated name of the Employer)........, THEN, the above Bond shall be void, but otherwise, it shall remain in full force and virtue.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorised representative under the common seal of the Company, the day, month and year first above mentioned.

SCHEDULE No. 1

<table>
<thead>
<tr>
<th>Particulars of the Equipment handed over</th>
<th>Quantity</th>
<th>Particulars of Despatch title Documents</th>
<th>Value of the Equipment</th>
<th>Signature of the Attorney in token of receipt</th>
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<td>RR/GR No. date of lading</td>
<td>Carrier</td>
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</table>

For and on behalf of
M/s........................................

WITNESS

1. Signature.......................... Signature.........................
   Name................................. Name.................................
   Address.............................. Address..............................

2. Signature.......................... Authorised representative
   Name................................. (Common Seal)
   Address.............................. (In case of Company)

Indemnity Bonds are to be executed by the authorised person and (i) in case of contracting Company under common seal of the Company or (ii) having the power of attorney issued under common seal of the company with authority to execute Indemnity Bonds, (iii) In case of (ii), the original Power of Attorney if it is specifically for this Contract or a photostat copy of the Power of Attorney if it is General Power of Attorney and such documents should be attached to Indemnity Bond.
11. FORM OF AUTHORISATION LETTER

Ref. No:

Date:

To

M/s..........................................................
..........................................................
..........................................................

REF.: Contract No. ......................... dated .................. for ........................................
awarded by .... (insert name of the Employer) ........

Dear Sir,

Kindly refer to Contract No. ......................... dated .................. for ........................................
You are hereby authorised on behalf of ................................ (Name of 
Employer) ...................... a company incorporated under the laws of Companies Act 1956 and 
having its Registered Office at ........ (registered address of the Employer) ...................... and 
its Project at ................ to take physical delivery of materials/equipments covered 
under Despatch Document/Consignment Note No. ..........* ........... dated ................. and as 
detailed in the enclosed schedule for the sole purpose of successful performance of the 
aforesaid contract and for no other purpose, whatsoever.

(Signature of Project Authority)**

Designation.................................

Date..............

Encl: As Above.

** To be signed not below the rank of Manager.

* Mention LR/RR No.
Schedule of Material/Equipment covered under Despatch Title Document (RR No./LR No. .................)

<table>
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</table>

(Signature of the Project Authority)

(Designation) ...........................................

(Date) ..............................................
12. FORM OF TRUST RECEIPT FOR PLANT, EQUIPMENT AND MATERIALS RECEIVED

We M/s. .................. (insert name of the Contractor) .................. having our Principal place of business at ................................. having been awarded a Contract No. .......................... dated .......................... for .......................... (insert Package name alongwith name of the Project).......................... by .......................... (insert name of the Employer) ..........................

We do hereby acknowledge the receipt of the Plant, Equipment and Materials as are fully described and mentioned under Documents of Title/RR/LR etc. and in the schedule annexed hereto, which shall form an integral part of this receipt as "Trustee" of .......................... (insert name of the Employer)........... The aforesaid materials etc. so received by us shall be exclusively used in the successful performance of the aforesaid Contract and for no other purpose whatsoever. We undertake not to create any charge, lien or encumbrance over the aforesaid materials etc, in favour of any other person/institution(s)/Banks.

For M/s ..........................

(Contractor's Name)

Dated : ..........................

(AUTHORISED SIGNATORY)

Place : ..........................

SEAL OF COMPANY
13. **FORM OF EXTENSION OF BANK GUARANTEE**

Ref. No........................................ Dated:.......................  

To: [Name and address of the Employer]

Dear Sirs,

Sub.: Extension of Bank Guarantee No. ...... ............... dated ............ for ..............., issued to you on behalf of M/s. .......(insert name of the Contractor) ............... in respect of Contract No. ................... dated ............... for ......... (insert name of the Package alongwith the Project name) ............. (hereinafter called original Bank Guarantee).

At the request of M/s. ............. (insert name of the Contractor) ............... We ...........(insert name & address of the issuing bank) ............., a Bank organized under the laws of ........................................ and having its Registered/Head Office at ...........(insert address of registered office of the bank)............... do hereby extend our liability under the above-mentioned Guarantee No. ......................... Dated ............... for a further period of ............... Years/Months from ............... to expire on ............... Except as provided above, all other terms and conditions of the original Bank Guarantee No. ......................... dated ............... shall remain unaltered and binding.

Please treat this as an integral part of the original Guarantee to which it would be attached.

For and on behalf of the Bank

[Signature of the authorised signatory(ies)]

Signature_______________________

Name_______________________

Designation_______________________

POA Number_______________________

Contact Number(s): Tel:______________ Mobile______________

Fax Number_______________________

email ____________________________

RGGVY/XII Plan/SBD-R1
Sample Forms and Procedures

Common Seal of the Bank_______________________

Witness:

Signature________________________

Name___________________________

Address__________________________

Contact Number(s): Tel.______________Mobile______________

email ____________________________

Note:
1. For the purpose of executing the Bank Guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank who issues the ‘Bank Guarantee’.

2. The Bank Guarantee shall be signed on all the pages by the Bank Authorities indicating their POA nos. and should invariably be witnessed.
14. FORM OF POWER OF ATTORNEY FOR JOINT VENTURE

KNOW ALL MEN BY THESE PRESENTS THAT WE, the Partners whose details are given hereunder ................................................................. have formed a Joint Venture under the laws of ............................................. and having our Registered Office(s)/Head Office(s) at ............................................. (hereinafter called the 'Joint Venture' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) acting through M/s ................................................................. being the Partner in-charge do hereby constitute, nominate and appoint M/s................................................... a Company incorporated under the laws of ..................................................... and having its Registered/Head Office at ............................................. as our duly constituted lawful Attorney (hereinafter called "Attorney" or "Authorised Representative" or "Partner In-charge") to exercise all or any of the powers for and on behalf of the Joint Venture in regard to Specification No............................ Package ............................ the bids for which have been invited by ............. (insert name of the Employer alongwith address) ............ (hereinafter called the 'Employer') to undertake the following acts:

i) To submit proposal and participate in the aforesaid Bid Specification of the Employer on behalf of the "Joint Venture".

ii) To negotiate with the Employer the terms and conditions for award of the Contract pursuant to the aforesaid Bid and to sign the Contract with the Employer for and on behalf of the "Joint Venture".

iii) To do any other act or submit any document related to the above.

iv) To receive, accept and execute the Contract for and on behalf of the "Joint Venture".

It is clearly understood that the Partner In-charge (Lead Partner) shall ensure performance of the Contract(s) and if one or more Partner fail to perform their respective portions of the Contract(s), the same shall be deemed to be a default by all the Partners.

It is expressly understood that this Power of Attorney shall remain valid binding and irrevocable till completion of the Defect Liability Period in terms of the Contract.

The Joint Venture hereby agrees and undertakes to ratify and confirm all the whatsoever the said Attorney/Authorised Representatives/Partner in-charge quotes in the bid, negotiates and signs the Contract with the Employer and/or proposes to act on behalf of the Joint Venture by virtue of this Power of Attorney and the same shall bind the Joint Venture as if done by itself.
IN WITNESS THEREOF the Partners Constituting the Joint Venture as aforesaid have executed these presents on this ........... day of .................. under the Common Seal(s) of their Companies.

for and on behalf of the
Partners of Joint Venture

............................................
............................................
............................................

The Common Seal of the above Partners of the Joint Venture:

The Common Seal has been affixed there unto in the presence of:

WITNESS

1. Signature......................................................
   Name .......................................................
   Designation ................................................
   Occupation ...............................................  

2. Signature.................................................
   Name ....................................................
   Designation ................................................
   Occupation ...............................................  

Note:
1. For the purpose of executing the Agreement, the non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture.

2. The Agreement shall be signed on all the pages by the authorised representatives of each of the partners and should invariably be witnessed.
15. FORM OF UNDERTAKING BY THE JOINT VENTURE PARTNERS

THIS JOINT DEED OF UNDERTAKING executed on this........... day of........... Two Thousand and.................. by ................................................................. a company incorporated under the laws of ......................... and having its Registered Office at ...........................................(hereinafter called the "Party No.1" which expression shall include its successors, executors and permitted assigns) and M/s...........................a company incorporated under the laws of ......................... and having its Registered Office at ...........................................(hereinafter called the "Party No.2" which expression shall include its successors, executors and permitted assigns) and M/s..........................a Company incorporated under the laws of ......................... and having its Registered Office at ...........................................(hereinafter called the "Party No.3" which expression shall include its successors, executors and permitted assigns) for the purpose of making a bid and entering into a contract [hereinafter called the "Contract" (in case of award)] against the Specification No.................. .............. for ...... (insert name of the package alongwith project name) .............. of ...... (insert names of the Employer) .............., a Company incorporated under the Companies Act of 1956 having its registered office at ...................(insert registered address of the Employer) ................ (hereinafter called the "Employer").

WHEREAS the Party No.1, Party No.2 and Party No.3 have entered into an Agreement dated.................

AND WHEREAS the Employer invited bids as per the above mentioned Specification for the design, manufacture, supply, erection, testing and commissioning of Equipment/ Materials stipulated in the Bidding Documents under ...... (insert name of the package alongwith project name) ..............

AND WHEREAS Clause 9.3, Section-ITB and BDS (documents establishing the Qualification of Bidder) & Qualification Criteria in Annexure-A to BDS forming part of the Bidding Documents, inter-alia stipulates that an Undertaking of two or more qualified manufacturers as partners, meeting the requirements of Qualification Criteria in Annexure-A to BDS, as applicable may bid, provided, the Joint Venture fulfills all other requirements under Clause 9.3 (c) of ITB and Qualification Criteria in Annexure-A to BDS and in such a case, the Bid Forms shall be signed by all the partners so as to legally bind all the Partners of the Joint Venture, who will be jointly and severally liable to perform the Contract and all obligations hereunder.

The above clause further states that this Undertaking shall be attached to the bid and the Contract performance guarantee will be as per the format enclosed with the Bidding Documents without any restrictions or liability for either party.

AND WHEREAS the bid is being submitted to the Employer vide proposal No..........................dated ............ by Party No.1 based on this Undertaking between all the parties; under these presents and the bid in accordance with the requirements of Clause
9.3, Section-ITB and BDS (documents establishing the Qualification of Bidder) & Qualification Criteria in Annexure-A to BDS, has been signed by all the parties.

NOW THIS UNDERTAKING WITNESSETH AS UNDER:

In consideration of the above premises and agreements all the parties of this Deed of Undertaking do hereby declare and undertake:

1. In requirement of the award of the Contract by the Employer to the Joint Venture Partners, we, the Parties do hereby undertake that M/s......... the Party No.1, shall act as Lead Partner and further declare and confirm that we the parties to the Joint Venture shall jointly and severally be bound unto the Employer for the successful performance of the Contract and shall be fully responsible for the design, manufacture, supply and successful performance of the equipment in accordance with the Contract:

2. In case of any breach or default of the said Contract by any of the parties to the Joint Venture, the party(s) do hereby undertake to be fully responsible for the successful performance of the Contract and to carry out all the obligations and responsibilities under the Contract in accordance with the requirements of the Contract.

3. Further, if the Employer suffers any loss or damage on account of any breach in the Contract or any shortfall in the performance of the equipment in meeting the performances guaranteed as per the specification in terms of the Contract, the Party(s) of these presents undertake to promptly make good such loss or damages caused to the Employer, on its demand without any demur. It shall not be necessary or obligatory for the Employer to proceed against Lead Partner to these presents before proceeding against or dealing with the other Party(s), the Employer can proceed against any of the parties who shall be jointly and severally liable for the performance and all other liabilities/obligations under the Contract to the Employer.

4. The financial liability of the Parties of this Deed of Undertaking to the Employer, with respect to any of the claims rising out of the performance or non-performance of the obligations set forth in this Deed of Undertaking, read in conjunction with the relevant conditions of the Contract shall, however not be limited in any way so as to restrict or limit the liabilities or obligations of any of the Parties of this Deed of Undertaking.

5. It is expressly understood and agreed between the Parties to this Undertaking that the responsibilities and obligations of each of the Parties shall be as delineated in Appendix - I (to be suitably appended by the Parties alongwith this Undertaking in its bid) to this Deed of Undertaking. It is further undertaken by the parties that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities of the Parties under the Contract.
6. It is also understood that this Undertaking is provided for the purposes of undertaking joint and several liabilities of the partners to the Joint Venture for submission of the bid and performance of the Contract and that this Undertaking shall not be deemed to give rise to any additional liabilities or obligations, in any manner or any law, on any of the Parties to this Undertaking or on the Joint Venture, other than the express provisions of the Contract.

7. This Undertaking shall be construed and interpreted in accordance with the provisions of the Contract.

8. In case of an award of a Contract, we the parties to this Deed of Undertaking do hereby agree that we shall be jointly and severally responsible for furnishing a Contract performance security from a bank in favour of the Employer in the currency/currencies of the Contract.

9. It is further agreed that this Deed of Undertaking shall be irrevocable and shall form an integral part of the bid and shall continue to be enforceable till the Employer discharges the same or upon the completion of the Contract in accordance with its provisions, whichever is earlier. It shall be effective from the date first mentioned above for all purposes and intents.

IN WITNESS WHEREOF, the Parties to this Deed of Undertaking have through their authorised representatives executed these presents and affixed Common Seals of their companies, on the day, month and year first mentioned above.

Common Seal of ........................................
has been affixed in my/ our presence pursuant to Board of
Director's Resolution dated ......................

Name .................................
Designation ..............................
Signature ...............................  
(Signature of the authorized representative)

WITNESS :
I. .................................

II. .................................

RGGVY/XII Plan/SBD-R1
Common Seal of ................................................................. has been affixed in my/ our presence pursuant to Board of Director’s Resolution dated .................

Name .................................................................

Designation .................................

Signature .................................

WITNESS :

I. .................................................

II. .................................................

Common Seal of ................................................................. has been affixed in my/ our presence pursuant to Board of Director’s Resolution dated .................

Name .................................................................

Designation .................................

Signature ................................. (Signature of the authorized representative)

WITNESS :

I. .................................................

II. .................................................

For Party No.-2
For and on behalf of M/s.................................

For Party No.-3
For and on behalf of M/s.................................

Note:
1. For the purpose of executing the Joint Deed of Undertaking, the non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture.

2. The Undertaking shall be signed on all the pages by the authorised representatives of each of the partners and should invariably be witnessed.
16. FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT/ FACILITIES

BANK CERTIFICATE

This is to certify that M/s. ________________ (insert Name & Address of the Contractor) ______,,, who have submitted their bid to ...........(insert name of the Employer).............. against their tender specification Vide ref. No. ......................... for .......... (insert name of the package along with the project name) ............ is our customer for the past ............. years.

Their financial transaction with our Bank have been satisfactory. They enjoy the following fund based and non fund based limits including for guarantees, L/C and other credit facilities with us against which the extent of utilization as on date is also indicated below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Type of Facility</th>
<th>Sanctioned Limit as on Date</th>
<th>Utilisation as on Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

This letter is issued at the request of M/s. ________________.

Signature ______________________

Name of Bank _________________

Name of Authorised Signatory ______________________

Designation ______________________

Phone No. ______________________

Address _______________________

SEAL OF THE BANK
17. FORM OF OPERATIONAL ACCEPTANCE

Date..................

Name of Contract..........................................

Contract No..........................................

To :

(Name and address of the Contractor)

Dear Ladies and/or Gentlemen,

Pursuant to GCC 20 (Completion of the Facilities) of the General Conditions of the Contract entered into between yourselves and the Employer dated .................... relating to the ..................................................... (insert brief description of the Facilities)................................................................., we hereby notify you that the we System tests and Acceptance tests of the following part(s) of the Facilities were satisfactorily completed on the date specified below:

1. Description of the Facilities or part thereof ............................................................

2. Date of Operational Acceptance:..........................................................

This letter does not relieve you of your obligation during the Defects Liability Period and Latent Defect warranty.

Very truly yours,

Title
(Project Manager)
18. **FORM OF SAFETY PLAN TO BE SUBMITTED BY THE CONTRACTOR WITHIN SIXTY DAYS OF AWARD OF CONTRACT**

[TO BE EXECUTED ON A NON JUDICIAL STAMP PAPER WORTH RS. TWENTY ONLY]

**SAFETY PLAN**

THIS SAFETY PLAN is made this ..................... day of ............. 20...... by .............................................. a Company registered under the Companies Act, 1956/Partnership firm/proprietary concern having its Registered Office at .......................... [to be modified suitably for JV Contractor] (hereinafter called as 'Contractor' which expression shall include its successors and permitted assigns) for approval of ......(insert name of the Employer)........, a company incorporated under the Companies Act, 1956 having its Registered Office at ......(insert registered address of the Employer)........ for its Contract for ............................... ......(insert package name, project name alongwith Specification number of the Contract)........

WHEREAS ......(abbreviated name of the Employer)......... has awarded to the Contractor the aforesaid Contract vide its Notification of Award/Contract No. ...................... dated .................. and Amendment No. .................... (applicable when amendments have been issued) (hereinafter called the "Contract") in terms of which the Contractor is required to submit 'Safety Plan' alongwith certain documents to the Engineer In-Charge/Project Manager of the Employer within Sixty (60) days of Notification of Award for its approval.

NOW THEREFORE, the Contractor undertakes to execute the Contract as per the safety plan as follows:

1. THAT the Contractor shall execute the works as per provisions of Bidding Documents including those in regard to Safety Precautions / provisions as per statutory requirements.

2. THAT the Contractor shall execute the works in a well planned manner from the commencement of Contract as per agreed mile stones of work completion schedule so that planning and execution of construction works goes smoothly and consistently throughout the contract duration without handling pressure in last quarter of the financial year/last months of the Contract and the shall be finalized in association with XXXX (Name of Employer) Engineer In-charge/Project Manager from time to time as required.

3. THAT the Contractor has prepared the safe work procedure for each activity i.e. foundation works including civil works, erection, stringing (as applicable), testing & commissioning, disposal of materials at site / store etc. to be executed at site, which is enclosed at Annexure - 1A (SP) for acceptance and approval of Engineer In-
THAT the Contractor shall ensure while executing works that they will deploy minimum 25% of their own experienced work force who are on the permanent roll of the company and balance 75% can be a suitable mixed with the hired gangs / local workers / casual workers if required. The above balance 75% work force should be provided with at least 10 days training by the construction agencies at sites and shall be issued with a certificate. No worker shall be engaged without a valid certificate. Hired gang workers shall also follow safe working procedures and safety norms as is being followed by company's workmen. It should also be ensured by the contractor that certified workers fitters who are climbing towers / doing stringing operations can be easily identifiable with a system like issue of Badge / Identification cards (ID cards) etc. Colour identification batches should be worn by the workers. Contractor has to ensure that inexperience workers / unskilled workers should not be deployed for skilled job.

THAT the Contractor’s Gang leader / Supervisor / Senior most member available at every construction site shall brief to each worker daily before start of work about safety requirement and warn about imminent dangers and precautions to be taken against the imminent dangers (Daily Safety Drill). This is to be ensured without fail by Contractor and maintain record of each gang about daily safety instructions issued to workers and put up to XXXX(Name of Employer) site In-charge for his review and record.

THAT the Contractor shall ensure that working Gangs at site should not be left at the discretion of their Gang Leaders who are generally hired and having little knowledge about safety. Gang leader should be experienced and well versed with the safe working procedures applicable for transmission line/ Sub Station works. In case gang is having Gang leader not on permanent roll of the company then additional Supervisor from company’s own roll having thorough knowledge about the works would be deployed so as to percolate safety instructions upto the grass root level in healthy spirits. Contractor has to ensure close supervision while executing critical locations of transmission lines / sub stations and ensures that all safety instructions are in place and are being followed.

THAT the Contractor shall maintain in healthy and working condition all kind of Equipments / Machineries / Lifting tools / Lifting tackles / Lifting gears / All kind of
Ropes including wire ropes / Polypropylene ropes etc. used for Lifting purpose during execution of the project and get them periodically examined and load tested for safe working load in accordance with relevant provisions and requirement of Building & other construction workers Regulation of Employment and Conditions of Services Act and Central Rule 1998 or latest, Factories Act 1948 or latest, Indian Electricity Act 2003 before start of the project. A register of such examinations and tests shall be properly maintained by the contractor and will be promptly produced as and when desired by the Engineer In-charge/Project Manager or by the person authorised by him. The Contractor has to ensure to give special attention on the formation / condition of eye splices of wire rope slings as per requirement of IS 2762 Specification for wire rope slings and sling legs.

THAT the Contractor has prepared a list of all Lifting machines, lifting Tools / Lifting Tackles / Lifting Gears etc. / All types of ropes and Slings which are subject to safe working load is enclosed at **Annexure - 2 (SP)** for review and approval of Engineer In-charge/Project Manager.

8. THAT the Contractor has to procure sufficient quantity of Personal Protective Equipment (PPE) conforming to Indian / International standards and provide these equipment to every workman at site as per need and to the satisfaction of Engineer-in-charge/Project Manager of **XXXX (Name of the Employer)**. The Contractor’s Site Supervisor/ Project Manager has to ensure that all workmen must use Personal Protective Equipment at site. The Contractor shall also ensure that Industrial Safety helmets are being used by all workmen at site irrespective of their working (at height or on ground). The Contractor shall further ensure use of safety shoes by all ground level workers and canvas shoes for all workers working at height, Rubber Gum Boots for workers working in rainy season and concreting job, Use of Twin Lanyard Full body Safety Harness with attachment of light weight such as aluminium alloy etc. and having features of automatic locking arrangement of snap hook, by all workers working at height for more than three meters and also for horizontal movement on tower shall be ensured by contractor. The Contractor shall not use ordinary half body safety harness at site. The Contractor has to ensure use of Retractable type fall arrestors by workers for ascending / descending on suspension insulator string and other similar works etc., Use of Mobile fall arrestor for ascending / descending from tower by all workers. The contractor has to provide cotton / leather hand gloves as per requirement, Electrical Resistance Hand gloves for operating electrical installations / switches, Face shield for protecting eyes while doing welding works and Dust masks to workers as per requirement. The Contractor will have to take action against the workers not using Personal Protective Equipment at site and those workers shall be asked to rest for that day and also their Salary be deducted for that day. **XXXX (Name of the Employer)** may issue warning letter to Project Manager of contractor in violation of above norms.

THAT the Contractor shall prepare a detailed list of PPEs, activity wise, to commensurate with manpower deployed, which is enclosed at **Annexure - 3 (SP)**
for review and approval of Engineer In-charge/Project Manager. It shall also be ensured that the sample of these equipment shall be got approved from XXXX (Name of the Employer) supervisory staff before being distributed to workers. The contractor shall submit relevant test certificates as per IS / International Standard as applicable to PPEs used during execution of work. All the PPE’s to be distributed to the workers shall be checked by XXXX (Name of the Employer) supervisory staff before its usage.

The Contractor also agrees for addition / modification to the list of PPE, if any, as advised by Engineer In-Charge/Project Manager.

9. THAT the Contractor shall procure, if required sufficient quantity of Earthing Equipment / Earthing Devices complying with requirements of relevant IEC standards (Generally IECs standards for Earthing Equipments / Earthing Devices are – 855, 1230, 1235 etc.) and to the satisfaction of Engineer In-Charge/ Project Manager and contractor to ensures to maintained them in healthy condition.

THAT the Contractor has prepared / worked out minimum number of healthy Earthing Equipments with Earthing lead confirming to relevant IS / European standards per gang wise during stringing activity/as per requirement, which is enclosed herewith at Annexure – 4 (SP) for review and acceptance of Engineer In-Charge/ Project Manager prior to execution of work.

10. THAT the Contractor shall provide communication facilities i.e. Walky – Talkie / Mobile Phone, Display of Flags / whistles for easy communication among workers during Tower erection / stringing activity, as per requirement.

11. THAT the Contractor undertakes to deploy qualified safety personnel responsible for safety as per requirements of Employer/Statutory Authorities.

THAT the Contractor employing more than 250 workmen whether temporary, casual, probationer, regular or permanent or on contract, shall employ at least one full time officer exclusively as qualified safety officer having diploma in safety to supervise safety aspects of the equipment and workmen who will coordinate with Engineer In-charge /Project Manager/Safety Co-ordinator of the Employer. In case of work being carried out through sub contractors the sub – contractor’s workmen / employees will also be considered as the contractor’s employees / workmen for the above purpose. If the number of workers are less than 250 then one qualified safety officer is to be deployed for each contract. He will report directly to his head of organization and not the Project Manager of contractor He shall also not be assigned any other work except assigning the work of safety. The curriculum vitae of such person shall be got cleared from XXXX (Name of the Employer) Project Manager / Construction staff.

The name and address of such safety officers of contractor will be promptly informed in writing to Engineer In-charge with a copy to safety officer - In-charge before start
of work or immediately after any change of the incumbent is made during the currency of the contract. The list is enclosed at Annexure - 5A (SP).

THAT the Contractor has also prepared a list including details of Explosive Operator (if required), Safety officer / Safety supervisor / nominated person for safety for each erection / stringing gang, list of personnel trained in First Aid Techniques as well as copy of organisation structure of the Contractor in regard to safety. The list is enclosed at Annexure - 5B (SP).

12. The Project Manager shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/or property, and/or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Project Manager within 3 days of such stoppage of work and decision of the Project Manager in this respect shall be conclusive and binding on the Contractor.

13. THAT, if any Employer's Engineer/ supervisor at site observes that the Contractor is failing to provide safe working environment at site as per agreed Safety Plan / XXXX (Name of the Employer) Safety Rule/ Safety Instructions / Statutory safety requirement and creates hazardous conditions at site and there is possibility of an accident to workmen or workmen of the other contractor or public or the work is being carried out in an unsafe manner or he continues to work even after being instructed to stop the work by Engineer / Supervisor at site / RHQ / Corp. Centre, the Contractor shall be bound to pay a penalty of Rs. 10,000/- per incident per day till the instructions are complied and as certified by Engineer / Supervisor of Employer at site. The work will remain suspended and no activity will take place without compliance and obtaining clearance / certification of the Site Engineer / Supervisor of the Employer to start the work.

14. THAT, if the investigation committee of Employer observes any accident or the Engineer In-charge/Project Manager of the Employer based on the report of the Engineer/Supervisor of the Employer at site observes any failure on the Contractor’s part to comply with safety requirement / safety rules/ safety standards/ safety instruction as prescribed by the Employer or as prescribed under the applicable law for the safety of the equipment, plant and personnel and the Contractor does not take adequate steps to prevent hazardous conditions which may cause injury to its own Contractor’s employees or employee of any other Contractors or Employer or any other person at site or adjacent thereto, or public involvement because of the Contractor’s negligence of safety norms, the Contractor shall be liable to pay a compensation of Rs. 10,00,000/- (Rupees Ten Lakh only) per person affected causing death and Rs. 1,00,000/- (Rupees One Lakh only) per person for serious injuries / 25% or more permanent disability to the Employer for further disbursement to the
deceased family/ Injured persons. The permanent disability has the same meaning as indicated in Workmen’s Compensation Act 1923 or latest. The above stipulations is in addition to all other compensation payable to sufferer as per workmen compensation Act / Rules

THAT as per the Employer’s instructions, the Contractor agrees that this amount shall be deducted from their running bill(s) immediately after the accident, That the Contractor understands that this amount shall be over and above the compensation amount liable to be paid as per the Workmen’s Compensation Act /other statutory requirement/ provisions of the Bidding Documents.

15. THAT the Contractor shall submit Near-Miss-Accident report alongwith action plan for avoidance such incidence /accidents to Engineer – In-charge/ Project Manager. Contractor shall also submit Monthly Safety Activities report to Engineer – In-charge/ Project Manager and copy of the Monthly Safety Activities report also to be sent to Safety In-charge at RHQ of the Employer for his review record and instructions.

16. THAT the Contractor is submitting a copy of Safety Policy/ Safety Documents of its Company which is enclosed at Annexure – 6 (SP) and ensure that the safety Policy and safety documents are implemented in healthy spirit.

17. THAT the Contractor shall make available of First Aid Box [Contents of which shall be as per Building & other construction workers (Regulation of Employment and Conditions of Services Act and Central Rule 1998 or latest / XXXX (Name of the Employer) Guidelines)] to the satisfaction of Engineer In-Charge/ Project Manager with each gang at site and not at camp and ensures that trained persons in First Aid Techniques with each gang before execution of work.

18. THAT the Contractor shall submit an ‘Emergency Preparedness Plan’ for different incidences i.e. Fall from height, Electrocution, Sun Stroke, Collapse of pit, Collapse of Tower, Snake bite, Fire in camp / Store, Flood, Storm, Earthquake, Militancy etc. while carrying out different activities under execution i.e. foundation works including civil works, erection, stringing (as applicable), testing & commissioning, disposal of materials at site / store etc. which is enclosed at Annexure – 7 (SP) for approval of the Engineer In-Charge/ Project Manager before start of work.

19. THAT the Contractor shall organise Safety Training Programs on Safety, Health and Environment and for safe execution of different activities of works i.e. foundation works including civil works, erection, stringing (as applicable), testing & commissioning, disposal of materials at site / store etc. for their own employees including sub contractor workers on regular basis.

The Contractor, therefore, submits copy of the module of training program, enclosed at Annexure - 9 (SP), to Engineer In-charge/Project Manager for its acceptance and approval and records maintained.
20. THAT the Contractor shall conduct safety audit, as per Safety Audit Check Lists enclosed at **Annexure - 8 (SP)**, by his Safety Officer(s) every month during construction of Transmission Lines / Sub Stations / any other work and copy of the safety audit report will be forwarded to the Employer’s Engineer In-charge / Site In-charge/Project Manager for his comments and feedback. During safety audit, healthiness of all Personal Protective Equipments (PPEs) shall be checked individually by safety officer of contractor and issue a certificate of its healthiness or rejection of faulty PPEs and contractor has to ensure that all faulty PPEs and all faulty lifting tools and tackles should be destroyed in the presence of XXXX (Name of the Employer) construction staff. Contractor has to ensure that each gang be safety audited at least once in two months. During safety audit by the contractor, Safety officer’s feedback from XXXX (Name of the Employer) concerned shall be taken and recorded. The Employer’s site officials shall also conduct safety audit at their own from time to time when construction activities are under progress. Apart from above, the Employer may also conduct surveillance safety audits. The Employer may take action against the person / persons as deemed fit under various statutory acts/provisions under the Contract for any violation of safety norms / safety standards.

21. THAT the Contractor shall develop and display Safety Posters of construction activity at site and also at camp where workers are generally residing.

22. THAT the Contractor shall ensure to provide potable and safe drinking water for workers at site / at camp.

23. THAT the Contractor shall do health check up of all workers from competent agencies and reports will be submitted to Engineer In-Charge within fifteen (15) days of health check up of workers as per statutory requirement.

24. THAT the Contractor shall submit information alongwith documentary evidences in regard to compliance to various statutory requirements as applicable which are enclosed at **Annexure - 10A (SP)**.

The Contractor shall also submit details of Insurance Policies taken by the Contractor for insurance coverage against accident for all employees are enclosed at **Annexure - 10B (SP)**.

25. THAT a check-list in respect of aforesaid enclosures alongwith the Contractor’s remarks, wherever required, is attached as **Annexure - Check List** herewith.

THE CONTRACTOR shall incorporate modifications/changes in this ‘Safety Plan’ necessitated on the basis of review/comments of the Engineer In-Charge/Project Manager within fourteen (14) days of receipt of review/comments and on final approval of the Engineer In-Charge/Project Manager of this ‘Safety Plan’, the Contractor shall execute the works under
the Contract as per approved ‘Safety Plan’. Further, the Contractor has also noted that the first progressive payment towards Services Contract shall be made on submission of ‘Safety Plan’ along with all requisite documents and approval of the same by the Engineer In-Charge/Project Manager.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorised representative under the common seal of the Company, the day, month and year first above mentioned.

For and on behalf of

M/s................................................

WITNESS
1. Signature.......................... Signature..........................
   Name................................. Name.............................
   Address............................. Address..........................

2. Signature.......................... Authorised representative
   Name................................. (Common Seal)
   Address............................. (In case of Company)

Note:
All the annexure referred to in this “Safety Plan” are required to be enclosed by the contractor as per the attached “Check List”

1. Safety Plan is to be executed by the authorised person and (i) in case of contracting Company under common seal of the Company or (ii) having the power of attorney issued under common seal of the company with authority to execute such contract documents etc., (iii) In case of (ii), the original Power of Attorney if it is specifically for this Contract or a Photostat copy of the Power of Attorney if it is General Power of Attorney and such documents should be attached to this Safety Plan.

2. For all safety monitoring/ documentation, Engineer In-charge / Regional In-charge of safety at RHQ will be the nodal Officers for communication.
**CHECK LIST FOR SAFETY PLAN**

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Details of Enclosure</th>
<th>Status of Submission of information/documents</th>
<th>Remarks</th>
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</thead>
</table>
| 1.    | **Annexure - 1A (SP)**  
Safe work procedure for each activity i.e. foundation works including civil works, erection, stringing (as applicable), testing & commissioning, disposal of materials at site / store etc. to be executed at site. | Yes/No | |
| 2.    | **Annexure - 1B (SP)**  
Manpower deployment plan, activity wise foundation works including civil works, erection, stringing (as applicable), testing & commissioning, disposal of materials at site / store etc. | Yes/No | |
| 3.    | **Annexure - 2 (SP)**  
List of Lifting Machines i.e. Crane, Hoist, Triffor, Chain Pulley Blocks etc. and Lifting Tools and Tackles i.e. D shackle, Pulleys, come along clamps, wire rope slings etc. and all types of ropes i.e. Wire ropes, Poly propylene Rope etc. used for lifting purposes along with test certificates. | Yes/No | |
| 4.    | **Annexure - 3 (SP)**  
List of Personal Protective Equipment (PPE), activity wise including the following along with test certificate of each as applicable:  
1. Industrial Safety Helmet to all workmen at site. (EN 397 / IS 2925) with chin strap and back stay arrangement.  
2. Safety shoes without steel toe to all ground level workers and canvas shoes for workers working on tower.  
3. Rubber Gum Boot to workers working in rainy season / concreting job. | Yes/No | |
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<tbody>
<tr>
<td>4.</td>
<td>Twin lanyard Full Body Safety harness with shock absorber and leg strap arrangement for all workers working at height for more than three meters. Safety Harness should be with attachments of light weight such as of aluminium alloy etc. and having a feature of automatic locking arrangement of snap hook and comply with EN 361 / IS 3521 standards.</td>
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<td>5.</td>
<td>Mobile fall arrestors for safety of workers during their ascending / descending from tower / on tower. EN 353 -2 (Guided type fall arresters on a flexible anchorage line.)</td>
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<td>6.</td>
<td>Retractable type fall arrestor (EN360: 2002) for ascending / descending on suspension insulator string etc.</td>
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<td>7.</td>
<td>Providing of good quality cotton hand gloves / leather hand gloves for workers engaged in handling of tower parts or as per requirement at site.</td>
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<td>8.</td>
<td>Electrical Resistance hand gloves to workers for handling electrical equipment / Electrical connections. IS : 4770</td>
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<td>9.</td>
<td>Dust masks to workers handling cement as per requirement. IS : 1179 / IS : 2553</td>
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<td>10.</td>
<td>Face shield for welder and Grinders. IS : 1179 / IS : 2553</td>
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<td>11.</td>
<td>Other PPEs, if any, as per requirement etc.</td>
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<td>5.</td>
<td><strong>Annexure - 4 (SP)</strong></td>
<td>Yes/No</td>
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<td>List of Earthing Equipment / Earthing devices with Earthing lead conforming to IECs for earthing equipments are - (855, 1230, 1235 etc.) gang wise for stringing activity/as per requirement</td>
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<td>6.</td>
<td><strong>Annexure - 5A (SP)</strong></td>
<td>Yes/No</td>
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<td>List of Qualified Safety Officer(s) alongwith their contact details</td>
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<td>7.</td>
<td><strong>Annexure - 5B (SP)</strong>&lt;br&gt;Details of Explosive Operator (if required), Safety officer / Safety supervisor for every erection / stinging gang, any other person nominated for safety, list of personnel trained in First Aid as well as brief information about safety set up by the Contractor alongwith copy of organisation of the Contractor in regard to safety</td>
<td>Yes/No</td>
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<td>8.</td>
<td><strong>Annexure - 6 (SP)</strong>&lt;br&gt;Copy of Safety Policy/ Safety Document of the Contractor's company</td>
<td>Yes/No</td>
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<td>9.</td>
<td><strong>Annexure - 7 (SP)</strong>&lt;br&gt;‘Emergency Preparedness Plan’ for different incidences i.e. Fall from height, Electrocution, Sun Stroke, Collapse of pit, Collapse of Tower, Snake bite, Fire in camp / Store, Flood, Storm, Earthquake, Militancy etc. while carrying out different activities under execution i.e. foundation works including civil works, erection, stringing (as applicable), testing &amp; commissioning, disposal of materials at site / store etc.</td>
<td>Yes/No</td>
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<td>10.</td>
<td><strong>Annexure - 8 (SP)</strong>&lt;br&gt;Safety Audit Check Lists ( Formats to be enclosed)</td>
<td>Yes/No</td>
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<td>11.</td>
<td><strong>Annexure - 9 (SP)</strong>&lt;br&gt;Copy of the module of Safety Training Programs on Safety, Health and Environment, safe execution of different activities of works for Contractor's own employees on regular basis and sub contractor employees.</td>
<td>Yes/No</td>
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<td>12.</td>
<td><strong>Annexure - 10A (SP)</strong></td>
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<td>Information alongwith documentary evidences in regard to the Contractor’s compliance to various statutory requirements including the following:</td>
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<tr>
<td>(i)</td>
<td>Electricity Act 2003</td>
<td>Yes/No</td>
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<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(ii)</td>
<td>Factories Act 1948 or latest</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(iii)</td>
<td>Building &amp; other construction workers (Regulation of Employment and Conditions of Services Act and Central Act 1996 or latest) and Welfare Cess Act 1996 or latest with Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(iv)</td>
<td>Workmen Compensation Act 1923 or latest and Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(v)</td>
<td>Public Insurance Liabilities Act 1991 or latest and Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(vi)</td>
<td>Indian Explosive Act 1948 or latest and Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(vii)</td>
<td>Indian Petroleum Act 1934 or latest and Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(viii)</td>
<td>License under the contract Labour (Regulation &amp; Abolition) Act 1970 or latest and Rules.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(ix)</td>
<td>Indian Electricity Rule 2003 and amendments if any, from time to time.</td>
<td>Yes/No</td>
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<td>[Name of Documentary evidence in support of compliance]</td>
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<td>(x)</td>
<td>The Environment (Protection) Act 1986 or latest and Rules.</td>
<td>Yes/No</td>
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<tr>
<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
<td></td>
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</tr>
<tr>
<td>(xi)</td>
<td>Child Labour (Prohibition &amp; Regulation) Act 1986 or latest.</td>
<td>Yes/No</td>
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<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
<td></td>
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</tr>
<tr>
<td>(xii)</td>
<td>National Building Code of India 2005 or latest (NBC 2005).</td>
<td>Yes/No</td>
<td></td>
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<tr>
<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
<td></td>
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</tr>
<tr>
<td>(xiii)</td>
<td>Indian standards for construction of Low/Medium/High/Extra High Voltage Transmission Line</td>
<td>Yes/No</td>
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<td></td>
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<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
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<td></td>
</tr>
<tr>
<td>(iv)</td>
<td>Any other statutory requirement(s) [please specify]</td>
<td>Yes/No</td>
<td></td>
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<tr>
<td></td>
<td>[Name of Documentary evidence in support of compliance]</td>
<td></td>
<td></td>
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<tr>
<td>S. N.</td>
<td>Details of Enclosure</td>
<td>Status of Submission of information/documents</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
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<td>-----------------------------------------------</td>
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<tr>
<td>13.</td>
<td><strong>Annexure - 10B (SP)</strong>&lt;br&gt;Details of Insurance Policies along with documentary evidences taken by the Contractor for the insurance coverage against accident for all employees as below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Under Workmen Compensation Act 1923 or latest and Rules.</td>
<td></td>
<td>Yes/No</td>
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<tr>
<td></td>
<td>————————————————————————————————————&lt;br&gt;[Name of Documentary evidence in support of insurance taken]</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(ii) Public Insurance Liabilities Act 1991 or latest</td>
<td></td>
<td>Yes/No</td>
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<tr>
<td></td>
<td>————————————————————————————————————&lt;br&gt;[Name of Documentary evidence in support of insurance taken]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iii) Any Other Insurance Policies</td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td></td>
<td>————————————————————————————————————&lt;br&gt;[Name of Documentary evidence in support of insurance taken]</td>
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</tbody>
</table>

---
19. **FORM OF JOINT DEED OF UNDERTAKING BY THE SUB-CONTRACTOR ALONGWITH THE BIDDER/ CONTRACTOR**

THIS DEED OF UNDERTAKING executed this ............... day of ..................... Two Thousand and ............. by M/s. .........................., a Company incorporated under the laws of ......................... and having its Registered Office at ................................... (hereinafter called the “Sub-contractor” which expression shall include its successors, executors and permitted assigns), and M/s. .........................., a Company incorporated under the laws of ......................... having its Registered Office at ................................... (hereinafter called the “Bidder”/“Contractor” which expression shall include its successors, executors and permitted assigns) in favour of XXXX *(Name of the Employer)* a Company incorporated under the Companies Act of 1956 having its registered office at XXXX *(Registered Address of the Employer)* (hereinafter called the “Employer” which expression shall include its successors, executors and permitted assigns)

WHEREAS the “Employer” invited Bid as per its Specification No. .......... for Rural Electrification works of ................. including installation of Sub-stations, lines, bays, DTs and providing service connections etc.

AND WHEREAS Clause No. .............., Section .............., of ................., Vol.-I... forming part of the Bid Documents inter-alia stipulates that the Bidder and/or Sub-contractor must fulfill the Qualifying Requirements and be jointly and severally bound and responsible for the quality and timely execution of Rural Electrification works in the event the Bid submitted by the Bidder is accepted by the Employer resulting in a Contract.

AND WHEREAS the Bidder has submitted its Bid to the Employer vide Proposal No. ................. dated .......... based on tie-up with the Sub-contractor for execution of aforesaid Rural Electrification works.

NOW THEREFORE THIS UNDERTAKING WITNESSETH as under:

1.0 In consideration of the award of Contract by the Employer to the Bidder (hereinafter referred to as the “Contract”) we, the Sub-contractor and the Bidder/Contractor do hereby declare that we shall be jointly and severally bound unto the XXXX *(Name of the Employer)* for execution of Rural Electrification works in accordance with the Contract Specifications.

2.0 Without in any way affecting the generality and total responsibility in terms of this Deed of Undertaking, the Sub-contractor hereby agrees to depute their representatives from time to time to the Employer’s Project site as mutually considered necessary by the Employer, Bidder/Contractor and the Sub-contractor to ensure proper quality, manufacture, testing and supply on FOR destination delivery at site basis and successful performance of Rural Electrification works in
accordance with Contract Specifications. Further, if the Employer suffers any loss or damage on account of non-performance of the material fully meeting the performance guaranteed as per Bid Specification in terms of the contract. We the **Sub-contractor** and the Contractor jointly and severally undertake to pay such loss or damages to the Employer on its demand without any demur.

3.0 This Deed of Undertaking shall be construed and interpreted in accordance with the laws of India and the Courts in Delhi shall have exclusive jurisdiction in all matters arising under the Undertaking.

4.0 We, the Bidder/Contractor and **Sub-contractor** agree that this Undertaking shall be irrevocable and shall form an integral part of the Contract and further agree that this Undertaking shall continue to be enforceable till the Employer discharges it. It shall become operative from the effective date of Contract.

IN WITNESS WHEREOF the **Sub-contractor** and/or the Bidder/Contractor have through their Authorised Representatives executed these presents and affixed Common seals of their respective Companies, on the day, month and year first above mentioned.

WITNESS

(For **Sub-contractor**)

Signature ..........................

Name ..........................

Office Address ..........................

(For **Bidder**)

Signature ..........................

Name ..........................

Office Address ..........................

Note:
1. For the purpose of executing the Deed of Joint Undertaking, the non-judicial stamp papers of appropriate value shall be purchased in the name of executant(s).

2. The Undertaking shall be signed on all the pages by the authorised representatives of each of the partners and should invariably be witnessed.

3. This Deed of Joint Undertaking duly attested by Notary Public of the place(s) of the respective executant(s), shall be submitted alongwith the bid.

4. In case the bid is submitted by a Joint Venture (JV) of two or more firms as partners, then the Joint deed of undertaking shall be modified accordingly.
20. **FORM OF CERTIFICATE OF FINANCIAL PARAMETERS FOR QR**  
(as per clause ref. no. 1.02 and 2.0 of Annexure-A(BDS))

(Rupees in Lakhs)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Net Worth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Paid up Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>Free Reserves and Surplus*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>Misc expenses to the extent not written off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Net Worth (a+b-c)</strong></td>
<td></td>
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<tr>
<td>2.</td>
<td><strong>Annual Turnover</strong></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td><strong>Liquid Asset (Total Current Asset - Inventories)</strong></td>
<td></td>
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</tr>
</tbody>
</table>

* Free Reserve and Surplus should be Exclusive of Revaluation Reserve, written back of Depreciation Provision and Amalgamation.  

** Annual total Income/ turnover as incorporated in the Profit and Loss Account excluding non recurring income, i.e. sale of fixed asset etc.

It is certified that all the figures are based on audited accounts read with auditors report and Notes to Accounts etc.

Date

Certified By

(Chartered Accountants)

Membership No.

Seal
GENERAL INFORMATION & SCOPE OF WORK
33 KV line, 11 KV Line, Distribution Substation, LT Lines and Service Connection

Rural Electrification Works under
XII Plan Rajiv Gandhi Grameen Vidyutikaran Yojana

VOLUME - I: SECTION-VII

(This document is meant for the exclusive purpose of bidding against the specification and shall not be transferred, reproduced or otherwise used for purposes other than that for which it is specifically issued).
1. Detailed scope of work under “XXXXX” package of XXXX District(s) in XXX State to be implemented on Turn-Key Contract basis is defined in this section. Detailed scope of work that Employer intends to get executed through the contractor described hereunder.

2. The scope of work includes execution on **turn-key** basis to cover but not restricted to the following activities, services and works:

   i. Mapping of electrical network at all voltage level for the rural areas with village wise identification of available infrastructure with suitable provision for super imposing newly created infrastructure facilities as may be created under the project. Preparing village wise (covering all habitations in it) detailed single line diagram showing (SLD) existing as well as proposed infrastructures. This SLD shall be up-loaded in RGGVY web portal on approval of Engineer and shall be used as basic diagram for assessment of works under the contract. On completion of village wise works including 11 KV line works, contractor will prepare as build Single Line Diagram showing actual works done mentioning assets identification details. This details shall also be uploaded on the RGGVY web portal and shall be used as reference documents by 3-tier Quality assurance Inspecting officials to execute inspection works.

   ii. Complete design and engineering of all the systems, sub-systems, equipment, material and services.

   iii. Providing engineering data, drawings and O&M manuals for review, approval & records of the Employer.

   iv. Manufacturing, supply, testing, packing, transportation and insurance from the manufacturer's works to the site.

   v. Receipt, storage, insurance, preservation and conservation of equipment at the site.

   vi. All civil and structural works to include fencing, gate, approach and internal roads, equipment and structure foundation earthing, pipes, culverts, trenches, drains etc, as required.

   vii. Fabrication, pre-assembly (if any), erection, testing and commissioning of all the equipment/material including successfully putting them into satisfactory operation.

   viii. In addition to the requirements indicated in the section “Technical Specifications” all the requirements as stated in other sections shall also
be considered as a part of this specification as if completely bound herewith.

ix. The contractor shall be responsible for providing all material, equipment and services specified or which are otherwise required to fulfill the intent of ensuring operation ability, maintainability and the reliability of the complete work covered under this package.

x. All services & activities required to be given contractually by the bidder during warranty period.

xi. To ensure compliance to the observations of 3-tier Quality Assurance Inspections and to submit compliance reports including photographs within one month from hearing. This would also be an important conditionalities for release of stage payments.

3. For individual equipment specifications reference shall be made to the relevant sections under “Technical Specification”.

4. Works covered under package:

i. New 33 KV and 11 KV Lines,
ii. New 33 or 11 KV bays at 33/11 KV Grid substations,
iii. New 11/0.433 KV Distribution transformer substations,
iv. Installation of 33 KV or 11 KV grade Isolators at cut points and at substation bay extension’ structures,
v. LT line through AB Cable or through Overhead conductors,
vi. Service connection

5. General: Following basic assumption have been made while covering detailed scope of work under the package:

a. Type of Supports: Following type of supports are envisaged in the package:

<table>
<thead>
<tr>
<th>No</th>
<th>Line</th>
<th>RGGVY Villages / Habitation</th>
<th>Plane area - approached by vehicle</th>
<th>Difficult hilly terrain - approach by head loads only</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>33 KV Lines</td>
<td>9.1 m long PCC Poles</td>
<td>11 m long Steel Tubular Poles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>33 KV Lines</td>
<td>13 m long RS joist (152x152 mm) - in dense forest area on specific approval only,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>11 KV</td>
<td>8 m long PCC Poles</td>
<td>11 meter long Steel Tubular Poles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 KV</td>
<td>13 m long RS joist (152x152 mm) - in dense forest area on specific approval only,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>LT Lines</td>
<td>8 m long PCC Poles</td>
<td>9 m long Steel tubular Poles</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13 m long RS joist (152x152 mm) - in dense forest area on specific approval only,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Accordingly, Tubular poles support or RS Joist supports shall only be used in difficult hilly terrain where approach except head loads is not feasible. Also, in dense forest area, where 13 meter long support are needed to take care of animals’ safety, RS Joists are permitted. In all other area, PCC supports are to be used. The specifications of PCC Poles as prevailing is state are to be used for LT, 11 KV and 33 KV lines.

b. Support foundations (Lines) : Following type of foundations are envisaged in the package for overhead lines:

<table>
<thead>
<tr>
<th>No</th>
<th>Line</th>
<th>RGGVY Villages / Habitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SP/ DP/ TP- (Foundation type)</td>
</tr>
<tr>
<td>1</td>
<td>33 KV</td>
<td>RS Joist (152x152 mm)/ Steel Tubular/PCC poles (Cement Concrete foundations for all type of support structures)</td>
</tr>
<tr>
<td>2</td>
<td>11 KV / LT</td>
<td>PCC Poles (Stone bolder + excavated earth refilling and ramming in case of Single Pole structures)</td>
</tr>
<tr>
<td>3</td>
<td>11 KV</td>
<td>PCC Poles (Cement Concrete in case of Double Pole, Triple Pole and Substation Pole structures)</td>
</tr>
<tr>
<td>4</td>
<td>11 KV</td>
<td>PCC Poles (Cement Concrete in case of Single Pole structures being erected in water logging area)</td>
</tr>
<tr>
<td>5</td>
<td>11 KV / LT</td>
<td>Steel Tubular poles (Cement Concrete in all type of support structures)</td>
</tr>
<tr>
<td>6</td>
<td>11 KV / LT</td>
<td>RS Joist (Cement Concrete in all type of support structures)</td>
</tr>
</tbody>
</table>

c. Support foundations (Bays Extension): Following type of foundations are envisaged in the package for Bay Extension gantry structures:

<table>
<thead>
<tr>
<th>Bays at 33/ 11 KV grid substations - (Foundation Type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS Joist (2Nos. X 152x152 mm)/ Steel Tubular Poles/ PCC Poles/ Lattice structure in Cement</td>
</tr>
</tbody>
</table>

d. Conductor: Following type and sizes of overhead conductors are standardized in the project:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>**Type of Conductor</th>
<th>No. and Diameter of Wires</th>
<th>Voltage Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACSR/AAAC</td>
<td>7/2.59 mm (30mm² Al.Area)</td>
<td>LT &amp; 11 KV Lines</td>
</tr>
<tr>
<td>2</td>
<td>ACSR/AAAC</td>
<td>7/3.35 mm (50mm² Al.Area)</td>
<td>LT, 11 KV Lines</td>
</tr>
<tr>
<td>3</td>
<td>ACSR/AAAC</td>
<td>7/4.09 mm (80mm² Al.Area)</td>
<td>11 KV Lines</td>
</tr>
<tr>
<td>4</td>
<td>ACSR/AAAC</td>
<td>6/4.72 mm+7/1.57 mm (100 mm² Al.Area)</td>
<td>33 KV Lines,</td>
</tr>
</tbody>
</table>

**Project implementation agency may use similar capacity AAAC conductors in place of ACSR conductor as per their suitability.**

e. Distribution Transformers: Following types and sizes of 3 Star rated {marking as per Bureau Of Energy Efficiency (BEE) definition} Distribution Transformers are standardized in the project:
f. PAINTING: Supporting post (Steel Tubular Poles or RS Joist or other steel poles) shall be painted. Before painting, surface shall be de-rusted using wire brush, emery paper etc. The surface shall be cleaned and painted with two or more coats of red oxide zinc chromate primer paint using painting brush. On smooth surface finish, two or more coats of aluminium paints using painting brush shall be applied on the portion of post which shall be above ground level, till final smooth surface finish and even shade on surface appears. The section of post which will be placed below ground level under cement concrete shall be applied with two coats of bitumen paint of reputed make and quality as approved by Engineer in Charge.

In above cases, the Engineer in Charge shall approve the make of paint. It shall be reputed make and shade. The brush shall only be used for painting. The quality of painting shall be examined at the time of final handing over of installation and also at the time of completion of defect liability period. In event of deterioration of paint, the surface cleaning and re-painting shall be performed by the agency without any extra cost. After application of two or more coats of red oxide zinc chromate paint, the installation shall be offered to owner for clearance to apply final finish paint aluminium paint.

6. **This package is covering following three sections: #**

i. New 33 KV, 11 KV Lines, LT Lines and Bay Extension,

ii. 11/0.433 KV Distribution Transformer Substations,

iii. LT Service connection

# (In few projects, scope also cover installation of new/augmentation of Grid Substation. The scope under this part is defined separately in the documents)

7. **Section-1: 33 KV, 11 KV and LT Lines**

The supply, erection, testing and commissioning of 33KV, 11KV and LT lines shall generally be performed as per REC Construction manual for 33KV, 11KV, Medium and Low Voltage Lines (REC Manual 8 / 1975). However, salient features are detailed out in foregoing paras:
7.1. Block wise details of New 33 kV lines, 11 kV lines, additional bays and crossings are indicated as below:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Particulars</th>
<th>Unit</th>
<th>Block-I</th>
<th>Block - II</th>
<th>Block- III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>33 KV Line</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>i</td>
<td>PCC Pole</td>
<td>Km.</td>
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<tr>
<td>ii</td>
<td>RS Joist</td>
<td>Km.</td>
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<tr>
<td>iii</td>
<td>Steel Tubular pole</td>
<td>Km.</td>
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<tr>
<td>B</td>
<td>11 KV Line</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>PCC Pole</td>
<td>Km.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Steel Tubular pole</td>
<td>Km.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>iii</td>
<td>XLPE Cable</td>
<td>Km.</td>
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<tr>
<td>C</td>
<td>Bays</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>11KV Bayat 33/11KV Grid SS</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>11KV Bay at 66/11KV Grid SS</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Crossings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Line Crossings 11 KV</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Line Crossing 33 KV</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>iii</td>
<td>Forest Clearance</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>iv</td>
<td>River Crossing</td>
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</tbody>
</table>

7.2. Line Work involves mainly following jobs:

i. Survey of 33 KV, 11 KV and LT lines, distribution transformer substation and LT single phase service consumers of Below Poverty Line (BPL) category,

ii. Procurement, pre-dispatch inspection, insurance and supplying required materials to site/site stores,

iii. Maintaining project wise site stores, maintaining round the clock security of stores, materials record keeping, materials handling in stores and up to working site location,

iv. Establishment of fabrication workshop as per requirements of work,

v. Temporarily removing obstructions created by LT and HT lines of Sub transmission and distribution network in the locality and making good the same on completion of work,

vi. Erection of supports, insulators, stay sets, stringing of conductors etc for completion of lines work,

vii. Erection of distribution transformer substations,

viii. Erection of bay extension at existing grid substations,

ix. Execution of temporary jumpering at the terminal points to facilitate uninterrupted supply of power to the consumers.

x. Special Crossing and its guarding i.e. P&T lines, building, line of other voltage grading, Road, other than Road/ Street, River crossing, Railway line...
xi. Jumpering of lines to existing system network.

xii. Testing & commissioning of RGGVY works with the existing system.

7.3. The Contractor shall start detailed survey and shall submit report/results progressively as per agreed PERT chart. Contractor shall extract required topographical maps from Survey of India.

7.4. The tree-cutting/trimming shall be responsibility of the Contractor. The Contractor shall count, mark and put proper numbers with suitable quality of paint at his own cost on all the trees that are to be cut/trim.

7.5. Owner shall pay compensation for any loss or damage for tree cutting due to Contractor’s work. Wherever forest clearance is envisaged for execution of work, clearance of forest department for tree cutting, if required, shall be arranged by the owner and compensation shall also be paid by the owner. Necessary fee if required to pay to Govt. dept. for arranging such clearances shall be paid by Employer. However, the contractor would however require to provide all necessary assistance for execution of this work.

7.6. POLE LOCATION: Poles shall be located as per following principles:

7.6.1. Keep spans uniform in length as far as possible. The maximum permissible span shall be as per REC specifications. However, actual span may vary as per site conditions. The contractor shall submit detailed route map of line for Employer's approval. In the course of surveying, any conspicuous variations in route length of the line shall be brought to the notice of Engineer in Charge. The Employer, if considers this variations unavoidable, shall make necessary alteration inline route which shall be carried out accordingly and revised route map shall be submitted for Employer’s approval by the contractor.

7.6.2. The span should be as near as possible to the basic design span indicated in REC drawings numbers mentioned below:

7.6.2.1. 33KV Line: M-2, M-11;

7.6.2.2. 11 KV Line: A-8, A-34,

7.6.2.3. LT Lines B-8, B-11, B-36, B-37

7.7. Proper sag chart calculations are to be followed while stringing the conductors. Fare erection practices shall be followed while spreading the conductors for erection to avoid wrinkles/damages to the conductor.

7.8. In area, lines are to be erected with provision for forming lines of two different gradients as under

- 11 KV Line and LT Lines
33 KV Line and LT Lines

7.9. Conductors forming parts of systems at different voltages are erected on the same supports. The contractor shall make adequate provision to guard against danger to linesmen and others from the lower voltage system being charged above its normal working voltage by leakage from or contact with the higher voltage system; and the methods of construction and the clearances between the conductors of the two systems shall be as described in the specifications.

7.10. In this package, the scope of execution of LT lines is also covered. At all such locations, the contractor shall make adequate provision to guard against danger to linesmen and others from the lower voltage system being charged above its normal working voltage by leakage from or contact with the higher voltage system.

7.11. The LT line between distribution transformer and consumers shall be laid using overhead conductors or LT Air Bunched cables as per prevailing practices of the states.

7.12. In case of LT overhead conductor formation, the earthing point of distribution transformer should be extended to the single phase beneficiary premises having en-route earth connection at every 6th supports. The earth conductor is to be connected with earth point provided in the premises of single phase consumers.

7.13. In case of LT ABC Cable conductor formation of LT lines, neutral conductor brought from transformer neutral should be extended to single phase consumer premises to install and maintain earth Point. Or else, individual consumers may be provided with separate earthing along with service connection to maintained earth point in the consumer premises.

7.14. LT AB cable: For extension of supply from Distribution box to overhead AB Cable/ LT line, connection shall be through cable/ AB Cable. The arrangement shall be as described below:

7.15. For this arrangement phase conductors of AB Cable shall be segregated from the bearer wire.

7.16. Bearer wire of LT AB cable shall be anchored through eyehook arrangement similar to dead end (anchor) clamps.

7.17. Extra length of continuous AB cable along with messenger / bearer wire shall be properly dressed and taken in to TPN switch, using bimetallic clamp of appropriate size / quality.

7.18. Connection from AB cable & messenger / bearer to bus bar of pole distribution box should be done using IPC (insulation piercing, connector) & bimetallic connector as per specification.
7.19. LT lines shall be constructed with Aerial Bunched Cable or through overhead ACSR/AAAC conductors. Support at each of the Pole as per the final line route to be decided based on survey. For LT lines with ‘ABC’, supports shall have Eye-hook and suspension clamp arrangement for anchoring of bearer wire associated with ABC line. These shall be as per the Drg. No. REC Construction Standard: E-34 & 35.

7.20. For LT pole locations, where consumer connections are more than two (extended), AB Cable shall be anchored on their bearer wire with suitable clamp or hook arrangement. This clamp shall be similar to dead end type (anchor) clamps, cable portion shall be terminated in and out of the distribution box. The anchor arrangement to be provided on both sides of the pole to facilitate connection of ABC to the next pole of the line. Locations, where LT lines have to cross important through fare (Main road, HT line etc.) suitable extension arrangement (pole top bracket) shall be provided to maintain the clearances and sags.

8. **Extension Of 33 KV and 11 KV Bays at 33/11KV Grid Substations:**

At few locations where 33 KV or 11 KV feeders are emanating from 33/11 KV Grid Substations, extension of bays is to be provided. Following works are envisaged under this head:

i. Supports: Employer may use lattice structures or RS Joists for 33KV gantry structures and equipment structures.

   **Option A: RS Joist Support and ISMC Channels as support structures:**

   a) 2x175x85mm RS joist supports for bus bars supports, Isolator support and Metering equipment supports,

   b) ISMC 100 Channels for bus bars, Isolators, Metering equipment, Line equipment,

   c) Cross arms for DP structures,

   **Option B: Galvanized Lattice structures Support:**

   a) Made of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design.

   b) All holes in the structures shall be 17.5mm diameters for 16mm diameter bolts unless specified otherwise. All structural steel members and bolts shall be galvanized after fabrication as per IS:4759 and zinc coating shall not be less than 610gm/sq. meter for all structural steel members. All L45x45x5 will have 23 mm back mark. All L50x50x6 will have 28mm back mark. 3.5mm spring washers are to be used under each nut, structural steel shall conform to IS 2026. All weld shall be 6mm filled weld unless specified otherwise. All nuts and bolts
shall be of property class 5.6 of IS 1367. Plain washers shall be as per IS 2016 & spring washers shall be IS: 3063.

ii. Equipment & Materials:

a. Line Isolator (33 KV – 800 A, 11 KV 400 A),
b. Station class Lighting Arresters on each phase of Station Class. Providing 50 x 6 mm galvanized steel flat including jointing / bolting / welding as required as per attached Technical Specification for connection to earthing mat / pit.
c. Three phase AB switch – for 11 KV bays only,
d. ACSR wolf conductors,
e. Pipe Earthing 1 No, using Medium class GI Earth Pipe 3 m long x 40 mm dia, including accessories and providing masonry enclosures, with Concrete Cover Plate - Reinforced 3" thick with handle, Watering arrangement and providing Charcoal 65 Kgs. & Salt 5 Kgs. as required complete.
f. Spike Earthing 4 Nos,
g. T clamps & PG clamps,
h. Strain Insulators, Pin Insulators and Strain hardware,
i. GS flat 50X6 mm for Earthing of structures, and 8 SWG GI wire for equipment earthing including handle of Isolator/AB Switch,
j. Hardware,
k. Danger plates at each structure,
l. Stone carpeting by 40mm aggregate hard Stone. Carpeting shall be 200 mm thick. It should be executed in and up to 1 meter around Bay structure.
m. Labeling for name of feeder using yellow color base and black color digits to indicate the title using 50mm height of digits,
n. Danger notice plate as per specifications,

9. **LINE METER:**

All those lines which are emanating from existing 33/11 KV Grid Substations would be metered. The metering equipment like CT and PT and trivector meter shall be installed on indoor control panel.

10. **Installation of Distribution Transformer Substations:**

10.1. Distribution Transformers: Following type and sizes of 3 star rated {as per Bureau of Energy Efficiency (BEE)}, distribution transformers are standardized in the project:

10.2. Successful bidder shall conduct a detailed survey of existing habitation/village and will prepare presentable document showing population residing in the un-electrified area of habitation/village, best location of installation of a new distribution transformer substation and the capacity of transformers to be
selected for installation. The capacity of DTR shall be governed by following technical aspects:

i. Optimistic lengths of LT lines needed to feed the beneficiaries,

ii. Space available for installation of support/transformers,

iii. Probable load expected to come on the transformer due to existing BPL beneficiaries /others beneficiaries in the locality and their expected load growth in next 5 years.

10.3. The Distribution Transformer substation shall include new equipment like single/three phase Distribution Transformer, LT Distribution Board/ Main switch, 11 KV Isolator, 11 KV DO Fuse, 11 KV Lightning Arrester, Switch Fuse Unit, Fuse Unit etc. The scope shall cover providing and fixing these equipment with their mounting structures and terminal connectors.

10.4. Support for Distribution Transformer Substation:

Three phase distribution transformers are to be erected with Double Pole Structure and Single Phase Distribution Transformers are to be installed in Single Pole structures.

The support used for the installation of DTR shall be concreted.

The transformer structures should be so installed that installation of transformer should be vertical.

10.5. Distribution Transformer:

Following capacity of Distribution Transformers are considered in the package:

- Single / three phase (as per requirement) : 16 KVA,
- Three Phase: 25 KVA, 63 KVA and 100 KVA

10.6. The specification covers the design, engineering, manufacture, stage inspection, testing, pre-delivery inspection, supply, delivery, loading, unloading and performance requirements of 11/0.433 KV or 11KV/250 V non-sealed type aluminum wound BEE specified 3 Star Distribution Transformers. The transformers shall be double wound, three phase, CRGO M3 Grade (0.23mm) or better (The core shall be constructed from high grade, non-ageing, Cold Rolled Grain Oriented (CRGO) silicon steel of M3 Grade (0.23mm) laminations only. No other core materials shall be entertained. Bidders are requested to note that only PRIME CORE M3 Grade (0.23mm) materials are to be used. In no case, second grade core material is to be used. The purchaser at his discretion, may select samples from the core laminations and get the same tested in CPRI/ NABL Accredited laboratory to prove the quality of the core material), oil immersed with ONAN cooling with Oil filled up to maximum permissible level. The ratings
required under this specification are with Aluminum windings. The equipment offered should have been successfully type tested within five years from date of tender and the designs should have been in satisfactory operation for a period not less than three years as on the date of bid opening. Compliance shall be demonstrated by submitting, (i) authenticated copies of the type test reports and (ii) performance certificates from the users, specifically from Central Govt./State Govt. or their undertakings.

10.7. Base mounting arrangement of transformer: The under base of all transformers up to 100 KVA capacity shall be provided with two 75x40 mm channels, 460 mm long with holes of 14 mm dia at a center to center distance of 415 mm to make them suitable for fixing on a platform or plinth.

10.8. 3 STAR LEVEL: In addition to above, the supplied Distribution Transformers must contain 3 Star Label with style and information provided by the Bureau of Energy Efficiency (B.E.E), Ministry of Power, Government of India.

10.9. Bimetallic connectors of suitable capacities are to be provided wherever required on LT side, HT side of the transformer and at joining of two different materials.

10.10. T-Clamps should be provided on each jumper on bus bars. Line jumpers should be provided with adequate size of PG Clamps (Two numbers PG Clamps at each end of jumper). Clamp should be made of aluminum grade T-1F as per IS-8309 having good electrical quality aluminum material and should not be brittle in nature.

10.11. Transformers should be tested for pre-commissioning checks which includes Insulation Resistance Test, ratio test, oil breakdown voltage testing. Before formal energisation, oil leakages from the parts of the transformer, oil level in conservator tank, condition of silica gel, earth connection (two separate) between neutral and earthing, proper jointing of earth wires/flats at the joints, earth resistance of the earthing are to be checked. On commissioning of the transformer, phase current and phase to phase voltage, phase to neutral voltage are to be recorded. The loading on the transformers should be balanced. The quantum of neutral current flowing through neutral may also be recorded. A record of checks are to be prepared and submitted to the Engineer.

10.12. Metering of DTR: Single phase or three phase metering of DTR shall be provided using static meters of accuracy class 1.0 (CT operated). The meter shall be installed in a metallic enclosure. Enclosure shall be earthed. The board shall be provided with push-and clamp type terminals. All CT terminals are to be provided with ring type lugs. Meter shall be tested before installation as per prevailing practice of state DISCOM. There would be no testing charges levied by DISCOM for testing of meters in their authorized laboratories, if facilities are available.

10.13. **Distribution Box:** Distribution boxes are to be installed as per specifications enclosed. The boxes are to be erected, electrically connected with the existing
system, properly earthed, and labeled. The test report of pre-commissioning checks should be prepared and submitted. All power cables are to be terminated using double compression type metallic (brass) glands and aluminum lugs. The cables shall get terminated on extendable bus bars supports of main switch. The distribution boxes are to be earthed using 8 SWG GI wire direct connection to the earthing. All CT terminals are to be ring type and other terminals are fork type. 2.5 sqmm copper multi stands wiring 1.1 KV grade, ISI marked, IS 694 shall be used for control wiring. 2 Nos Earthing bolts on the distribution boards should be provided of 10mm dia. The cables should be terminated with proper size lugs and gland. Necessary tagging, identification of cores and dressing of cables with nylon cable ties shall be in the scope of work. The unutilized holes in the DBs provided for cable entry needs to be plugged properly in a manner that it must stop access to reptiles, dust and water ingress. Replacement of defective component like cable ties, cable termination materials, cable dressing/ bunching mechanism etc. shall be in the scope of work. Nylon ties of approved make shall be done to bunch the cables at each 1 foot length. The Low Tension bus bars are to be painted with two or more coats of brush-able epoxy compound suitable to insulate the bus bars for 415 volts exposure. Electric power from the transformer is drawn through the incomer TPN Switch provided in LT side to protect the transformer form the faults occurring on LT system. Following TPN switch shall be installed in the distribution box:

<table>
<thead>
<tr>
<th>No</th>
<th>Type of DTR</th>
<th>Incomer</th>
<th>Outgoing</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>16 KVA 1-phase DTR</td>
<td>63 A SPN MCB</td>
<td>2 x 32 A SPN MCB</td>
</tr>
<tr>
<td>B</td>
<td>16 KVA 3-phase DTR</td>
<td>63 A TP MCCB</td>
<td>2 x 40 A TP MCCB</td>
</tr>
<tr>
<td>C</td>
<td>25 KVA 3-phase DTR</td>
<td>100 A TP MCCB</td>
<td>3 x 40A TP MCCB</td>
</tr>
<tr>
<td>D</td>
<td>63 KVA 3-phase DTR</td>
<td>125 A TP MCCB</td>
<td>3 x 63 A TP MCCB</td>
</tr>
<tr>
<td>E</td>
<td>100 KVA 3-phase DTR</td>
<td>200 A TP Fuse MCCB</td>
<td>2X63A and 1X100 A TP MCCB</td>
</tr>
</tbody>
</table>

All distribution boxes shall have separate neutral bus of 30mmx5mm size made of aluminium to house incoming and outgoing cable termination. Termination of cable shall be through aluminium lugs, cable glands as required. SPN mcb and TP MCCB of ISI marked and repute brand shall be used.

The distribution box should also house three phase trivector energy meter / single phase meter depending on capacity and type of distribution transformer as per specifications. Suitable current transformers shall also be installed in the distribution box for metering.

10.14. **HF FUSE with ISOLATORS:**

All distribution transformers shall be installed with an isolator and a HG fuse protection on their HV side as per enclosed technical specifications.

10.15. **Lighting Arrester:**

Distribution Class LAs should be supplied with base steel structure, terminals bi - metallic connectors / PG clamps and earth connectors. LAs are to be connected with separate earth connection. All LA terminals / connections are to be tightened.
10.16. **Earthing:**

Earthing work is to be executed on all the substations. Earthing should be provided with GI earth pipe and 50X6 mm GS flat forming earth grid and riser. The risers are required for connection with the equipments through GI wires / Stay wires / Flat, as per requirement of Engineer in Charge who shall approve arrangement of earthing network.

Standard requirements / provisions of earthing shall be as per technical specifications. Connections of earth-grid / earth-pit with Lightning Arrester and Distribution Transformer Neutral and Transformer body (at two distinct points), equipments, fencing, LT panels etc are to be made as per standard specifications.

Substation wise measurement of earth resistance of earth pits / mesh and corresponding drawing of existing earthing arrangement shall be recorded and submitted by the agency.

<table>
<thead>
<tr>
<th>Description of equipment</th>
<th>Earth connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Pipe 3 m long, 40 mm dia</td>
<td>3 Nos.</td>
</tr>
<tr>
<td>Earth mat and riser</td>
<td>50X6 mm GS Flat</td>
</tr>
<tr>
<td>Laying of earth mat</td>
<td>Below ground 0.5 meter</td>
</tr>
</tbody>
</table>

Standard requirements of earthing are as under

i. Earth Pit - 1 for Transformer Neutral,
ii. Earth pit - 2 for Lightening Arrester,
iii. Earth pit - 3 for Equipment body earthing.

Following arrangement is envisaged for grid/ earth pipe in each distribution transformer substation:

i. Transformer Neutral (Two distinct connections) : GS Flat 50x6mm
ii. Transformer Body : GS Flat 50X6mm
iii. Lightning Arrester : GS Flat 50X6mm
iv. Fencing (Wherever required) : GI wire 8 SWG
v. LT Distribution Box (Two distinct connections) : GI wire 8 SWG
vi. AB Switch handle : GI wire 8 SWG
vii. Steel structure of substation : GI wire 8 SWG
viii. Line meters : GS wire 8 SWG

The location of earth pits should be adequately apart, say 3m, so that they their earth conductive area do not overlap.

10.17. **ACSR Conductor:**

ACSR conductor {7/4.09 mm (80 Sqmm Al. area)} is to be used for connection between overhead lines to transformer studs/bushing.
10.18. **Cabling:**

The power cables shall be used for connection from Distribution Transformer to Distribution Box and Distribution Box to Outgoing LT feeder lines. Cable should not be used in underground laying arrangement. Cables should be tied properly using clamps at 1 meter intervals. At-least one meter cable is to be kept as spare at the individual ends. Unarmored, PVC insulated, PVC sheathed 1.1 KV aluminum conductor stranded power cable as IS : 1554 (Part-I) : 1988 (Specification for PVC insulated heavy duty Electric Cables for working voltages up-to and including 1100 Volts) & Aluminium Conductor complying with IS : 8130 : 1984

a. 16 KVA, 1-ph Distribution Transformer: 2 Core 16 sqmm,

b. 25 KVA 3-ph Distribution Transformer: 3.5 Core 25 sqmm,

c. 63 KVA 3-phase Distribution Transformer: 3.5 Core 50 sqmm,

d. 100 KVA 3-phase Distribution Transformer: 3.5 Core 70 sqmm

10.19. **Labeling:**

All the equipments and circuits should be labeled using yellow base and black indication marks (number or name). 40 / 50 mm height digits / words should be used for this purpose. Color coding of phases at breaker, bus and transformer and feeder end should be marked with color circles. Sample should be approved by EIC before execution. Painting and marking of digits etc should be performed by a skilled / trained painter. Labeling of following information is intended by the owner preferably in local HINDI language:

i. Transformer capacity and designated name like “200KVA Raj Nagar I” and Codification number if not available on it.

ii. Color coding of bus bars, transformer terminals,

iii. Name of feeder:

iv. Warning instruction, if any, of availability of two sources of HT supply on same structure.

11. **Section 4: LTCONSUMER CONNECTION FROM SERVICE POLE**

*(AS PER REC Spec.5/ 1986)*

11.1. **Service connection:** General arrangement shall be as depicted in REC Construction Standard drawing H-1 and H-2. For all identified BPL Below Poverty Line) consumers, the contractor shall carry out following works:
General Information & Scope of Works for Village Electrification

1. Service line from nearby LT pole/Distribution Board/Distribution Transformer,
2. Installation of energy meter,
3. Internal wiring works,
4. One LED lamp, socket, switch, holder, etc
5. Low Tension Protective equipment,
6. Installation of earth point,
7. Testing of consumer meter at distribution licensee’s test laboratory,

Following materials shall be used for single phase service connection:

11.2. **Service Cable**: 2.5 mm² twin core (unarmoured) PVC insulated cables with aluminium conductors as per REC Specification 26/1983 shall be used. Alternatively, PVC insulated cables with embedded bearer wire as per REC Specification No 27 /1983 can also be used. These are particularly useful for coastal and polluted areas, where corrosion of G.I bearer wire is a problem.

Following are instruction for service cables:

a. The cable shall be free of joints,
b. The cables shall have substantial weather proof and weather resisting properties.
c. The span shall not be more than 35 meters or shorter as indicated in REC Construction Standards H-1 to H-9.
d. 3.15 mm (10 SWG) GI wire (55-95 kg. quality) shall be used invariably when insulated services cable is preferred between LT Pole and Meter box.
e. The service wire should be taken through suitable porcelain spool or any other insulating cleat attached with bearer wire by means of binding wire.

11.3. **Meter Board**: The meter board should be preferably of the box type with sides covered and back open i.e. the meter board will have a frame all round having a clear depth of 40mm to which front board will be fixed. Size of the meter board should be 350 x 200 mm. Each meter board shall be provided with 4(four) anchor bolts 6 mm. Meter board shall be of good quality wood or Fiber Glass Reinforced Polyester sheet moulding compound (SMC) board.

11.4. **Service Supports**: Service supports comprising of G.I. Pipe, G.S. angle or Rigid Steel conduit and of sizes given in REC Construction Standard H-1 shall be used.

11.5. **Single Phase energy meter** - Fully Static, class 1.0, compatible with state’s existing metering system, 5-30A, 240 Volts. Meter body and cover shall be sealed after testing and adjustment with the sealing plier in association with DISCOM officials.
11.6. PVC Pipe: PVC Pipe 25mm dia (ISI marked) as per IS-2509 (3 mtr piece) for service termination - if PVC pipe is being used to receive service wire, then 3 meter length angle 35x35x5mm duly painted shall be used to support the pipe.

11.7. GI Wire: 3.15mm dia hard quality GI wire as per IS 280 is to be used to support the service wire coming from the LT line pole and for guy. The service wire shall have ground clearance of 5800mm across the road, 5500mm along the road and 4000mm elsewhere. The span should not be more than 35 meters.

11.8. LT line support should be installed matching with the single-phase-service-wire length requirements of “up to 35 meters”.

11.9. GI pipe or MS angle 35mmx35mmx5mm shall be clamped firmly using 40x3mm MS flat clamps at at-least two locations.

11.10. GI Medium Class ISI marked, (Blue tripped painted) pipe 20 mm dia (3 mtr single length without joints) as per IS 1161

11.11. ISI marked double pole miniature circuit breaker - 10 amps

11.12. Meter box for single phase meter made of Fiberglass Reinforced Polyester (FRP) based sheet moulding compound (SMC) 2.5 mm thick conforming to IS:13410 (1992) shall be provided for meter protection,

11.13. Reel Insulator and Egg Insulator as per requirements,

11.14. G.I. Wire No. 10 (3.15 MM) (For installation earthing)

11.15. Meter board {200x350x40mm (minimum)} should house Energy meter, earth terminal as per Rule 33 (1) of IE Rules 1956, sealed cut-out after the meter as per IE Rules No 58 of Indian Electricity Rules 1956 and 16 A MCB. It should be installed at 1500mm min height on the wall. The earth terminal shall be installed and maintained by DISCOM/Distribution licensee.

11.16. **House wiring:**

Each BPL Household shall be provided with a switch board, Angle Holder, 7 watts, pin type LED Lamp, internal wiring (average 15 feet long) between holder and switch board & meter and switch board. Following are the details of house hold wiring: Single Point Wiring Wooden/Fiber Glass Reinforced Polyester sheet moulding compound (SMC) board {200x150x40 (minimum)} should be installed at normal operating height. The board shall be of size Following accessories shall be installed under internal electrification work:

1. 7 Watts, pin type, LED lamp, 140-270 Volts operating voltage range as per specifications,
2. 2 Nos. ISI mark, Piano type 5A, 240V, Switch,
3. 1 No ISI mark, 5A, 240V, three-pin socket,
4. ISI mark, 5A, 240 volts, angle Bakelite/plastic holder lamp holder,
5. Bakelite round base / wooden round base to house Bakelite holder,
6. ISI mark, 240V, 16A Double Pole miniature circuit breaker.
7. PVC insulated and PVC sheathed single core 2.5 sq mm aluminum conductor cable as per IS 694/1990 (ISI marked) wiring on PVC pipe (IS marked) IS 2509 as per specification,
8. Clips for supporting the pipes at every 1 feet distance,

b. All construction activities shall be performed as per REC construction standard H-1. The switch board shall be installed at operating height whereas lamp should be installed at a height of 7 to 8 feet above the ground level depending on availability of height in consumer house. Neutral wire should not be short-circuited. Earthing point of three-pin socket should be connected with earth point installed on the meter board.

11.17. **LT Air Bunched cables:**

For LT lines with AB Cables, pole shall have Eye-hook and suspension clamp arrangements for anchoring of bearer wire. These shall be as per Drg No. E-34 and E-35 of REC Construction Standards.

Pole mounting distribution box, as per the specifications, should be installed on LT pole for providing consumer connection. The supply should be tapped from the IPC (Insulation Piercing Connector) installed on the LT AB cable (on the pole). Thus Pole mounted distribution box’s LT bus should be charged as well the neutral bus should be connected by tapping of messenger/neutral wire.

12. **Section: 5 - Identification of RGGVY Assets:**

12.1. **RGGVY Sign Boards:** RGGVY sign boards shall be provided in **Un-electrified villages** only which have been electrified under the scheme. The board shall be erected at a suitable location preferably near the office of Sarpanch/Gram Panchayat/or any other prominent location.

   a. Size of board: 4 feet x 3 feet
   b. The script should be bilingual and should be uniform across the country.
   c. The name of village should be included on the sign board.
   d. The sample copy of signboard is enclosed as **Annexure-1**

The details of sign board is provided in Technical specification. The boards are to be installed at prominent locations like public building, school, health center, Panchayat Bhawan etc. A photograph depicting installation of board shall be submitted to the Engineer while submission of claim for the completed village. The list of village wise photographs, in soft copy shall be maintained by the contractor and shall be submitted for review at the time of block wise reconciliation of works and associated payments.
12.2. **All Support Structures**: Single Pole (SP), Double Pole (DP), DTRSS (Distribution Transformer Substation Structures) are to be provided with unique identification of the structure as per prevailing practices of state. The details of pre-painting preparations, painting and writing shall be as given in section Technical specifications.

12.3. **Specification of sign board on Distribution Transformer, Distribution Transformer Sub-station and Village Electrification**:

   Size of board
   - 4 feet × 3 feet (for new/augmented grid sub-station)
   - 1 feet × 1 feet (for Distribution substation)

12.4. The grid substation / distribution transformer substation board should indicate the name of the scheme (Rajiv Gandhi Grameen Vidyutikaran Yojana), name of implementation agency and capacity of substation. The sign board should be put up immediately when the substation is commissioned.
Annexure-I

This village has been electrified under **Rajiv Gandhi Gramjee Vidyutikaran Yojana**, of the Ministry of Power, Government of India.

Gram / Village:
GENERAL INFORMATION & SCOPE OF WORK
New 33/11 KV Grid Substation

Rural Electrification Works under
XII Plan Rajiv Gandhi Grameen Vidyutikaran Yojana

VOLUME - I: SECTION-VIII

(This document is meant for the exclusive purpose of bidding against the specification and shall not be transferred, reproduced or otherwise used for purposes other than that for which it is specifically issued).
New 33/11 KV Grid Substation Package

Detailed scope of work under “New 33/11 KV Grid Sub - Stations Package” to be implemented on Turnkey Contract basis is defined in this section. Bidders are requested to familiarize themselves to the detailed scope of work which owner intends to get executed in the contract. Locations of substations are also given in the foregoing paragraph. Bidder wish to visit these locations may consult concern officer of Employer wing who shall assist them in this activity. Bidder should quote his offer considering detailed scope of work described hereunder. Bidders are requested to visit the site to ascertain the exact type of strata before submitting their bids.

1.1 Supply of equipment and material:

1.1.1 The Contractor shall be responsible for design, engineering, manufacture, testing & inspection at manufacturer's works, supply, transportation, insurance, delivery at site, unloading, storage, transportation at site, complete erection & supervision, site testing & inspection, and successful commissioning of all the equipment and material as per scope of work, technical specifications and conditions / special conditions of the contract so as to complete the work to the satisfaction of the owner.

1.1.2 Any item though not specifically mentioned, but is required to complete the project works in all respects for its safe, reliable, efficient and trouble free operation shall also be taken to be included, and the same shall be supplied and erected by the Contractor without extra cost unless it is explicitly excluded.

2 Salient feature Of Land/ Site Of proposed 33/ 11 Kv S/ S -

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Place</th>
<th>Approx. Distance from Circle Head-Quarters</th>
<th>Length of Approach Road</th>
<th>Type of Strata* Depth from G.L.</th>
<th>Type of soil</th>
<th>Culvert Proposed</th>
<th>Proposed foundation of control room</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXXX Circle</td>
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<td></td>
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<td></td>
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<td>a. XXXXX Division</td>
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RGGVY/XII PLAN/R1
3 Electrical Details of New 33/11 KV Grid Substations -

<table>
<thead>
<tr>
<th>No</th>
<th>Name of Proposed Substation</th>
<th>Division</th>
<th>33KV line LILO or Radial</th>
<th>Capacity in KVA</th>
<th>Name of outgoing Feeders details</th>
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<tr>
<td>1</td>
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<td></td>
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</tr>
</tbody>
</table>

4 Following works are in the scope of owner and shall be executed by owner:

4.1 Acquisition of Land for the substation and its possession to start constructional activities,
4.2 Approach road to the substation land,
4.3 Leveling of the substation land,
4.4 Construction of retaining wall wherever required including digging or filling as required,
4.5 Availability of up-stream source and plan for incomer 33 KV line,
4.6 General layout of the substation.

Since above works are not covered under substation works, Employer/Owner shall provide all above input before start of substation work by turnkey contractor. The zero date for start of substation work shall start with availability of all above inputs to turnkey contractor and on signing of format protocol note to that effect between Engineer and authorized representative of Turnkey Contractor.

5 Types of substation: Two types of substations are envisaged under this head as per following:

a. **Partly-Outdoor substation** - in this type, 33KV section comprising breakers, isolators, 33/11 KV station transformer, CTs, PT, Lightening Arrester, Power Transformer, 33KV gantry shall be installed in switch yard. Control panels of breakers shall be installed inside the control room. All 11KV equipment like CTs, Breakers, control panels, shall be installed inside the control room. 11 KV cables shall be used for connection of power transformer and breaker and Breaker to outgoing isolators. 11KV feeder isolators and 11KV Lightening Arresters shall be installed outdoor.
<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td>33 KV</td>
<td>11 KV</td>
<td>33 KV</td>
</tr>
<tr>
<td>1</td>
<td>33/11 kV, 3 ph, Cu Wound, Power Transformer as per TS.</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>100 KVA, 33/0.433 kV, 3 ph, Station Transformer on double pole as per TS.</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Support for Station transformer and outgoing DP as per Technical Specification.</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>36kV, 1250A, 25ka, 3-ph, Outdoor type Vacuum Circuit breaker along with support structure, marshalling box and required accessories complete</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>33kV Control &amp; Relay panel along with E/F &amp; O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per TS for controlling</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>a</td>
<td>For 33 kV incomer feeder VCB with Static Tri-Vector Energy Meter</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>b</td>
<td>For Power transformer VCB</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>c</td>
<td>For Power transformer 33 kV VCB with Static Tri-Vector Energy Meter</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>33KV, 3 phase HG Fuse as per TS (for station transformer)</td>
<td>1 set</td>
<td>-</td>
<td>1 set</td>
</tr>
<tr>
<td>7</td>
<td>36kV, 630A, 25KA, 3-ph double break centre rotating type(DBCR), Gang Operated, isolator with line side earth switch along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per TS</td>
<td>1 set</td>
<td>-</td>
<td>1 set</td>
</tr>
<tr>
<td>7a</td>
<td>36kV, 630A, 25KA, 3-ph double break centre rotating type(DBCR), Gang Operated, isolator with line side earth switch along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per TS</td>
<td>3 set</td>
<td>-</td>
<td>3 set</td>
</tr>
<tr>
<td>8</td>
<td>33kV, 400A, 25KA, 3-ph, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc complete as per TS</td>
<td>2 set</td>
<td>-</td>
<td>2 set</td>
</tr>
<tr>
<td>9</td>
<td>36kV, 1-Phase, 25kA outdoor type Current Transformer along with junction box (1 no junction box for 3 nos of 1-phase CTs) etc., complete as per Technical Specifications.</td>
<td>6 Nos.</td>
<td>-</td>
<td>6 Nos.</td>
</tr>
<tr>
<td>10</td>
<td>Gapless Surge Arrestor complete as per TS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>30kV, 10KA, 1-ph LA with porcelain</td>
<td>9 Nos.</td>
<td>-</td>
<td>9 Nos.</td>
</tr>
<tr>
<td>ii</td>
<td>9kV, 10KA, 1-ph LA with porcelain</td>
<td>15 Nos.</td>
<td>-</td>
<td>18 Nos.</td>
</tr>
<tr>
<td>11</td>
<td>36 kV, 1-Phase, 33kV/110 volt, Single core outdoor type Potential transformer along with junction box (1 no junction box for 3 nos of 1-phase PTs) and required accessories etc., complete as per Technical Specifications.</td>
<td>3 Nos.</td>
<td>-</td>
<td>3 Nos.</td>
</tr>
<tr>
<td>No</td>
<td>Description</td>
<td>1x3.15 MVA expandable to 2x3.15 MVA</td>
<td>1x5 MVA expandable to 2x5 MVA</td>
<td>2x5 MVA</td>
</tr>
<tr>
<td>----</td>
<td>-------------</td>
<td>---------------------------------</td>
<td>----------------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Type of Substation</td>
<td>Type A</td>
<td>Type B</td>
<td>Type C</td>
</tr>
<tr>
<td>12</td>
<td>11 kV Indoor VCB Panel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>11kV,3 phase, 1250A, indoor type control and relay panel consisting of 12kV,VCB,CTs, PTs, A-meter, volt-meter, Relay &amp; accessories complete as per TS. (For incomer)</td>
<td>2 Nos.</td>
<td>-</td>
<td>2 Nos. - 2 Nos.</td>
</tr>
<tr>
<td>ii</td>
<td>11kV, 3 phase, 1250A, indoor type control and relay panel consisting of 12kV, VCB, CTs, A-meter, volt-meter, Relay, energy meter (TVM) &amp; accessories complete as per TS.</td>
<td>4 Nos.</td>
<td>-</td>
<td>5 Nos. 6 Nos.</td>
</tr>
<tr>
<td>iii</td>
<td>11kV, 3 phase, 1250A, indoor type control and relay panel consisting of 12kV, VCB, CTs, &amp; accessories complete as per TS(Bus-Coupler panel).</td>
<td>1 Nos.</td>
<td>-</td>
<td>1 Nos. - 1 Nos.</td>
</tr>
<tr>
<td>13</td>
<td>Battery, Battery Charger with 30V DCDB and 415V ACDB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>24V, 80 AH Ni-Cd battery &amp; all other accessories and connectors as per Technical Specifications.</td>
<td>2 set</td>
<td>-</td>
<td>2 set - 2 set</td>
</tr>
<tr>
<td>ii</td>
<td>24V, 40 Amp. Float-Cum-Boost Battery Charger with full wave rectification for 220 V, 1 phase, 50 Hz AC Input Supply along with inbuilt DC Distribution board as per Technical Specification.</td>
<td>2 set</td>
<td>-</td>
<td>2 set - 2 set</td>
</tr>
<tr>
<td>iii</td>
<td>415V, ACDB along with voltmeter, ammeter and Selector switches etc. complete as per Technical Specifications.</td>
<td>1 set</td>
<td>-</td>
<td>1 set - 1 set</td>
</tr>
<tr>
<td>14</td>
<td>Bay marshalling Kiosk complete as per TS</td>
<td>2 Nos.</td>
<td>-</td>
<td>2 Nos. - 2 Nos.</td>
</tr>
<tr>
<td>15</td>
<td>11 kV HT, XLPE Cable and termination accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>XLPE Cable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>3CX400 mm²</td>
<td>As per Cable Schedule Approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>3Cx185 mm²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>11 KV End termination kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Suitable for termination in transformer cable box for 3Cx400 mm² for 11kV side</td>
<td>-</td>
<td>1 set</td>
<td>- 1 set - 2 set</td>
</tr>
<tr>
<td>ii</td>
<td>Suitable for termination in Indoor VCB panel for 3Cx400 mm²</td>
<td>-</td>
<td>1 set</td>
<td>- 1 set - 2 set</td>
</tr>
<tr>
<td>iii</td>
<td>Suitable for termination in Indoor VCB panel for 3Cx185 mm²</td>
<td>-</td>
<td>4 set</td>
<td>- 5 set - 6 set</td>
</tr>
<tr>
<td>iv</td>
<td>Suitable for Outdoor DP mounted end termination for 3Cx185 mm²</td>
<td>-</td>
<td>4 set</td>
<td>- 5 set - 6 set</td>
</tr>
<tr>
<td>16</td>
<td>Cables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>1.1kV grade PVC Insulated steel armoured, stranded conductor, power &amp; control Cables as per technical specifications.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
33/11 kV Substation Scope of Works

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>1x3.15 MVA expandable to 2x3.15 MVA</th>
<th>1x5 MVA expandable to 2x5 MVA</th>
<th>2x5 MVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type of Substation</td>
<td>Type A</td>
<td>Type B</td>
<td>Type C</td>
</tr>
<tr>
<td>A</td>
<td>Power Cable (Aluminium Conductor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>3.5Cx70 Sq.mm</td>
<td>As per Cable Schedule Approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>3.5Cx35 Sq.mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Power Cable (Cu Conductor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>2Cx16 Sq.mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Control Cable (Copper Conductor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>2Cx2.5 Sq.mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>5Cx2.5 Sq.mm</td>
<td>As per Cable Schedule Approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>10Cx2.5 Sq.mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>T-Clamps, Through Clamp, Connectors, P.G. Clamps, Spacers, etc. suitable for connection to ACSR Wolf, Pad type compression clamp, cleat for holding Earth wire, various 33 KV &amp; 11 kV Equipments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>33 kV line Bay with VCB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>33 kV Transformer Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>33KV Sectionalise isolator</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>33kV line Bay with HG Fuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>33KV PT Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>33/433KV Station Transformer Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>ACSR Wolf Conductor for 33 Bus-Bars &amp; Jumpers/Droppers/Terminations</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Earthing &amp; Grounding conductor as per Approved Electrical Layout for each sub-station with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>32 mm dia MS Rod</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>50x 6 mm Galvanised GI flat (risers)</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>25 x 3 mm Galvanised GI flat (risers)</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>GI pipe earth electrode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover, placed on GI frame, Charcol, Salt and other accessories complete as per technical specification. (Treated for Transformer, LA, tower with peak)</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>20 mm dia., 3000 mm long GI rod and other accessories as per technical specification.</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>33KV Insulator along with Hardware &amp; Accessories as per approved drawings &amp; TS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>70 KN Disc Insulator along with Hardware &amp; Accessories all complete (one set consisting of 3 nos. of Disc Insulator) as per Technical Specification.</td>
<td>As per Drawing approved by PIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>33 kV Post Insulator assembly comprising of 2 nos of insulators, fittings and accessories.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Type of Substation

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>1x3.15 MVA expandable to 2x3.15 MVA</th>
<th>1x5 MVA expandable to 2x5 MVA</th>
<th>2x5 MVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Supply of Galvanised MS lattice structure for 33/11 kV Switch yard i.e. Towers, Beams, equipment support structure, etc., including Nuts, bolts, foundation bolts, washers and other accessories, channels for auxiliary transformers, O/G DP structure complete as per TS.</td>
<td>Type A</td>
<td>Type B</td>
<td>Type C</td>
</tr>
<tr>
<td>23</td>
<td>Station Lighting System complete for switchyard, control room building, main gate &amp; sub-station boundary as per technical specification for each new PSS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Fire Fighting Equipments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Dry Chemical Powder Type(6 Kg) for control room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>CO2 Type of 4.5Kg Capacity for Control Room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Capacitor Bank with automatic voltage control mechanism</td>
<td>1×600 KVR</td>
<td>1×1200 KVR</td>
<td>2×1200 KVR</td>
</tr>
<tr>
<td>26</td>
<td>Chain link Fencing, Gate, Sign Board, gravel filling, Ladder type cable tray and cable supporting angles, as per TS &amp; Drawing</td>
<td>1 set</td>
<td>1 set</td>
<td>1 set</td>
</tr>
<tr>
<td>27</td>
<td>Control room with sanitary piping &amp; soak pit, water supply, internal electrification, deep tube well, submersible pump complete with cable, starter panel, suction &amp; discharge pipe etc.</td>
<td>1 set</td>
<td>1 set</td>
<td>1 set</td>
</tr>
</tbody>
</table>

**b. Fully-Outdoor Substation** - in this type, all 33KV and 11 KV equipments comprising Breakers, Isolators, CTs, PT, 33/11KV Station Transformer, Lightening Arrester and Power Transformer shall be installed in substation yard i.e. outdoor. Control panels shall be installed indoor.

6. **The detailed scope of works:** The scope is further detailed as under:

a. **Power Transformer:**

Following sizes of power transformers are envisaged under this package:

i. 33/11 KV 5 MVA Power Transformer with off load tap changer, or

ii. 33/11 KV 3.15 MVA Power Transformer without load tap changer,

Power transformer shall include Transformer Oil, Buchholtz relay, OTI & WTI, Marshalling Box, Conservator Tank, Oil Level Indicator, Valves, Neutral Earthing strips (2Nos) supported with insulators, completely sealed LV cable box (for partly indoor substation) or LV bushing (for fully outdoor substation) Vent explosion plug, Internal wiring, Cable supporting tray on the transformer body, transformer wheels, bushing etc as required,
**b. Breaker:**

33 kV & 11 kV Vacuum Circuit Breakers shall be used for control of power circuits. Capacitor banks shall be installed with 11 KV 100A Switch for control of power supply. In partly outdoor substation, all 11 KV switchgears shall be indoor mounted type and 33 KV breakers shall be outdoor mounting type whereas in fully outdoor substation, 11 KV as well as 33 KV breakers shall be outdoor mounting type. In both the type of substation, control panels shall be indoor type. Detailed cable schedules, termination details and circuit diagrams of control panels, transformer marshalling box, breaker marshalling box, and capacitor banks equipment shall be prepared and submitted by turnkey contractor for approval of Engineer before commencing the work.

**c. Station Transformer:**

1 No. of 100 KVA, 33/0.433 KV station (auxiliary transformer) for 33/11 KV Substation lighting & power supply. Transformer should be provided with ACDB, LT armored power Cables, 11 KV DO Fuse, 11 KV Isolator, 11 KV Station Class Lighting Arrester. It should be provided with distribution box and interconnecting power cable between LT bushing and DB (3½ 70 Sq mm). Cable shall be PVC insulated and PVC sheathed ISI marked cable as per specifications enclosed. The cables shall be terminated with suitable double compression brass glands and aluminum lugs. Necessary tagging, identification of cores and dressing of cables with nylon cable ties shall be in the scope of work. Transformer neutral shall require terminating directly to earth pit by means of two separate 50x6 mm² GS flat. Three separate earth electrodes shall cater the need of station transformer substation as per following connection details:

<table>
<thead>
<tr>
<th>Description of equipment</th>
<th>Station transformer Substation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Pipe 4.5 m long, 40 mm dia</td>
<td>3 Nos.</td>
</tr>
<tr>
<td>Earth mat and riser</td>
<td>50X6 mm GS Flat</td>
</tr>
<tr>
<td>Laying of earth mat</td>
<td>Below ground 0.5 meter</td>
</tr>
</tbody>
</table>

Standard requirements of earthing are as under

1. Earth Pit - 1 for Transformer Neutral, (GS flat 50x6 mm),
2. Earth pit - 2 for Lighting Arrester,( GI flat 50x6 mm),
3. Earth pit – 3 for Equipment body earthing.

**d. Power supply in Substation:**

Detailed cable schedule shall be prepared by contractor for power supply cabling, control supply cabling and for control and instrumentation circuits of power equipments like breakers, current transformer, potential transformer, metering and relaying etc.
i. **Station Transformer Distribution Board:**

Station Transformer Distribution Box shall comprise of following:

- 200 A incomer – switch fuse unit,
- 6 nos Outgoing feeder – 63 A capacity switch Fuse unit,
- Three phase timer control area lighting contactor circuit: 63 Amp capacity
- 2 Nos 32 A Fuse switch fuse units,
- 3 phase, electronic, Energy meter for transformer power supply metering with suitable CT, cabling, terminals etc.
- Cable terminals suitable for incomer and outgoing cables.
- 20 A Industrial socket and switch for local power supply requirements,
- Distribution board should be mounted on ISMC 100 channel on suitable foundation. Cable should have bottom entry with double compressions brass glands,

ii. **AC Distribution board (ACDB)**

Indoor floor mounted, 415V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 63 Amps TPN switch fuse unit as incomer, 32 Amps TPN switches as outgoing feeders suited for number of control panels, nos of VCB kiosk panel, having 20% spare outgoing feeders, mounting arrangements etc as per technical specifications, approved drawings and scope of works.

iii. **DC Distribution board (DCDB)**

Indoor floor mounted, two pole 100 Amp DC Switch Fuse unit as incomer, two pole 40 Amp Switch Fuse units for outgoing feeders suited for numbers of control panels, numbers of VCB kiosks panels and control room lighting with 20% spares outgoing feeders Direct Current Distribution Board shall be installed in each substation. It would comprises of DC volt meter including mounting arrangements etc as required as per technical specifications, approved drawings and scope of works.

e. **Structural Works:**

There are two options for gantry support structures which may be used at outdoor switchyard.

**Option A: RS Joist Support and ISMC Channels as support structures:**

2x175x85mm RS joist supports for bus bars supports, Isolator support and Metering equipment supports, ISMC 100 Channels for bus bars, Isolators, Metering equipment, Line equipment, all holes in the structures shall be 17.5mm
diameters for 16mm diameter bolts unless specified otherwise. All structural steel members and bolts shall be galvanized after fabrication as per IS:4759 and zinc coating shall not be less than 610gm/sq. meter for all structural steel members. All weld shall be 6mm filled weld unless specified otherwise. All nuts and bolts shall be of property class 5.6 of IS 1367. Plain washers shall be as per IS 2016 & spring washers shall be IS: 3063.

**Option B: Galvanized Lattice structures Support:**

Lattice structures shall be made of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. All holes in the structures shall be 17.5mm diameters for 16mm diameter bolts unless specified otherwise. All structural steel members and bolts shall be galvanized after fabrication as per IS:4759 and zinc coating shall not be less than 610gm/sq. meter for all structural steel members. All L45x45x5 will have 23 mm back mark. All L50x50x6 will have 28mm back mark. 3.5mm spring washers are to be used under each nut, structural steel shall conform to IS 2026. All weld shall be 6mm filled weld unless specified otherwise. All nuts and bolts shall be of property class 5.6 of IS 1367. Plain washers shall be as per IS 2016 & spring washers shall be IS: 3063.

f. **Cables:**

i. **Control cables:** 1.1 KV grade 2.5 mm² (Cores to be finalized in detailed engineering) PVC insulated and PVC sheathed, armored, stranded, copper control cable with complete accessories as per detailed engineering

ii. **HT Power Cables:** In partly outdoor substation, 11KV XLPE Cables shall be used as per following requirements:

- Between Power Transformer (5 MVA) and Main transformer breaker – 3 core 400 sqmm
- Between Power Transformer (3.15 MVA) and Main transformer breaker – 3 core 240 sqmm
- Between Feeder breaker and outdoor feeder DP structures - 3 core 185 sqmm
- Between capacitor bank switch and capacitor bank – 3 core 50sqmm.

iii. **LT Power cables:** 1.1 KV grade, armored, stranded, aluminum power cable PVC insulated and PVC sheathed with complete accessories as per detailed engineering

1. 3.5Cx70mm² (between station transformer & Distribution Box)
2. 3.5Cx35mm² to be used from Station Transformer Distribution Board to:
• Control room building Internal Electrification DB,
• ACDB Board,
• Tube well Start Panel,
• Outdoor area lighting control and distribution panel

3. 2 core x16 mm² for supply to area lighting masts.

iv. **LT cable for Internal Electrification works**: following cables shall be used for internal electrification purpose:

- 1.1 KV PVC insulated PVC sheathed ISI marked, IS 694, 10mm² copper conductor, stranded, for internal electrification works between main DB and Sub DB or Su DB to switch board,
- 1.1 KV PVC insulated PVC sheathed ISI marked, IS 694, 2.5mm² /4.00mm², copper conductor, stranded, for internal electrification works light & Fan and Power circuits respectively,
- 1.1 KV PVC insulated PVC sheathed ISI marked, IS 694, 4.00mm² copper conductor, stranded weather proof cable for connection between outdoor area lighting luminary fixtures and its junction boxes,

Power Cables are to be laid as per best engineering practices. Power and control cables are to be laid in different alignments in cable trench. However, in case power/control cable is required to extend up to the equipments where cable trench is not constructed, they shall be laid in underground trench of width 300 – mm wide, provided with 2nd class brick protection (Appro. 10 bricks per meter length of laying) and sand protective covering (200 mm thick) and laid at the depth of 750mm minimum (for LT cables0/ 1000mm (for HT cables). Laying specification of cable shall be as detailed in CPWD specification of laying power cables. Suitable loop length of 1.5 meter to be kept at the end points. Excessive loop lengths shall not be paid.

g. **Area lighting and control room lighting:**

Complete lighting and illumination of the substation yard (including approach path way in substation yard), Control Room to ensure following illumination levels:

- Control room: 300 Lux
- Switchyard: 100 Lux on main equipment at equipment connection level. 50 lux on balance switchyard & path ways.

The bidder shall submit calculation for achieving the above Lux levels.
h. Fire Protection System:

Fire Buckets filled with sand: The fire buckets confirming to IS 2546/1974 filled with sand shall be installed at two places in new s/s - in control room and in switchyard near power transformer. There shall be 4 no. of buckets at each location in a s/s. The buckets shall be hanging on a steel stand. The buckets and the stand shall be as per relevant standards and will be filled with sand.

Portable Fire Extinguishers: Carbon dioxide type and Dry chemical powder type fire extinguishers are also to be installed in newly constructed substation. All the portable extinguishers shall be of free standing type and shall be capable of discharging freely and completely in upright position. Each extinguisher shall have the instructions for operating the extinguishers on its body itself. All extinguishers shall be supplied with initial charge and accessories as required. Portable type extinguishers shall be provided with suitable clamps for mounting on walls or columns. All extinguishers shall be painted with durable enamel paint of fire red color conforming to relevant Indian Standards. Capacities of each type shall be as indicated in the schedule of quantities. Carbon dioxide (CO2, type) extinguisher shall of 4.5 kg for control room conform to IS:2878. Dry chemical powder type extinguisher shall be of 6 kg capacity for control room conform to IS:2171.

i. Metering & metering equipment:

Current Transformer & Potential Transformer, control cables between energy meters & metering equipment and energy meters. Energy meters shall be installed on the control panel of their respective feeder. Junction boxes are to be used for control cable termination in the field. Cable loop IN and loop OUT facility should be provided in the Junction Box with ring type cable terminations. The junction boxes should be hot dip galvanized having IP 55 protection for enclosures, terminals of 20A rating suitable for ring type terminals. JBs are to be mounted on a frame made of GS angles 65x65x6 mm equal angle grouted in the field in 1:3:6 Cement Concrete of 400x400x600 foundation. All CT secondary wirings up to meter terminals should be of ring type terminals only.

j. Capacitor banks:

Capacitor banks of 600 KVAR and 1200 KVAR capacity shall be provided with 3.15 MVA and 5.0 MVA capacity power Transformer respectively. Capacitor bank shall comprises of switching vacuum circuit breaker, current transformers (100-50/5-5A), fully automatic control panel mounted inside the substation buildings, 11 KV residual voltage transformer, 11 KV three phase Isolator, Earthing system, capacitor banks complete with individual fuses, interconnection mounting rakes, external fuses mounting arrangement, base insulators & accessories, 3 Nos. 11 KV single phase Metal oxide (Gap less) lighting arresters, isolators etc as per requirements. Hot dip galvanized mounting structure made of sections of
100x50x6 mm channel or 75x40x6 mm channel or 75x75x8 mm equal angles only.

k. **Tube well:**

Deep Tube is envisaged for all the substations. Depending on the depth of the bore, suitable capacity of submerged pump shall be installed. Bore diameter should be 6” which must be penetrated vertically in all type of soil condition. Before digging the bore, soil Resistivity needs to be checked to ascertain the location of the best site for the tube well. Following works are envisaged under this scope:

- Digging bore of diameter six inches. Providing MS casing on bore up to the suitable depth finalized during detailed engineering.
- Providing new 3 phase submersible pump 32 stages or 30 stages depending on technical requirements.
- Providing Start Panel of reputed make like L&T, Havells or equivalent make having single phase protection, Over load protection, Pre - set timer of L&T make, Star Delta Starter, Indications for Load currents in all three phases, Indications for Supply voltages in all three phases etc. Starting panel must conform to IP 52 protection for enclosure. It should be mounted indoor inside the Control room on 50x50x6 mm GS angle supports. Start panel must be earthed with 2 Nos 8 SWG wires. 4 core 16 Sq mm aluminum armoured cable must be used for energizing this Start Panel.
- Three phase, 4 wires, copper flexible supply cables suitable for submersible pump operations, ISI marked, 1100V grade should be connected to submersible pump through underground trench up to the well as per CPWD specifications duly protected from brick and sand cushioning.
- A Heavy-duty gunmetal wheel valve (tap) may be provided on the discharge line for drinking water requirements.
- Provision for lifting the pump in case of overhauling / breakdown maintenance may also be provided.
- ISI marked PVC or 2nd GI Pipes are to be used for suction as well as discharge water lines.
- An open drain must be provided in the vicinity of the tube well. Detail arrangement shall be finalized in detailed engineering.

l. **Internal Electrification:**

Indoor Distribution Board having 63A TPN MCB, outgoing MCBs of suitable ratings for power and light & fan circuits are to be installed. Internal electrification of the control room includes provision of fans, exhaust fans, illumination fixtures, switches, sockets. Plugs, AC distribution control box fitted with miniature circuit breakers, separate 2 Nos 4.5 m long 40 mm dia class B
earthing pipe pits. 6 SWG GI wires shall connect earthing pits with internal electrification circuit. Wiring shall be provided with single core PVC insulated & PVC sheathed 2.5 mm² stranded ISI 694 marked copper flexible wire in conceal arrangement in 25 mm dia 2 mm thick PVC ISI marked pipe and 2.5mm thick switch boards in flash arrangement. Neutral links are to be used in each switchboards and no- jointing in neutral conductor other than at switching board shall be permitted.

Iron junction box made of 18 gauges CRCA sheet should be used for switchboard; 2 mm thick cotton impregnated hylum sheet is to be used for the purpose of switch board. ISI marked switched and sockets are to be used for Internal Electrification works. Earth wire must be made available duly connected with earth circuit for Earthing in each and every switchboard. Reputed make indoor double door Miniature circuit breaker DB fitted with mcbs of MDS/ Havells/ Standard make shall be used for the protection. Reputed make fittings and fans are to be used for the substation. These materials are to be procured from authorized dealer of the materials manufacturers only. Documentary evidence may be submitted for source of supply of all electrical materials. Before procurement of materials approval of owner needs to be obtained for make, type and quality of materials.

m. DC emergency lighting:

At-least four Philips make LED bulbs are to be provided of 7 watts {2 Nos in control room, 1 No in stationary battery room, 1 No in yard area) The wiring of these bulbs should be so designed that it will automatically turn ON in event of failure of normal power supply. Provision for putting these bulbs OFF by operator is also to be provided. Wiring is to be performed concealed using PVC insulated PVC sheathed 2.5 mm² stranded wire. An automatic change over switch is envisaged for this purpose. This may be installed at prominent location, generally easily approachable by operator in the substation control room.

n. Station Battery and battery Charger:

The battery connections / terminals are to be cleaned and provided with petroleum jelly. Terminals hardware is to be provided with connecting cables. The cable should be neatly dressed, clamped and wired using ferrules, tag marks, double compression glands. The new cable wherever supplied should conform to IS: 1554 specification and must be suitable for DC utilization and having current carrying capacity 50 A current rating.

Station battery are to be supplied with wooden racks made of teak wood planks of thickness not less than 25mm, support legs made of size not less than 2 inches X 2 inches. The battery may be placed on two-tier formation of stand. The construction of battery rack should suit site conditions of their placement.
rack should be painted with three coat of acid proof paint of reputed make as approved by Engineer in Charge. No metal fasteners / nails should be used for construction of battery racks. The stand should be supported on insulators to obtain necessary insulation from the earth and there should be insulators between each cell and stand.

New battery sets are to be provided with battery chargers as per detail specifications enclosed. Interconnecting cables and power supply cables originating / terminating at the battery charger, should be neatly dressed, clamped and wired using ferrules, tag marks, double compression glands etc as applicable. Connecting cable and associated materials needed for commissioning of charger shall be treated as part of the battery charger. 1.1 KV multi-strands, 30 sqmm, copper conductors, PVC insulated and PVC sheathed cable for DC wiring between DCDB and Battery bank.

The agency shall provide following equipments at all the substations:

1. Two copies of battery instruction sheet duly laminated,
2. One cell testing voltmeter 3 – 0 – 3 volts,
3. Two syringe hydrometers
4. One thermometer with specific gravity correction scale,
5. One set of suitable spanners,
6. Two acid resistant funnel,
7. One acid resisting jar of 2 liters capacity,

**o. Current Transformer:**

Outdoor type CTs are to be erected on supporting structure provided on the breaker structure or suitable structure as per state practices. Testing and pre commissioning checks shall be conducted in accordance with OEM recommendations and as approved by the owner. Terminal components at HT as well as LT & Earthing side shall also be the part of the newly supplied CT.

**p. Control Panels:**

New panels as per the requirement of protection like feeder protection, transformer protection or incomer protection are to be supplied with each newly supplied breaker:

1. In case of fully outdoor type substation, Panel to be erected on ISMC75 (75x40x6 mm) MS channel duly welded on MS angle inserted on indoor trench. Panels should then be properly aligned, Cables should enter with double compression glands, codified, lugedd, and dressed. In indoor type breaker, panels are to be mounted on upper alignment of the breaker.

2. All alarm, annunciation and trip circuits / indication & alarm circuits should be tested and made operative,
3. The indication should be made operable,
4. Indicating instruments should be calibrated,
5. Grounding of panel at two different locations should be made available,
6. Control relays should be calibrated and checked for tripping and closing operations,
7. Pick up time / trip time and tripping at normal and reduced voltages should be checked, properly adjusted and recorded,
8. Latching arrangement of relays should be checked for operation,

q. **Lighting Arrester:**

Station Class LAs will be used in 33 KV and 11 KV with base steel structure, terminals bi – metallic connectors / PG clamps and earth connectors. LAs are to be connected with separate earth connection using GS flat. All LA terminals / connections are to be tightened. All lightening arresters installed in grid substations shall be Station Class Lightening Arresters.

r. **Yard Lighting:**

The substation area inside the fencing should be illuminated with flood light fittings provided with 250 Watts Sodium Vapor Lamps. Each fitting and its Junction box enclosures should be IP 55 protection type. Water and vermin proof-ness is a must. At least 4 Nos. fittings at all the four corners should be provided. Acceptable make of fitting, fixtures and lamp are Philips, Crompton, Alstom, and Bajaj only.

Area light supply from Substation DB to be extended through 2X16 mm² PVC insulated PVC Sheathed aluminum stranded armored power cable laid in underground trench of width 300 - mm wide, provided with 2nd class brick protection (Appro. 10 bricks per meter length of laying) and sand protective covering (200 mm thick) and laid at the depth of 750mm minimum. Laying specification of cable shall be as detailed in CPWD specification of laying power cables. Suitable loop length of 1.5 metre to be kept at the end points.

Pole mounted junction box (and not the Control Gear Box supplied with the fitting) should be made of 2mm thick CR steel sheet of size 300X300X200mm fitted with SPN terminal block of 32A capacity, 10A SPN miniature circuit breaker of ISI mark and reputed manufacture. The JB should be hot dip galvanized. The JB should also conform to IP 55 protection for enclosure. Neoprene gasket should be used in JB. 2 Nos. earthing terminals of 10 - mm dia should be provided with 25X6mm size of mounting clamps. Bidders shall get JB drawing approved before start of manufacturing.
4 Sq.mm, 1100V grade, weather proof three core (One core for phase, one core for Neutral and one core for earthing) aluminum stranded flexible conductor PVC sheathed and PVC insulated cable conforming to IS 694 should be used for connection of fitting and its Control Gear Box from pole mounted Junction Box. Control Gear box must provide ISI approved components. Copper wound heavy chocks shall be acceptable.

Tubular poles 12m high as per IS: 2713 (Latest Version) embossed with ISI certification mark and pole designation shall be used for installation of area light fixtures in Urban as well as Rural substations. Pole should be designated as 410 – SP - 60. Poles and fitting structures should be painted with two coat of anti-rusting bitumen paint inside and outside up to the planting depth and two coat zinc oxide paint followed by 2 or more coats of aluminum paint of approved make, brand and shade on portion of pole which will remain above ground level.

s. **Earthing:**

Earthing work is to be executed on all the substations. Earthing should be provided with 4.5 m long GI earth pipe, 25 mm dia solid GS spikes and 50X6 mm GS flat forming earth grid and riser along with GI wires / Stay wires as per requirement of Engineer in Charge. Engineer shall approve arrangement of earthing network.

Standard requirements / provisions of earthing are enclosed herewith. Connections of earth-grid / earth-pit with Lightning Arrester and Power Transformer Neutral and Transformer body (at two distinct points), equipments, fencing, control panels etc are to be made using 50X6mm GS flat / 8 or 6 SWG GI wire / GI Stay wires as per standard specifications enclosed.

Fencing and gate should be grounded. Moving portion of gate should be grounded with flexible braided conductors of equivalent aluminum 25 mm2 sizes of conductors duly lugged and bolted.

Substation wise measurement of earth resistance of earth pits / mesh and corresponding drawing of existing earthing arrangement shall be recorded and submitted by the agency.

Transformer neutral should be solidly grounded with two different earth connections. The transformer body should be grounded at two different locations.

t. **Insulators:**

All insulators should be cleaned and checked for cracks / chipping. Chipped or cracked insulators should not be used. Each insulator will require checking before erection for its Insulation Resistance capability.
u. **ACSR Conductor:**

ACSR Panther conductor is to be used for bus conductors.

v. **Connections:**

Suitable Bi - metallic clamps should be provided at bushings of transformers and circuit breakers. Also at all those points where joining of two different materials is found, bi – metallic clamps should be provided.

T – Clamps should be provided on each jumper on bus bars. Line jumpers should be provided with adequate size of PG Clamps (Two numbers PG Clamps at each end of jumper). Clamp should be made of aluminum grade T-1F as per IS - 8309 having good electrical quality aluminum material and should not be brittle in nature.

w. **Power receptacles**

Two power receptacles are envisaged in yard area to provide power supply to Transformer Oil Filtration machine and other testing and commissioning related works in the yard. Each receptacle should house 63A MCCB as incomer, 40A 3 phase socket/switch and 1 No, 20A single phase Industrial type socket/switch of reputed brand and type.

x. **Labeling:**

All the equipments and circuits should be labeled using yellow base and black indication marks (number or name). 40 / 50 mm height digits / words should be used for this purpose. Color coding of phases at breaker, bus and transformer and feeder end should be marked with color circles. Sample should be approved by EIC before execution. Painting and marking of digits etc should be performed by a skilled / trained painter. Labeling of following information is intended by the owner preferably in local HINDI language:

1. Transformer capacity and designated name like T - 1 or T – 2,
2. VCB designated name
3. Identification of CT & PT
4. Color coding of bus bars, transformer terminals, feeders phases (R-Y-B)
5. Name of incoming / outgoing feeder – like 11 KV Nandlapur Feeder I
6. Warning instruction, if any, of availability of two sources of HT supply on same structure.
7. Earth pit designation and date of checking,
y. **Tools & tackles**

The Contractor shall also supply at site one set of tools & tackles, testing equipment, handling equipment, etc. which are required by the Owner’s operational and maintenance staff to maintain the substation successfully at no extra cost. The list of such tools and tackles is as under: (one each at each substation)

a. Megger 1000 Volt (Electrically as well as manually operated) of Megger/Fluke/Motwane or equivalent make
b. Earth resistance meter, Megger/Fluke/Motwane or equivalent make
c. Crimping tool for cable from 2.5 sqmm to 185 sqmm,
d. Torque wrench M8 to M16
e. Multi-meter Motwane make analogue type,
f. Tong tester digital 0-600A capacity,
g. Allen key set,
h. ISI marked, Discharge rod 66 KV rating with discharging copper cables & terminals - 6 Nos
i. Electrician tool box – Taparia standard kit
j. Set of D-spanners
k. 12” size electrical screw driver
l. 12” size electrical hexagonal head screw driver
m. Pipe wrench suitable for 2 ½ inch dia pipe
n. ISI marked rubber mat rated for 11 KV insulation, ¾” thick, size 1000mm x 2000 mm - in front of all the control panels.

z. **Yard Earthing:**

Earthing should be provided with GI earth pipe, GS solid rod 25 mm dia and 50X6 mm GS flat forming earth grid and riser along with GI wires / Stay wires as per requirement of Engineer. Engineer shall approve arrangement of earthing network. Following arrangement envisaged for grid/earth rod/ earth pipe: (Indicative drawing is enclosed with the document)

<table>
<thead>
<tr>
<th>Description of equipment</th>
<th>Fully outdoor Substation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Pit 3 m long, 40 mm dia</td>
<td>3 Nos. (excluding earthing envisaged for station transformer-3 Nos; indoor panels-2 Nos.; internal electrification works 1 No and substation fencing 2 Nos. pits)</td>
</tr>
<tr>
<td>Earth rod GS solid 25 mm dia</td>
<td>19 Nos (+/-) 20%</td>
</tr>
<tr>
<td>Earth mat</td>
<td>75X8 mm GS Flat</td>
</tr>
<tr>
<td>Laying of earth mat</td>
<td>Below ground 0.5 meter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of equipment</th>
<th>Partly outdoor Substation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Pit 3 m long, 40 mm dia</td>
<td>3 Nos. (excluding earthing envisaged for station transformer-3 Nos; indoor panels-2 Nos.; internal electrification works 1 No and substation fencing 2 Nos. pits)</td>
</tr>
</tbody>
</table>
Earth rod GS solid 25 mm dia | 14 Nos (+/-) 20%
Earth mat | 75X8 mm GS Flat
Laying of earth mat | Below ground 0.5 meter

Standard requirements / provisions of earthing are enclosed herewith. Connections of earth-grid / earth pit with Lightning Arrester and Power Transformer Neutral and Transformer body (at two distinct points) are to be made using 50X6mm GS flat. Connections of other equipments may be provided with 8 SWG GI wire or GI Stay wire as per approval of Engineer in charge. Following arrangements are envisaged for earth connection:

1. Power Transformer Neutral (Two distinct connections) GS Flat
2. Transformer Body GS Flat
3. Breaker body / legs (Two distinct connections) GS Flat
4. Lightning Arrester GI flat
5. Station transformer Neutral (Two distinct connections) GI flat
6. Fencing GS Flat
7. Control Panels (Two distinct connections) GS flat
8. Isolator handle GS Flat
9. Steel structure of substation GS Flat
10. Line meters GS wire

Fencing and gate should be grounded. Moving portion of gate should be grounded with flexible braided conductors of equivalent aluminum 25 mm² sizes of conductors duly lugged and bolted.

aa. **Following details shall be provided at each substations:**

For suitable information to operating staff or the other related persons visiting the substation, following facilities shall be provided before commissioning of substation or on date of inauguration of the substation.

- Sketch of substations electrical circuit inside the substation in white cotton impregnated 2 mm thick hylum sheet 2x2 feet size installed on the wall,
- Notice board 3x3 feet made out of 10 mm thick water proof ply, painted suitably and provided with 1st class teak wood ribs at the sides of 2 x ½ inches size,
- Electrical safety charts,
- Provision for notifying name, address, telephone numbers, qualification details etc of the operational staff owner intends to post at the substations and their officials in hierarchy,
- Depicting working drawings of cable terminals details and cable laying details in laminated sheets
Color coding of bus bars and terminal conductors of the feeders using enamel painting round marks and labeling name of feeders, equipment, etc as defined.

**bb. Others:**

1. Buildings for substation control room - shall be 10mx12m size. Details are enclosed in the tender drawing.

2. **Approach road to substation:** Distance from nearby approach road to substation is indicated. The approach road and culvert wherever indicated in the scope, shall be provided by the owner.

3. Indoor trenches covered with 6 mm thick chequered plates: Concrete trench are required inside control room with 50x50x6 mm GS angle inserted at the edges for erection of control panels. Unused part of cable trench should be covered with 6mm thick MS chequered plates inside control room. At the entry point of trench in control room, proper sealing arrangement should be provided so as to stop entry of reptiles and rainwater inside control room through trench.

4. Bi-metallic connectors should be provided wherever there is a connection between two metal parts on all electrical equipment like 33/11 KV Power transformer, 33/0.433 KV station transformer, vacuum circuit breakers, isolators, DO Fuse, Lighting Arrester, etc.

**7 SITE TESTING AND PRE-COMMISSIONING CHECKS:**

An indicative list of tests is given below. Contractor shall perform any additional test based on specialties of the items as per the Field Quality Plan/ instructions of the equipments manufacturer or owner without any extra cost to the Owner. The Contractor shall arrange all instruments required for conducting these tests along with calibration certificates and shall furnish the list of instruments to the Owner for approval. Detail test certificates duly signed by MPSEB Engineer’s representative & agency representative of tests jointly carried out at site before putting the equipments in use, shall be submitted by the contractor in three copies.

Agency shall also be responsible to prepare Single Line Diagram of substations and an overall power distribution network of the circle showing 400KV, 220KV, 132KV, 3 KV network and point of metering. A set of drawings which includes drawing of Single phasing AB Switch, Substation earthing arrangement are enclosed for basic information. These drawings are not necessarily showing the exact dimensions of the substations.
7.1 **Electrical Inspection by state Electrical Inspectorate:**

The substations shall be subjected to the inspection of state owned Electrical Inspectorate for which payment of fees shall be made by Employer. The responsibility of contractor shall include rectification / alteration / addition of installation as per advice of electrical inspector for successful commissioning of the substations.

7.2 **Inputs by Owner**

1. Land to construct the substation,
2. Three (3phase) 415V AC power supply at one point on contractor's expense & as per prevailing electricity tariff provided LT network is available in the vicinity of the proposed substation.

7.3 **Arrangement by the Contractor**

Contractor shall make his own necessary arrangements for the following and for those not listed anywhere else:

1. Distributions of power supply at all work areas in the substation premises.
2. Construction of office and store (open & covered)
3. Construction of workshop and material/field testing laboratory
4. Fire protection and security arrangements during construction stage

7.4 **Civil works:**

Details scope under civil works have been provided in Volume II section I – “Civil Works and Soil Investigation”.

7.5 **Basic Reference Drawings**

The reference drawings, which are indicative of the type of specifications owner intends to accept, are annexed with this specification. The contractor shall maintain the overall dimensions of the substation, buildings, bay length, bay width, phase to earth clearance, phase to phase clearance and sectional clearances, clearances between buses, bus heights but may alter the locations of equipment to obtain the statutory electrical clearances required for the substation.

The enclosed drawings give the basic scheme, layout of substation, associated services, earthing arrangement. These drawings are provided for general information only.
### 7.6 Basic Insulation Level and Clearances:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description of the Parameter</th>
<th>33 kV</th>
<th>11 kV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System Operating Voltage</td>
<td>33 kV</td>
<td>11 kV</td>
</tr>
<tr>
<td>2</td>
<td>Maximum operating voltage of the systems (rms)</td>
<td>36 kV</td>
<td>12 kV</td>
</tr>
<tr>
<td>3</td>
<td>Rated frequency</td>
<td>50 Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td>4</td>
<td>No. of phases</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Rated Insulation levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Full wave impulse withstand voltage (1.2/50 micro-sec.)</td>
<td>170 kVp</td>
<td>75 kVp</td>
</tr>
<tr>
<td></td>
<td>(ii) One minute power frequency dry and wet withstand voltage (rms)</td>
<td>80 kVp</td>
<td>28 kVp</td>
</tr>
<tr>
<td>6</td>
<td>Min. creepage distance</td>
<td>25 mm/KV (900 mm)</td>
<td>25 mm/KV (300 mm)</td>
</tr>
<tr>
<td>7</td>
<td>Min. clearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Phase to earth</td>
<td>320 mm</td>
<td>140 mm</td>
</tr>
<tr>
<td></td>
<td>(ii) Phase to phase</td>
<td>320 mm</td>
<td>280 mm</td>
</tr>
<tr>
<td></td>
<td>(iii) Sectional</td>
<td>3000 mm Clearances</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Rated short circuit current</td>
<td>25 KA for 1 sec.</td>
<td>25 KA for 1 sec.</td>
</tr>
<tr>
<td>9</td>
<td>System neutral earthing</td>
<td>Effectively earthed</td>
<td>Effectively earthed</td>
</tr>
</tbody>
</table>

Note: The insulation and RIV levels of the equipments shall be as per values given in the respective chapter of the equipments.

### 7.7 Commissioning spares

The Contractor shall supply spares, which he expects to consume during installation testing and commissioning of system. The quantity of these spares shall be decided based on his previous experience, such that site works shall not be hampered due to non-availability of these spares. Contractor shall submit a complete list of such spares along with the bid, the cost of which shall be deemed to have been included in the lump-sum proposal price of the package. The contractor, if so agreed at a cost to be negotiated may leave the unused commissioning spares at the site for use of owner.

### 7.8 Recommended spares

The Contractor shall provide a list of recommended spares giving unit prices and total prices for 3 years of normal continuous operation of equipment. This list shall take into consideration and should be given in a separate list. The Owner reserves the right to buy any or all the recommended spares. The recommended spares parts shall be delivered at the site. The list of recommended spares to be furnished by the Bidder should also contain the following:
1. Location of each item installed along with reference drawing number.
2. Service life expectancy of each item.
3. Offer validity period

Price of recommended spares will not be used for evaluation of bids. The prices of these spares will remain valid for a period of not less than 120 days after the date on which the validity of main bid expires. Whenever recommended spares are the same as mandatory spares, then the prices of the mandatory spares and such common recommended spares shall be the same. Further, the prices of any recommended spares shall be subject to review by the Owner and shall be finalized after mutual discussions.

8 TYPE TEST, ROUTINE AND ACCEPTANCE TESTS

All equipment with their terminal connectors, control cabinets, main protective relays, etc. as well as insulators, insulator strings with hardware, clamps and connectors, marshalling boxes, etc., shall conform to type tests and shall be subjected to routine and acceptance tests in accordance with the requirements stipulated under respective equipment sections.

Contractor shall submit all type test reports/certificates according to the relevant standards and/or specifications for all the equipments/material for Owner's review as a proof of their conformity to type tests along with a certificate regarding conformity of equipments to be supplied with the type test.

The test certificates submitted shall be of the tests conducted within 5 years prior to the date of bid opening. In case the test reports are of the tests conducted earlier than 5 years prior to the date of bid opening, or they do not meet the requirements of the specifications/relevant standards, or they are not available, the Contractor shall conduct these type test(s) under this contract at no extra cost to the Owner.

The Owner will have the right of getting any test of reasonable nature carried out on any component or completely assembled equipment at Contractor’s premises or at site or in any other place in addition to the aforesaid type and routine tests, to satisfy that the materials/equipment comply with the specifications.

Failure of any equipment to meet the specified requirements of tests carried out at works or at site shall be sufficient cause for rejection of that equipment lot. Rejection of any equipment lot will not be held as a valid reason for delay in the completion of the works as per schedule. Contractor shall be responsible for removing all deficiencies, and supplying the equipment that meet the requirement.

Test results / Test reports of various tests performed under this contract should be furnished by the agency in two copies signed jointly by agency and representative of Engineer in Charge along with a soft copy in excel file in the office of Employer.
8.1 **GENERAL CHECKS:**

i. Check for physical damages.

ii. Visual examination of zinc coating/planting.

iii. Check from name plate that all items are as per order/specification.

iv. Check tightness of all bolts, clamp and connecting terminals using torque wrenches.

v. For oil filled equipments check for oil leakage, if any. Also check oil level and top up.

vi. Check ground connections for quality of weld and application of zinc rich paint over weld joint of galvanized surfaces.

vii. Check cleanliness of insulator and bushings.

viii. All checks and tests specified by the manufacturers in their drawings and manuals as well as tests specified in the relevant code of erection.

8.2 **POWER TRANSFORMER:**

i. Check for Vector group.

ii. Checking for transformation ratio.

iii. Checks for winding resistances,

iv. Insulation resistance of windings, live parts, transformer oil,

v. Operation of WTI, OTI, Buchholtz relays,

vi. Calibration of OTI & WTI,

vii. Functional checking for tripping of transformer on field inputs,

viii. Transformer oil testing - BDV

8.3 **CIRCUIT BREAKERS:**

i. Insulation resistance of each pole.

ii. Check adjustment, if any, suggested by manufacturer.

iii. Breaker closing and tripping time.

iv. Slow and power closing operation and opening.

v. Trip free and anti-pumping operation.

vi. Minimum pick up volts of coils

vii. Contact resistance.

viii. Interlock with other breakers/circuits,

ix. Functional checking of all accessories.

x. Functional checking of control circuits, interlocks, tripping through protective relays and auto-reclose operation.

xi. Insulation resistance of control circuits, motor etc.

xii. Resistance of closing and tripping coils.
8.4 **ISOLATORS:**

i. Alignment,
ii. Insulation resistance of each pole.
iii. Manual and electrical operation on interlocks.
iv. Insulation resistance of control circuit and motors.
v. Ground connections
vi. Contact resistance
vii. Proper alignment to minimize the vibration to the extreme possible during operation.
viii. Measurement of operating torque for isolator and earth switch
ix. Resistance of operating and interlocking coils.

8.5 **CURRENT TRANSFORMERS:**

i. Insulation Resistance Test
ii. Polarity test.
iii. Ratio identification test-checking of all ratios on all cores by primary injection of current.
iv. Dielectric test of oil (Wherever applicable)
v. Magnetizing characteristics test.

8.6 **VOLTAGE TRANSFORMERS**

i. Insulation resistance test
ii. Polarity test.
iii. Ratio test
iv. Dielectric test of oil (if applicable)

8.7 **SURGE ARRESTER**

i. Grading leakage current
ii. Resistance of ground connection

8.8 **PHASING OUT**

The phasing out of all supplies in the Sub-station system shall be carried out.

8.9 **STATION EARTHING**

i. Check soil Resistivity
ii. Check continuity of grid wires
iii. Check earth resistance of the entire grid as well as various sections of the same.
iv. Check for weld joint and application of zinc rich paint on galvanized surface.
v. Dip test on earth conductor prior to use.
8.10 **CONDUCTOR STRINGING AND POWER CONNECTORS**

i. Physical check for finish

ii. Electrical clearance check

iii. Testing of torque by torque wrenches on all bus power connectors and other accessories.

iv. Milli volt drop test on all power connectors

v. Sag and tension check on conductors.

8.11 **INSULATORS**

i. Visual examination for finish damage, creepage distance, etc.

ii. Insulation resistance