STANDARD BIDDING DOCUMENT

(FULL TURNKEY CONTRACT)

FOR

RURAL/URBAN ELECTRIFICATION WORKS OF XXXX (NAME OF DISTRICT) DISTRICT OF XXXX (NAME OF STATE) UNDER DEENDAYAL UPADHYAYA GRAM JYOTI YOJANA/INTEGRATED POWER DEVELOPMENT SCHEME

VOLUME-II

(PMS, QUALITY ASSURANCE & EVALUATION MECHANISM, BID FORMS AND PRICE SCHEDULES)

Section-I: PMS, Quality Assurance & Evaluation Mechanism (QAM), Documentation & PMA

Section-II: Bid Forms

Section-III: Price Schedules

SPECIFICATION No.:……..

DOCUMENT NO.:……

VOLUME-II: SECTION – I

PROJECT MANAGEMENT SYSTEM (PMS), QUALITY ASSURANCE & EVALUATION MECHANISM (QAM), DOCUMENTATION & PMA

PROJECT MANAGEMENT SYSTEM, QUALITY ASSURANCE AND DOCUMENTATION

This section describes the project management system, quality assurance and documentation requirements for the project.

1. Project Management System

1.1. General

The Contractor shall assign a project manager with the authority to make commitments and decisions that are binding on the Contractor. Employer will designate a project manager to coordinate all employer project related activities. All communications between employer and the Contractor shall be coordinated through the project managers. The project managers shall also be assisting employer in communicating project related information to other stake holders.

Bidder shall submit the manpower deployment plan along with the bids, describing the key roles of each person.

The role and responsibilities of contractor shall be as follows:

a) To prepare, maintain and update project detailed Work Execution Plan for successful implementation of project like approval of GTP, approval of sub-contractor, approval of drawings, supply of materials, mobilization of men, material and equipment etc. at site for successful completion of works, Compile and up-load physical as well as financial progresses, compile the progress of works at Employer level and to assist in forwarding it to all stake holders.

b) To actively participate with employer in resolving all issues relating to project implementation including ROW, Forest Clearances, Railway Crossings, and Payments to contractors/vendors and policy matters.

c) To actively participate in monitoring, reviewing and analysing the physical, financial and quality assurances works' progress of DDUGJY/IPDS works and also to take suitable measures on compliance of observations being raised during monitoring/review meetings with employer.

d) To implement and maintain a dedicated centralized bank account for the project, upload and up-date project wise physical progress in DDUGJY/IPDS web portal. Physical as well as financial progresses shall be uploaded in standard Bill of Material format of the contract. Also, to submit claims as per release DDUGJY/IPDS guidelines to Employer for release of payments/funds.

e) To oversee the progress and compliance of the Quality Assurance Mechanism as per DDUGJY/IPDS guidelines.

1.2. Project Schedule

As per the schedule the bidder shall submit a preliminary implementation plan along with the bid. The detailed project implementation schedule shall be submitted by the contractor after the award for employer's approval, which shall include at least the following activities:

(a) Surveying of site.
(b) Documents submission and approval schedule
(c) Type Testing Schedule
(d) Dispatch Schedule
(e) Installation & commissioning schedule
(f) Training schedule, if any.

The project schedule shall include the estimated period for completion of project and its linkage with other activities.

1.3. **Progress Report**

A progress report shall be prepared by the Contractor each month against the activities listed in the project schedule. The report shall be made available to employer on a monthly basis, e.g., the 10th of each month. The progress report shall include all the completed, ongoing and scheduled activities.

1.4. **Transmittals**

Every document, letter, progress report, change order, and any other written transmissions exchanged between the Contractor and employer shall be assigned a unique transmittal number. The Contractor shall maintain a correspondence index and assign transmittal numbers consecutively for all Contractor documents. Employer will maintain a similar correspondence numbering scheme identifying documents and correspondence that employer initiates.

2. **Quality Assurance and Evaluation Mechanism**

The Project Implementation Agency (PIA) shall be solely responsible & accountable for assuring quality in Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) works. Project Implementing Agency (PIA) shall formulate a detailed comprehensive Quality Assurance (QA) plan for the works to be carried out under DDUGJY scheme with an objective to create quality infrastructure works. The QA and Inspection Plan shall be integral part of the contract agreement with turnkey contractor or equipment supplier and erection agency as the case may be in case of turnkey/ or departmental execution of works. PIA has to ensure that the quality of materials/equipment supplied at site and execution of works carried out at field under DDUGJY scheme is in accordance to Manufacturing Quality Plan (MQP)/Guaranteed Technical Particulars (GTP) and Field Quality Plan (FQP)/Approved Drawings/Data Sheets respectively.

2.1. **Quality checks to be ensured by PIA/Turnkey Contractor:**

PIA & Turnkey Contractor shall strictly ensure QA checks during the day to day course of project execution, which are as follows:

a. 100% pre-dispatch inspections of all materials viz. as per MQP/ Approved Drawings/ Technical Specifications/Datasheet/GTP/applicable national & international standards.
b. 100% villages with all infrastructures are to be verified for quality as per MQP/Datasheet/GTP/ Approved Drawings/Technical Specifications and FQP.
c. 100% of all 66/11 or 33/11 kV sub stations (New & Augmented) for quality of material as per MQP/Approved Drawings/Technical Specifications/Datasheet/GTP and erection works in the field as per FQP/approved survey drawings/layout.
d. 100% verification of BPL HHs connections released.
e. 100% verifications feeders created under the scheme.
f. 100% verification of materials utilised under the scheme.
g. 100% verification of works done in Metering, SAGY & System Strengthening.

Also, PIA & Turnkey Contractor have to carry out quality assurance of village electrification and substation works as per the checklist provided at Annexure-A.

2.1.1. **Vendor approval:** All the materials procured for DDUGJY works shall be purchased from the authorised vendors approved by their Quality Assurance Department of PIA. Approved vendors list is to be uploaded periodically (monthly) on the PIA web portal.

New vendors/suppliers may be approved by PIAs, provided capability of manufacturer's is assessed suitably by visiting the factory premises and checking the testing facility available before accepting it as approved vendor. If required, State Electricity Board/Power Department/ Distribution Companies may adopt vendors already approved by CPSUs.

2.1.2. **Material Inspection:** All six materials of 33/11kV or 66/11kV substations and materials required for Village Electrification shall be inspected at manufacturer works/premises before dispatch at site. The materials to be used under the scheme shall be as per Technical Specification attached with Standard Bidding Document of DDUGJY scheme or as per latest relevant Indian Standards/approved Datasheet/drawings/GTP/MQP.

Note: PIA to perform one stage inspection of Power/Distribution transformer for each manufacturer.

2.1.3. **FQP for Civil works:** PIA shall prepare a separate FQP for civil works supported with drawings which shall be approved by their competent authority which shall be uploaded at web portal. The turnkey contractor shall adhere to this FQP while carrying out physical works.

2.1.4. **FQP for testing & commissioning:** PIA shall prepare a comprehensive FQP for testing & commissioning of 33/11kV or 66/11kV substation, Distribution transformer Substation etc. as well as infrastructure created during electrification of villages/habitations. The electrical system shall be energized only after performing all tests as described in the FQP. Proper records in this regard, including tests on earth resistance, insulation resistance of 11 kV line & Distribution Transformer etc. shall be maintained, jointly signed by PIA and turnkey contractor representatives.

2.1.5. **QA documentation:** All the quality assurance checks shall be conducted in the field as per approved Field Quality Plan(FQP) and shall be documented properly and signed by the quality engineer of the turnkey contractor & countersigned by PIA's representative and shall be kept for future reference. These documents shall be maintained by PIAs in proper order and shall be made available at site for verification by Quality Monitors during inspection.

2.2. Quality Assurance Mechanism to be envisaged by REC/MoP for DDUGJY Projects

DDUGJY Projects shall have a single tier Quality Assurance Mechanism (QAM). The single tier QAM shall exclude the in-house process quality checks followed by the Project Implementation Agency (PIA) during the physical execution of the project.

Rural Electrification Corporation (REC), the nodal agency for the DDUGJY scheme shall operate for Quality Assurance Mechanism. REC shall designate a senior officer (ZM/CPM of the state) as REC State Quality Assurance Coordinator (RSQAC) at its State level Zonal/Project office. REC corporate office shall designate a senior officer not below the level of AGM/GM as RQAC.

Under this mechanism, *RQM shall oversee the compliance of DDUGJY guidelines,* adherence to system procedures etc. shall be verified by an independent inspecting agency.

REC shall outsource independent agency(ies) designated as REC Quality Monitors (RQM) to ensure quality of materials procured and shall also verify quality of works carried out under the DDUGJY scheme. RQM shall carry out pre-dispatch inspection of six materials randomly in a single lot containing minimum 10% materials at manufacturer works. RQM shall also verify quality of works carried out in the Project, which are as follows:

- 100% of the Un-electrified and 10% of Intensive Electrified villages where electrification works has been carried out excluding SAGY villages,
  (Note: Villages includes Habitations/Dhani/Majra/Tolas/Thandas etc.)
- 10% of Feeders created under Feeder Separation,
- 1% Consumer Meters & 10% of Industrial/Commercial Meters or 3-Phase Distribution Transformer Meters,
- 100% works carried out in Sansad Adarsh Gram Yojana (SAGY) ,
- 100% of new substations (66/11 or 33/11kV),
- 25% of augmented substations (66/11 or 33/11kV),

2.2.1. **Material Inspection:** Six important materials of 33/11kV or 66/11kV substation including materials to be used for village electrification shall be inspected at manufacturer premises before dispatch.

2.2.1.1. **Inspection of substation materials**: Following materials have been identified as important materials for 33/11 or 66/11kV Substation:

i. Power Transformer,
ii. Circuit Breaker,
iii. Insulators,
iv. Cables
v. Conductor
vi. Control & Relay Panel,

2.2.1.2. **Inspection of Village Electrification Materials**: The materials which have been identified for pre-dispatch inspection at manufacture premises is as follows:

i. Distribution Transformer,
ii. Overhead Conductor,
iii. Energy Meter,
iv. Pole,
v. Insulators,
vi. Cables,

At least one type from each of the aforesaid 6 (six) materials to be utilized in substations and villages' electrification shall be inspected by the RQM as per MQP. The inspection/testing/witnessing of acceptance tests shall be as per approved Drawings/Technical Specifications/Datasheet/GTP/ and applicable national & international standard.

2.2.1.3. **Sampling from field**: Any material, including materials listed below, may be picked from site for testing at test laboratory chosen by inspecting official.

i. Distribution Transformer,
ii. Overhead Conductor,
iii. Energy Meter,
iv. Pole,
v. Insulators,
vi. Cables,
vii. Circuit Breaker

All expenditures that shall incurred towards packing, transport, inspection, testing charges etc. are to be borne by the PIA.

2.2.2. Villages' inspections are to be done as per approved FQP/Drawings/Technical Specifications/Datasheet/survey report. The villages inspection that shall be carried out by REC Quality Monitors, which are as hereunder:

2.2.2.1. 100% Un-Electrified (UE) and 10% of Intensive Electrified (IE) villages are to be inspected in 2 (two) stages including SAGY villages. Stage-I & Stage-II inspections shall cover 50%UE & 5% of IE villages respectively.

2.2.2.2. **Stage-I** inspection of RQM shall commence in a project when 50% of UE & 30% of IE villages are completed in all respect. Five (5) nos. of villages in a project are to be thoroughly inspected at the very beginning when the same is completed in a project. *These villages after rectification of defects will become modal quality village. The findings of inspection of these five villages shall be used as training resource and necessary improvement in Quality Assurance*.

2.2.2.3. **Stage-II** inspection of RQM shall commence and end in a project when 100 % of UE & 70% of IE villages are completed in all respect.

2.2.2.4. (a) Inspection of 100% new (33/11 or 66/11 kV) substation for quality works as per FQP.

(b) Inspection of 25% augmented (33/11 or 66/11 kV) substation for quality works as per FQP.

2.2.3. Inspection of 100% works carried out in Sansad Adarsh Gram Yojana(SAGY) including HT Lines, LT lines, Distribution Transformer Substation, BPL HHs connection released or any other works not stated herein but have been carried out under the scheme in that village(s).

2.2.4. In 100% UE & 10% IE villages of the project; 100% verification of BPL connections, 100% of Distribution Transformer Substations, 1km(for hilly areas)/2km (for plain areas) of 33kV Lines, 100% verification of LT Lines and 100% of the 11KV lines attributed to the village (emanating from cut-point/grid substation) as well as the 11 KV line laid within the village, verification of village energisation & BPL beneficiaries, installation of service connections in public places, hours of supply in the village, time taken by DISCOM to raise first energy bill in favor of beneficiaries.

2.2.5. REC Quality Monitor shall also oversee the Contract Management Part of PIA like adherence to Standard Bidding Document, PMA appointment, adherence to Quality Assurance Mechanism of DDUGJY scheme, Contractual provisions pertaining to defects identification and rectification, resolution of project related issues and action on delayed project. In their visit, RQM would give thrust on adherence on systems and procedures of DDUGJY schemes by PIA and turnkey contractors during project implementation. Also, RQM would ensure availability and awareness of project specific drawings, documents, quality assurance plans among all stake holders in PIA contractor staff/workers.

2.2.6. REC Quality Monitors shall oversee the progress of up-loading of monitoring observations raised by inspectors during inspection and submission of compliance by PIA with supporting site photographs details in DDUGJY web portal.

2.3. GENERAL

2.3.1. To ensure that the equipment and services under the scope of this Contract whether manufactured or performed within the Contractor's Works or at his Sub-contractor's premises or at the Employer's site or at any other place of Work are in accordance with the specifications, the Contractor shall adopt suitable quality assurance programme to control such activities at all points necessary. Such programme shall be broadly outlined by the contractor and finalized after discussions before the award of contract. The detailed programme shall be submitted by contractor after the award of contract and finally accepted by the Employer after discussions. A quality assurance programme of the contractor shall generally cover the following:

a) His organization structure for the management and implementation of the proposed quality assurance programme :

b) Documentation control system;

c) Qualification data for bidder's key personnel;

d) The procedure for purchases of materials, parts components and selection of sub-Contractor's services including vendor analysis, source inspection, incoming raw material inspection, verification of material purchases etc.

e) System for shop manufacturing and site erection controls including process controls and fabrication and assembly control;

f) Control of non-conforming items and system for corrective actions;

g) Inspection and test procedure both for manufacture and field activities.

h) Control of calibration and testing of measuring instruments and field activities;

i) System for indication and appraisal of inspection status;

j) System for quality audits;

k) System for authorizing release of manufactured product to the Employer.

l) System for maintenance of records;

m) System for handling storage and delivery; and

n) A manufacturing quality plan detailing out the specific quality control measures and procedures adopted for controlling the quality characteristics relevant to each item of equipment furnished and/or services rendered.

o) A Field quality Plan covering field activities

2.3.2. The manufacturing & Field quality Plans shall be mutually discussed and approved by the Employer after incorporating necessary corrections by the Contractor as may be required.

2.3.3. The Employer or his duly authorized representative reserves the right to carry out quality audit and quality surveillance of the system and procedure of the Contractor/his vendor's quality management and control activities.

2.3.4. The Contractor would be required to submit all the Quality Assurance documents as stipulated in the Quality Plan at the time of Employer's Inspection of equipment/material.

2.4. TYPE & ACCEPTANCE TESTS

The following type, acceptance and routine tests and tests during manufacture shall be carried-out on the material. For the purpose of this clause:

2.4.1. Contractor shall supply the materials of type & design which has already been Type Tested. Contractor shall provide copy of such tests at site in support of type-tested materials supplied under the contract. No extra payment or time shall be granted for type testing of materials. In exceptional case to case basis, employer will decide to permit type testing of material at contractor's cost.

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

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

2.4.1.3. Tests during Manufacture shall mean those tests, which are to be carried out during the process of manufacture and end inspection by the Contractor to ensure the desired quality of the end product to be supplied by him.

2.4.1.4. The norms and procedure of sampling for these tests will be as per the Quality Assurance Programme to be mutually agreed to by the Contractor and the Owner.

2.4.1.5. The standards and norms to which these tests will be carried out are listed against them. Where a particular test is a specific requirement of this Specification, the norms and procedure of the tests shall be as per IS/IEC Standard this specification or as mutually agreed to between the Contractor and the Owner in the Quality Assurance Programme.

2.4.1.6. For all type test and acceptance tests, the acceptance values shall be the values specified in this Specification, Approved Quality Plan or guaranteed by the Bidder, as applicable.

2.5. TYPE TESTING, INSPECTION, TESTING & INSPECTION CERTIFICATE

2.5.1. All equipment being supplied shall conform to type tests including additional type tests, if any as per technical specification and shall be subject to routine tests in accordance with requirements stipulated under respective sections. Employer reserves the right to witness any or all the type tests. The Contractor shall intimate the Employer the detailed program about the tests at least three (3) weeks in advance in case of domestic supplies & six (6) weeks in advance in case of foreign supplies.

2.5.2. The reports for all type tests and additional type tests as per technical specification shall be furnished by the Contractor alongwith equipment/material drawings. The type tests conducted earlier should have either been conducted in accredited laboratory (accredited based on ISO/IEC Guide 25/17025 or EN 45001 by the national accreditation body of the country where laboratory is located) or witnessed by the representative(s) of Employer or Utility. The test-reports submitted shall be of the tests conducted within last 10 (ten) years prior to the date of bid opening. In case the test reports are of the test conducted earlier than 10 (ten) years prior to the date of bid opening, the contractor shall repeat these test(s) at no extra cost to the Employer

2.5.3. In the event of any discrepancy in the test reports i.e. any test report not acceptable due to any design/manufacturing changes (including substitution of components) or due to non-compliance with the requirement stipulated in the Technical Specification or any/all additional type tests not carried out, same shall be carried out without any additional cost implication to the Employer.

2.5.4. The Employer, his duly authorized representative and/or outside inspection agency acting on behalf of the Employer shall have at all reasonable times free access to the Contractor's/sub-vendors premises or Works and shall have the power at all reasonable times to inspect and examine the materials and workmanship of the Works during its manufacture or erection if part of the Works is being manufactured or assembled at other premises or works, the Contractor shall obtain for the Engineer and for his duly authorized representative permission to inspect as if the works were manufactured or assembled on the Contractor's own premises or works. Inspection may be made at any stage of manufacture, dispatch or at site at the option of the Employer and the equipment if found unsatisfactory due to bad workmanship or quality, material is liable to be rejected.

2.5.5. The Contractor shall give the Employer/Inspector ten (10) days written notice of any material being ready for joint testing including contractor and Employer. Such tests shall be to the Contractor's account except for the expenses of the Inspector. The Employer/Inspector, unless witnessing of the tests is virtually waived, will attend such tests within thirty (30) days of the date of which the equipment is notified as being ready for test /inspection, failing which the Contractor may proceed alone with the test which shall be deemed to have been made in the Inspector's presence and he shall forthwith forward to the Inspector duly certified copies of tests in triplicate.

2.5.6. The Employer or Inspector shall, within fifteen (15) days from the date of inspection as defined herein give notice in writing to the Contractor, of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objections and shall either make the modifications that may be necessary to meet the said objections or shall confirm in writing to the Employer/Inspector giving reasons therein, that no modifications are necessary to comply with the Contract. If any modification is made on the equipment on the basis of test results not in conformity with the contract, the modified equipment shall be subject to same sequence of test again without any additional cost to Employer.

2.5.7. When the factory tests have been completed at the Contractor's or Sub-Contractor's works, the Employer/Inspector shall issue a certificate to this effect within fifteen (15) days after completion of tests but if the tests are not witnessed by the Employer/Inspector, the certificate shall be issued within fifteen (15) days of receipt of the Contractor's Test certificate by the Engineer/Inspector. Failure of the Employer/Inspector to issue such a certificate shall not prevent the Contractor from proceeding with the Works. The completion of these tests or the issue of the certificate shall not bind the Employer to accept the equipment should, it, on further tests after erection, be found not to comply with the Contract. The equipment shall be dispatched to site only after approval of test reports and issuance of dispatch instruction by the Employer.

2.5.8. In all cases where the Contract provides for tests whether at the premises or at the works of the Contractor or of any Sub-Contractor, the Contractor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably

demanded by the Employer/Inspector or his authorized representative to carry out effectively such tests of the equipment in accordance with the Contract and shall give facilities to the Employer/Inspector or to his authorized representative to accomplish testing.

2.5.9. The inspection by Employer and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the Contractor in respect of the agreed quality assurance programme forming a part of the Contract.

2.5.10. The Employer will have the right of having at his own expenses any other test(s) of reasonable nature carried out at Contractor's premises or at site or in any other place in addition of aforesaid type and routine tests, to satisfy that the material comply with the specification.

2.5.11. The Employer reserves the right for getting any field tests not specified in respective sections of the technical specification conducted on the completely assembled equipment at site. The testing equipment for these tests shall be provided by the Employer.

2.5.12. The Employer intends that type tests and additional type tests are conducted on Power/Distribution Transformers, Pin & Disc Insulators, 33 kV/11 kV LT AB cables, Conductors, 66 kV / 33 kV & 11 kV Vacuum circuit breaker, Battery Charger and energy meter. The price of conducting type tests and additional type tests shall be included in Bid price.

2.5.13. In case the contractor opts to procure these items from more than one manufacturer, the type test shall be conducted in respect of all the manufactures. No type test / repeat type test charges shall be paid by owner.

2.5.14. Purchaser reserves the right to witness any or all the type tests.

2.6. PRE-COMMISSIONING TESTS

On completion of erection of the equipment and before charging, each item of the equipment shall be thoroughly cleaned and then inspected jointly by the Employer and the contractor for correctness and completeness of installation and acceptability for charging, leading to initial pre-commissioning tests at Site. The list of pre-commissioning tests to be performed is given in respective chapters or as included in the Contractor's quality assurance programme.

2.7. COMMISSIONING TESTS

All required instrumentation and control equipment will be used during such tests and the contractor will use all such measuring equipment and devices duly calibrated as far as practicable. However, the Contractor, for the requirement of these tests, shall take immeasurable parameters into account in a reasonable manner. The tests will be conducted at the specified load points and as near the specified cycle condition as practicable. The contractor will apply proper corrections in calculation, to take into account conditions, which do not correspond to the specified conditions.

2.7.1. Any special equipment, tools and tackles required for the successful completion of the Commissioning tests shall be provided by the contractor, free of cost.

2.8. The specific tests to be conducted on equipment have been brought out in the respective chapters of the technical specification. However where the pre-commissioning tests have not been specified specifically they shall be as per relevant IS code of practice or as mutually agreed.

2.9. The Contractor shall be responsible for obtaining statutory clearances from the concerned authorities for commissioning and operation of the equipment including the Electrical Inspector. Necessary fee to perform these works shall be paid by Employer.

3. Documentation

3.1. GENERAL

3.1.1. To ensure that the proposed systems conform to the specific provisions and general intent of the Specification, the Contractor shall submit documentation describing the systems to employer for review and approval. The contractor shall obtain approval of employer for the relevant document at each stage before proceeding for manufacturing, system development, factory testing, site testing, training etc. The schedule for submission/approval of each document shall be finalised during the discussions before placement of the contract, this schedule shall be in line to overall project schedule.

3.1.2. Each document shall be identified by a Contractor document number, the employer document number, and the employer purchase order number. Where a document is revised for any reason, each revision shall be indicated by a number, date, and description in a revision block along with an indication of official approval by the Contractor's project manager. Each revision of a document shall highlight all changes made since the previous revision.

3.1.3. All technical description, specifications, literature, correspondence, prints, drawings, instruction manuals, test reports(both factory and at site), progress photographs, booklets, schedules and all supplementary data or documents furnished in compliance with the requirements of the Contract, shall become the property of the Employer and the costs shall be considered as included in the Contract price.

3.1.4. The Contractor shall be responsible for any time delay, misinterpretation, error and conflict during design, manufacturing, testing and erection of the Works resulting from non-compliance with the requirements of this Specification.

3.1.5. The Employer shall have the right to make copies of any documents, data, reports, information etc. supplied by the Contractor in connection with the Works. The Employer shall not impart the information of these documents to any other manufacturer or competitor but he shall be free to use these for preparation of technical papers, reports etc.

3.1.6. All documentation shall be in English language.

3.2. REQUIREMENTS FOR SUBMISSION OF DOCUMENTS, INFORMATION AND DATA BY THE CONTRACTOR

3.2.1. The Contractor shall submit to the Employer all documents in accordance with an approved schedule of submissions and shall submit any further information (in the form of drawings, documents, manuals, literature, reports etc.) when asked by the Employer while commenting/approving any drawings/documents etc.

3.2.2. The documents which are subject to the approval of the Employer shall be identified by the Contractor with the stamp "FOR APPROVAL". All other documents shall be submitted to the Employer for information and shall be identified by the Contractor with the stamp "FOR INFORMATION".

3.2.3. The sequence of submission of the documents shall be subject to the approval of the Employer. The sequence of submissions of all documents shall be such that the necessary information is available to enable the Employer to approve or comment the document.

3.2.4. The Contractor shall supply 4 hard copies of all drawings and documents.

3.2.5. In case a "SUBSEQUENT" revision of any document is made due to any reason whatsoever, a revision of the same, highlighting the changes shall be resubmitted for the Employer's specific approval/ information.

3.3. DOCUMENTS FOR APPROVAL

3.3.1. The Employer shall be allowed fifteen (15) calendar days to approve the Contractor's submissions. The submissions for approval, shall be returned to the Contractor marked in one of the following ways :

Category I:	Approved
Category II:	Approved with Comments.
Category III:	Returned for correction.
Category IV :	For information

3.3.2. The first notations "I" or "II" shall be deemed to permit the Contractor to proceed with the work shown on the document, except in the case of notation "II" the work shall be done subject to the corrections indicated thereon and/or described in the letter of transmittal. The Contractor shall bear the full responsibility for proceeding with the Works prior to receipt of the release in notation "I" from the Employer.

3.3.3. In case of notation "II", the Contractor shall include the alterations required & resubmit the document within fifteen (15) days from date of Employer's letter of transmittal.

3.3.4. In case of notation "III", the Contractor shall include the alterations required and resubmit the document to the Employer, within fifteen (15) days, from date of letter of transmittal, so that such document can be returned with the notation "I" or "II".

3.3.5. It may also be noted that the approval/commenting by the Employer does not relieve the Contractor of any of his contractual obligations and his responsibilities for correctness of dimensions, materials, weights quantities or any other information contained therein, as well as the conformity of designs with Indian Statutory Laws and the Technical Specifications as may be applicable. The approval also does not limit the Employer's rights under the Contract.

3.3.6. The approved documents shall be considered as the working documents. However the Technical Specification and connected documents shall prevail over these documents in case a decision is required on interpretation.

3.4. DOCUMENTS FOR INFORMATION

The Contractor shall not delay the Works pending the receipt by the Contractor of the comments on documents submitted to the Employer for information. However, the Employer shall have the right to comment on all the documents submitted by the Contractor, when, in the opinion of the Employer the document does not comply with the Contract or otherwise. The Contractor shall satisfactorily demonstrate that the information contained in the aforesaid document does meet the requirements of the Contract or revise the document in order that the information shall comply with the requirements of the Contract.

3.5. BASIC REFERENCE DRAWINGS

3.5.1. The reference drawings are enclosed with the bid document, which forms a part of the specification. The contractor shall develop a new layout in line with the specification and take the approval of the EMPLOYER. 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 as required for the substation.

3.5.2. All drawings submitted by the Contractor including those submitted at the time of bid shall be in sufficient detail to indicate the type, size, arrangement, material description, Bill of Materials, weight of each component, break-up for packing and shipment, dimensions, internal & the external

connections, fixing arrangement required and any other information specifically requested in the specifications.

3.5.3. Each drawing submitted by the Contractor shall be clearly marked with the name of the Employer, the unit designation, the specifications title, the specification number and the name of the Project. If standard catalogue pages are submitted, the applicable items shall be indicated therein. All titles, noting, markings and writings on the drawing shall be in English. All the dimensions should be in metric units.

3.5.4. Further work by the Contractor shall be in strict accordance with these drawings and no deviation shall be permitted without the written approval of the Employer, if so required.

3.5.5. The review of these data by the Employer will cover only general conformance of the data to the specifications and documents interfaces with the equipment provided under the specifications. This review by the Employer may not indicate a thorough review of all dimensions, quantities and details of the equipment, materials, any devices or items indicated or the accuracy of the information submitted. This review and/or approval by the Employer shall not be considered by the Contractor, as limiting any of his responsibilities and liabilities for mistakes and deviations from the requirements, specified under these specifications and documents.

3.5.6. All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawings shall be at the Contractor's risk. The Contractor may make any changes in the design which are necessary to make the equipment conform to the provisions and intent of the Contract and such changes will again be subject to approval by the Employer. Approval of Contractor's drawing or work by the Employer shall not relieve the contractor of any of his responsibilities and liabilities under the Contract.

3.5.7. All engineering data submitted by the Contractor after final process including review and approval by the Employer shall form part of the Contract Document and the entire works performed under these specifications shall be performed in strict conformity, unless otherwise expressly requested by the Employer in Writing.

3.6. 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 10-day time. Depending on requirement, inspection shall be witnessed by representatives of Employer, TPIA and/or REC/PFC/MoP.

The contractor shall ensure receipt of material at site within 21 days from date of receipt of dispatch instructions. In case materials are not received within 21 days from date of issue of dispatch instruction, the dispatch instruction shall stand cancelled. In the event of delay in receipt of materials beyond 21 days due to reasons not attributed to turnkey contractor/supplier, suitable time extension may be permitted by the Employer. All expenditure incurred by Employer in performance of dispatch instruction shall be recovered from turnkey contractor.

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 or the inspection could not be carried out due to non-availability of requisite calibrated certificate of instruments with manufacturer, closing of works on scheduled date of inspection, non-availability of sufficient testing/material handling staff at manufacturer works etc, 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 and re-inspection shall be carried out on expense of contractor. 2nd such situation at same manufacturer/supplier shall result in rejection of name of manufacturer from list of approved vendors/sub-vendors. In case sub-standard materials (old component, re-cycled materials, re-used core material, re-used transformer coil material

etc) offered for inspection and are noticed during the inspection, materials shall be rejected and approval of sub-vendor shall also be cancelled for all DDUGJY/IPDS projects.

4. **Project Management Agency (PMA)**

Employer shall appoint a Project Management Agency (PMA) to assist them in Project Planning and Implementation of the project as under:

4.1. Project Planning and Implementation:

4.1.1. Assisting Employer in preparation of detailed work implementation schedule in association with turnkey contractor.
4.1.2. Coordination & monitoring of project implementation activities.
4.1.3. To monitor DPR wise monthly physical & financial progress of the scheme, prepare a consolidated report & submit to utility for onward submission to Nodal Agency.
4.1.4. Identification of anticipated bottlenecks in project implementation & preparation of remedial action plan in consultation with Employer & Contractor.
4.1.5. To assist Employer in addition of the created assets to their asset register.
4.1.6. Recommend the claim of utility for fund release from Nodal Agency. The recommendation is to be supported by a report on expenditure, progress and constraints if any for timely completion of project.
4.1.7. Submit a report to Nodal Agency, regarding Project Completion and expenditure incurred along with recommendation in accordance with the guidelines.
4.1.8. To assist utility in supervision of flow of funds in dedicated bank account of projects.

4.2. Quality Monitoring:

4.2.1. To prepare a Quality Assurance (QA) Plan
4.2.2. To carry out field quality inspection of ongoing/ completed works
4.2.3. Joint inspection of material at site on sample basis i.e. 10% of major materials (Poles, Conductor, Meters, Transformers, Cable etc).

Annexure-A

Checklist for Quality Assurance

Distribution Transformer Substation

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
1	Record capacity of DTR transformer used				
2	Record S. No., make and year of manufacturing of DTR transformer				
3	Safe and adequate access to distribution transformer (DTR) substation				
4	Availability of approved survey report				
5	Proper load survey is performed of the locality for perspective consumers while deciding capacity and location of DTR				
6	Expected loading of transformer using 5 years growth is performed in survey report				
7	Proper alignment of substation structure with 11 KV line				
8	Record type of poles/support used for DTR substation				
9	Record type of foundation used				
10	Proper muffing is provided on steel supports of DTR substation				
11	If DTR substation is in water logging area, its foundation is grouted in cement concrete				
12	Proper verticality of substation supports				
13	Proper pole to pole distance of substation supports.				
14	Proper erection of jumpers and connection to DTR transformers without any bent				
15	Proper binding of insulators				
16	Stay plates are properly grouted in cement concrete mixture to support DTR substation structure (if erected)				
17	Proper tensioning is there on stay set				
18	Proper alignment of stay wire with overhead conductor				
19	Proper erection of stay clamp using 12 mm dia nuts and bolts				
20	Proper galvanization of stay wire				
21	Thimble is provided on turn buckle of stay set				
22	Stay set installation is provided with guy insulator				
23	Proper phase to phase and phase to ground clearances maintained on the substation jumpers				
24	Steel overhead structure is properly earthed using 8 SWG wire/G.I. flat?				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No
25	Each 11 kV overhead equipment including transformer are individually earthed using 8 SWG Earth wire/ GI flat				
26	Danger plate is installed at appropriate height using proper size clamp. Record type and size of clamp				
27	Proper anti-climbing device (barbed wire/spike) installed at appropriate height on individual support. Record quality of wrapping of barbed wire				
28	Substation is numbered				
29	Individual substation pole is imposed/painted with the name of scheme				
30	Surface of the PCC poles is finished and there are no steel wire visible				
31	No physical damages appeared on PCC pole surface				
32	GI flat to GI flat connection using at least 2 sets of GI nut bolts and washers				
33	8 SWG GI wire/GI Flat is properly dressed with support				
34	GI wire to GI wire jointing is provided using 12 SWG GI nut bolts and washers				
35	GI wire connection to earth pit is using GI nut bolt and washer				
36	GI earth pipe is properly inserted inside earth without hammering				
37	Number of earth pit used for substation earthling.				
38	Pit to pit distance in meters. Is it adequate?				
39	Masonry enclosure is provided over individual earth pits				
40	Funnel is provided over earth pit				
41	Proper jumpering using binding practices/PG clamp				
42	Proper clearances to avoid bird fault on conductors of substation supports				
43	Type and size of overhead conductors used in the substation				
44	Cement-concrete grouting foundation of substation supports				
45	Measure quantum of cement concreting in any one sample support				
46	Measure cement concreting foundation in any one sample of stay set pit				
47	Proper painting/galvanizing done on steel structure				
48	Any sign of rusting found on substation structure/hardware				
49	Any broken insulator found in the substation				
50	Disc Insulators installed precariously (loose bolts/ missing cotter pins)				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No
51	Separate individual earth connection using GI wire/GI flat is used for neutral earthing with separate pit				
52	Dedicated transformer body earthing using GI wire/GI flat				
53	Bimetallic clamps are provided on 11 kV bushing				
54	No gap between busing seat and bimetallic clamp on LT as well as HT bushing while connecting conductor/cable				
55	Proper lugs are provided on termination of cables				
56	Oil is filled in cup of silica gel breather				
57	Silica gel is blue in colour				
58	Oil control valves are open between transformer tank and breather (wherever used)				
59	Oil leakage from the body/gasket of transformer and from conservator tank				
60	Record level of oil in conservator tank				
61	Transformer installed precariously (Nut / bolts / side bracing missing)				
62	Transformer is fitted with 12 mm dia nut bolts on its base channel				
63	Transformer belting is provided				
64	Dimension of transformer base channel				
65	Individual lightening arrestor are earthed with dedicated separate earth pit				
66	LA jumper connections is missing/ not proper				
67	LA is charged/ installed but not meggared				
68	Isolators/AB switch are properly aligned and its operation is smooth				
69	Operating handle (not missing eye bolt) of isolator/AB switch is earthed using flexible cable				
70	No joint in between entire length of operating pipe of isolator/AB switch				
71	Guiding hook is provided for isolator pipe movement				
72	Alignment of male and female contacts of isolators/AB switch and no spark during normal use				
73	Proper fuse wire is used in DO fuse/HG fuse				
74	Arching Horn is missing/ not aligned / not proper				
75	Proper size of LT cable are used between transformer and LTDB				
76	lockability and proper closing of door of LTDB				
77	Gland plate and glands are used for cable entry in LTDB				
76	No unused holes on gland plates				
77	Availability of LTDB equipment as per approved drawing and scope of work like isolator, fuse, switch, bus bar, MCCB, MCB etc.				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
78	Installation of DTR as per BIS specification				
79	LTDB earthing at different points using 8 SWG GI wire				
80	Proper painting and No physical damages on LTDB				
81	Suitable loop length of cables in LTDB				
82	3 Nos earthing pit and earth mat /risers using 50X6mm GI Flat are used as under:				
a	a) Earth Pit – 1 for Transformer Neutral,				
b	b) Earth pit - 2 for Lightening Arrester,				
c	c) Earth pit – 3 for Equipment body earthing				
83	Metering of DTR substation				
84	Type of meters used and its healthiness				
85	Quality of painting/galvanizing on substation structure				
86	DTR is newly supplied				
87	PG Clamps are used (wherever needed as per drwg- Jumper etc)				
88	Energy meters (@ 11 kV feeder , DT , BPL consumer) at installed at appropriate height				
89	Earthing Electrodes short/missing				
90	Commissioning Defect: DT charged/installed but not merged				
91	Fasterers (Nuts/ Bolt/ Clamps /Connector) size not as per drawing /specification				
92	Fasteners (Nuts / bolts/ Clamps / connectors) in precarious state				
93	Poles not erected properly (inadequate or missing brick bat/ foundation)				
94	Stay installation is not proper : guy insulator missing ;inadequate depth				
95	Earthing wire diameter undersize				
96	Danger plate missing/improper				
97	Earthing wire not secured / not dressed				
98	Barbed wire missing/improper				
99	DTR ground electrodes far too close				
100	Earth pit to earth pit clearance not maintained				
101	HT Fuse not provided				
102	HT fuse unit jumpering not connected properly				
103	MCCB of lower rating than specified in LOA				
104	MCCB not installed				
105	Inferior quality of Distribution Board used (makeshift, locally fabricated DBs)				

LT Line

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
1	Availability of approved survey report with Single line diagram				
2	Correct alignment of LT line				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No
3	Type of poles used as per scope of the work				
4	Type of foundation used as per scope of work				
5	If line is passing through water logging area and its foundation is grouted in cement concrete				
6	Proper verticality of poles				
7	Any deflecting tension on LT pin insulator				
8	Proper tensioning of overhead conductor/LT cable/ABC Cable				
9	Any knot/wrapping of overhead conductor /LT cable /ABC Cable is there during erection				
10	Proper binding of insulators cable both / tension work is done				
11	Stay plates are properly grouted in cement concrete mixture				
12	Proper tensioning is there on stay set				
13	Proper alignment of Stay wire and stay set with overhead conductor is there to nullify tension				
14	Proper erection of stay clamp using 12 mm dia nuts and bolts and 50x6 mm (or more) size clamp				
15	If every 6th pole in a section of line is provided with stay sets to avoid line deflection				
16	Proper galvanization of stay wire/stay set				
17	Thimble is provided on turn buckle of stay set				
18	Proper phase to phase clearances are maintained on the line				
19	Steel overhead structure is properly earthed using 8 SWG wire				
20	Each LT pole individually earthed using 8 SWG Earth wire and separate Earth pit/Earthing coil/Earth spike				
21	Quality and size of danger plates is as per scope of work				
22	Danger plate is installed at appropriate height using proper clamp as per scope of work				
23	Anti-climbing device (barbed wire/spike) are installed at appropriate height on individual support				
24	Individual pole is numbered				
25	Individual pole is imposed/painted with the name of scheme				
26	Surface of the PCC poles is finished and there are no steel wire visible				
27	No physical damages appeared on PCC pole surface				
28	Cradle guard earthing is provided on each road crossing or on each LT line crossing				
29	Proper tensioning of the cradle guard wires				
30	Separate earthing on both the sides of road/line for cradle guarding are there				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
31	8 SWG G.I. wire is properly dressed with support for V-Cross arm/Channel/Top clamp earthing				
32	GI wire to GI wire jointing is provided using 12 SWG GI nut bolts and washers				
33	GI wire connection to earth pit is using 12 mm GI nut bolt and washer				
34	Earth pipe is properly inserted inside earth without pipe hammering				
35	Masonry enclosure is provided over individual pipe earth pits				
36	Funnel is provided over pipe earth pit				
37	Jumpering using best binding practices/PG clamp				
38	Proper conductor clearances to ground is there to avoid bird fault on end sectionizer support where disc insulator are used				
39	Average pole to pole span length in the line. It should not be less than 50 m.				
40	If Pole to pole span is less than 50 m, record the reason with pole numbers				
41	Number of poles used per kilometre of the line				
42	Type and size of overhead conductors/ABC cable used in the line				
43	Shuttering is used during casting of cement concrete foundation				
44	Cement-concrete grouting foundation of end supports				
45	Quantum of cement concreting in any one sample support				
46	Cement concreting foundation in any one sample of stay set pit				
47	Proper painting is done on steel structure				
48	Any broken insulator found in the line				
49	Surface finish of painting on Steel tubular pole/RSJ/H Pole/Rail pole about 2 m from bottom and above 2 m				
50	Possible damage on ABC cable surface				
51	Piercing connections are used to take-off connection from ABC cable				
52	Muffing is used in steel steel tubular poles, rail pole, RS joint/H beam Supports				
53	Adequate tree cutting on either side of line done				
54	Pole to pole schedule enclosed with profarma				

11 KV Line

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
1	Availability of approved survey report with single line diagram				
2	Correct alignment of 11 kV line				
3	Type of poles used as per scope of the work				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No
4	Type of foundation used as per scope of work				
5	Record whether line is passing through water logging area and its foundation is grouted in cement concrete				
6	Proper verticality of poles				
7	Cross-bracing on Double poles are provided				
8	Conductors are passing through the top grove of the insulator (creepage distance compromised)				
9	More than one joint in one span				
10	Any deflecting tension on 11 KV pin insulator				
11	Proper tensioning of overhead conductor				
12	Any knot/wrapping of overhead conductor is there during erection				
13	Proper binding of insulators is done				
14	Stay plates are properly grouted in cement concrete mixture				
15	Proper tensioning is there on stay set				
16	Proper alignment of Stay wire with overhead conductor is there to nullify tension				
17	Guy insulator, anchor plate/ thimble/ hardware are provided with stay set				
18	Proper erection of stay clamp using 12 mm dia nuts and bolts and 50x6 mm (or more) size clamp				
19	If every 6th pole in a section of line is provided with stay sets to avoid line deflection				
20	Proper galvanization of stay wire and stay set				
21	Thimble is provided on turn buckle of stay set				
22	Proper phase to phase clearances are maintained on the line				
23	Steel overhead structure is properly earthed using 8 SWG wire				
24	Each 11 kV pole individually earthed using 8 SWG Earth wire and separate Earth pit/Earthing coil/Earth spike				
25	Quality and size of danger plates is as per scope of work				
26	Danger plate is installed at appropriate height using proper clamp as per scope of work				
27	Anti-climbing device (barbed wire/spike) are installed at appropriate height on individual support				
28	Individual pole is numbered				
29	Individual pole is imposed/painted with the name of scheme				
30	Surface of the PCC poles is finished and there are no steel wire visible				
31	No physical damages appeared on PCC pole surface				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No
32	Cradle guard earthing is provided on each road crossing or on each LT line crossing				
33	Proper tensioning of the cradle guard wires				
34	Proper Guard wires are provided in case of Road crossing as per drawing specification				
35	8 SWG G.I. wire is properly dressed with support for V-Cross arm/Channel/Top clamp earthing				
36	GI wire to GI wire jointing is provided using 12 SWG GI nut bolts and washers				
37	GI wire connection to earth pit is using 12 mm GI nut bolt and washer				
38	Earth pipe is properly inserted inside earth without pipe hammering				
39	Masonry enclosure is provided over individual pipe earth pits				
40	Funnel is provided over pipe earth pit				
41	Proper jumpering using binding practices/PG clamp				
42	If under sized conductor used				
43	Proper conductor clearances to ground is there to avoid bird fault on end sectionizer support where disc insulator are used				
44	Proper pole to pole span length in the line. It should not be less than 50 m.				
45	If Pole to pole span is less than 50 m, record the reason with pole numbers				
46	Number of poles used per kilometre of the line				
47	Record type and size of overhead conductors used in the line				
48	Shuttering is used during casting of cement concrete foundation				
49	Cement-concrete grouting foundation of end supports				
50	Measure quantum of cement concreting in any one sample support				
51	Measure cement concreting foundation in any one sample of stay set pit				
52	Proper painting is done on steel structure				
53	Disc Insulators are installed precariously (loose bolts/ missing cotter pins)				
54	D -shaped loop for jumpers are maintained				
55	Any broken insulator found in the line				
56	Surface finish and painting on Steel tubular pole/RSJ/H Pole/Rail pole				
57	Adequate tree cutting on either side of line done				
58	Pole to pole schedule enclosed with proforma				

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
59	Pole numbering with "DDUGJY " inscription not done (properly)				
60	Engraving of poles (Name of Manufacturer, SL Nos etc.) not done				
61	Line Spacers not used				
62	Guy insulator not used in stay wire				
63	Inadequate length of barbed wire				

LT Domestic Service connection to BPL

S. No	Description	Status (Yes/No)	Observations	Location	Picture No.
1	Approximate length of service line taken from nearby LT pole/Distribution Board/Distribution box				
2	Following materials are provided in the premises of consumer:				
A	Energy meter				
B	Metal meter box				
C	Double pole miniature circuit breaker				
D	Meter board				
E	Earthing point				
F	LED lamp				
3	The consumer meter has been tested at distribution licensee's test laboratory,				
4	The size of service cable is 2.5 mm^2 twin core (unarmoured) PVC insulated cables with aluminium conductors				
5	Service cable is free of joints				
6	The size of the bearer wire is 3.15 mm (10 SWG) GI wire (55-95 kg. quality)				
7	Suitable meter board has been installed as per specification				
8	Suitable Switch Board has been installed (as per specification)				
9	Single phase Energy meter is installed as per specification with acrylic cover				
10	Type and size of PVC pipe/GI pipe support as per specification				
11	Proper ground clearance of service line as per the guidelines				
12	GI pipe/MS angle (35mmx35mmx5mm) clamped firmly using 40x3mm MS flat clamps at at-least two locations				
13	Use of GI Medium Class pipe as per specification				
14	Use of double pole miniature circuit breaker as per specification				
15	Meter box for single phase meter made provided for meter protection of the specified dimensions				

S. No.	Description	Status (Yes/No)	Observations	Location	Picture No.
16	Reel Insulator are provided as per requirements				
17	Egg Insulator as per requirements				
18	Protection and Earthing as per specification and CEA regulations has been provided at consumer premises				
19	Each BPL Household has been provided with internal house wiring and accessories between switch board and Angle Holder as per specifications				
20	All the construction activities related to power supply in the households have been performed as per REC construction standards.				
21	Wattage of LED lamp provided at consumer premises				
22	Type of holder used for LED lamp				
23	Following ISI marked internal electrifcation material in consumer premises:				
a	5A socket				
b	5A 3 pin piano type switch				
c	5A pendant holders				
24	Type and size of following boards:				
a	Switch board				
b	Meter board				
25	Height of switch board in consumer premises				
26	Protection from direct sunlight and rain water to meter box at consumer premises				
27	Proper tensioning of service cable at consumer premises				

Checklist for inspection of REDB (Substation)

S.N.	Description	Status (Yes/No)	Observation	Picture No.	Location as per SLD
1	Major Materials (CT/PT/CB/X'mer/Battery/ Panels /Structures/Conductor) as per specifications				
2	Record S. No., make and year of manufacturing of Power transformer				
3	Major Materials dispatched without inspection				
4	Construction as per Approved Drawing				
5	Civil works FQP documentation maintained during construction				
6	Equipment (name it) provided in the BOQ/ drawing but not installed				
7	Verification of pre-commissioning and commissioning testes of substation equipment i.e. Circuit Breaker, CT, PT, transformer, Charger, Battery, Relays, Control Panels, Switchgear, 11 KV cable etc				
8	Present condition of main equipment				
9	Functional Status of Transformer: WTI, OTI etc, Relays, Battery Charger, Battery, CB, CT, PT, Energy Meter, Control & Relay panel				
10	Transformer oil tested				
11	Transformer Relays, CT, PT , CB , Switchgears, battery sets, etc charged after test				
12	Equipment charged after commissioning test				
13	Gravel size proper				
14	Earthing of main equipment, fence etc done properly				
15	Sub Station fencing provided				
16	Cable trench made with cable trays – or cables lying on trench floor				
17	Whether Cable trenches have suitable slope to ensure automatic draining of rainwater				
18	Proper storage of equipment				
19	Cables tied on cable trays				
20	Glands, lugs used (wherever need - at cable entries)				
21	Dead end marking for cables is done				
22	Earth mat provided				
23	Undersized conductor/ cables used				
24	Correct size of earthing conductor - flats, GI wires etc used				
25	Acid proof floor used in battery room				
26	Fasteners (nut, bolts, clamps connectors, hardwaresetc) as per specification				
27	Switchgear rubber mats, chequer plates not provided				
28	FQP for material receipt and storage maintained by PIA				
29	Name of Feeder on Control Panel.				
30	Name of Feeder on Outgoing DP structure				
31	Working platform on 33 KV and 11 KV outdoor VCB				
32	Name of Substation board on the entrances				

33	Painting of control room, water supply position in Substation				
34	General sanitation arrangement in the control room building				
35	Internal Lighting in the substation control room				
36	Closed fencing of the substation yard				
37	Approach road to Power Transformer foundation				
38	Water logging/ Earth filling in the yard trench				
39	Partition wall between two Power Transformers				
40	Availability of Earthing Rod in the substation				
41	Availability of Permit & Work Book				
42	Tracing of Earth connection of Power/ Distribution Transformer up to Earth Pit				
43	Connection at Earth Pit				
44	Jointing & Clamping of Earth Conductors				
45	All Terminal Blocks at CTs/PTs/Breaker/Panels/Junction Box				
46	Earthing& Fencing is as per specification				
47	Cable trench cover inside the control room and in the yard.				
48	Exhaust Fan in the Battery Room				
49	Inter Battery connections				
50	Battery Charger connection				
51	Earthing of Control Panel				
52	Termination of power cables at 11 KV sides/LT sides of Power and Station Transformer.				
53	Inside pic of distribution board of station transformer				
54	Take Overall picture of station transformer				
55	Connection of Lightning arrestor				
56	Approximate clearance of live part in the substation				
57	Oil leakage in Power/Station Transformer				
58	Area lighting in the substation				
59	Material diagram of substation in the control room				
60	List of authorized operational personnel in the substation				
61	Connection at the bus-bar jumpers				
62	Loop cables LT/HT/Control				
63	Tagging on cable terminals				
64	Work clearance on control panels and sufficient lightening on the control panel				

VOLUME-II: Section-II

Bid Forms (Bid Envelope)

BID Forms (Bid Envelope)

Bid Proposal Ref. No.:..... Date: …….

To:
XXXXXXXX (Name of Employer)
XXXXXXXX (Address of Employer)

Name of Contract: **Electrification works of XXXXXXXX (name of district) district in XXXXX (Name of State) under Deendayal Upadhyaya Gram Jyoti Yojana(DDUGJY) /Integrated Power Development Scheme (IPDS)**
(**Specification No.:XXXXXXXXXXXXXXXXXXXXXX**).

Dear Sir/ or Madam,

1.0 Having examined the Bidding Documents, including Amendment Nos. (*Insert Numbers*) …… dated ..... the receipt of which is hereby acknowledged, we the undersigned, offer to design, manufacture, test, deliver, install and commission (including carrying out Trial operation, Performance & Guarantee Test as per the provision of Technical Specification) the Facilities under the above-named Project in full conformity with the said Bidding Documents. In accordance with ITB Clause 9.1 of the Bidding Documents, as per which the bid shall be submitted by the bidder under "Single Stage - Bid Envelope" procedure of bidding. Accordingly, we hereby submit our Bid, in Bid envelope i.e. Techno – Commercial Part. Price Part i.e. Price is uploaded. We have submitted and uploaded on-line price bid through e-mode to be opened subsequently.

2.0 Attachments to the Bid Form (Bid Envelope)

In line with the requirement of the Bidding Documents, we enclose herewith the following Attachments:

(a) Attachment 1: Bid Security, in a separate envelope, in the form of Bank Draft/Pay Order/Banks certified Cheque/Bank Guarantee* for a sum of ..... (*name of currency and amount in words and figures*) initially valid for a period of seven (07) months from the date set for opening of bids.

* delete whichever is not applicable.

(b) Attachment 2: A power of attorney duly authorized by a Notary Public indicating that the person(s) signing the bid have the authority to sign the bid and thus that

the bid is binding upon us during the full period of its validity in accordance with the ITB Clause 14.

(c) Attachment 3: The documentary evidence that we are eligible to bid in accordance with ITB Clause 2. Further, in terms of ITB Clause 9.3 (c) & (e), the qualification data has been furnished as per your format enclosed with the bidding documents [Attachment-3(QR). * Further, the required Joint Venture Agreement signed by us and our Partners has also been furnished as per your format [Attachment-3(JV).
* Delete if not applicable

(d) Attachment 4: The documentary evidence establishing in accordance with ITB Clause 3, Vol.-I of the Bidding Documents that the facilities offered by us are eligible facilities and conform to the Bidding Documents has been furnished as Attachment 4. A list of Special Tools & Tackles to be used by us for erection, testing & Commissioning and to be handed over to Employer, the cost of which is included in our Bid Price, is also enclosed as per your format as Attachment 4A. A list of Special Tools & Tackles to be brought by the contractor for erection, testing & Commissioning and to be taken back after completion of work, whose cost in not included in our bid price, is enclosed as per your format as Attachment 4B.

(e) Attachment 5: The details of all major items of services or supply which we propose subletting in case of award, giving details of the name and nationality of the proposed subcontractor/sub-vendor for each item.

(f) Attachment 6: The variation and deviations from the requirements of the Conditions of Contract, Technical Specification and Drawings (excluding critical provisions as mentioned at clause 6.0 below) in your format enclosed with the Bidding Documents, including, inter alia, the cost of withdrawal of the variations and deviations indicated therein.

(g) Attachment 7: ~~The details of Alternative Bids made by us indicating the complete Technical Specifications and the deviation to contractual and commercial conditions.~~ [**Not Applicable**]

(h) Attachment 8: Manufacturer's Authorisation Forms - registered/notarized

(i) Attachment 9: Work Completion Schedule.

(j) Attachment 10: Guarantee Declaration.

(k) Attachment 11: Information regarding ex-employees of Employer in our firm.

(l) Attachment 12: Filled up information regarding Price Adjustment Data as per the format enclosed in the bidding documents

(m) ~~Attachment 13: Declaration regarding Social Accountability~~

(n) Attachment 14: Integrity Pact, in a separate envelope, duly signed on each page by the person signing the bid.

(o) Attachment 15: Option for Interest bearing Initial Advance payment and Information for E-payment, PF details and declaration regarding Micro/Small & Medium Enterprises

(p) Attachment 16: Additional Information

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

(r) Attachment 18: Declaration

(s) Attachment 19: Bank Guarantee verification checklist

3.0 We are aware that, in line with Clause No. 27.1 (ITB), our online price bid is liable to be rejected in case the same contains any deviation/omission from the contractual and commercial conditions and technical Specifications other than those identified in this Bid Envelope.

3.1 We are aware that the Price Schedules do not generally give a full description of the Work to be performed under each item and we shall be deemed to have read the technical specifications, scope of works and other sections of the Bidding Documents and Drawings to ascertain the full scope of Work included in each item while filling-in the rates and prices in price schedule quoted and uploaded in e-procurement web-portal.

3.2 We declare that as specified in Clause 11.5, Section –II:ITB, Vol.-I of the Bidding Documents, prices quoted by us in the Price Schedules shall be fixed and firm during the execution of Contract except for the permitted items for which Price Adjustment is applicable, as mentioned in Appendix-2 (Price Adjustment) to the Contract Agreement of Volume-I : Section-VI (Sample Forms and Procedures).

4.0 We confirm that except as otherwise specifically provided our Bid Prices quoted and uploaded in e-procurement web portal include all taxes, duties, levies and charges as may be assessed on us, our Sub-Contractor/Sub-Vendor or their employees by all municipal, state or national government authorities in connection with the Facilities, in and outside of India.

4.1 100% of applicable Taxes and Duties*(for direct transaction between Employer and us)*, which are payable by the Employer under the Contract, shall be reimbursed by the Employer after dispatch of equipment on production of satisfactory documentary evidence by the Contractor in accordance with the provisions of the Bidding Documents.

4.2 We further understand that notwithstanding 4.0 above, in case of award on us, you shall also bear and pay/reimburse to us, Excise Duty, Sales Tax/VAT (but not the surcharge in lieu of Sales Tax/VAT), local tax and other levies in respect of direct transaction between you and us, imposed on the Plant & Equipment including Mandatory Spare Parts specified in Schedule No. 1 of our Price Schedule quoted and uploaded on e-procurement web portal, to be incorporated into the Facilities; by the Indian Laws.

4.3 We also understand that, in case of award on us, you shall reimburse to us 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). Further, Service Tax, if applicable, for the services to be rendered by us, the same is included in our bid price quoted and uploaded on e-procurement web portal.

4.4 We confirm that we shall also get registered with the concerned Sales Tax Authorities, in all the states where the project is located.

4.5 We confirm that no Sales Tax/VAT in any form shall be payable by you for the bought out items which shall be dispatched directly by us under the First Contract (as referred in para 5.1 below) to the project site. However, you will issue requisite Sales Tax declaration/Vatable forms in respect of such bought out items, on production of documentary evidence of registration with the concerned Sales Tax Authorities.

5.0 **Construction of the Contract**

5.1 We declare that we have studied Clause GCC 2.1 relating to mode of contracting for Domestic Bidders and we are making this proposal with a stipulation that you shall award us two separate Contracts viz 'First Contract' for supply of all equipment and materials including mandatory spares and 'Second Contract' for providing all the services i.e. inland transportation for delivery at site, insurance, unloading, storage, handling at site, installation, testing and commissioning including Trial operation in respect of all the equipment supplied under the 'First Contract' and other services specified in the Contract Documents. We declare that the award of two contracts, will not, in any way, dilute our responsibility for successful operation of plant/equipment and fulfillment of all obligations as per Bidding Documents and that both the Contracts will have a cross-fall breach clause i.e. a breach in one Contract will automatically be classified as a breach of the other contract which will confer on you the right to terminate the other contract at our risk and cost.

6.0 We have read the provisions of following clauses and confirm that the specified stipulations of these clauses are acceptable to us:

(a) ITB 13 Bid Security

(b)	GCC 2.14	Governing Law
(c)	GCC 8	Terms of Payment
(d)	GCC 9.3	Performance Security
(e)	GCC 10	Taxes and Duties
(f)	GCC 21.2	Completion Time Guarantee
(g)	GCC 22	Defect Liability
(h)	GCC 23	Functional Guarantee
(i)	GCC 25	Patent Indemnity
(j)	GCC 26	Limitation of Liability
(k)	GCC 38	Settlement of Disputes
(l)	GCC 39	Arbitration
(m)	Appendix 2 to Form of Contract Agreement	Price Adjustment

Further we understand that deviation taken in any of the above clauses by us may make our bid non-responsive as per provision of bidding documents and be rejected by you.

7.0 We undertake, if our bid is accepted, to commence the work immediately upon your Notification of Award to us, and to achieve the delivery of goods and related services within the time stated in the Bidding Documents.

8.0 If our bid is accepted, we undertake to provide a Performance Security(ies) in the form and amounts, and within the times specified in the Bidding Documents.

9.0 We agree to abide by this bid for a period of six (06) months from the date fixed for opening of bids as stipulated in the Bidding Documents, and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

10.0 Until a formal Contract is prepared and executed between us, this bid, together with your written acceptance thereof in the form of your Notification of Award shall constitute a binding contract between us.

11.0 We understand that you are not bound to accept the lowest or any bid you may receive.

*12.0 ***(For Joint Venture only)*** We, the partners of Joint Venture submitting this bid, do agree and confirm that in case of Award of Contract on the Joint Venture, we shall be jointly and severally liable and responsible for the execution of the Contract in accordance with Contract terms and conditions.

13.0 We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the Contract to be entered into, if the award is made on us, that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal is in all respects for and in good faith, without collusion or fraud.

Dated this ____ day of _____20__

Thanking you, we remain,

Yours Sincerely,

For and on behalf of the [*Name of the Bidder#*]

(Signature).....

(Printed Name).....

(Designation).....

(Common Seal).....

Date:

Place:

Business Address:

Country of Incorporation:

(State or Province to be indicated)

Name of the Principal Officer:

Address of the Principal Officer:

*****Applicable in case of a bid from Joint Venture of firms.

#In case the bid is submitted by a Joint Venture, the name of the Joint Venture should be indicated

Note: Bidders may note that no prescribed proforma has been enclosed for:

(a) Attachment 2: Power of Attorney.

(For Attachments 2 Bidders may use their own proforma for furnishing the required information with the bid).

List of Attachments

Attachment-3(JV)

Electrification works of XXXXXXXX (name of district) district in XXXXX (Name of State) under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Joint Venture Agreement and Power of Attorney for Joint Venture*)

Bidder's Name and Address: To: <Name and Address of Employer>

Dear Sir,

The Joint Venture Agreement (as per the proforma attached at no. 15 in Section-VI, Sample Forms and Procedures, Conditions of Contract, Vol.-I of the Bidding Documents) and Power of Attorney for Joint Venture (as per the proforma attached at no. 14 in Section-VI, Sample Forms and Procedures, Conditions of Contract, Vol.-I of the Bidding Documents) are enclosed herewith.

* Applicable for Joint Venture.

Date:.....

(Signature).....

Place:.....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-3 (QR)

Electrification works of XXXXXXXX (name of district) district in XXXXX (Name of State) under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Qualifying Requirement Data)

Bidders Name & Address:

To
<Name and Address of the Employer>

Dear Ladies and/or Gentlemen,

In support of the Qualification Requirements (QR) for bidders, stipulated in Annexure-A (BDS) of the Section - III (BDS), Volume-I & additional information required as per ITB clause 9.3(c) of the Bidding Documents, we furnish herewith our QR data/details/documents etc., alongwith other information, as follows (The QR stipulations have been reproduced in italics for ready reference, however, in case of any discrepancy the QR as given in BDS shall prevail).

* We have submitted bid as individual firm.

* We have submitted bid as joint venture of following firms:

(i) .....

(ii) .....

(iii) .....

(* ***Strike-off whichever is not applicable***)

[For details regarding Qualification Requirements of a Joint Venture, please refer para 4.0 below.]

We are furnishing the following details/document in support of Qualifying requirement for the subject project.

A. Attached copies of original documents defining:

a) The constitution or legal status;
b) The principal place of business;
c) The place of incorporation (for bidders who are corporations); or the place of registration and the nationality of the Owners (for applicants who are partnerships or individually-owned firms).

B. Attached original & copies of the following documents.

a) Written power of attorney of the signatory of the Bid to commit the bidder.

b)** Joint Venture Agreement

*[** To be submitted only in case of Joint Ventures. Strike off in case of individual firms.]*

1.0 Pre-qualification criteria – Part A:

1.01 Technical:

(I) Part I: Supply, Erection, Testing & Commissioning of New/Augmentation of existing 66/11 KV or 33/11KV substation[1] **and new/Augmentation of its incoming 33 or 66 KV Lines**

The detailed criteria is mentioned at 1.01 (I) of Annexure-A to BDS at Volume-I : Section-III.

Format A: Format for the Bidder (Single Firm / Partner(s) in case of Joint Venture) for technical experience in compliance to para 1.01 (I) {(i) or (ii) or (iii)} of Annexure-A to BDS (Volume-I : Section-III) [In case of Joint Venture bidder, the QR data of each of the partner (in support of meeting the requirement of para 1.01 (I) (iv) of Annexure-A to BDS (Volume-I : Section-III)] is also is to furnished, as applicable, using this format. The bidder (Single Firm / Partner(s) in case of Joint Venture) who is willing to qualify in compliance to para 1.01 (I) {(ii) or (iii)} of para 1.01 (I) (iv) of Annexure-A to BDS (Volume-I : Section-III) shall fill below format for two or all three contracts.

A1.	Name of Bidder/Lead Partner of JV/other partner(s) of JV	
A2.	Name of Contract (executed during the last 7 years as on the originally scheduled date of bid opening):	
A3.	**Contract Reference No. & Date of Award**	
A4	Name and Address of the Employer/Utility by whom the Contract was awarded e-mail ID Telephone No. Fax No.	 _____ _____ _____

[1] Depending on the state practice to use 66 KV or 33 KV as sub-transmission voltage gradient

A5(i)	Name of electrical works of sub-station of 33/11 KV or 66/11 KV class and its associated 33 KV/66KV lines successfully erected, tested and commissioned	_____
(ii)	Transformer capacity successfully erected, tested and commissioned for s/s of 33/11 KV or 66/11 KV (in KVA)	_____
(iii)	% of Transformer capacity executed w.r.t. transformer capacity proposed in bid (in %)	_____
(iv)	Length of 33 KV/66KV line successfully erected, tested and commissioned (in cKms)	_____
(v)	% of 33 KV/66KV line executed w.r.t. 33 KV/66KV line proposed in bid (in %)	_____
A6(i)	Date of successful execution of the Contract/Date of commissioning	_____
(ii)	No. of years the above referredelectrical works is in successful operation as on the date of bid opening	_____ years
A7.	Capacity in which the Contract was undertaken (Check One)	☐ Prime Contractor ☐ Partner of JV ☐ Subcontractor *(Tick whichever is applicable)*
A8.	Details/documentary evidence submitted in support of stated experience/Contract	

(Documentary evidence, such as copies of utility certificates etc., in support of its experience shall be attached with the filled-up format for each experience/Contract)

(II) Part II: Supply, Erection, Testing and Commissioning of New/Augmentation of existing 22 KV or 11 KV & LT Lines, New/Augmentation of existing 11/0.4 KV Distribution Transformer substation and Single Phase Electricity Connections including Service Line & Internal House wiring for BPL Households and HT/LT metering

The detailed criteria is mentioned at 1.01 (II) of Annexure-A to BDS at Volume-I : Section-III.

Format B: Format for the Bidder (Single Firm / Partner(s) in case of Joint Venture) for technical experience in compliance to para 1.01 (II) {(i) or (ii) or (iii)} of Annexure-A to BDS (Volume-I : Section-III) [In case of Joint Venture bidder, the QR data of each of the partner (in support of meeting the requirement of para 1.01 (II) (iv) of Annexure-A to BDS (Volume-I : Section-III)] is also is to furnished, as applicable, using this format. The bidder (Single Firm / Partner(s) in case of Joint Venture) who is willing to qualify in compliance to para 1.01 (II) {(ii) or (iii)} of Annexure-A to BDS (Volume-I : Section-III) shall fill below format for two or all three contracts.

A1.	Name of Bidder/Lead Partner of JV/other partner(s) of JV	
A2.	Name of Contract (executed during the last 7 years as on the originally scheduled date of bid opening):	
A3.	**Contract Reference No. & Date of Award**	
A4	Name and Address of the Employer/Utility by whom the Contract was awarded e-mail ID Telephone No. Fax No.	 _____ _____ _____
A5(i) (ii) (iii) (iv) (v)	Name of electrical works of LT line or 11 KV or 22 KV class successfully erected, tested and commissioned Distribution transformer capacity successfully erected, tested and commissioned for s/s of 33/11 KV or 66/11 KV (in KVA) % of Distribution transformer capacity executed w.r.t. Distribution transformer capacity proposed in bid (in %) Length of LT line/11 KV/22 KV line successfully erected, tested and commissioned (in cKms) % of LT line/11 KV/22 KV line executed w.r.t. LT line/11 KV/22 KV line proposed in bid (in %)	_____ _____ _____ _____ _____
A6(i) (ii)	Date of successful execution of the Contract/Date of commissioning No. of years the above referredelectrical works is in successful operation as on the date of bid opening	_____ _____ years
A7.	Capacity in which the Contract was undertaken (Check One)	☐ Prime Contractor ☐ Partner of JV ☐ Subcontractor *(Tick whichever is applicable)*
A8.	Details/documentary evidence submitted in support of stated experience/Contract	

(Documentary evidence, such as copies of utility certificates etc., in support of its experience shall be attached with the filled-up format for each experience/Contract)

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

The detailed criteria is mentioned at 1.01 (III) of Annexure-A to BDS at Volume-I : Section-III.

Format C: Format for the Bidder (Single Firm / Partner(s) in case of Joint Venture) for technical experience in compliance to para 1.01 (III) {(i) or (ii) or (iii)} of Annexure-A to BDS (Volume-I : Section-III) [In case of Joint Venture bidder, the QR data of each of the partner (in support of meeting the requirement of para 1.01 (III) (iv) of Annexure-A to BDS (Volume-I : Section-III)] is also is to furnished, as applicable, using this format. The bidder (Single Firm / Partner(s) in case of Joint Venture) who is willing to qualify in compliance to para 1.01 (III) {(ii) or (iii)} above shall fill below format for two or all three contracts.

A1.	Name of Bidder/Lead Partner of JV/other partner(s) of JV	
A2.	Name of Contract (executed during the last 7 years as on the originally scheduled date of bid opening):	
A3.	**Contract Reference No. & Date of Award**	
A4	Name and Address of the Employer/Utility by whom the Contract was awarded e-mail ID Telephone No. Fax No.	 _____ _____ _____
A5(i) (ii) (iii) (iv) (v)	Name of electrical works of 33/11 KV or 66/11 KV class substation and its associated 33 KV/66 KV lines successfully erected, tested and commissioned Transformer capacity successfully erected, tested and commissioned for 33/11 KV or 66/11 KV s/s(in KVA) % of Transformer capacity executed w.r.t. transformer capacity proposed in bid (in %) Length of 33 KV/66KV line successfully erected, tested and commissioned (in cKms) % of 33 KV/66KV line executed w.r.t. 33 KV/66KV line proposed in bid (in %)	_____ _____ _____ _____ _____

A6(i)	Name of electrical works of LT line or 11 KV or 22 KV class successfully erected, tested and commissioned	_____
(ii)	Distribution transformer capacity successfully erected, tested and commissioned (in KVA)	_____
(iii)	% of Distribution transformer capacity executed w.r.t. Distribution transformer capacity proposed in bid (in %)	_____
(iv)	Length of LT line/11 KV/22 KV line successfully erected, tested and commissioned (in Kms)	_____
(v)	% of LT line/11 KV/22 KV line executed w.r.t. 11 KV/22 KV line proposed in bid (in %)	_____
A7(i)	Date of successful execution of the Contract/Date of commissioning	_____
(ii)	No. of years the above referredelectrical works is in successful operation as on the date of bid opening	_____ years
A8.	Capacity in which the Contract was undertaken (Check One)	☐ Prime Contractor ☐ Partner of JV ☐ Subcontractor *(Tick whichever is applicable)*
A9.	Details/documentary evidence submitted in support of stated experience/Contract	

(Documentary evidence, such as copies of utility certificates etc., in support of its experience shall be attached with the filled-up format for each experience/Contract)

1.01.1 For Bidder to qualify for more than one projects, the technical requirements of bidder shall be as per following:

S. No.	Description	Unit	Project1	Project2	Project3	QR for technical requirement of a bidder participating in all 3 projects
Part-I						
1	66 KV + 33 KV+ higher voltage	Km	500	200	150	500
2	sum of 33/11 KV and 66/11 KV substation	MVA	50	20	80	80
Part-II						
3	sum of 22 KV+11 KV+ LT line length	Km	1000	2000	3000	3000
4	sum of DTR transformation	MVA	2000	8000	5000	8000
Part-III						
1	66 KV + 33 KV+ higher voltage	Km	500	200	150	500

2	sum of 33/11 KV and 66/11 KV substation	MVA	50	20	80	80
3	sum of 22 KV+11 KV+ LT line length	Km	1000	2000	3000	3000
4	sum of DTR transformation	MVA	2000	8000	5000	8000

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

The detailed criteria is mentioned at 1.02 of Annexure-A to BDS at Volume-I : Section-III.

Format C: Format for the Bidder (Single Firm / Partner(s) in case of Joint Venture) for commercial experience in compliance to para 1.02.1 (i) of Annexure-A to BDS at Volume-I : Section-III [In case of Joint Venture bidder, the QR data of each of the partner (in support of meeting the requirement of para 1.02.5 of Annexure-A to BDS at Volume-I : Section-III] is also is to furnished, as applicable, using this format. The bidder (Single Firm / Partner(s) in case of Joint Venture) who is willing to qualify in compliance to para 1.02.1 {(ii) or (iii)} of Annexure-A to BDS at Volume-I : Section-III shall fill below format for two or all three contracts.

A1.	Name of Bidder/Lead Partner of JV/other partner(s) of JV	
A2.	Name of Contract (executed during the last 5 years up to 31.03.2013):	
A3.	**Contract Reference No. & Date of Award**	
A4	Name and Address of the Employer/Utility by whom the Contract was awarded e-mail ID Telephone No. Fax No.	 _____ _____ _____

[2] Name of state where work is to be executed.

A5(i) (ii) (iii)	Name of completed work of project execution in electrical Transmission or sub-transmission & distribution sector Cost of the project % of cost w.r.t. estimated cost of this bid (in %)	_____ _____
A6(i)	Date of successful execution of the Contract/Date of commissioning	_____
A7.	Capacity in which the Contract was undertaken (Check One)	☐ Prime Contractor ☐ Partner of JV ☐ Subcontractor *(Tick whichever is applicable)*
A8.	Details/documentary evidence submitted in support of stated experience/Contract	

(Documentary evidence, such as copies of utility certificates etc., in support of its experience shall be attached with the filled-up format for each experience/Contract)

Format D: Format for the Bidder (Single Firm / Partner(s) in case of Joint Venture) for commercial experience in compliance to para 1.02.2, 1.02.3 & 1.02.4 of Annexure-A to BDS at Volume-I : Section-III [In case of Joint Venture bidder, the QR data of each of the partner (in support of meeting the requirement of para 1.02.5 of Annexure-A to BDS at Volume-I : Section-III] is also to furnished, as applicable, using this format.

A1.	Name of Bidder/Lead Partner of JV/other partner(s) of JV	
A2.	Net-worth in last three years 1. Financial Year 2012-13 2. Financial Year 2013-14 3. Financial Year 2014-15	 : Rs. ----- lakhs : Rs. ----- lakhs : Rs. ----- lakhs
A3.	Minimum Average Annual Turnover (MAAT) 1. Financial Year 2010-11 2. Financial Year 2011-12 3. Financial Year 2012-13 4. Financial Year 2013-14 5. Financial Year 2014-15	 : Rs. ----- lakhs : Rs. ----- lakhs : Rs. ----- lakhs : Rs. ----- lakhs : Rs. ----- lakhs
A4	liquid assets (LA) and/ or evidence of access to or availability of credit facilities	: Rs. ----- lakhs

A4.	Details/documentary evidence submitted in support of stated experience/Contract	

(Documentary evidence, such as copies of utility certificates etc., in support of its experience shall be attached with the filled-up format for each experience/Contract)

1.02.1 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.

1.02.2 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-Vol.-IA.

1.02.3 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.

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 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 hereinabove, 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.

Attachment-4

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)**

(Form of Certificate of Origin and Eligibility)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

We hereby certify that equipment and materials to be supplied are produced in ....., an eligible source country.

We hereby certify that our company is incorporated and registered in ....., an eligible source country.

Date:..... (Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Attachment-4A

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)**

(List of Special Maintenance Tools & Tackles)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We are furnishing below the list of special maintenance tools & tackles for various equipment under the subject project. The prices for these tools & tackles are included in our lumpsum bid price. We further confirm that the list of special maintenance tools & tackles includes all the items specifically identified in your bidding documents as brought out below:

S.No.	For Equipment	Item Description	Unit	Quantity

Notwithstanding what is stated above, we further confirm that any additional special maintenance tools and tackles, required for the equipment under this project shall be furnished by us at no extra cost to the employer.

Date:.....

(Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Attachment-4B

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)**

(List of Special Maintenance Tools & Tackles)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We are furnishing below the list of special maintenance tools & tackles for various equipment under the subject Project. The prices for these tools & tackles which are to be taken back after the completion of the work by us are not included in our lumpsum bid price. We further confirm that the list of special maintenance tools & tackles includes all the items specifically identified in your bidding documents as brought out below:

(a) .....

(b) .....

Date:.....

(Signature).....

Place:.....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-5

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Bought-out & Sub-contracted Items)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

1.0 We hereby furnish the details of the items/ sub-assemblies, we propose to buy for the purpose of furnishing and installation of the subjectProject:

Sl. No.	Item Description	Quantity proposed to be bought/sub-contracted	Details of the proposed sub-contractor/sub-vendor	
			Name	Nationality
1.				
2.				
3.				
4.				
5.				
6.				

2.0 We ***hereby declare that, we would not subcontract the erection portion of the contract without the prior approval of Employer.***

Date:.....

Place:.....

(Signature).....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-6

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Alternative, Deviations and Exceptions to the Provisions)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

The bidder shall itemize any deviation from the Specifications included in his bid. Each item shall be listed (separate sheets may be used and enclosed with this Attachment) with the following information:

Sl. No.	Reference clause in the Specifications	Deviation	Cost of withdrawal of the deviation

The above deviations and variations are exhaustive. We confirm that we shall withdraw the deviations proposed by us at the cost of withdrawal indicated in this attachment, failing which our bid may be rejected and Bid Security forfeited.

Except for the above deviations and variations, the entire work shall be performed as per your specifications and documents. Further, we agree that any deviations, conditionality or reservation introduced in this Attachment-6 and/or in the Bid form, Price schedules & 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 bid.

Date:..... (Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Attachment-8

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Manufacturer's Authorization Form)

(On Manufacturer's Letterhead, see Clause 9.3(c) of the ITB)

To: [Insert: name of Employer]

Dear Ladies and/or Gentlemen,

WE *[insert: **name of Manufacturer**]* who are established and reputable manufacturers of *[insert: **name and/or description of the plant & equipment**]* having production facilities at *[insert: **address of factory**]* do hereby authorize *[insert: **name & address of Bidder**]* (hereinafter, the "Bidder") to submit a bid, and subsequently negotiate and sign the Contract with you against IFB *[insert**: title and reference number of Invitation for Bids**]* including the above plant & equipment or other goods produced by us.

We hereby extend our full guarantee and warranty for the above specified plant & equipment materials or other goods offered supporting the supply, installation and achieving of Operational Acceptance of the plant by the Bidder against these Bidding Documents, and duly authorize said Bidder to act on our behalf in fulfilling these guarantee and warranty obligations. We also hereby declare that we and ……, *[insert: **name of the Bidder**]* have entered into a formal relationship in which, during the duration of the Contract (including warranty / defects liability) we, the Manufacturer or Producer, will make our technical and engineering staff fully available to the technical and engineering staff of the successful Bidder to assist that Bidder, on a reasonable and best effort basis, in the performance of all its obligations to the Purchaser under the Contract.

For and on behalf of the Manufacturer

Signed: _____

Date: _____

In the capacity of *[insert: **title of position or other appropriate designation**]* and this should be signed by a person having the power of attorney to legal bind the manufacturer.

Date:.....

Place:..... (Signature).....

(Printed Name).....

(Designation).....

(Common Seal).....

Note 1. The letter of Undertaking should be on the letterhead of the Manufacturer and should be signed by a person competent and having Power of Attorney to legally bind the Manufacturer. It shall be included by the bidder in its bid.

2. Above undertaking shall be registered or notarized so as to be legally enforceable.

Attachment-9

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Work Completion Schedule)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We hereby declare that the following Work Completion Schedule shall be followed by us in furnishing and installation of the subject Project for the period commencing from the effective date of Contract to us:

Sl. No.	Description of Work	Period in months from the effective date of Contract
1.	Detailed Engineering and drawing submission a) commencement b) completion	
2.	Procurement of equipment/ components & assembly a) commencement b) completion	
3.	~~Type Tests~~ ~~a) commencement~~ ~~b) completion~~	
4.	Manufacturing a) commencement b) completion	
5.	Shipments & Delivery a) commencement b) completion	
6.	Establishment of site office	
7.	Installation at Site	

Sl. No.	Description of Work	Period in months from the effective date of Contract
	a) commencement b) completion	
8.	Testing & Pre-commissioning a) commencement b) completion	
9.	Trial Operation a) commencement b) completion	

Date:..... (Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Note: Bidders to enclose a detailed network covering all the activities to be undertaken for completion of the project indicating key dates for various milestones for each phase constituent-wise.

Attachment-10

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Guarantee Declaration)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We hereby declare that this Attachment of "Guarantee Declaration" is furnished by us in Packet-I of Inner Envelope-2 of bid envelope.

Date:.....

Place:.....

(Signature).....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-11

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Information regarding Ex-employees of XXXXX *(Name of Employer)* in our Organisation)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We hereby furnish the details of ex-employees of **XXXXX *(Name of Employer)*** who had retired/ resigned at the level of **XXXXXX *(Define suitable post)*** from **XXXXX *(Name of Employer)*** and subsequently have been employed by us:

Sl. No.	Name of the person with designation in **XXXXX *(Name of Employer)***	Date of Retirement/ resignation from **XXXXX *(Name of Employer)***	Date of joining and designation in our Organisation
1.	.....	.....	.....
2.	.....	.....	.....
3.	.....	.....	.....
4.	.....	.....	.....
5.	.....	.....	.....

Date:.....

(Signature).....

Place:.....

(Printed Name).....

(Designation).....

(Common Seal).....

Note: The information in similar format should be furnished for each partner of joint venture in case of joint venture bid.

Attachment-12

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Price Adjustment Data as per Appendix-2 of section-VI : Sample forms and procedures)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We hereby furnish the details of Price Adjustments:

Name of Material	**Price as on 30 days prior to date of bid opening***	**Price as on 60 days prior to date of shipment***	**Variation***
ACSR conductor			
Power / Station / Distribution Transformer (Copper / Aluminium wound)			
Cables			

*Detailed calculations as per appendix-2 of section-VI : sample forms and procedures to be enclosed

Date:.....

(Signature).....

Place:.....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-14

(PRECONTRACT INTEGRITY PACT)

General

Thispre-bidpre-contractAgreement (hereinaftercalledtheIntegrityPact)ismade on day ofthe month of 2010, between, on one hand,the …….. (Name of Owner) acting through Shri…… (Name and designation of Project Manager) (hereinaftercalledthe"BUYER",which expression shall mean and include, unless*the*context otherwise requires, his successorsinofficeandassigns)oftheFirstPartandM/s…….. (Name of Bidder) representedby Shri____,Chief Executive Officer (hereinaftercalled the "BIDDER/Seller"which expression shall mean and include, unlessthe context otherwise requires, his successors andpermittedassigns)oftheSecondPart.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) andtheBIDDER/Selleriswillingtooffer/hasofferedthestoresand

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a PSU/Utility/Department of State Govt. performing its functions on behalf of the …… (Name of owner).

NOW,THEREFORE,

Toavoidallformsofcorruptionbyfollowingasystemthatisfair,transparentand freefromanyinfluence/prejudiceddealingspriorto,duringandsubsequenttothe currencyofthecontracttobeenteredintowithaviewto:-

EnablingtheBUYERtoobtainthedesiredsaidstores/equipmentatacompetitive priceinconformitywiththedefinedspecificationsbyavoidingthehighcostandthe distortionaryimpactofcorruptiononpublicprocurement,and

EnablingBIDDERstoabstainfrombribingorindulginginanycorruptpracticein ordertosecurethecontractbyprovidingassurancetothemthattheircompetitors wi"alsoabstainfrombribingandothercorruptpracticesandtheBUYERwlllcommit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agreeto enterintothis Integrity Pactandagreeas follows:

CommitmentsoftheBUYER

1.1 The BUYER undertakesthat no official of the BUYER, connected directlyorindirectlywiththecontract,willdemand,takeapromiseforor accept,directlyorthroughintermediaries, anybribe,consideration,gift,

reward,favouroranymaterialorimmaterialbenefitorany other advantagefromtheBIDDER,either forthemselvesorforanyperson, organisationorthirdpartyrelatedtothecontractinexchange foran advantage in the bidding process, bid evaluation, contracting or implementationprocessrelatedtothecontract.

1.2 TheBUYERwill,duringthepre-contractstage,treatallBIDDERsalike andwill provideto all BIDDERsthe same informationandwill not provideanysuch informationtoanyparticular BIDDERwhichcould affordanadvantagetothatparticularBIDDERincomparisontoother BIDDERs.

1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach

2.0 Incase anysuchprecedingmisconductonthe partof suchofficial(s) is reportedbytheBIDDERtotheBUYER withfullandverifiablefactsandthe sameisprimafaciefoundtobecorrectbytheBUYER,necessarydisciplinary proceedings,oranyotheractionasdeemedfit,includingcriminalproceedings maybeinitiatedbytheBUYERandsuchapersonshallbedebarredfrom furtherdealings relatedtothecontractprocess. Insuchacasewhilean enquiryisbeingconductedbytheBUYERtheproceedingsunderthecontract wouldnotbestalled.

CommitmentsofBIDDERs

3.0 TheBIDDERcommitsitselftotakeallmeasuresnecessary topreventcorrupt practices,unfairmeansandillegalactivitiesduringanystageofitsbidor duringanypre-contractorpost-contractstageinordertosecurethecontract orinfurtherancetosecureit andinparticularcommititselftothefollowing:-

3.1 TheBIDDERwillnotoffer,directlyorthroughintermediaries,anybribe, gift,consideration,reward,favour,anymaterialorimmaterialbenefitor otheradvantage,commission,fees,brokerageorinducement toany officialoftheBUYER, connecteddirectlyorindirectlywiththebidding process,ortoanyperson,organisationorthird partyrelatedtothe contract inexchange foranyadvantageinthe bidding, evaluation, contractingandimplementationofthecontract.

3.2 The BIDDER further undertakes that it has not given, offered or promisedto give, directlyorindirectlyanybribe,gift, consideration, reward,favour,anymaterialorimmaterialbenefitorotheradvantage, commission, fees, brokerage or inducement to any official of the BUYERorotherwiseinprocuring theContractorforbearingtodoor havingdoneanyactinrelation totheobtainingorexecutionofthe contract orany othercontractwiththe Governmentfor showingor for bearingtoshowfavourordisfavourtoanypersoninrelationtothe contract or any other contract with Government.

3.3 BIDDERs shall disclose the name and address of agents and representatives and Indian BIDDERs shall disclose their foreign principalsorassociates.

3.4 BIDDERs shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5 The BIDDERfurther confirms anddeclares to the BUYERthat the BIDDERistheoriginalmanufacturer/integrator/authorisedgovernment sponsoredexportentityofthedefencestoresandhasnotengagedany individualorfirmorcompanywhetherIndianorforeigntointercede, facilitate or inanywayto recommendto the BUYERoranyof its functionaries, whether officially'or unofficially to the award of the contracttotheBIDDER,norhasanyamountbeenpaid,promisedor intendedtobepaidtoanysuchindividual,firmorcompanyinrespect ofanysuchintercession,facilitationorrecommendation.

3.6 The BIDDER, eitherwhile presentingthe bidorduring pre-contract negotiationsorbeforesigningthecontract,shalldiscloseanypayments hehasmade,iscommittedtoorintendstomaketoofficials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.7 TheBIDDERwillnotcolludewithotherpartiesinterestedinthecontract to impair thetransparency, fairnessandprogressofthebidding process,bidevaluation,contractingandimplementationofthecontract.

3.8 TheBIDDERwillnotacceptanyadvantageinexchangeforanycorrupt practice,unfairmeansandillegalactivities.

3.9 TheBIDDERshallnotuseimproperly,forpurposesofcompetitionor personalgain,orpassontoothers,anyinformationprovidedby the BUYERaspartofthebusinessrelationship,regardingplans,technical proposalsandbusinessdetails,includinginformationcontainedin any electronicdatacarrier.TheBIDDERalsoundertakestoexercisedue andadequatecarelestanysuchinformationis divulged.

3.10 TheBIDDERcommitstorefrainfromgivinganycomplaintdirectlyor throughanyothermannerwithoutsupportingitwithfullandverifiable facts.

3.11 TheBIDDERshallnotinstigateorcausetoinstigateanythirdpersonto commitanyoftheactionsmentionedabove.

3.12 IftheBIDDERoranyemployeeoftheBIDDERoranypersonactingon behalfoftheBIDDER,eitherdirectlyorindirectly,isarelativeofanyof theofficersoftheBUYER,oralternatively,ifanyrelativeofanofficerof theBUYERhasfinancialinterest/stakeintheBIDDER'sfirm,thesame shallbe disclosedbytheBIDDERatthetimeoffilingoftender.

Theterm'relative'forthispurposewouldbeasdefinedinSection 6 oftheCompanies Act1956.

3.13 TheBIDDERshallnotlendtoorborrowanymoneyfromorenterinto anymonetarydealingsortransactions,directlyorindirectly,withany employeeoftheBUYER.

4. **Previous Transgression**

4.1 TheBIDDERdeclaresthatnoprevioustransgressionoccurredinthe lastthreeyearsimmediatelybeforesigningofthisIntegrityPact,with anyothercompanyinany countryinrespectofany corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

4.2 TheBIDDERagreesthatifitmakesincorrectstatementonthissubject, BIDDERcanbedisqualifiedfromthetenderprocessorthecontract,if alreadyawarded,canbeterminated forsuchreason.

5. EarnestMoney(SecurityDeposit)

5.1 Whilesubmittingcommercialbid,theBIDDERshalldepositanamount……. (tobe specifiedinRFP)asEarnestMoney/SecurityDeposit,withthe BUYERthroughanyofthefollowinginstruments:

(i) BankDraftoraPayOrderinfavourof

(ii) A confirmed guarantee by an Indian Nationalised Bank, promising paymentofthe guaranteedsumtothe BUYERon demandwithinthreeworkingdayswithoutanydemurwhatsoever andwithout seekinganyreasonswhatsoever.Thedemandfor paymentbytheBUYERshallbetreatedasconclusiveproofof payment.

(iii) Anyothermodeorthroughanyotherinstrument(tobespecified intheRFP).

5.2 TheEarnestMoney/SecurityDepositshallbevaliduptoaperiodof….. yearsorthecompleteconclusionofthecontractualobligations tothe completesatisfactionofboth theBIDDERandtheBUYER,including warrantyperiod,whicheverislater.

5.3 IncaseofthesuccessfulBIDDERaclausewouldalsobeincorporated intheArticlepertaining toPerformanceBondinthe'PurchaseContract thatthe provisionsofSanctionsforViolation shall beapplicablefor forfeitureofPerformanceBondincaseofadecisionby theBUYER to forfeitthesamewithoutassigninganyreasonforimposingsanctionfor violationofthisPact.

5.4 NointerestshallbepayablebytheBUYERtotheBIDDERonEarnest Money/SecurityDepositfortheperiodofitscurrency.

6. SanctionsforViolations

6.1 Any breachofthe aforesaid provisionsbythe BIDDERoranyone employedby itoractingonitsbehalf(whetherwith orwithoutthe knowledgeoftheBIDDER)shallentitletheBUYERtotakeallorany oneofthefollowing actions,whereverrequired:-

(i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However,theproceedingswiththeotherBIDDER(s)wouldcontinue.

(ii) The Earnest Money Deposit (in pre-contract stage) and/or SecurityDeposit/PerformanceBond(afterthecontractissigned)shall standforfeitedeitherfullyorpartially,asdecidedbytheBUYERand theBUYERshallnotberequiredtoassignanyreasontherefore.

(iii) To immediatelycancelthecontract, if already signed,without givinganycompensationtotheBIDDER.

(iv) TorecoverallsumsalreadypaidbytheBUYER,andincaseof an Indian BIDDER with interest thereon at 2% higher than the prevailingPrimeLendingRateofStateBankof India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the UBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

(vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss 'or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER

(vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

(X) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1(i) to (x) of this Pact also

on the Commission by the BIDDER or anyone employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointedforthepurposesofthisPact.

7. Fall Clause

7.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

8. Independent Monitors

8.1 The BUYER has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties.

The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

11. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings

12. Validity

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at ……on……..

BUYER	BIDDER
Name of the Officer	CHIEF EXECUTIVE OFFICER
Designation	
Deptt./PSU	
Witness	Witness
1……..	2…….
2…….	3……..

* Provisions of these clauses would need to be amended/ deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers

Attachment-15

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(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)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

I. We have read the provisions in the Bidding Documents regarding furnishing the option for advance payment. Accordingly, as per ITB Clause 9.3 as provided in Section BDS, Section III, Vol.-I of the Bidding Documents, we hereby confirm to opt the following:

Interest Bearing Initial Advance

Supply Portion : Yes* [ ] No* [ ]

Installation Portion : Yes^ [ ] No^ [ ]

(*^ tick ONLY ONE of the selected options)

II. We are furnishing the following details of Statutory Registration Numbers and details of Bank for electronic payment.

1.	Name of the Supplier/ Contractor in whose favour payment is to be made	
2.	Address with PIN Code and State	Registered Office: Branch Office: Correspondence Address:

3.	Status – Company/others [Declaration of Micro/ Small/ Medium Enterprise under Micro/ Small & Medium Enterprises Development Act 2006, if applicable]	
4.	Permanent Account (PAN) No.	
5.	Central Sales Tax (CST) No.	
6.	State Sales Tax No.	
7.	Work Contract Tax No.	
8.	Service Tax Registration No.	
9.	PF Registration No. of the Company	
10.	PF Regional Office covered (with Address)	
11.	Name of Contact Person	
12.	Telephone No(s). Email	Landline(s): Mobile(s): Email ID :
13.	Bank Details for Electronic Payment	Name of the Bank: Address of Branch: Account No.: Type of Account: [ ] Saving [ ] Current
14.	9 digit MICR code printed at bottom in middle, next to cheque no.	

15.	IFSC (for RTGS)/NEFT Code (*to be obtained from the Bank*) ***Sample Cancelled Cheque to be enclosed***	

We hereby declare that the above information is true and correct and we agree that the payment on account of this Contract, in the event of award, be made in the above account maintained in the above mentioned Bank.

Date:.....

(Signature).....

Place:.....

(Printed Name).....

(Designation).....

(Common Seal).....

Attachment-16

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Additional Information)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

In support of the additional information required as per ITB Sub-Clause 9.3 (p) of the Bidding Documents, we furnish herewith our data/details/documents etc., alongwith other information, as follows (the stipulations have been reproduced in italics for ready reference):

1.0 The Bidder shall furnish

A 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.[Reference ITB clause 9.3(p)(i)]

1.1 In accordance with 1.0, certificate(s) from banker as per requisite format, indicating various fund based/non fund based limits sanctioned to the bidder or each member of the joint venture and the extent of utilization as on date is/are enclosed, as per the following details:

Name of the Bidder/partner of Joint Venture	
Name of the Banker by whom certificate issued	
Date of certificate (should not be earlier than **3 months** prior to date of bid opening)	
Whether fund based/non fund based limits are indicated in the certificate	
Whether extent of utilization is indicated in the certificate	

*1.2 The Bidder should accordingly also provide the following information/documents (**In case of JV bidders, information should be provided separately for all the Partners of JV in the given format**):*

(i) Details of Banker:

Name of Banker	
Address of Banker	_____ _____ _____
Telephone No.	_____
Contact Name and Title	_____
Fax No.	_____
E-mail ID	_____

(ii) As per para 1.0, Authorization Letter(s) from the bidder (in case of JV bidder, from all the partners) addressed to the Banker(s), authorizing **XXXXX *(Name of Employer)*** to seek queries about the bidder with the Banker(s) and advising the Banker(s) to reply the same promptly, is/are enclosed as per following details:

Sl. No.	Letter Ref.	Date	Addressed to (name of the Bank)

2.0 **Litigation History**

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. **[Reference ITB clause 9.3(p)(ii)]**

2.1 Details of litigation history resulting from Contracts completed or under execution by the bidder over the last five years

Year	**Name of client, cause of litigation/arbitration and matter in dispute**	**Details of Contract and date**	**Award for or against the bidder**	**Disputed amount**

3.0 OTHER INFORMATION

3.1 Current Contract Commitments of works in progress

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

Details of Contract	Value of outstanding work (Rs.)	Estimated completion date

3.2 Financial Data :

(In Rs. Millions)

	Actual (previous five years)					**Projection for next five years**				
1. Total Assets										
2. Current Assets										
3. Total Liability										
4. Current Liability										
5. Profit before taxes										
6. Profit after taxes										

4. The information/documentation in support of Bidder's design infrastructure and erection facilities and capacity and procedures including quality control related to the work, are enclosed at _____ herewith.

5. 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 and the CVs of other employees to be deputed for the subject work, are enclosed at ____ herewith.

Date:..... (Signature) .....

Place:..... (Printed Name) .....

(Designation) .....

(Common Seal) .....

Attachment- 17

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Declaration for tax exemptions, reductions, allowances or benefits)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sirs,

1. We confirm that we are solely responsible for obtaining following tax exemptions, reductions, allowances or benefits in respect of supplies under the subject Project, in case of award. We further confirm that we have considered the same in our bid thereby passing on the benefit to **XXXXX *(Name of Employer)*** while quoting our prices. In case of our failure to receive such benefits, partly or fully, for any reason whatsoever, the Employer will not compensate us.

2. We are furnishing the following information required by the Employer for issue of requisite certificate if and as permitted in terms of the applicable Govt. of India policies/procedures(in case of award):

Applicable Act, Notification No. and Clause Ref. No.	Sl. No.	Description of item on which applicable	Country of origin	Remarks, if any

(*The requirements listed above are as per current Notification of Govt. of India indicated above. These may be modified, if necessary, in terms of the Notifications.)*

Date:..... Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Attachment-18

Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Declaration)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

Dear Sir,

We confirm that Bid Form have been filled up by us as per the provisions of the Instruction to Bidders. We have also uploaded price bid electronically as per the provisions of the Instruction to Bidders. Further, we have noted that the same shall be evaluated as per the provisions of the Bidding Documents.

Further, we hereby confirm that except as mentioned in the Attachment – 6 (Alternative, Deviations and Exceptions to the Provisions) hereof and/or the Covering Letter, forming part of our Bid Envelope:

(i) there are no discrepancies/inconsistencies and deviations/omissions/ reservations to the Bidding Documents, in the price bid;

(ii) the description of items and the unit thereof in the price schedules are in conformity with those indicated in the price schedule of the Bidding Documents without any deviation to the specified scope of work.

We also confirm that in case any discrepancies/ inconsistencies and deviations/ omissions/ reservations, as referred to in para (i) and (ii) above, is observed in the online price bid, the same shall be deemed as withdrawn/rectified without any financial implication, whatsoever to **XXXXX *(Name of Employer)***. However, in case of any arithmetical errors, the same shall be governed as per the provision of ITB Sub-Clause 27.2 read in conjunction with BDS.

Date:..... (Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

Attachment-19

Rural Electrification works of XXXXXXXX *(name of district)* district in XXXXX *(Name of State)* under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) /Integrated Power Development Scheme (IPDS)

(Bank Guarantee verification Check list)

Bidder's Name and Address: To: XXXXX *(Name and Address of Employer)*

S. No.	Checklist	Yes	No
1	Does the bank guarantee compare verbatim with standard proforma for BG?		
2(a)	Has the executing Officer of BG indicated his name designation & Power of Attorney No. / Signing power Number etc. on BG?		
2(b)	Is each page of BG duly Signed/ initialed by the executants and last page is signed with full particulars as required in the standard proforma of BG and under the seal of the bank?		
2(c)	Does the last page of the BG carry the signatures of two witnesses alongside the signature of the executing Bank Manager?		
3(a)	Is the BG on non-judicial stamp paper of appropriate value?		
3(b)	Is the date of sale of non-judicial stamp paper shown on the BG and the stamp paper is issued not more than Six months prior to the date of execution of BG?		
4(a)	Are the factual details such as Bid specification No., LOA No. contract price, etc, correct?		
4(b)	Whether Overwriting /cutting, if any on the BG, authenticated under signature & seal of executants?		
5	Is the amount and validity of BG is inline with contract provisions?		
6	Whether the BG has been issued by a Nationalized bank / Non-Nationalized Bank acceptable to Buyer /Scheduled Bank in India (the applicability of the bank should be in line with the provisions of bidding documents)?		

Date:..... (Signature).....

Place:..... (Printed Name).....

(Designation).....

(Common Seal).....

VOLUME-II: SECTION – III

Price Schedules

Price Schedule-1: Ex-works Supply of Materials

Price Schedule-2: Local Transportation, Insurance and other incidental services

Price Schedule-3: Installation/Erection Charges

Price Schedule-4: Summary of Taxes and Duties

Price Schedule-5: Grand Summary

Schedule-1 (1/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

A. New 33 KV Lines

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
1.00	**Supports for 33 KV overhead line as per technical specification, approved drawings and scope of work.**					
1.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No				
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT				
3.00	**MS Nuts, bolts and washers as per technical specification, approved drawings and scope of work.**	MT				
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamps, guy insulator (2 Nos.), anchor plate (300x300x8mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 20 mm diameter solid GS stay rod & 7/4.00 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set				
5.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**					
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set				
5.02	GI Earthing spike made of 20mm solid Rod	Set				
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set				
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				
5.05	6 SWG GI wire for earthing and guarding with GI nuts, bolts & washers	MT				
5.06	8 SWG GI wire for earthing and guarding with GI nuts, bolts & washers	MT				
6.00	**Insulator and hardware as per technical specification, approved drawings and scope of work**					
6.01	33 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set				
6.02	33 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set				

A. New 33 KV Lines

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
7.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic conductor, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work**					
7.01	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km				
7.02	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km				
7.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km				
8.00	**33kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal / Vertical Mounting type (As desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set				
9.00	**33 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 33 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG PIPE EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 33 KV ARIAL BUNCHED CABLES 200 sqmm dia (10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.**	set				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (2/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

B New 33/11 KV Substation Works (Excluding civil works)

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
B (I)	**33/11 KV Substation Works - Common for fully outdoor / partly outdoor substation**					
1.00	33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.					
1.01	1.60 MVA without tap changer	No				
1.02	3.15 MVA without tap changer	No				
1.03	5.00 MVA with off load tap changer	No				
1.04	8.00 MVA with off load tap changer	No				
1.05	10.0 MVA with off load tap changer	No				
2.00	**100 KVA, 11/0.4 kV, 3 ph, 50 Hz, ONAN, Three Star Aluminium wound, CRGO core, outdoor type Station Transformer along with transformer oil and all accessories as required as per technical specifications, scope of works and approved drawings.**	No				
3.00	**DP structure for 11/0.4 KV Station Transformer comprising of H-Beam 152x152 mm 37.1 kg/mtr, 8 meter long, 11 KV Isolators, 11 KV Station Type LAs structures, Transformer mounting channel, DO mounting channel, transformer belting, DC cross arm, back clamps, insulator with hardware etc all complete as per technical specifications, scope of works and approved drawings.**	Set				
4.00	**Gantry structures made of H-Beam 152x152 mm 37.1 kg/mtr, 8 meter long, double MS Channel 100x50x6 mm cross arms of various length for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, scope of works and approved drawings.**	MT				
	OR					
	Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, scope of works and approved drawings..	MT				

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
5.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No				
6.00	**33kV, Indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**					
6.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No				
6.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No				
7.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				
8.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
9.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
10.00	**24V, 80 AH Ni-Cd or Pb Acid battery (or as per state practice), battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set				
11.00	**24V, 40 Amp. Float-cum-Boost Battery Charger (or as per state practice) with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply as per technical specifications, approved drawings and scope of works.**	set				
12.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No				
13.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works. .**	Set				

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
14.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works.**					
14.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km				
14.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km				
15.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station as per technical specifications, approved drawings and scope of works**					
15.01	75 x 8 mm GI flat for ground mat	MT				
15.02	50 x 6 mm Galvanized GI flat (risers)	MT				
15.03	25 x 3 mm Galvanized GI flat (risers)	MT				
15.04	25mm dia GI rod 3 m long for earth mat	MT				
16.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover, placed on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing)**	Set				
17.00	**33 and 11 KV polymer/porcelain Insulator - Pin, Post and Disc insulators along with suitable hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set				
18.00	**Internal Electrification works of control room comprising of Main Distribution Board, Sub-distribution Boards, copper flexible multi conductor 2.5 sqmm wiring (for light & fan)/4 sqmm wiring(for power points), power and light points, conduits, fan/LED lamps/tube fittings, exhaust fans, switches, sockets, 2mm thick, PVC 25mm dia conduits pipes in recess, plugs, miniature circuit breakers, seperate independent earthing (2 Nos of 40mm GI Pipe/3-m long)etc as required including DC emergency lighting and auto-change-over switch as per technical specifcations, approved drawings and scope of work.**	Set				
19.00	**External Electrification in switch yard area including power receptacles, station yard lighting with 4 Nos lightening mast (fitted with 2x250 watts SON fittings) made of 12 meters high Steel Tubular Poles (IS 2713 part I, II III) of designation 410 – SP - 60, complete as per technical specifications, approved drawings and scope of the work.**	Set				
20.00	**11kV, 200 A, 3-ph Drop Out fuse assembly including insulators and mounting arrangements, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	Set				
21.00	**LT Power Cables including their termination materials like glands, lugs, tagging etc. as per technical specifications, approved drawings and scope of the work.**					
21.01	3.5 Core 150 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km				
21.02	3.5 Core 70 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km				
21.03	2 Core 16 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km				
22.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of the work.**					

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
22.01	2 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
22.02	6 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
22.03	10 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
23.00	**Outdoor type Distribution Box for station transformer comprising 200 A switch fuse unit, 6 Nos SP MCCB– 90 A, 2 Nos 32 A SP MCCB, 3-ph, 63A, contactor controlled yard lighting timer unit, tri-vector electronic energy meter with suitable CT, control/power cabling and terminals, 1 No 20 A Industrial socket and switch for local power supply requirements, mounting channel, clamps and hardware as per scope of work, technical specifications and approved drawings.**	Set				
24.00	**12 kV, 800A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated Isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				
25.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Horizonal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set				
26.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs), bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set				
27.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs), bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	set				
B (II)	**Feeder Metering:**					
1.00	33 KV Feeder Metering at 33/11 kV substation using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set				
2.00	11 KV Feeder Metering at 33/11 kV substation using 11 kV/110 V, 3 ph 4 wire CT ratio 300-150/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set				

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
B (III)	**11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**					
1.00	CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set				
2.00	CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set				
3.00	CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set				

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
B (IV)	**Description of items needed for fully outdoor type 33/11 kV substation**					
1.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per technical specifications, approved drawings and scope of the works.**	No				
2.00	**Indoor type control and relay panel as per technical specifications, approved drawings and scope of works:**					
2.01	Indoor type control and relay panel for 11kV, 3phase, 1250 A VCB (Transformer Breaker) consisting of A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection	No.				
2.02	Indoor type control and relay panel for 11 KV 3 phase, 1250 A VCB (Feeder Breakers) consisting of A-meter, volt-meter, Relays, energy meter (TVM) & accessories complete for feeder breaker protection as per technical specifications, approved drawings and scope of works.	No.				
B (V)	**Description of items needed for partly outdoor type 33/11 kV substation**					
1.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for Transformer breaker, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relay & accessories complete for transformer breaker protection as per technical specifications, approved drawings and scope of works.**	No				
2.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for feeder protection, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete for feeder breaker protection as per technical specifications, approved drawings and scope of works.**	Set				
3.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for bus coupler, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for bus coupler protection**	Set				
4.00	**11 KV, XLPE, 3 phase power cable armored, aluminium conductor, stranded, including their termination materials like glands, lugs, tagging etc as required as per technical specifications, approved drawings and scope of the works.**					
4.01	3Cx 300 sqmm	km				
4.02	3Cx 185sqmm	km				
4.03	3Cx35 Sqmm	km				

B	New 33/11 KV Substation Works (Excluding civil works)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
5.00	**Cable termination kit suitable for termination in transformer cable box/ breaker panel/ outdoor 11 KV terminals complete with all accessories etc. as per technical specifications, approved drawings and scope of the works.**					
5.01	3Cx 300 sqmm	set				
5.02	3Cx 185sqmm	set				
5.03	3Cx35 Sqmm	set				
6.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core Indoor type Potential Transformer along with required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (3/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

C New 11 KV Lines

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
1.00	**Support for 11 KV overhead line as per technical specification, approved drawings and scope of work**					
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No				
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No				
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT				
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT				
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	set				
5.00	**Insulator and hardware as per technical specification, approved drawings and scope of work.**					
5.01	11 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	set				
5.02	11 KV Polymer /porcelain Pin Insulators with GI PIN	set				
6.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**					
6.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	set				
6.02	Spike Earthing 20mm solid Rod	set				
6.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	set				
6.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				
6.05	8 SWG GI wire, GI nuts, bolts & washers for earthing and guarding	MT				

C New 11 KV Lines

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
6.06	6 SWG GI wire, GI nuts, bolts & washers for earthing and guarding	MT				
7.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic clamp, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work**					
7.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km				
7.02	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit	km				
7.03	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km				
7.04	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km				
8.00	**12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set				
9.00	**11 LV Line overhead crossing and underground railway crossing ensuring statutory clearances**					
9.01	11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx185 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 11 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG pipe EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES 200 sqmm dia(10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.	set				
9.02	11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 11 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG PIPE EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES 200 sqmm dia(10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.	set				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

D Distribution Transformer Substations

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
1.00	**DTR Substation Supports as per technical specification, approved drawings and scope of work.**					
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No				
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No				
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) as per technical specification, approved drawings and scope of work**	MT				
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT				
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6mm), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work**	set				
5.00	**Polymer/ Porcelain Insulators with hardware fittings, hardware etc as required as per technical specification, approved drawings and scope of work.**					
5.01	11 KV, Disc Insulator with suitable hardware fittings	Set				
5.02	11 KV, Post Insulators / Pin Insulators with hardware fittings	Set				
6.00	**New Distribution Transformer (three Star) with all accessories as per as per technical specification, approved drawings and scope of work.**					
6.01	11/0.230 kV Distribution Transformer 10 KVA 1 Phase Aluminium wound DTR	No				
6.02	11/0.230 kV Distribution Transformer 16 KVA 1 Phase Aluminium wound DTR	No				
6.03	11/0.4 KV Distribution Transformer 16 KVA 3 phase Aluminium wound DTR	No				
6.04	11/0.4 KV Distribution Transformer 25 KVA 3 phase Aluminium wound DTR	No				
6.05	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No				
6.06	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No				

D	Distribution Transformer Substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
6.07	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No				
6.08	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No				
7.00	**Outdoor mounting type Distribution box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**					
7.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering	No				
7.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No				
7.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No				
7.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No				
7.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No				
7.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No				
7.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No				
7.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No				
8.00	**11 KV Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	No				
9.00	**11 kV, 3-ph, 200 A, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Sets				
10.00	**11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Sets				
11.00	**3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161, making earth grid using 50x6mm GI Flat and riser as per scope of work of Distribution Transformer Substations, approved drawings and technical specifications.**	Set				
12.00	**8 SWG GI wire for earthing as per technical specifications, approved drawings and scope of works.**	MT				

D	Distribution Transformer Substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
13.00	**1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**					
13.01	1Cx16 sqmm aluminium conductor cable	km				
13.02	1CX35 sqmm aluminium conductor cable	km				
13.03	1CX50 sqmm aluminium conductor cable	km				
13.04	1Cx70 sqmm aluminium conductor cable	km				
13.05	1Cx150 sqmm aluminium conductor cable	km				
13.06	1Cx300 sqmm aluminium conductor cable	km				
14.00	**ACSR Rabbit Conductor for jumpering including PG Clamps, bi-metallic connectors, hardware etc as per technical specifications, approved drawings and scope of works.**	Km				
15.00	**Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**					
15.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No				
15.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No				
15.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No				
15.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

E	**New LT Line**					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
1.00	**Support for LT overhead Line as per technical specification, approved drawings and scope of work.**					
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No				
1.02	11 m long H-Beam 152x152 mm, 37.1kg/mtr	No				
1.03	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.04	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Galvanised Stay Set with anchor plate (200x200x6mm), 50x8mm stay clamp, Stay guy insulator, nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set				
3.00	**Earthing as per approved drawings, technical specifications and scope of work**					
3.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	Set				
3.02	Spike Earthing 20mm solid Rod	Set				
3.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set				
3.04	8 SWG GI wire for earthing & GI nuts, bolts & washers	MT				
4.00	**LT line with following arrangements using areal bunched XLPE cable including tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, spring loaded bus bar suitable for single phase and three phase systems etc. as required as per technical specification, approved drawings and scope of work:**					
4.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	Km				
4.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	Km				
4.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	Km				
4.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	Km				
4.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	Km				
4.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	Km				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
F(I)	**Augmentation & Renovation of 11/0.4 kV Distribution Transformer Substation**					
1.00	**Augmentation of Distribution Transformer Substation (ASSUMING 25 YEARS OF LIFE AND 10 YEARS IN SERVICE) using New Distribution Transformer (three star) as per technical specifications, approved drawings and scope of the work. Replaced material to be deposited in Employer's store:**					
1.01	New 63 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 25KVA old DTR),	No				
1.02	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No				
1.03	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No				
1.04	New 315 KVA (11/0.4 kV) Copper wound DTR (Replacing 200 KVA old DTR),	No				
2.00	**Augmentation of DTR Substation by using new 1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings. Replaced cables to be deposited in Employer's store.**					
2.01	1Cx16 sqmm aluminium conductor cable	km				
2.02	1CX35 sqmm aluminium conductor cable	km				
2.03	1CX50 sqmm aluminium conductor cable	km				
2.04	1Cx70 sqmm aluminium conductor cable	km				
2.05	1Cx150 sqmm aluminium conductor cable	km				
2.06	1Cx300 sqmm aluminium conductor cable	km				
3.00	**Augmentation of DTR Substation by using new outdoor mounting type Distribution box made of MS sheet of thickness not less than 1.8 mm, dust and moisture vermin, weather proof with degree of protection IP 33 as per IS 13947 with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, non magnetic 4 mm thick gland plate, double compression brass cable glands, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**					
3.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering	No				
3.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
3.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No				
3.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No				
3.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No				
3.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No				
3.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No				
3.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No				
4.00	**Renovation of DTR substation Earthing as per technical specification, approved drawings and scope of work:**					
4.01	Revamping of Distribution Transformer substation earthing by using 40 mm dia 3 meter long GI pipe earthing, using 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment, using 200 kg bentonite powder of substation in normal soil	No				
4.02	Revamping of Distribution Transformer substation earthing by using 3 Nos. chemical rod earthing including electrode & chemical, 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment in hard rock soil	No				
5.00	**Augmentation of DTR substation by new Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) as per technical specification, approved drawings and scope of work.**	MT				
6.00	**Augmentation of DTR substation by new MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT				
7.00	**Augmentation of DTR substation by new Polymer/ Porcelain Insulators with hardware fittings, hardware etc as required as per technical specification, approved drawings and scope of work.**					
7.01	11 KV, Disc Insulator with suitable hardware fittings	Set				
7.02	11 KV, Post Insulators / Pin Insulators with hardware fittings	Set				
8.00	**Augmentation of DTR substation by new 9KV, 11 KA Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	Set				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
9.00	**Augmentation of DTR substation by new 11 kV, 3-ph, 200 A, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Sets				
10.00	**11kV, 200 A, 3-ph Drop Out fuse assembly including insulators and mounting arrangements, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	Set				
F(II)	**Augmentation of 33 KV lines**					
1.00	**Augmentation of 3 phase 33 kV line using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**					
1.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No				
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Augmentation of 3 phase 33 kV line using new Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT				
3.00	**Augmentation of 3 phase 33 kV line replacing existing conductor with following type of new ACSR conductor including jointing sleeves, binding material and helical formed fittings etc as required as per technical specification, approved drawings and scope of work.**					
3.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog replacing existing racoon conductor	km				
3.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon replacing existing rabbit/weasel conductor	km				
3.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther replacing existing dog/racoon conductor	km				
4.00	**Augmentation of 3 phase 33 kV line using new Insulator and hardware as per technical specification, approved drawings and scope of work**					
4.01	33 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set				
4.02	33 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set				
5.00	**Augmentation of 3 phase 33 kV line using new Earthing arrangement as per technical specificatons, approved drawings and scope of work.**					
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set				
5.02	GI Earthing spike made of 20mm solid Rod	Set				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set				
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				
6.00	**Augmentation of 3 phase 33 kV line using new Stay Set (Galvanised) with 50x8 mm stay clamp, guy insulator, anchor plate (300x300x8mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 20 mm diameter solid GS stay rod & 7/4.00 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work**	Set				
7.00	**Augmentation of 3 phase 33 kV line using new 33kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set				
8.00	**Augmentation of 3 phase 33 kV line using new GI wire for earthing and guarding as per technical specification, approved drawings and scope of work.**					
8.01	6 SWG	MT				
8.02	8 SWG	MT				
F(III)	**Augmentation of 11 KV lines**					
1.00	**Augmentation of 3 phase 11 kV line using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**					
1.01	8 meter long /140 KG PCC Poles (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No				
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Augmentation of 3 phase 11 kV line using new Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels, MS angle, MS flats of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT				
3.00	**Augmentation of 3 phase 11 kV line replacing existing conductor with following type of new ACSR conductor including jointing sleeves, binding material and helicon formed fittings etc as required as per technical specification, approved drawings and scope of work.**					
3.01	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit by replacing existing weasel/squirrel condcutor	km				
3.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon by replacing existing rabbit/weasel/squirel condcutor	km				
3.03	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog by replacing existing racoon/rabbit condcutor	km				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
4.00	**Augmentation of 3 phase 11 kV line using new Insulator and hardware as per technical specification, approved drawings and scope of work**					
4.01	11 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set				
4.02	11 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set				
5.00	**Augmentation of 3 phase 11 kV line using new Earthing arrangement as per technical specificatons, approved drawings and scope of work.**					
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set				
5.02	GI Earthing spike made of 20mm solid Rod	Set				
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set				
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				
6.00	**Augmentation of 3 phase 11 kV line using new Stay Set (Galvanised) with 50x8 mm stay clamp, guy insulator, anchor plate (200x200x6mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GI stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work**	Set				
7.00	**Augmentation of 3 phase 11 kV line using new 11kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set				
8.00	**Augmentation of 3 phase 11 kV line using new GI wire for earthing and guarding as per technical specification, approved drawings and scope of work.**					
8.01	6 SWG	MT				
8.02	8 SWG	MT				
F(IV)	**Conversion of existing LT lines on bare conductor to Areal bunch XLPE cable**					
1.00	**Conversion of existing LT lines with bare conductor to AB XLPE cable using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**					
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No				
1.02	13 m long H-Beam 152x152 mm, 37.1kg/mtr	No				
1.03	11 m long H-Beam 152x152 mm, 37.1kg/mtr	No				
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No				
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
2.00	**Conversion of existing LT lines using new Galvanised Stay Set with anchor plate (200x200x6mm), 50x8mm stay clamp, Stay guy insulator, nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set				
3.00	**Conversion of existing LT lines using new Earthing as per approved drawings, technical specifications and scope of work**					
3.01	Spike Earthing made of 20mm GI solid Rod	Set				
3.02	8 SWG GI wire for earthing and guarding	Set				
4.00	**Conversion of existing LT bare conductor line with following arrangements using new areal bunched XLPE cable,tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, spring loaded bus bar suitable for single phase and three phase systems etc. as required as per technical specification, approved drawings and scope of work:**					
4.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	Km				
4.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	Km				
4.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	Km				
4.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	Km				
4.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	Km				
4.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	Km				
F (V)	**Augmentation of 33/11 KV Fully outdoor type substation**					
1.00	33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.					
1.01	1.60 MVA without tap changer	No				
1.02	3.15 MVA without tap changer	No				
1.03	5.00 MVA with off load tap changer	No				
1.04	8.00 MVA with off load tap changer	No				
1.05	10.0 MVA with off load tap changer	No				
	Gantry structures made of H-Beam 152x152 mm 37.1 kg 8 meter long, double MS Channel 100x50mm for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, approved drawings and scope of works.	MT				
	OR					

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
2.00	**Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, approved drawings and scope of works. .**	MT				
3.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 25kA/3 seconds, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No				
4.00	**33kV, Indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**					
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No				
4.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No				
5.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				
6.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
7.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
8.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per technical specifications, approved drawings and scope of the works.**	No				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
9.00	**Indoor type control and relay panel as per technical specifications, approved drawings and scope of works:**					
9.01	Indoor type control and relay panel for 11kV, 3phase, 1250 A VCB (Transformer Breaker) consisting of A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection	No.				
9.02	Indoor type control and relay panel for 11 KV 3 phase, 1250 A VCB (Feeder Breakers) consisting of A-meter, volt-meter, Relays, energy meter (TVM) & accessories complete as per specifications for feeder breaker protection	No.				
10.00	**24V, 80 AH (or as per State practice) Ni-Cd or Pb Acid battery, battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set				
11.00	**24V, 40 Amp. (or as per State practice) Float-cum-Boost Battery Charger with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply as per technical specifications, approved drawings and scope of works.**	set				
12.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No				
13.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works.**	Set				
14.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works**					
14.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km				
14.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km				
15.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station as per technical specifications, approved drawings and scope of works with**					
15.01	75 x 8 mm GI flat for ground mat	MT				
15.02	50 x 6 mm Galvanized GI flat (risers)	MT				
15.03	25 x 3 mm Galvanized GI flat (risers)	MT				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
15.04	25mm dia GI rod 3 m long for earth mat	MT				
16.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover, placed on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing) as per technical specifications, approved drawings and scope of works.**	Set				
17.00	**33 and 11 KV Insulator - Pin, Post and Disc insulators along with suitable hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set				
18.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of the work.**					
18.01	2 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
18.02	6 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
18.03	10 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
19.00	**12 kV, 800A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated Isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				
20.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set				
21.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including earthing connection using 50x6mm GS flat, bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set				
22.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including earthing connection using 50x6mm GS flat, bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	set				
F (VI)	**Augmentation of 33/11 KV Partly outdoor type substation**					

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
1.00	**33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.**					
1.01	1.60 MVA without tap changer	No				
1.02	3.15 MVA without tap changer	No				
1.03	5.00 MVA with off load tap changer	No				
1.04	8.00 MVA with off load tap changer	No				
1.05	10.0 MVA with off load tap changer	No				
2.00	**Gantry structures made of H-Beam 152x152 mm 37.1 kg 8 meter long, double MS Channel 100x50mm for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, approved drawings and scope of works.**	MT				
	Or					
	Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, approved drawings and scope of works. .	MT				
3.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 25kA/3 seconds, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No				
4.00	**33kV, indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**					
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No				
4.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No				

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
5.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				
6.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
7.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.				
8.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for Transformer breaker, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection**	No				
9.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for feeder protection, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for feeder breaker protection**	Set				
10.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for bus coupler, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for bus coupler protection**	Set				
11.00	**24V, 80 AH (or as per state practices) Ni-Cd or Lead Acid battery, battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set				
12.00	**24V, 40 Amp. (or as per state practice) Float-cum-Boost Battery Charger with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply with built in DCDB as per technical specifications, approved drawings and scope of works.**	set				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
13.00	**415V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 Amps TPN switch fuse unit as incomer, 32 Amps TPN switches as outgoing feeders suited for number of VCB-cum-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.**	No				
14.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor VCB-cum-control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works. .**	Set				
15.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works.**					
15.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km				
15.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km				
16.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station with**					
16.01	75 x 8 mm GI flat for ground mat	MT				
16.02	50 x 6 mm Galvanized GS flat (risers)	MT				
16.03	25 x 3 mm Galvanized GI flat (risers)	MT				
16.04	25mm dia GI rod 3 m long for earth mat	MT				
17.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing)**	Set				
18.00	**33 and 11 KV Insulator - Pin, Post and Disc insulators along with Hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set				
19.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of works.**					
19.01	2 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
19.02	6 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
19.03	10 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km				
20.00	**12 kV, 400A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set				

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
21.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set				
22.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer including accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set				
23.00	**11 KV, XLPE, 3 phase power cable armored, aluminium conductor, stranded as per technical specifications, approved drawings and scope of works.**					
23.01	3Cx 300 sqmm	km				
23.02	3Cx 185sqmm	km				
23.03	3Cx35 Sqmm	km				
24.00	**Cable termination kit suitable for termination in transformer cable box/ breaker panel/ outdoor 11 KV terminals complete with all accessories etc. as per technical specifications, approved drawings and scope of works.**					
24.01	3Cx 300 sqmm	set				
24.02	3Cx 185sqmm	set				
24.03	3Cx35 Sqmm	set				
25.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core Indoor type Potential Transformer along with required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set				
F(VII)	**11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**					
1.00	CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set				
2.00	CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set				
3.00	CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set				
	Total Ex-works					

F	Augmentation, Renovation and Modernisation of existing lines and substations					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (7/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

G HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
1.00	**Support for conversion of existing LT line into 11 KV overhead line as per technical specification, approved drawings and scope of work.**					
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No				
1.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No				
1.03	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No				
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure, DO mounting channel, Transformer clamping set, bracket, clamps, cross bracings, bracings, strain clamp, guarding channels, back clamp, etc made of MS Channels (100x50x6 mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work**	MT				
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT				
4.00	**Galvanized Stay Set with anchor plate (200x200x6 mm), 50x8 mm Stay clamp, guy insulator (2 Nos.), nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7.3.15 mm dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set				
5.00	**Porcelain / Polymer Insulators with mounting hardware, fittings as per technical specification, approved drawings and scope of work.**					
5.01	11 KV 45 KN Disc Insulator with hardware fittings	set				
5.02	11 KV Pin insulators with GI Pin	set				
6.00	**Earthing arrangement as per technical specification, approved drawings and scope of work.**					
6.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set				
6.02	Spike earthing made of 20mm dia solid GI rod	Set				
6.03	8 SWG GI Wire	MT				
6.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				
7.00	**Distribution Transformer Substation earthing using 3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161 and as per REC construction drawings, making earth grid using 50x6mm GS Flat and riser as per scope of work, approved drawings and technical specifications,**	Set				
8.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic conductor, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work.**					
8.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km				

G	HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
8.02	6/3.35 + 1/3.35 mm mm (50 mm² Al. Area) - Rabbit	km				
9.00	**Distribution Transformer (three Star rating) with all accessories as per as per technical specification, approved drawings and scope of work.**					
9.01	Single Phase 10 KVA, 11/0.230 KV	No				
9.02	Single Phase 16 KVA, 11/0.230 KV	No				
9.03	Three Phase 16 KVA, 11/0.4 KV	No				
9.04	Three Phase 25 KVA, 11/0.4 KV	No				
9.05	Three Phase 63 KVA, 11/0.4 KV	No				
9.06	Three Phase 100 KVA, 11/0.4 KV	No				
10.00	**12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set				
11.00	**Distribution Class 9KV, 10KA Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	No				
12.00	**11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Set				
13.00	**LT Distribution box with metering and LT control mechanism as per scope of the work, technical specifications and approved drawings suitable for following transformer:**					
13.01	Single Phase 10 KVA	No				
13.02	Single Phase 16 KVA	No				
13.03	Three Phase 16 KVA	No				
13.04	Three Phase 25 KVA	No				
13.05	Three Phase 63 KVA	No				
13.06	Three Phase 100 KVA	No				
14.00	**1.1 KV PVC insulated, PVC sheathed, Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**					
14.01	2CX16 sqmm aluminium conductor cable	km				
14.02	4Cx16 sqmm aluminium conductor cable	km				
14.03	3.5CX25 sqmm aluminium conductor cable	km				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (8/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Ex-works supply of materials

Bidder's Name & Address:

All prices in Indian Rupees

H METERING

Sr. No.	Description	Unit	Qty	Unit Ex-works price	Total Ex-works price	Mode of Transaction (Direct/Bought-out items)
1.00	**Feeder Metering:**					
1.01	33 KV feeder Metering at 33/11 kV substation and intermediatory points using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS nuts & bolts, meter with MS meter box (trivector DLMS compliant category 'A' meter suitable for substation/feeder metering, 3 ph 4 W, 110 V, 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set				
1.02	11 KV feeder Metering at 33/11 kV substation and intermediatory points using 11 kV/110 V, 3 ph 4 wire CT ratio 400-150/5 A outdoor oil immersed metering equipment type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS NUTS & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph, 4 W, 110 V, 5 A, accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set				
2.00	**Distribution Transformer metering on LT side using ring type current transformer of suitable ratio, MS meter box, including supporting steel fabricated structure, earthing using 8 SWG GI wire, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, energy meter (3 ph 4 w 240 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem), ring type lugs, terminal block, double compression brass cable glands, danger board, etc as per specification, approved drawing & scope of works for following rating of Distribution Transformers :**					
2.01	Three Phase 16 KVA	No				
2.02	Three Phase 25 KVA	No				
2.03	Three Phase 63 KVA	No				
2.04	Three Phase 100 KVA	No				
2.05	Three Phase 200 KVA	No				
2.06	Three Phase 315 KVA	No				
3.00	**Supply of LT metering materials as per technical specification, approved drawing & scope of works:**					
3.01	1-Ph 2 wire, 5-30Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set				
3.02	3-Ph 4 wire, 10-40Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set				
4.00	**Earthing arrangement as per technical specification, approved drawings and scope of work.**					
4.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set				
4.02	Spike earthing made of 20mm dia solid GI rod	Set				
4.03	8 SWG GI Wire	MT				
4.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No				

H	METERING					
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Ex-works price**	**Total Ex-works price**	**Mode of Transaction (Direct/Bought-out items)**
5.00	**LT Distribution Box made of Cold Rolled MS sheet of 20 SWG thick, IP 54 without welding joints, deep drawn process of following types as per technical specification, approved drawing & scope of works:**					
5.01	225x285x120 mm incoming 2Cx25 sqmm, outgoing 8 Nos. 2Cx10 sqmm	No				
5.02	418x300x120 mm incoming 4Cx35 sqmm, outgoing 4 Nos. 4Cx16 sqmm	No				
6.00	**LT XLPE Power Cables including their termination materials like glands, lugs, tagging etc. as per technical specifications, approved drawings and scope of the work.**					
6.02	4 Core 35 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km				
6.03	2 Core 25 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km				
7.00	**Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**					
7.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No				
7.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No				
7.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No				
7.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No				
	Total Ex-works					

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (1/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

A. New 33 KV Lines

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**Supports for 33 KV overhead line as per technical specification, approved drawings and scope of work.**				
1.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No			
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT			
3.00	**MS Nuts, bolts and washers as per technical specification, approved drawings and scope of work.**	MT			
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamps, guy insulator (2 Nos.), anchor plate (300x300x8mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 20 mm diameter solid GS stay rod & 7/4.00 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set			
5.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
5.02	GI Earthing spike made of 20mm solid Rod	Set			
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
5.05	6 SWG GI wire for earthing and guarding with GI nuts, bolts & washers	MT			
5.06	8 SWG GI wire for earthing and guarding with GI nuts, bolts & washers	MT			
6.00	**Insulator and hardware as per technical specification, approved drawings and scope of work**				
6.01	33 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set			

A. New 33 KV Lines

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
6.02	33 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set			
7.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic conductor, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work**				
7.01	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km			
7.02	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
7.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km			
8.00	**33kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal / Vertical Mounting type (As desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
9.00	**33 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 33 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG PIPE EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 33 KV ARIAL BUNCHED CABLES 200 sqmm dia (10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.**	set			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

B New 33/11 KV Substation Works (Excluding civil works)

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
B (I)	**33/11 KV Substation Works - Common for fully outdoor / partly outdoor substation**				
1.00	33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			
1.05	10.0 MVA with off load tap changer	No			
2.00	**100 KVA, 11/0.4 kV, 3 ph, 50 Hz, ONAN, Three Star Aluminium wound, CRGO core, outdoor type Station Transformer along with transformer oil and all accessories as required as per technical specifications, scope of works and approved drawings.**	No			
3.00	**DP structure for 11/0.4 KV Station Transformer comprising of H-Beam 152x152 mm 37.1 kg/mtr, 8 meter long, 11 KV Isolators, 11 KV Station Type LAs structures, Transformer mounting channel, DO mounting channel, transformer belting, DC cross arm, back clamps, insulator with hardware etc all complete as per technical specifications, scope of works and approved drawings.**	Set			
4.00	**Gantry structures made of H-Beam 152x152 mm 37.1 kg/mtr, 8 meter long, double MS Channel 100x50x6 mm cross arms of various length for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, scope of works and approved drawings.**	MT			
	OR				
	Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, scope of works and approved drawings..	MT			

B New 33/11 KV Substation Works (Excluding civil works)

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
5.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No			
6.00	**33kV, Indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**				
6.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No			
6.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No			
7.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			
8.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.			
9.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.			
10.00	**24V, 80 AH Ni-Cd or Pb Acid battery (or as per state practice), battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set			
11.00	**24V, 40 Amp. Float-cum-Boost Battery Charger (or as per state practice) with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply as per technical specifications, approved drawings and scope of works.**	set			
12.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No			
13.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works. .**	Set			

B	New 33/11 KV Substation Works (Excluding civil works)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
14.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works.**				
14.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
14.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km			
15.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station as per technical specifications, approved drawings and scope of works**				
15.01	75 x 8 mm GI flat for ground mat	MT			
15.02	50 x 6 mm Galvanized GI flat (risers)	MT			
15.03	25 x 3 mm Galvanized GI flat (risers)	MT			
15.04	25mm dia GI rod 3 m long for earth mat	MT			
16.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover, placed on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing)**	Set			
17.00	**33 and 11 KV polymer/porcelain Insulator - Pin, Post and Disc insulators along with suitable hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set			
18.00	**Internal Electrification works of control room comprising of Main Distribution Board, Sub-distribution Boards, copper flexible multi conductor 2.5 sqmm wiring (for light & fan)/4 sqmm wiring(for power points), power and light points, conduits, fan/LED lamps/tube fittings, exhaust fans, switches, sockets, 2mm thick, PVC 25mm dia conduits pipes in recess, plugs, miniature circuit breakers, seperate independent earthing (2 Nos of 40mm GI Pipe/3-m long)etc as required including DC emergency lighting and auto-change-over switch as per technical specifcations, approved drawings and scope of work.**	Set			
19.00	**External Electrification in switch yard area including power receptacles, station yard lighting with 4 Nos lightening mast (fitted with 2x250 watts SON fittings) made of 12 meters high Steel Tubular Poles (IS 2713 part I, II III) of designation 410 – SP - 60, complete as per technical specifications, approved drawings and scope of the work.**	Set			
20.00	**11kV, 200 A, 3-ph Drop Out fuse assembly including insulators and mounting arrangements, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	Set			
21.00	**LT Power Cables including their termination materials like glands, lugs, tagging etc. as per technical specifications, approved drawings and scope of the work.**				
21.01	3.5 Core 150 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km			
21.02	3.5 Core 70 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km			
21.03	2 Core 16 Sq. mm armoured, stranded aluminium conductor, PVC insulated and PVC sheathed cable	km			

B	New 33/11 KV Substation Works (Excluding civil works)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
22.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of the work.**				
22.01	2 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
22.02	6 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
22.03	10 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
23.00	**Outdoor type Distribution Box for station transformer comprising 200 A switch fuse unit, 6 Nos SP MCCB– 90 A, 2 Nos 32 A SP MCCB, 3-ph, 63A, contactor controlled yard lighting timer unit, tri-vector electronic energy meter with suitable CT, control/power cabling and terminals, 1 No 20 A Industrial socket and switch for local power supply requirements, mounting channel, clamps and hardware as per scope of work, technical specifications and approved drawings.**	Set			
24.00	**12 kV, 800A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated Isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			
25.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Horizonal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set			
26.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs), bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set			
27.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs), bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	set			
B (II)	**Feeder Metering:**				
1.00	33 KV Feeder Metering at 33/11 kV substation using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set			

B	New 33/11 KV Substation Works (Excluding civil works)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
2.00	11 KV Feeder Metering at 33/11 kV substation using 11 kV/110 V, 3 ph 4 wire CT ratio 300-150/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set			
B (III)	**11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**				
1.00	CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set			
2.00	CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			
3.00	CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			

B	New 33/11 KV Substation Works (Excluding civil works)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
B (IV)	**Description of items needed for fully outdoor type 33/11 kV substation**				
1.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per technical specifications, approved drawings and scope of the works.**	No			
2.00	**Indoor type control and relay panel as per technical specifications, approved drawings and scope of works:**				
2.01	Indoor type control and relay panel for 11kV, 3phase, 1250 A VCB (Transformer Breaker) consisting of A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection	No.			
2.02	Indoor type control and relay panel for 11 KV 3 phase, 1250 A VCB (Feeder Breakers) consisting of A-meter, volt-meter, Relays, energy meter (TVM) & accessories complete for feeder breaker protection as per technical specifications, approved drawings and scope of works.	No.			
B (V)	**Description of items needed for partly outdoor type 33/11 kV substation**				
1.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for Transformer breaker, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relay & accessories complete for transformer breaker protection as per technical specifications, approved drawings and scope of works.**	No			
2.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for feeder protection, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete for feeder breaker protection as per technical specifications, approved drawings and scope of works.**	Set			
3.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for bus coupler, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for bus coupler protection**	Set			
4.00	**11 KV, XLPE, 3 phase power cable armored, aluminium conductor, stranded, including their termination materials like glands, lugs, tagging etc as required as per technical specifications, approved drawings and scope of the works.**				
4.01	3Cx 300 sqmm	km			
4.02	3Cx 185sqmm	km			
4.03	3Cx35 Sqmm	km			

B	New 33/11 KV Substation Works (Excluding civil works)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
5.00	**Cable termination kit suitable for termination in transformer cable box/ breaker panel/ outdoor 11 KV terminals complete with all accessories etc. as per technical specifications, approved drawings and scope of the works.**				
5.01	3Cx 300 sqmm	set			
5.02	3Cx 185sqmm	set			
5.03	3Cx35 Sqmm	set			
6.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core Indoor type Potential Transformer along with required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

C New 11 KV Lines

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**Support for 11 KV overhead line as per technical specification, approved drawings and scope of work**				
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT			
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT			
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	set			
5.00	**Insulator and hardware as per technical specification, approved drawings and scope of work.**				
5.01	11 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	set			
5.02	11 KV Polymer /porcelain Pin Insulators with GI PIN	set			
6.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
6.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	set			
6.02	Spike Earthing 20mm solid Rod	set			
6.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	set			
6.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			

C	New 11 KV Lines				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
6.05	8 SWG GI wire, GI nuts, bolts & washers for earthing and guarding	MT			
6.06	6 SWG GI wire, GI nuts, bolts & washers for earthing and guarding	MT			
7.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic clamp, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work**				
7.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km			
7.02	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit	km			
7.03	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km			
7.04	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
8.00	**12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
9.00	**11 LV Line overhead crossing and underground railway crossing ensuring statutory clearances**				
9.01	11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx185 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 11 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG pipe EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES 200 sqmm dia(10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.	set			
9.02	11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm XLPE Armoured Cable (0.3 km each) USING 150MM DIA GI PIPES (grade A for underground laying and grade B for pole support), OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, 11 KV LIGHTENING ARRESTOR STATION CLASS 10KA (6 NOS.), LUGS, 4 Nos GI 3-Meters LONG PIPE EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES 200 sqmm dia(10 mtr) etc AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK.	set			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

D Distribution Transformer Substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**DTR Substation Supports as per technical specification, approved drawings and scope of work.**				
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) as per technical specification, approved drawings and scope of work.**	MT			
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT			
4.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6mm), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	set			
5.00	**Polymer/ Porcelain Insulators with hardware fittings, hardware etc as required as per technical specification, approved drawings and scope of work.**				
5.01	11 KV, Disc Insulator with suitable hardware fittings	Set			
5.02	11 KV, Post Insulators / Pin Insulators with hardware fittings	Set			
6.00	**New Distribution Transformer (three Star) with all accessories as per as per technical specification, approved drawings and scope of work.**				
6.01	11/0.230 kV Distribution Transformer 10 KVA 1 Phase Aluminium wound DTR	No			
6.02	11/0.230 kV Distribution Transformer 16 KVA 1 Phase Aluminium wound DTR	No			
6.03	11/0.4 KV Distribution Transformer 16 KVA 3 phase Aluminium wound DTR	No			

D	Distribution Transformer Substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
6.04	11/0.4 KV Distribution Transformer 25 KVA 3 phase Aluminium wound DTR	No			
6.05	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
6.06	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
6.07	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
6.08	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No			
7.00	**Outdoor mounting type Distribution box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
7.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering	No			
7.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No			
7.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No			
7.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No			
7.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No			
7.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No			
7.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No			
7.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No			
8.00	**11 KV Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	No			
9.00	**11 kV, 3-ph, 200 A, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Sets			
10.00	**11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Sets			

D Distribution Transformer Substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
11.00	**3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161, making earth grid using 50x6mm GI Flat and riser as per scope of work of Distribution Transformer Substations, approved drawings and technical specifications.**	Set			
12.00	**8 SWG GI wire for earthing as per technical specifications, approved drawings and scope of works.**	MT			
13.00	**1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**				
13.01	1Cx16 sqmm aluminium conductor cable	km			
13.02	1CX35 sqmm aluminium conductor cable	km			
13.03	1CX50 sqmm aluminium conductor cable	km			
13.04	1Cx70 sqmm aluminium conductor cable	km			
13.05	1Cx150 sqmm aluminium conductor cable	km			
13.06	1Cx300 sqmm aluminium conductor cable	km			
14.00	**ACSR Rabbit Conductor for jumpering including PG Clamps, bi-metallic connectors, hardware etc as per technical specifications, approved drawings and scope of works.**	Km			
15.00	**Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
15.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
15.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
15.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
15.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Schedule-1 (5/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

E New LT Line

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**Support for LT overhead Line as per technical specification, approved drawings and scope of work.**				
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
1.02	11 m long H-Beam 152x152 mm, 37.1kg/mtr	No			
1.03	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.04	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Galvanised Stay Set with anchor plate (200x200x6mm), 50x8mm stay clamp, Stay guy insulator, nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set			
3.00	**Earthing as per approved drawings, technical specifications and scope of work**				
3.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	Set			
3.02	Spike Earthing 20mm solid Rod	Set			
3.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
3.04	8 SWG GI wire for earthing & GI nuts, bolts & washers	MT			
4.00	**LT line with following arrangements using areal bunched XLPE cable including tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, spring loaded bus bar suitable for single phase and three phase systems etc. as required as per technical specification, approved drawings and scope of work:**				
4.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	Km			
4.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	Km			
4.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	Km			
4.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	Km			
4.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	Km			
4.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	Km			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

E	New LT Line				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
F(I)	**Augmentation & Renovation of 11/0.4 kV Distribution Transformer Substation**				
1.00	**Augmentation of Distribution Transformer Substation (ASSUMING 25 YEARS OF LIFE AND 10 YEARS IN SERVICE) using New Distribution Transformer (three star) as per technical specifications, approved drawings and scope of the work. Replaced material to be deposited in Employer's store:**				
1.01	New 63 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 25KVA old DTR),	No			
1.02	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No			
1.03	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No			
1.04	New 315 KVA (11/0.4 kV) Copper wound DTR (Replacing 200 KVA old DTR),	No			
2.00	**Augmentation of DTR Substation by using new 1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings. Replaced cables to be deposited in Employer's store.**				
2.01	1Cx16 sqmm aluminium conductor cable	km			
2.02	1CX35 sqmm aluminium conductor cable	km			
2.03	1CX50 sqmm aluminium conductor cable	km			
2.04	1Cx70 sqmm aluminium conductor cable	km			
2.05	1Cx150 sqmm aluminium conductor cable	km			
2.06	1Cx300 sqmm aluminium conductor cable	km			
3.00	**Augmentation of DTR Substation by using new outdoor mounting type Distribution box made of MS sheet of thickness not less than 1.8 mm, dust and moisture vermin, weather proof with degree of protection IP 33 as per IS 13947 with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, non magnetic 4 mm thick gland plate, double compression brass cable glands, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
3.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering	No			
3.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No			
3.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No			
3.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No			
3.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No			
3.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No			
3.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No			
3.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No			
4.00	**Renovation of DTR substation Earthing as per technical specification, approved drawings and scope of work:**				
4.01	Revamping of Distribution Transformer substation earthing by using 40 mm dia 3 meter long GI pipe earthing, using 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment, using 200 kg bentonite powder of substation in normal soil	No			
4.02	Revamping of Distribution Transformer substation earthing by using 3 Nos. chemical rod earthing including electrode & chemical, 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment in hard rock soil	No			
5.00	**Augmentation of DTR substation by new Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) as per technical specification, approved drawings and scope of work.**	MT			
6.00	**Augmentation of DTR substation by new MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT			
7.00	**Augmentation of DTR substation by new Polymer/ Porcelain Insulators with hardware fittings, hardware etc as required as per technical specification, approved drawings and scope of work.**				
7.01	11 KV, Disc Insulator with suitable hardware fittings	Set			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
7.02	11 KV, Post Insulators / Pin Insulators with hardware fittings	Set			
8.00	**Augmentation of DTR substation by new 9KV, 11 KA Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	Set			
9.00	**Augmentation of DTR substation by new 11 kV, 3-ph, 200 A, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Sets			
10.00	**11kV, 200 A, 3-ph Drop Out fuse assembly including insulators and mounting arrangements, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	Set			
F(II)	**Augmentation of 33 KV lines**				
1.00	**Augmentation of 3 phase 33 kV line using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**				
1.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No			
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Augmentation of 3 phase 33 kV line using new Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT			
3.00	**Augmentation of 3 phase 33 kV line replacing existing conductor with following type of new ACSR conductor including jointing sleeves, binding material and helical formed fittings etc as required as per technical specification, approved drawings and scope of work.**				
3.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog replacing existing racoon conductor	km			
3.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon replacing existing rabbit/weasel conductor	km			
3.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther replacing existing dog/racoon conductor	km			
4.00	**Augmentation of 3 phase 33 kV line using new Insulator and hardware as per technical specification, approved drawings and scope of work**				

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
4.01	33 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set			
4.02	33 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set			
5.00	**Augmentation of 3 phase 33 kV line using new Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
5.02	GI Earthing spike made of 20mm solid Rod	Set			
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
6.00	**Augmentation of 3 phase 33 kV line using new Stay Set (Galvanised) with 50x8 mm stay clamp, guy insulator, anchor plate (300x300x8mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 20 mm diameter solid GS stay rod & 7/4.00 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set			
7.00	**Augmentation of 3 phase 33 kV line using new 33kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
8.00	**Augmentation of 3 phase 33 kV line using new GI wire for earthing and guarding as per technical specification, approved drawings and scope of work.**				
8.01	6 SWG	MT			
8.02	8 SWG	MT			
F(III)	**Augmentation of 11 KV lines**				
1.00	**Augmentation of 3 phase 11 kV line using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**				
1.01	8 meter long /140 KG PCC Poles (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm 37.1 kg/m	No			
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
2.00	**Augmentation of 3 phase 11 kV line using new Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels, MS angle, MS flats of given sizes for over head structures as per technical specification, approved drawings and scope of work.**	MT			
3.00	**Augmentation of 3 phase 11 kV line replacing existing conductor with following type of new ACSR conductor including jointing sleeves, binding material and helicon formed fittings etc as required as per technical specification, approved drawings and scope of work.**				
3.01	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit by replacing existing weasel/squirrel condcutor	km			
3.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon by replacing existing rabbit/weasel/squirel condcutor	km			
3.03	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog by replacing existing racoon/rabbit condcutor	km			
4.00	**Augmentation of 3 phase 11 kV line using new Insulator and hardware as per technical specification, approved drawings and scope of work**				
4.01	11 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set			
4.02	11 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set			
5.00	**Augmentation of 3 phase 11 kV line using new Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
5.02	GI Earthing spike made of 20mm solid Rod	Set			
5.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
6.00	**Augmentation of 3 phase 11 kV line using new Stay Set (Galvanised) with 50x8 mm stay clamp, guy insulator, anchor plate (200x200x6mm) , nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GI stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set			
7.00	**Augmentation of 3 phase 11 kV line using new 11kV, 600A, 25kA, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
8.00	**Augmentation of 3 phase 11 kV line using new GI wire for earthing and guarding as per technical specification, approved drawings and scope of work.**				

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
8.01	6 SWG	MT			
8.02	8 SWG	MT			
F(IV)	**Conversion of existing LT lines on bare conductor to Areal bunch XLPE cable**				
1.00	**Conversion of existing LT lines with bare conductor to AB XLPE cable using additional supports matching with length and type of existing support as per technical specifications, scope of works and approved drawings**				
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Conversion of existing LT lines using new Galvanised Stay Set with anchor plate (200x200x6mm), 50x8mm stay clamp, Stay guy insulator, nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set			
3.00	**Conversion of existing LT lines using new Earthing as per approved drawings, technical specifications and scope of work**				
3.01	Spike Earthing made of 20mm GI solid Rod	Set			
3.02	8 SWG GI wire for earthing and guarding	Set			
4.00	**Conversion of existing LT bare conductor line with following arrangements using new areal bunched XLPE cable,tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, spring loaded bus bar suitable for single phase and three phase systems etc. as required as per technical specification, approved drawings and scope of work:**				
4.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	Km			
4.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	Km			
4.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	Km			
4.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	Km			
4.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	Km			
4.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	Km			
F (V)	**Augmentation of 33/11 KV Fully outdoor type substation**				

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
1.00	33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			
1.05	10.0 MVA with off load tap changer	No			
2.00	**Gantry structures made of H-Beam 152x152 mm 37.1 kg 8 meter long, double MS Channel 100x50mm for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, approved drawings and scope of works.**	MT			
	OR				
	Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, approved drawings and scope of works. .	MT			
3.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 25kA/3 seconds, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No			
4.00	**33kV, Indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**				
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No			
4.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
5.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			
6.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.			
7.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.			
8.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per technical specifications, approved drawings and scope of the works.**	No			
9.00	**Indoor type control and relay panel as per technical specifications, approved drawings and scope of works:**				
9.01	Indoor type control and relay panel for 11kV, 3phase, 1250 A VCB (Transformer Breaker) consisting of A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection	No.			
9.02	Indoor type control and relay panel for 11 KV 3 phase, 1250 A VCB (Feeder Breakers) consisting of A-meter, volt-meter, Relays, energy meter (TVM) & accessories complete as per specifications for feeder breaker protection	No.			
10.00	**24V, 80 AH (or as per State practice) Ni-Cd or Pb Acid battery, battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set			
11.00	**24V, 40 Amp. (or as per State practice) Float-cum-Boost Battery Charger with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply as per technical specifications, approved drawings and scope of works.**	set			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
12.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No			
13.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works.**	Set			
14.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works**				
14.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
14.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km			
15.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station as per technical specifications, approved drawings and scope of works with**				
15.01	75 x 8 mm GI flat for ground mat	MT			
15.02	50 x 6 mm Galvanized GI flat (risers)	MT			
15.03	25 x 3 mm Galvanized GI flat (risers)	MT			
15.04	25mm dia GI rod 3 m long for earth mat	MT			
16.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover, placed on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing) as per technical specifications, approved drawings and scope of works.**	Set			
17.00	**33 and 11 KV Insulator - Pin, Post and Disc insulators along with suitable hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set			
18.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of the work.**				
18.01	2 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
18.02	6 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
18.03	10 Core 2.5 sqmm armoured, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
19.00	**12 kV, 800A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated Isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			
20.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set			
21.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including earthing connection using 50x6mm GS flat, bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set			
22.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core outdoor type Potential Transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including earthing connection using 50x6mm GS flat, bi-metallic clamp and required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	set			
F (VI)	**Augmentation of 33/11 KV Partly outdoor type substation**				
1.00	**33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves, 2 sets of 50x8 mm GS Neutral Earthing strips {(with braided conductor on bushing end), isolating link, isolation with insulators}, Vent explosion plug, control wiring between sensing equipment and marshalling box, cable supporting tray on the body of transformer, transformer wheels, LV/HV bushing etc as required as per technical specifications, approved drawings and scope of the work.**				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			
1.05	10.0 MVA with off load tap changer	No			
	Gantry structures made of H-Beam 152x152 mm 37.1 kg 8 meter long, double MS Channel 100x50mm for bus bar supports (Beam), 65x65x6mm angle for cross arms/supporting structures and 50x8mm flats for clamps along with hardware items duly painted etc. as per technical specifications, approved drawings and scope of works.	MT			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
	Or				
2.00	**Gantry structures made of Lattice structures of equal angles sections, flat as per approved drawings. State practices are to be adopted in the design. 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 as per technical specifications, approved drawings and scope of works. .**	MT			
3.00	**36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 25kA/3 seconds, 200-100/5-5 Amps or 300-150/5-5 Amps 3 Nos outdoor type Current Transformers along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, bi-metallic clamps, permanent maintenance platform, marshalling box etc required as per technical specifications, scope of works and approved drawings**	No			
4.00	**33kV, indoor, Control & Relay panel along with E/F & O/C relays, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, specifications and scope of works controlling:**				
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter	No			
4.02	Power transformer 33 kV VCB with Static Tri-Vector Energy Meter	No			
5.00	**36kV, 630A, 25kA for 3 seconds, 3-ph double break centre rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			
6.00	**30 kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required as per technical specifications, approved drawings and scope of the works.**	No.			
7.00	**9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	No.			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
8.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for Transformer breaker, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relays & accessories complete as per specifications for transformer breaker protection**	No			
9.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 or 200-100/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for feeder protection, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for feeder breaker protection**	Set			
10.00	**12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 600-300/5-5 or 300-150/5-5 3 Nos indoor type Current Transformer, indoor mounting type control panel for bus coupler, control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, 3-phase electronic energy meter, Relay & accessories complete as per specifications for bus coupler protection**	Set			
11.00	**24V, 80 AH (or as per state practices) Ni-Cd or Lead Acid battery, battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm, 1.1 kv, copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per technical specifications, approved drawings and scope of works.**	Set			
12.00	**24V, 40 Amp. (or as per state practice) Float-cum-Boost Battery Charger with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply with built in DCDB as per technical specifications, approved drawings and scope of works.**	set			
13.00	**415V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 Amps TPN switch fuse unit as incomer, 32 Amps TPN switches as outgoing feeders suited for number of VCB-cum-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.**	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
14.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor VCB-cum-control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works. .**	Set			
15.00	**ACSR Conductor for Bus-Bars & Jumpers/Droppers/Terminations including hardware fittings, hardware, T-claimp etc as per technical specifications, approved drawings and scope of works.**				
15.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
15.02	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km			
16.00	**Earthing & Grounding conductor as per Approved Electrical Layout for each sub-station with**				
16.01	75 x 8 mm GI flat for ground mat	MT			
16.02	50 x 6 mm Galvanized GS flat (risers)	MT			
16.03	25 x 3 mm Galvanized GI flat (risers)	MT			
16.04	25mm dia GI rod 3 m long for earth mat	MT			
17.00	**40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bantonide powder and other accessories complete as per technical specification. (for Power Transformer Neutral, Station Transformer Neutral and Lightening Arresters direct earthing)**	Set			
18.00	**33 and 11 KV Insulator - Pin, Post and Disc insulators along with Hardware & accessories suitable for Panther/Dog conductors as per approved drawings & specifications.**	Set			
19.00	**LT Control cables including their termination materials like glands, lugs etc. as per technical specifications, approved drawings and scope of works.**				
19.01	2 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
19.02	6 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
19.03	10 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	km			
20.00	**12 kV, 400A, 25kA for 3 seconds, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel, down Pipe and all required accessories complete as per technical specifications, scope of works and approved drawings**	Set			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
21.00	**12kV, 600A, 25kA for 3 sec, 3-Phase, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch, along with support insulators, Base Channel, down pipe, Arching Horns etc. and all complete accessories as per technical specifications, scope of works and approved drawings**	Set			
22.00	**36 kV, 3-pole, 1-Phase, 33kV/110 volt, Single core outdoor type Potential Transformer including accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set			
23.00	**11 KV, XLPE, 3 phase power cable armored, aluminium conductor, stranded as per technical specifications, approved drawings and scope of works.**				
23.01	3Cx 300 sqmm	km			
23.02	3Cx 185sqmm	km			
23.03	3Cx35 Sqmm	km			
24.00	**Cable termination kit suitable for termination in transformer cable box/ breaker panel/ outdoor 11 KV terminals complete with all accessories etc. as per technical specifications, approved drawings and scope of works.**				
24.01	3Cx 300 sqmm	set			
24.02	3Cx 185sqmm	set			
24.03	3Cx35 Sqmm	set			
25.00	**12 kV, 3-pole, 1-Phase, 11kV/110 volt, Single core Indoor type Potential Transformer along with required accessories etc., complete as per technical specifications, approved drawings and scope of the works.**	Set			
F(VII)	**11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**				
1.00	CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set			
2.00	CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
3.00	CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

G HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**Support for conversion of existing LT line into 11 KV overhead line as per technical specification, approved drawings and scope of work.**				
1.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
1.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure, DO mounting channel, Transformer clamping set, bracket, clamps, cross bracings, bracings, strain clamp, guarding channels, back clamp, etc made of MS Channels (100x50x6 mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work**	MT			
3.00	**MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT			
4.00	**Galvanized Stay Set with anchor plate (200x200x6 mm), 50x8 mm Stay clamp, guy insulator (2 Nos.), nut bolts, 2 Nos turn buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7.3.15 mm dia GI stranded wire etc as required as per technical specification, approved drawings and scope of work.**	Set			
5.00	**Porcelain / Polymer Insulators with mounting hardware, fittings as per technical specification, approved drawings and scope of work.**				
5.01	11 KV 45 KN Disc Insulator with hardware fittings	set			
5.02	11 KV Pin insulators with GI Pin	set			
6.00	**Earthing arrangement as per technical specification, approved drawings and scope of work.**				
6.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
6.02	Spike earthing made of 20mm dia solid GI rod	Set			
6.03	8 SWG GI Wire	MT			
6.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
7.00	**Distribution Transformer Substation earthing using 3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161 and as per REC construction drawings, making earth grid using 50x6mm GS Flat and riser as per scope of work, approved drawings and technical specifications,**	Set			

G HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
8.00	**ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic conductor, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work.**				
8.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km			
8.02	6/3.35 + 1/3.35 mm mm (50 mm² Al. Area) - Rabbit	km			
9.00	**Distribution Transformer (three Star rating) with all accessories as per as per technical specification, approved drawings and scope of work.**				
9.01	Single Phase 10 KVA, 11/0.230 KV	No			
9.02	Single Phase 16 KVA, 11/0.230 KV	No			
9.03	Three Phase 16 KVA, 11/0.4 KV	No			
9.04	Three Phase 25 KVA, 11/0.4 KV	No			
9.05	Three Phase 63 KVA, 11/0.4 KV	No			
9.06	Three Phase 100 KVA, 11/0.4 KV	No			
10.00	**12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
11.00	**Distribution Class 9KV, 10KA Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	No			
12.00	**11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Set			
13.00	**LT Distribution box with metering and LT control mechanism as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
13.01	Single Phase 10 KVA	No			
13.02	Single Phase 16 KVA	No			
13.03	Three Phase 16 KVA	No			
13.04	Three Phase 25 KVA	No			
13.05	Three Phase 63 KVA	No			
13.06	Three Phase 100 KVA	No			
14.00	**1.1 KV PVC insulated, PVC sheathed, Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**				
14.01	2CX16 sqmm aluminium conductor cable	km			
14.02	4Cx16 sqmm aluminium conductor cable	km			
14.03	3.5CX25 sqmm aluminium conductor cable	km			

G	HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)				
Sr. No.	**Description**	**Unit**	**Qty**	**Unit Freight & Insurance Charges**	**Total Freight & Insurance Charges**
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Local Transportaion, Insurance and other Incidental Services

Bidder's Name & Address:

All prices in Indian Rupees

H METERING

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
1.00	**Feeder Metering:**				
1.01	33 KV feeder Metering at 33/11 kV substation and intermediatory points using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS nuts & bolts, meter with MS meter box (trivector DLMS compliant category 'A' meter suitable for substation/feeder metering, 3 ph 4 W, 110 V, 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set			
1.02	11 KV feeder Metering at 33/11 kV substation and intermediatory points using 11 kV/110 V, 3 ph 4 wire CT ratio 400-150/5 A outdoor oil immersed metering equipment type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS NUTS & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph, 4 W, 110 V, 5 A, accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set			
2.00	**Distribution Transformer metering on LT side using ring type current transformer of suitable ratio, MS meter box, including supporting steel fabricated structure, earthing using 8 SWG GI wire, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, energy meter (3 ph 4 w 240 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem), ring type lugs, terminal block, double compression brass cable glands, danger board, etc as per specification, approved drawing & scope of works for following rating of Distribution Transformers:**				
2.01	Three Phase 16 KVA	No			
2.02	Three Phase 25 KVA	No			
2.03	Three Phase 63 KVA	No			
2.04	Three Phase 100 KVA	No			
2.05	Three Phase 200 KVA	No			
2.06	Three Phase 315 KVA	No			
3.00	**Supply of LT metering materials as per technical specification, approved drawing & scope of works:**				
3.01	1-Ph 2 wire, 5-30Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set			
3.02	3-Ph 4 wire, 10-40Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set			
4.00	**Earthing arrangement as per technical specification, approved drawings and scope of work.**				
4.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
4.02	Spike earthing made of 20mm dia solid GI rod	Set			
4.03	8 SWG GI Wire	MT			

H METERING

Sr. No.	Description	Unit	Qty	Unit Freight & Insurance Charges	Total Freight & Insurance Charges
4.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
5.00	**LT Distribution Box made of Cold Rolled MS sheet of 20 SWG thick, IP 54 without welding joints, deep drawn process of following types as per technical specification, approved drawing & scope of works:**				
5.01	225x285x120 mm incoming 2Cx25 sqmm, outgoing 8 Nos. 2Cx10 sqmm	No			
5.02	418x300x120 mm incoming 4Cx35 sqmm, outgoing 4 Nos. 4Cx16 sqmm	No			
6.00	**LT XLPE Power Cables including their termination materials like glands, lugs, tagging etc. as per technical specifications, approved drawings and scope of the work.**				
6.02	4 Core 35 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km			
6.03	2 Core 25 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km			
7.00	**Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
7.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
7.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
7.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
7.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No			
	Total Ex-works				

% DISCOUNT, IF ANY: _____

Note:

Installation/Erection Charges

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

All prices in Indian Rupees

A	Erection, testing and Commissioning of New 33 KV lines:				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.00	Survey, route alignment & pole spotting, preparation of survey report and uploading in the web portal after approval of Project Manager	Km			
2.00	Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:				
2.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
2.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
3.00	Excavation of pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:				
3.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
3.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
4.00	Excavation of pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:				
4.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
4.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
4.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
4.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
5.00	Erection, testing & commissioning of pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and MS nuts, bolts & washers including painting by red oxide & aluminium paint as per technical specification, approved drawings and scope of work.	MT			
6.00	Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:				
6.01	Normal soil	No			
6.02	Soft rock soil where blasting is not required	No			
6.03	Hard rock soil where blasting is required	No			
7.00	Erection of complete stay set with GI stay wire (7x4.00 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.3 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works	Set			
8.00	Erection, testing and commissioning of 33 kV polymer/porcelain insulator including their hardware fittings as per technical specification, approved drawings and scope of work.				
8.01	33 kV Pin insulator with GI pin	Set			
8.02	33 kV Disc insulator with strain hardware (set of 3, 11 KV disc insulators)	Set			
9.00	Erection of following types of poles for 33 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) etc as per scope of work, approved drawings and specifications:				
9.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice) - cement concreting (0.5 cmt)	No			
9.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr - cement concreting (0.65 cmt)	No			
9.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - cement concreting (0.65 cmt)	No			
9.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980) - cement concreting (0.65 cmt)	No			

Installation/Erection Charges

A	**Erection, testing and Commissioning of New 33 KV lines:**				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
10.00	**Paying out, tensioning, binding of conductor and tightening of stays and stringing, testing and commissioning of ACSR Conductor of following sizes including jointing sleeves, helical formed fittings, jumpering and by providing & erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications**				
10.01	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km			
10.02	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	km			
10.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther	km			
11.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
11.01	Excavation, erection, testing & commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	Set			
11.02	Excavation, erection, testing & commissioning of Spike Earthing 20mm solid Rod	Set			
11.03	Excavation, erection, testing & commissioning of Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
11.04	Erection of 8 SWG GI Coil 115 tonnes (1.85 kg)	No			
11.05	Erection of 8 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
11.06	Erection of 6 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
12.00	**Erection, Testing and Commissioning of 33 kV AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
13.00	**Erection of 33 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm (0.3 km) XLPE Armoured Cable , USING 150MM DIA GI PIPES, OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, LUGS, 4 Nos GI 3-METERS LONG EARTHING, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 33 KV ARIAL BUNCHED CABLES 200 sqmm dia (10 mtr), 33 KV STATION TYPE LIGHTENING ARRESTORS (6 NOS.), ETC AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, DRAWINGS AND SCOPE OF THE WORK**	Set			
	Total				
	% discount, if any:				

Installation/Erection Charges

Schedule-3 (2/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges : All prices in Indian Rupees

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
B (I)	33/11 KV Grid Substation works - Common for fully outdoor / partly outdoor substation				
B (Ia)	Civil works: Design, supply of all material, T&P, labour etc for the following civil works complete				
1.00	Soil Investigation & Contour Survey of Substation area as per Technical Specification, approved Drawing & Scope of works	PER S/S			
2.00	Earth Filling & Site Levelling				
2.01	Earth work in PSS site provided by employer for pits free from logs, stumps, roots, rubbish or any other ingredients likely to deteriorate or affect the stability of the (0.5 meter filling considered size 40ftx40ft) site surface including breaking the clods maximum to 60 mm. cube, placing the earth in layers not exceeding 225 mm in loose thickness, rough dressing including cost of cutting and removing shrubs, roots falling in borrow area all complete as per approved design, as per Technical Specification, approved Drawing & Scope of works	CMT			
3.00	Gravel filling in switchyard area excluding road and footpath as per Technical Specification, approved Drawing & Scope of works.	Sq. m			
4.00	Design, engineering and construction of foundation for following power transformer considering original equipment manufacturer recommendations including excavation of pit, shuttering, reinforcement, cement concreting including providing and erecting guiding rail, wheel stopper etc as per Technical Specification, approved Drawing & Scope of works:				
4.01	1.60 MVA without tap changer	CMT			
4.02	3.15 MVA without tap changer	CMT			
4.03	5.00 MVA with off load tap changer	CMT			
4.04	8.00 MVA with off load tap changer	CMT			
4.05	10.0 MVA with off load tap changer	CMT			
5.00	Design, engineering and construction of foundation for following outdoor mounted Vacuume Circuit Breaker considering original equipment manufacturer recommendation including excavation of pit, shuttering and by providing reinforcement, cement concreting, painting etc as per Technical Specification, approved Drawing & Scope of works. Works also includes providing working platform for operation of breakers and painting.				
5.01	33 KV VCB	CMT			
5.02	11 KV VCB	CMT			
6.00	Providing and Construction of outdoor gantry structure foundation and erection of gantry structure (H-Beam/lattice structure) including top muffing and its painting by excavation of pit and by providing shuttering, cement concreting (0.65 cmt per structure) etc as per Technical Specification, approved Drawing & Scope of works	CMT			
7.00	Providing and Construction of Boundary Wall made of reinforced cement concrete foundation (Beam, column, footing), angle supports, brick works, plastering including Barbed Wire Fencing on MS angle and one MS Gate per Substation, including Supply, Fabrication, Fixing including red oxide and aluminium painting all complete as per Technical Specification, approved Drawing & Scope of works	R/Mtr			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
8.00	**Design, engineering and construction of Control Room Building of size 10mx12m complete with foundation, flooring, trenching, plastering, brick work, roof, painting, doors & windows, surface tile as per requirement, recessed water supply piping (GI medium class pipes and fittings), sanitary fittings, toilet, water supply arrangements, sign board including Labour, Cement, Reinforcement Steel, Framework, Excavation etc, all complete as per Technical Specification, approved Drawing & Scope of works**	Sqm			
9.00	**Design, engineering and construction of cement concrete Cable Trench of 0.5 Mtr wide, required depth, precast RCC Trench Cover, Water slop, cable supporting angles including Labour, Reinforcement Steel, MS Angles, Flats, Steel Frame Work, Excavation etc, all complete as per Technical Specification, approved Drawing & Scope of works.**	R/Mtr			
10.00	**Design, engineering and construction of Drainage System made of brick work in the Substation premises including Excavation etc, all complete as per design, Technical Specification, approved Drawing & Scope of works**	R/Mtr			
11.00	**Design, engineering and construction of approach road, footpath including bitumen carpeting and excavation, compaction etc. all complete as per Technical Specification, approved Drawing & Scope of works**				
11.01	width of approach road 3.75 m	R/Mtr			
11.02	width of footpath 1.5 m	R/Mtr			
12.00	**Drilling of tube well bore and installation of submersible pump, submersible motor, cabling and control panel of suitable capacity as per Technical Specification, approved Drawing & Scope of works.**	SET			
13.00	**Earth Filling & Site Levelling**				
13.01	Earth work in Substation site with ordinary soil obtained from borrow pits free from logs, stumps, roots, rubbish or any other ingredients likely to deteriorate or affect the stability of the (0.5 meter filling considered size 40*40) site surface including breaking the clods maximum to 60 mm. cube, placing the earth in layers not exceeding 225 mm in loose thickness, rough dressing including cost of cutting and removing shrubs, roots falling in borrow area all complete as per approved design, as per detailed Technical Specification, approved Drawing & Scope of works.	CMT			
14.00	**Gravel filling in switchyard area excluding road and footpath as per detailed Technical Specification, approved Drawing & Scope of works.**	Sq. m			
15.00	**Construction of Boundary Wall including Barbed Wire Fencing on MS angle over the Boundary Wall and Gate per Substation, including Supply, Fabrication, Fixing, Painting all complete as per detailed Technical Specification, approved Drawing & Scope of works.**	Mtr			
16.00	**Design, engineering and construction of Control Room Building including indoor trench comprising of battery room, panel room, administration room, toilet etc as required of overall size 10mX12m, single story including supply of construction materials, Labour, Cement, Reinforcement Steel, Frame Work, Excavation etc, all complete as per detailed Technical Specification, approved Drawing & Scope of works.**	Sqm			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
17.00	**Design, engineering and construction of Cable Trench of 0.5 Mtr wide, required depth, precast RCC Trench Cover, Water stops, Brick Work wherever required including supply of T&P, Labour, Cement, Reinforcement Steel, Steel Angles, Flats, Form Work, Excavation etc, all complete as per detailed Technical Specification, approved Drawing & Scope of works.**	Mtr			
18.00	**Design, engineering and construction of Drainage System in the Substation premises including supply of civil construction materials, Labour, Cement, brick, Form Work, Excavation etc, all complete as per detailed Technical Specification, approved Drawing & Scope of works.**	Mtr			
19.00	**Design, engineering and construction of approach road, footpath including supply of civil construction materials, labour, brick, stone, earth, bitumen and excavation, compaction etc. all complete as per detailed Technical Specification, approved Drawing & Scope of works.**				
19.01	width of approach road 3.75 m	Mtr			
19.02	width of footpath 1.5 m	Mtr			
B (Ib)	**Substation Electrical works**				
1.00	**Erection, filtration, testing and commissioning of 33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves by providing 2 sets of 50x8 mm GS Neutral Earthing strips with braided conductor on bushing end supported with insulators, OTI & WTI Indicators, Vent explosion plug, control wiring / cabling, cable supporting tray on the body, transformer wheels, bushing etc as per Technical Specification, approved Drawing & Scope of works**				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			
1.05	10.0 MVA with off load tap changer	No			
2.00	**Station Transformer Substation**				
2.01	Erection, testing and commissioning of 100 KVA, 11/0.4 kV, 3 ph, 50 Hz, ONAN, aluminium would outdoor type Distribution Transformer (Station Transformer) as per Technical Specification, approved Drawing & Scope of works	Set			
2.02	Providing and Erection, testing & commissioning of ACSR Rabbit Conductor for jumpering including PG Clamps, bi-metallic connectors, hardware on station transformer substation etc as per Technical Specification, approved Drawing & Scope of works	Km			
2.03	Erection, testing and Commissioning of 12 KV, 200 A, 3-pole AB Switch for station Transformer Substation as per Technical Specification, approved Drawing & Scope of works.	Set			
2.04	Erection, testing and commissioning of 9 KV,10 KA Distribution Class Lightening Arrester for station transformer substation as per technical specification, approved drawings and scope of work.	No			
2.05	Erection, testing and commissioning of 11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings	Set			
3.00	**Fabrication and Erection of Gantry structures using H-Beam, lattice structure (galvanised including hardware), MS channel, MS angle and MS flat of various sizes including MS nuts & bolts, by providing red oxide painting and aluminium painting etc as required as per Technical Specification, approved Drawing & Scope of works**	MT			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
4.00	Erection, testing and commissioning of 36kV, 630A, 25kA for 3 sec, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per approved drawings, technical specifications and scope of the work	Set			
5.00	Erection, testing and Commissioning of 30kV, 10kA, 1-ph Station Class Lightening Arresters, jumpering from bus bar, hardware etc as required, as per approved drawings, technical specifications and scope of the work.	No			
6.00	Erection, testing and Commissioning of 9kV, 10kA, 1-ph Station Class Lightening Arrester, jumpering from bus bar, hardware, etc as required as per approved drawings, technical specifications and scope of the work.	No			
7.00	Erection, testing and Commissioning of 36 kV, 1-Phase, 33kV/110 volt, Single core outdoor type Potential transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including control and power supply cabling and required accessories etc., complete as per as per approved drawings, technical specifications and scope of the work	Set			
8.00	Erection, wiring, testing and commissioning of 12 kV, 1250 A, 25kA, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 A and 300-150/5-5, outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, supporting structures, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per approved drawings, technical specifications and scope of the work,	Set			
9.00	Design, Engineering, providing foundation channel ISMC 75, erection, welding with MS angle of trench, wiring, control and power supply cabling in trench between field equipment and panels, testing and commissioning of 11kV indoor type control and relay panel consisting of A-meter, volt-meter, Relay & accessories complete as per specifications for transformer breaker as per approved drawings, technical specifications and scope of the work,				
9.01	Transformer Protection Breaker Panel	No			
9.02	Feeder Protection Breaker Panel	No			
10.00	Installation, initial charging, cabling, interconnection cabling, testing and commissioning of 24V, 80 AH Ni-Cd or Pb Acid battery (or as per state practice) on battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per as per approved drawings, technical specifications and scope of the work,	Set			
11.00	Design, engineering, construction of foundation, Installation, interconnection cabling, testing and commissioning of 24V, 40 Amp. Float-Cum-Boost Battery Charger (or as per state practice) with full wave rectification for 230 V, 1 phase, 50 Hz AC Input Supply as per approved drawings, technical specifications and scope of the work	No			
12.00	Erection, testing & commissioning of 415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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, by providing MS angle 50x50x6 mm structure, cement concrete foundation etc as per technical specifications, approved drawings and scope of works.	No			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
13.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare, by providing MS angle 50x50x6 mm structure, cement concrete foundation etc as per technical specifications, approved drawings and scope of works.**	Set			
14.00	**Excavation, laying, welding, refilling, earthing & grounding conductor as per Approved Electrical Layout for each sub-station and erection of riser up to various equipment/gantry structures as per Technical Specification, approved Drawing & Scope of works**				
14.01	75 x 8 mm MS flat for ground mat	MT			
14.02	50 x 6 mm Galvanized GS flat (risers)	MT			
14.03	25 x 3 mm Galvanized GI flat (risers)	MT			
14.04	25 mm dia GI Rod 3 m long for earth mat	MT			
15.00	**Excavation, erection, testing and commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode by providing test link, RCC pit, RCC cover, placed on GI frame, bentonite powder and other accessories complete as per approved drawings, technical specifications and scope of the work for power transformer neutral, station transformer neutral, lightening arresters direct earthing.**	Set			
16.00	**Erection, testing and commissioning of Bus Conductor (Panther Conductor) and droppers (Dog Conductor) including jumpers to various equipment using 11 KV and 33 KV insulators, GI Pin, GI Hardware fittings, PG Clamps, T-connectors etc as required as per approved drawings, specifications and scope of the work**	km			
17.00	**Erection, testing and commissioning of External electrification works of substation including area lighting by 4 No, 12m high steel tubular lighting masts, 2x250 watts LED flood light fittings on each mast, Junction boxes of the fittings, area lighting power distribution board, 2 nos. 3 Phase 63 Amp power receptacles, tube well power supply, etc as required by laying power cables in underground/above ground/trenches, construction of foundations for receptacles, distribution boards etc as required as per approved drawings, specifications and scope of work.**	Set			
18.00	**Supply, Erection, testing and commissioning of Fire Fighting Equipment comprises of Dry Chemical Powder Type (6 Kg) for control room; CO2 Type of 4.5Kg Capacity for Control Room and CO2 Type Trolley Mounted of 22.5 Kg Capacity for Switch Yard and 3 Nos. fire buckets of 25 ltr capacity filled with sand and mounted on 50x50x6 MS stand duly painted as per Technical Specification, approved Drawing & Scope of works**	SET			
19.00	**Erection, testing and commissioning of Internal electrification work in Substation Control room as per approved drawings, specifications and scope of work by installing, erection, testing and commissioning of fans, exhaust fans, fluorescent lighting, LED lamps, L&F, power points, wiring materials, Distribution Boards, Sub-distribution boards etc. as per Technical Specification, approved Drawing & Scope of works**	**Set**			
20.00	**Laying, testing and commissioning of Power Cables in cable trench/pipes/underground/overhead laying including their termination at indoor/outdoor terminals including supply of glands, lugs, cable ties, tagging etc as required as per Technical Specification, approved Drawing & Scope of works**				
20.01	3.5 Core 150 Sq. mm armored, stranded aluminium conductor, PVC insulated and PVC sheathed cable	MTR			
20.02	3.5 Core 70 Sq. mm armored, stranded aluminium conductor, PVC insulated and PVC sheathed cable	MTR			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
20.03	3.5 Core 35 Sq. mm armored, stranded aluminium conductor, PVC insulated and PVC sheathed cable	MTR			
20.04	2 Core 16 Sq. mm armored, stranded aluminium conductor, PVC insulated and PVC sheathed cable	MTR			
21.00	**Laying, testing and commissioning of Control Cables in cable trench/pipes/underground/overhead laying including their termination at indoor/outdoor terminals including supply of glands, lugs, cable ties, tagging etc as required as per Technical Specification, approved Drawing & Scope of works**				
21.01	2 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
21.02	6 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
21.03	10 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
B (II)	**Feeder Metering:**				
1.00	Erection, testing & commissioning of 33 KV Feeder Metering at 33/11 kV substation using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set			
2.00	Erection, testing & commissioning of 11 KV Feeder Metering at 33/11 kV substation using 11 kV/110 V, 3 ph 4 wire CT ratio 300-150/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph 4 w 110 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, danger board, GI earth wire etc as per specification, drawing & scope of works	Set			
B (III)	**11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**				
1.00	ERECTION, TESTING & COMMISSIONING OF CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set			
2.00	ERECTION, TESTING & COMMISSIONING OF CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			
3.00	ERECTION, TESTING & COMMISSIONING OF CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			

Installation/Erection Charges

B	33/11 KV Grid Substation works				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
B (IV)	33/11 KV Grid Substation works: Fully outdoor type				
1.00	Erection, testing and commissioning of 36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 200-100/1-1 Amps outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs)], Jumpers, earthing, supporting structures, maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per Technical Specification, approved Drawing & Scope of works	SET			
2.00	Design, Engineering providing and installation of ISMC 75 channel on top of indoor trench, erection of panels on ISMC 75 channels, welding, testing and commissioning of 33kV indoor Control & Relay panel along with E/F & O/C relays, control and power supply cabling in trench between field equipment and panels, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, technical specifications and scope of the work for controlling:				
2.01	33 kV feeder VCB with Static Tri-Vector Energy Meter etc	No			
2.02	33 kV Power transformer VCB with Static Tri-Vector Energy Meter,	No			
B (V)	33/11 KV Grid Substation works: Partly outdoor type				
1.00	Erection of 12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker and indoor control panel by providing ISMC 100 channel, levelling, alignment and welding on existing cable trench in control room. Erection, testing & commissioning of indoor VCB panel including 3 Nos indoor type Current Transformer, Potential Transformer, indoor mounting type control panel, by providing control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relay & accessories complete for following arrangements and protection as per approved drawings, technical specifications and scope of the work. :				
1.01	Transformer Protection	Set			
1.02	Feeder Protection	Set			
1.03	Bus coupler	Set			
2.00	Laying, erection, termination using indoor & outdoor termination kit, 11KV XLPE, Power armored cables of following sizes as per technical specifications, approved drawings and scope of works. :				
2.01	3Cx300 sqmm	km			
2.02	3Cx240 sqmm	km			
2.03	3Cx35 sqmm	km			
	Total				
	% discount, if any: _____				

Installation/Erection Charges

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

All prices in Indian Rupees

C	Erection, testing and Commissioning of New 11 KV lines:				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.00	**Survey, route alignment & pole spotting, preparation of survey report and uploading in the web portal after approval of Project Manager**	Km			
2.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
4.00	**Excavation of pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
4.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
4.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
4.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
4.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)				
5.00	**Erection of following types of poles for 11 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**				
5.01	8 m/140 Kgs PCC Poles with RCC Base plate/pad including refilling by brick ballast/ stone bolder as required - (state practices of PCC pole and base plate/stone to be used)	No			
5.02	8 m/140 Kgs PCC Poles with RCC Base plate/pad - Cement concreting 0.5 cmt	No			
5.03	13 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
5.04	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
5.05	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.65 cmt	No			
5.06	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
6.00	**Erection, testing & commissioning of pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and MS nuts, bolts & washers including painting by red oxide & aluminium paint as per technical specification, approved drawings and scope of work**	MT			
7.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
7.01	Excavation, erection, testing & commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, Charcoal, Salt and other accessories complete	Set			
7.02	Excavation, erection, testing & commissioning of Spike Earthing 20mm solid Rod	Set			
7.03	Excavation, erection, testing & commissioning of Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			

Installation/Erection Charges

C	Erection, testing and Commissioning of New 11 KV lines:				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
7.04	Erection of 8 SWG GI Coil 115 tonnes (1.85 kg)	No			
7.05	Erection of 8 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
7.06	Erection of 6 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
8.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
8.01	Normal soil	No			
8.02	Soft rock soil where blasting is not required	No			
8.03	Hard rock soil where blasting is required	No			
9.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works**	Set			
10.00	**Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**				
10.01	11 kV Pin insulator with GI pin	Set			
10.02	11 kV Disc insulator with strain hardware	Set			
11.00	**Paying out, tensioning, binding of conductor and tightening of stays and stringing, testing and commissioning of ACSR Conductor of following sizes including jointing sleeves, helical formed fittings, jumpering and by providing & erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications**				
11.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km			
11.02	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit	km			
11.03	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon	km			
11.04	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog				
12.00	**Erection, Testing and Commissioning of 11 kV AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
13.00	**ERECTION, TESTING & COMMISSIONING OF 11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx185 Sqmm XLPE Armoured Cable (0.3 km each) , USING 150MM DIA GI PIPES, OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, LUGS, 4 Nos GI 3-METERS LONG EARTHING PIPE, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES (200mm dia, 10 mtrs), 11 KV STATION TYPE LIGHTENING ARRESTORS (6 NOS.), ETC AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, APPROVED DRAWINGS AND SCOPE OF THE WORK**	Set			
14.00	**ERECTION, TESTING & COMMISSIONING of 11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx300 Sqmm XLPE Armoured Cable (0.3 km each) , USING 150MM DIA GI PIPES, OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, LUGS, 4 Nos GI 3-METERS LONG EARTHING PIPE, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES (200mm dia, 10 mtrs), 11 KV STATION TYPE LIGHTENING ARRESTORS (6 NOS.), ETC AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, APPROVED DRAWINGS AND SCOPE OF THE WORK**	Set			
	Total				
	% discount, if any:				

Schedule-3 (4/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

All prices in Indian Rupees

D	Erection, Testing and Commissioning of new Distribution Transformer Substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
1.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Excavation of pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)				
4.00	**Erection of following types of poles for 11/0.4 KV Distribution transformer substation by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) etc as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 Kgs PCC Poles with RCC Base plate/pad - Cement concreting 0.5 cmt	No			
4.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
4.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
4.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.65 cmt	No			
4.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
5.01	Normal soil	No			
5.02	Soft rock soil where blasting is not required	No			
5.03	Hard rock soil where blasting is required	No			
6.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works**	Set			

D	Erection, Testing and Commissioning of new Distribution Transformer Substations				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
7.00	**Erection, testing, commissioning of Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) and MS nuts, bolts & washers including painting by red oxide & aluminium as per technical specification, approved drawings and scope of work.**	MT			
8.00	**Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**				
8.01	11 kV Pin insulator with GI pin	Set			
8.02	11 kV Disc insulator with strain hardware	Set			
9.00	**Erection, Testing and Commissioning of Distribution Transformer with all accessories as per scope of work, approved drawings and specifications:**				
9.01	11/0.230 kV Distribution Transformer Substation 10 KVA 1 Phase Aluminium wound DTR	No			
9.02	11/0.230 kV Distribution Transformer Substation 16 KVA 1 Phase Aluminium wound DTR	No			
9.03	11/0.4 KV Distribution Transformer 16 KVA 3 phase Aluminium wound DTR	No			
9.04	11/0.4 KV Distribution Transformer 25 KVA 3 phase Aluminium wound DTR	No			
9.05	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
9.06	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
9.07	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
9.08	11/0.4 KV Distribution Transformer 315 KVA 3 phase Copper wound DTR	No			
10.00	**Erection, testing and Commissioning of Outdoor mounting type Distribution box made of MS sheet of thickness not less than 1.8 mm, dust and moisture vermin, weather proof with degree of protection IP 33 as per IS 13947 with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, non magnetic 4 mm thick gland plate, double compression brass cable glands, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
10.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering				
10.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No			
10.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No			
10.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No			
10.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No			
10.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No			
10.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No			
10.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No			
11.00	**Erection, testing and Commissioning of 3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161, making earth grid using 50x6mm GI Flat and riser and connecting risers to various equipment as per scope of work, approved drawings and technical specifications**	Set			
12.00	**Erection, testing and commissioning of 8 SWG GI wires as per Scope of work, technical specification and approved drawings**	MT			
13.00	**Erection, testing and Commissioning of 1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**				
13.01	1Cx16 sqmm aluminium conductor cable	km			
13.02	1CX35 sqmm aluminium conductor cable	km			
13.03	1CX50 sqmm aluminium conductor cable	km			
13.04	1Cx70 sqmm aluminium conductor cable	km			
13.05	1Cx150 sqmm aluminium conductor cable	km			
13.06	1Cx300 sqmm aluminium conductor cable	km			

D	**Erection, Testing and Commissioning of new Distribution Transformer Substations**				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
14.00	**Erection, testing and commissioning of ACSR Rabbit Conductor for jumpering including PG Clamps, bi-metallic connectors, hardware etc as per Technical Specification, approved Drawing & Scope of works**	Km			
15.00	**Erection, testing and Commissioning of 12 KV, 200 A, 3-pole AB Switch for Distribution Transformer Substation as per Technical Specification, approved Drawing & Scope of works**	Sets			
16.00	**Erection, testing and commissioning of 9 KV, 10 KA Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	Set			
17.00	**Erection, testing and commissioning of 11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Sets			
18.00	**Erection, testing and commissioning of Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
18.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
18.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
18.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
18.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No			
	Total				
	% discount, if any:				

Installation/Erection Charges

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

All prices in Indian Rupees

E	LT Line				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
1.00	**Survey, route alignment & pole spotting, preparation of survey report and uploading in the web portal after approval of Project Manager**	Km			
2.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
2.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.04	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
3.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.04	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
4.00	**Excavation of pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
4.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
4.03	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
4.04	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
5.00	**Erection of following types of poles for LT overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**				
5.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice) - Cement concreting 0.5 cmt	No			
5.02	8 m/140 kgs PCC Poles - (PCC Pole as per state practice) - refilling with bolder & earth	No			
5.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
5.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.65 cmt	No			
5.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
6.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
6.01	Normal soil	No			
6.02	Soft rock soil where blasting is not required	No			
6.03	Hard rock soil where blasting is required	No			
7.00	**Erection of galvanised Stay Set with 50x8mm stay clamp, stay guy insulator, nut bolts, 2 Nos turn buckle's, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required by providing 0.2 cum cement concrete as per approved drawings, technical specification and scope of work**	No			
8.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
8.01	Excavation, erection, testing & commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, bentonite powder and other accessories complete	Set			
8.02	Excavation, erection, testing & commissioning of Spike Earthing 20mm solid Rod	Set			
8.03	Excavation, erection, testing & commissioning of Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
8.04	Erection testing and commissioning of 8 SWG GI wire for earthing including GI nuts, bolts & washers	MT			

Installation/Erection Charges

E	LT Line				
Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
9.00	**Erection, testing and Commissioning of LT line with following arrangements using areal bunched XLPE cable including tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, etc as required as per technical specification, approved drawings and scope of work:**				
9.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	km			
9.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	km			
9.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	km			
9.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	km			
9.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	km			
9.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	km			
10.00	**Single phase service connection by providing Thermo-plastic insulated weatherproof cable of size 2 Core 2.5 sqm aluminium conductor (up to 35m length of house hold from LT line), 10 SWG GI tension wire, 20 mm GI Pipe medium class to accept service cable at consumer residence, single phase whole current 30A temper proof electronic energy meter, 2 Nos. piano type ISI marked 250V/5A switch. 1 ISI mark 250V/5A socket, 250V/5A ISI marked holder, 144-288V, upto 9 watts, 710 lumen LED lamp 250V,5A capacity ISI mark lamp holder, Internal wiring using 1.5 sqm copper multistrands PVC insulated ISI marked cable, 250V/16A switch cartridge fuse assembly of ISI marked and a 10mm dia earth terminal point, internal wiring in ISI marked 12mm dia PVC rigid pipes including its clamps, fittings and fixtures as required as per REC drawing and Specifications. Earth point would be connected with existing earthing potential maintained by DISCOM through 10 SWG GI wire.**	No			
11.00	**Providing and installation of DDUGJY sign Board as per scope of work, approved drawings and technical specification,**				
11.01	Village Electrification Board and new 33/11 kV substation board of size 4ftx3ft by providing board, mounting angles, excavation, cement concreting foundation, painting etc as required	No			
11.02	Distribution Transformer Electrification Board with clamp - mounting on substation structure	No			
	Total				
	% discount, if any:				

Schedule-3 (6/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges : All prices in Indian Rupees

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
F(I)	**Augmentation & Renovation of 11/0.4 kV Distribution Transformer Substation**				
1.00	**Erection, testing & commissioning of augmented/new Distribution Transformer by reconnecting 11 kV, LT, earthing circuit providing suitable lugs, bi-metallic clamps including supporting structure etc as required as per technical specifications, approved drawings and scope of the work. Replaced material and DTR to be deposited in Employer's store:**				
1.01	New 63 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 25KVA old DTR),	No			
1.02	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No			
1.03	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No			
1.04	New 315 KVA (11/0.4 kV) Copper wound DTR (Replacing 200 KVA old DTR),	No			
2.00	**Erection, testing & commissioning of new 1.1 KV XLPE Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line by replacing old cables and by bunching & providing cable ties and cable lugs, double compression brass glands, etc as per Scope of work, technical specification and approved drawings. Replaced cables to be deposited in Employer's store.**				
2.01	1Cx16 sqmm aluminium conductor cable	km			
2.02	1CX35 sqmm aluminium conductor cable	km			
2.03	1CX50 sqmm aluminium conductor cable	km			
2.04	1Cx70 sqmm aluminium conductor cable	km			
2.05	1Cx150 sqmm aluminium conductor cable	km			
2.06	1Cx300 sqmm aluminium conductor cable	km			
3.00	**Erection, testing & commissioning of new outdoor mounting type Distribution box made of MS sheet of thickness not less than 1.8 mm, dust and moisture vermin, weather proof with degree of protection IP 33 as per IS 13947 with suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, non magnetic 4 mm thick gland plate, double compression brass cable glands, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
3.01	1 Ph 10 KVA transformer 45 A SPN MCCB (incomer) and 2 Nos. 32 A SP MCCB (outgoing) with metering	No			
3.02	1 Ph 16 KVA transformer 80 A SPN MCCB (incomer) and 2 Nos. 50 A SP MCCB (outgoing) with metering	No			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
3.03	3 Ph 16 KVA transformer 25 A TPN MCCB (incomer) and 6 Nos. 16 A SP MCCB (outgoing) with metering	No			
3.04	3 Ph 25 KVA transformer 40 A TPN MCCB (incomer) and 6 Nos. 25 A SP MCCB (outgoing) with metering	No			
3.05	3 Ph 63 KVA Transformer having 200 A TPN isolator, 100 A HRC fuse (incomer) and 6 Nos. 60 A SP MCCB (outgoing)	No			
3.06	3 Ph 100 KVA Transformer having 200 A TPN isolator, 160A HRC fuse (incomer) and 6 Nos. 90 A SP MCCB (outgoing)	No			
3.07	3 Ph 200 KVA Transformer having 600 A TPN isolator, 315 A HRC fuse (incomer) and 9 Nos. 120 A SP MCCB (outgoing)	No			
3.08	3 Ph 315 KVA Transformer having 600 A TPN isolator, 500 A HRC fuse (incomer) and 12 Nos. 120 A SP MCCB (outgoing)	No			
4.00	**Renovation & commissioning of DTR substation Earthing as per technical specification, approved drawings and scope of work:**				
4.01	Revamping of Distribution Transformer substation earthing by using 40 mm dia 3 meter long GI pipe earthing, using 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment, using 200 kg bentonite powder of substation in normal soil	No			
4.02	Revamping of Distribution Transformer substation earthing by using 3 Nos. chemical rod earthing including electrode & chemical, 50x6 mm GS flat for earth mat and riser and 25x3mm GS flat for connecting equipment in hard rock soil	No			
5.00	**Erection, testing & commissioning of new Pre-fabricated steel items like DC cross arm (100x50x6 mm), back clamps (65x8 mm), pole clamp (65x8 mm), DO mounting channel (100x50x6 mm), transformer mounting channel (100x50x6 mm), transformer clamping set (50x50x6 mm), transformer belting set (50x50x6 mm) and by providing red oxide & aluminium painting as per technical specification, approved drawings and scope of work**	MT			
6.00	**Erection, testing & commissioning of new MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.**	MT			
7.00	**Erection, testing & commissioning of new Polymer/ Porcelain Insulators with hardware fittings, hardware etc as required as per technical specification, approved drawings and scope of work.**				
7.01	11 KV, Disc Insulator with suitable hardware fittings	Set			
7.02	11 KV, Post Insulators / Pin Insulators with hardware fittings	Set			
8.00	**Erection, testing & commissioning of new 11 KV Distribution Class Lightening Arrester for DT as per technical specification, approved drawings and scope of work.**	No			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
9.00	**Erection, testing & commissioning of new 11 kV, 3-ph, 200 A, 3 Pin type, Vertical Mounting type, Gang Operated, AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Sets			
10.00	**Renovation of existing Distribution Transformer by providing and topping up of transformer oil including replacement of suitable silica gel breather of existing type & size as per technical specifications, approved drawings and scope of works. .**	ltr			
11.00	**Erection, testing & commissioning of 11kV, 200 A, 3-ph Drop Out fuse assembly including insulators and mounting arrangements, jumpering from bus bar, hardware, etc as required as per technical specifications, approved drawings and scope of the works.**	Set			
F(II)	**Augmentation of 33 KV lines**				
1.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
1.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
1.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
2.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
2.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
3.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr	No			
3.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980)	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
4.00	**Erection of following types of additional poles matching with existing line supports by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering excluding cement concrete foundation using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) etc as per scope of work, approved drawings and specifications:**				
4.01	9.1 meter long /280 KG PCC Poles (PCC Pole as per state practice) - cement concreting (0.5 cmt)	No			
4.02	13 m long H-Beam 152x152 mm 37.1 kg/mtr - cement concreting (0.65 cmt)	No			
4.03	11 M long steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - cement concreting (0.65 cmt)	No			
4.04	13 M long steel Tubular poles with welded steel base plate of Designation 540 SP 72 (IS 2713, Pt I, II, III 1980) - cement concreting (0.65 cmt)	No			
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
5.01	Normal soil	No			
5.02	Soft rock soil where blasting is not required	No			
5.03	Hard rock soil where blasting is required	No			
6.00	**Erection of complete stay set with GI stay wire (7x4.00 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.3 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set			
7.00	**Erection, testing and commissioning of 33 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**				
7.01	33 kV Pin insulator with GI pin	Set			
7.02	33 kV Disc insulator with strain hardware (set of 3, 11 KV disc insulators)	Set			
8.00	**Erection, testing & commissioning of new Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and providing red oxide & aluminium painting as per technical specification, approved drawings and scope of work.**	MT			
9.00	**Dismantling of existing overhead line conductor and fittings, depositing the dismantled material to employer's store and paying out & stringing of new ACSR conductor of following sizes by providing jointing sleeves, binding wire & tape & helical formed fittings etc as required as per technical specification, approved drawings and scope of work**				
9.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog replacing existing racoon conductor	km			
9.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon replacing existing rabbit/weasel conductor	km			
9.03	30/3.00 + 7/3.00 mm (200 mm² Al. Area) - Panther replacing existing dog/racoon conductor	km			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
10.00	**Augmentation of 3 phase 33 kV line using new Insulator and hardware as per technical specification, approved drawings and scope of work**				
10.01	33 KV polymer/porcelain Disc insulator 45 KN along with suitable hardware fittings	Set			
10.02	33 KV Polymer /porcelain Pin Insulators 10 KN with GI PIN	Set			
11.00	**Erection, testing & commissioning of earthing as per technical specificatons, approved drawings and scope of work.**				
11.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
11.02	GI Earthing spike made of 20mm solid Rod	Set			
11.03	Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
12.00	**Erection, testing & commissioning of new 33kV, 600A, 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 technical specifications, scope of works and approved drawings**	Set			
13.00	**Erection, testing & commissioning of new GI wire for earthing and guarding as per technical specification, approved drawings and scope of work.**				
13.01	6 SWG	MT			
13.02	8 SWG	MT			
F(III)	**Augmentation of 11 KV lines**				
1.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
2.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
4.00	**Erection of following types of poles for 11 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering excluding cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 Kgs PCC Poles with RCC Base plate/pad including refilling by brick ballast/ stone bolder as required - (state practices of PCC pole and base plate/stone to be used)	No			
4.02	8 m/140 Kgs PCC Poles with RCC Base plate/pad including concreting as per scope of work, technical specifications and approved drawings.	No			
4.03	13 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
4.04	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
4.05	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.65 cmt	No			
4.06	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
5.01	Normal soil	No			
5.02	Soft rock soil where blasting is not required	No			
5.03	Hard rock soil where blasting is required	No			
6.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
7.00	**Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**				
7.01	11 kV Pin insulator with GI pin	Set			
7.02	11 kV Disc insulator with strain hardware	Set			
8.00	**Dismantling of existing overhead line conductor & fittings and depositing to Employer's store, Paying out, tensioning, binding of new conductor and tightening of stays and stringing, testing and commissioning of ACSR Conductor of following sizes including jointing sleeves, helical formed fittings, jumpering and by providing & erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications**				
8.01	6/3.35 + 1/3.35 mm (50 mm² Al. Area) - Rabbit by replacing existing weasel/squirrel condcutor	km			
8.02	6/4.09 + 1/4.09 mm (80 mm² Al. Area) - Racoon by replacing existing rabbit/weasel/squirel condcutor	km			
8.03	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog by replacing existing racoon/rabbit condcutor	km			
9.00	**Erection, Testing and Commissioning of 11 kV AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set			
10.00	**Erection, testing & commissioning of pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and MS nuts, bolts & washers including painting by red oxide & aluminium paint as per technical specification, approved drawings and scope of work.**	MT			
11.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**				
11.01	Excavation, erection, testing & commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plates on GI frame, Charcoal, Salt and other accessories complete	Set			
11.02	Excavation, erection, testing & commissioning of Spike Earthing 20mm solid Rod	Set			
11.03	Excavation, erection, testing & commissioning of Chemical rod earthing including electrode, chemical, with 2000mm long, 50 mm diameter GI pipe, GI Strip of 24x3mm miminum in hard rock locations only.	Set			
11.04	Erection of 8 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
11.05	Erection of 6 SWG GI wire for earthing and guarding by providing GI nut, bolts & washers, turn buckle etc	MT			
F(IV)	**Conversion of existing LT lines on bare conductor to Areal bunch XLPE cable**				
1.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
1.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
1.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
1.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
2.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
2.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
2.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of additional pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles - (PCC Pole as per state practice)	No			
3.02	13 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.04	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980)	No			
3.05	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
4.00	**Erection of following types of poles for LT overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering excluding cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 Kgs PCC Poles with RCC Base plate/pad including refilling by brick ballast/ stone bolder as required - (state practices of PCC pole and base plate/stone to be used)	No			
4.02	8 m/140 Kgs PCC Poles with RCC Base plate/pad including concreting as per scope of work, technical specifications and approved drawings.	No			
4.03	13 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
4.04	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
4.05	11 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 52 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.65 cmt	No			
4.06	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
5.01	Normal soil	No			
5.02	Soft rock soil where blasting is not required	No			
5.03	Hard rock soil where blasting is required	No			
6.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set			
7.00	**Removal of existing LT bare conductor line & fixtures, depositing to stores of employer and erection, testing & commissioning of new areal bunched XLPE cable,tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, spring loaded bus bar suitable for single phase and three phase systems etc. as required as per technical specification, approved drawings and scope of work:**				
7.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x16 SQ. MM.	Km			
7.02	AERIAL BUNCHED XLPE CABLE 3 X 35 SQ.MM.+1x35 SQ. MM.+1x16 SQ. MM.	Km			
7.03	AERIAL BUNCHED XLPE CABLE 3 X 25 SQ.MM.+1x35 SQ. MM.+ 1x16 SQ. MM.	Km			
7.04	AERIAL BUNCHED XLPE CABLE 3 X 16 SQ.MM. + 1x16 SQ. MM. +1x25 SQ. MM.	Km			
7.05	AERIAL BUNCHED XLPE CABLE 2 X 35 SQ.MM. + 1x16 SQ. MM.	Km			
7.06	AERIAL BUNCHED XLPE CABLE 2 X 25 SQ.MM. + 1x16 SQ. MM.	Km			
8.00	**Erection, testing & commissioning of earthing by inserting GI Earthing spike made of 20mm solid Rod as per approved drawings, scope of work and technical specifications**	Set			
9.00	**Erection of 8 SWG GI wire for earthing by providing GI nut, bolts & washers, turn buckle etc as per approved drawings, scope of work and technical specifications**	MT			
F (V)	**Augmentation of 33/11 KV Fully outdoor type substation**				
F (Va)	**Civil works: Design, supply of all material, T&P, labour etc for the following civil works complete as per Technical Specification, approved Drawing & Scope of works**				
1.00	**Soil Investigation & Contour Survey of Substation area**	PER S/S			
2.00	**Gravel filling in switchyard area excluding road and footpath**	Sq. m			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
3.00	**Design, engineering and construction of transformer foundation considering original equipment manufacturer prescription including excavation of pit, shuttering, reinforcement, cement concreting including providing and erecting guiding rail, wheel stopper etc as per Technical Specification, approved Drawing & Scope of works for following sizes of transformer:**				
3.01	1.60 MVA without tap changer	CMT			
3.02	3.15 MVA without tap changer	CMT			
3.03	5.00 MVA with off load tap changer	CMT			
3.04	8.00 MVA with off load tap changer	CMT			
3.05	10.0 MVA with off load tap changer	CMT			
4.00	**Design, engineering and construction of outdoor mounted Vacuume Circuit Breaker foundation considering original equipment manufacturer prescription including excavation of pit, shuttering and by providing reinforcement, cement concreting, painting etc as per Technical Specification, approved Drawing & Scope of works. Works also includes providing working platform for operation of breakers and painting**				
4.01	33 KV VCB	CMT			
4.02	11 KV VCB	CMT			
5.00	**Providing and Construction of outdoor gantry structure foundation and erection of gantry structure (PCC pole/H-Beam/lattice structure) including top muffing and its painting by excavation of pit and by providing shuttering, cement concreting (0.65 cmt per structure) etc as per Technical Specification, approved Drawing & Scope of works**	CMT			
6.00	**Design, engineering and construction of cement concrete Cable Trench of 0.5 Mtr wide, required depth, precast RCC Trench Cover, Water slop, cable supporting angles including Labour, Reinforcement Steel, MS Angles, Flats, Steel Frame Work, Excavation etc, all complete as per Technical Specification, approved Drawing & Scope of works**	R/Mtr			
F (Vb)	**Substation Electrical works**				
1.00	**Erection, filtration, testing and commissioning of 33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves by providing 2 sets of 50x8 mm GS Neutral Earthing strips with braided conductor on bushing end supported with insulators, OTI & WTI Indicators, Vent explosion plug, control wiring / cabling, cable supporting tray on the body, transformer wheels, bushing etc as per Technical Specification, approved Drawing & Scope of works**				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.05	10.0 MVA with off load tap changer	No			
2.00	**Fabrication and Erection of Gantry structures using MS channel, MS angle and MS flat of various sizes including MS nuts & bolts, by providing red oxide painting and aluminium painting etc as required as per Technical Specification, approved Drawing & Scope of works**	MT			
3.00	**Erection, testing and commissioning of 36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 200-100/1-1 Amps outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs)], Jumpers, earthing, supporting structures, maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per Technical Specification, approved Drawing & Scope of works**	SET			
4.00	**Design, Engineering providing and installation of ISMC 75 channel on top of indoor trench, erection of panels on ISMC 75 channels, welding, testing and commissioning of 33kV indoor Control & Relay panel along with E/F & O/C relays, control and power supply cabling in trench between field equipment and panels, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, technical specifications and scope of the work for controlling:**				
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter etc	No			
4.02	33 kV Power transformer VCB with Static Tri-Vector Energy Meter,	No			
5.00	**Erection, testing and commissioning of 36kV, 630A, 25kA for 3 sec, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per approved drawings, technical specifications and scope of the work**	Set			
6.00	**Erection, testing and Commissioning of 30kV, 10kA, 1-ph Station Class Lightening Arresters with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required, as per approved drawings, technical specifications and scope of the work,**	No			
7.00	**Erection, testing and Commissioning of 9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per approved drawings, technical specifications and scope of the work.**	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
8.00	**Erection, testing and Commissioning of 36 kV, 1-Phase, 33kV/110 volt, Single core outdoor type Potential transformer along with junction box (1 no junction box for 3 no of 1-phase PTs) including control and power supply cabling, earthing connection using 50x6mm GS flat and required accessories etc., complete as per as per approved drawings, technical specifications and scope of the work**	Set			
9.00	**Erection, wiring, testing and commissioning of 12 kV, 1250 A, 25kA, 3-ph, Outdoor type Vacuum Circuit breaker along with 12 kV, 1-Phase, 300-150/5-5 A and 300-150/5-5, outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs), Jumpers, earthing, supporting structures, permanent maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per approved drawings, technical specifications and scope of the work,**	Set			
10.00	**Design, Engineering, providing foundation channel ISMC 75, erection, welding with MS angle of trench, wiring, control and power supply cabling in trench between field equipment and panels, testing and commissioning of 11kV indoor type control and relay panel consisting of A-meter, volt-meter, Relay & accessories complete as per specifications for transformer breaker as per approved drawings, technical specifications and scope of the work,**	Set			
10.01	Transformer Protection Breaker Panel	No			
10.02	Feeder Protection Breaker Panel	No			
11.00	**Installation, initial charging, cabling, interconnection cabling, testing and commissioning of 24V, 80 AH (or as per state practice) Ni-Cd or Pb Acid battery on battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per as per approved drawings, technical specifications and scope of the work,**	Set			
12.00	**Design, engineering, construction of foundation, Installation, interconnection cabling, testing and commissioning of 24V, 40 Amp. (or as per state practice) Float-Cum-Boost Battery Charger with full wave rectification for 220 V, 1 phase, 50 Hz AC Input Supply as per approved drawings, technical specifications and scope of the work**	No			
13.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
14.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works**	Set			
15.00	**Excavation, laying, welding, refilling, earthing & grounding conductor as per Approved Electrical Layout for each sub-station and erection of riser up to various equipment/gantry structures as per Technical Specification, approved Drawing & Scope of works**	Set			
15.01	75 x 8 mm MS flat for ground mat	MT			
15.02	50 x 6 mm Galvanized GS flat (risers)	MT			
15.03	25 x 3 mm Galvanized GI flat (risers)	MT			
15.04	25 mm dia GI Rod 3 m long for earth mat	MT			
16.00	**Excavation, erection, testing and commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode by providing test link, RCC pit, RCC cover, placed on GI frame, bentonite powder and other accessories complete as per approved drawings, technical specifications and scope of the work for power transformer neutral, station transformer neutral, lightening arresters direct earthing.**	Set			
17.00	**Erection, testing and commissioning of Bus Conductor (Panther Conductor) and droppers (dog conductor) bus jumpers to various equipment using 11 KV and 33 KV insulators, GI Pin, GI Hardware fittings, PG Clamps, T-connectors etc as required as per approved drawings, specifications and scope of the work**	km			
18.00	**Excavation, foundation, Erection, testing and commissioning through erection of support, Capacitor bank equipment in the substation yard, erection, testing and commissioning of VCB, VCB Panel, Control and power supply cabling, Earthing, etc as required as per approved drawings, specifications and scope of work**				
18.01	600 KVAr	Set			
18.02	1200 KVAr	Set			
18.03	1500 KVAr				
19.00	**Laying, testing and commissioning of Control Cables in cable trench/pipes/underground/overhead laying including their termination at indoor/outdoor terminals including supply of glands, lugs, cable ties, etc as required as per Technical Specification, approved Drawing & Scope of works**				
19.01	2 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
19.02	6 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
19.03	10 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
F (VI)	**Augmentation of 33/11 KV partly outdoor type substation**				
F(VIa)	**Civil works: Design, supply of all material, T&P, labour etc for the following civil works complete as per Technical Specification, approved Drawing & Scope of works**				
1.00	**Gravel filling in switchyard area excluding road and footpath as per Technical Specification, approved Drawing & Scope of works.**	Sq. m			
2.00	**Design, engineering and construction of transformer foundation considering original equipment manufacturer prescription including excavation of pit, shuttering, reinforcement, cement concreting including providing and erecting guiding rail, wheel stopper etc as per Technical Specification, approved Drawing & Scope of works for following sizes of transformer:**				
2.01	1.60 MVA without tap changer	CMT			
2.02	3.15 MVA without tap changer	CMT			
2.03	5.00 MVA with off load tap changer	CMT			
2.04	8.00 MVA with off load tap changer	CMT			
2.05	10.0 MVA with off load tap changer	CMT			
3.00	**Design, engineering and construction of outdoor mounted Vacuume Circuit Breaker foundation considering original equipment manufacturer prescription including excavation of pit, shuttering and by providing reinforcement, cement concreting, painting etc as per Technical Specification, approved Drawing & Scope of works. Works also includes providing working platform for operation of breakers and painting**				
3.01	33 KV VCB	CMT			
3.02	11 KV VCB	CMT			
4.00	**Providing and Construction of outdoor gantry structure foundation and erection of gantry structure (PCC pole/H-Beam/lattice structure) including top muffing and its painting by excavation of pit and by providing shuttering, cement concreting (0.65 cmt per structure) etc as per Technical Specification, approved Drawing & Scope of works**	CMT			
5.00	**Design, engineering and construction of cement concrete Cable Trench of 0.5 Mtr wide, required depth, precast RCC Trench Cover, Water slop, cable supporting angles including Labour, Reinforcement Steel, MS Angles, Flats, Steel Frame Work, Excavation etc, all complete as per Technical Specification, approved Drawing & Scope of works**	R/Mtr			
F(VIb)	**Substation Electrical works**				

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.00	**Erection, filtration, testing and commissioning of 33/11 kV, 3 ph, 50 Hz, ONAN, Cu Wound, Outdoor Conventional type Power Transformer along with transformer oil, Buchholtz relay, breather, OTI & WTI, Marshalling Box, Conservator tank, oil level indicator, valves by providing 2 sets of 50x8 mm GS Neutral Earthing strips with braided conductor on bushing end supported with insulators, OTI & WTI Indicators, Vent explosion plug, control wiring / cabling, cable supporting tray on the body, transformer wheels, bushing etc as per Technical Specification, approved Drawing & Scope of works**				
1.01	1.60 MVA without tap changer	No			
1.02	3.15 MVA without tap changer	No			
1.03	5.00 MVA with off load tap changer	No			
1.04	8.00 MVA with off load tap changer	No			
1.05	10.0 MVA with off load tap changer	No			
2.00	**Fabrication and Erection of Gantry structures using MS channel, MS angle and MS flat of various sizes including MS nuts & bolts, by providing red oxide painting and aluminium painting etc as required as per Technical Specification, approved Drawing & Scope of works**	MT			
3.00	**Erection, testing and commissioning of 36kV, 1250A, 25kA for 3 seconds, 3-ph, Outdoor type Vacuum Circuit breaker along with 36kV, 1-Phase, 200-100/1-1 Amps outdoor type Current Transformer along with junction box (1 no junction box for 3 no of 1-phase CTs)], Jumpers, earthing, supporting structures, maintenance platform, marshalling box, control cabling between VCB and indoor control panel and required accessories complete as per Technical Specification, approved Drawing & Scope of works**	SET			
4.00	**Design, Engineering providing and installation of ISMC 75 channel on top of indoor trench, erection of panels on ISMC 75 channels, welding, testing and commissioning of 33kV indoor Control & Relay panel along with E/F & O/C relays, control and power supply cabling in trench between field equipment and panels, Mimic Diagram, Voltmeter, Ammeter, Annunciation Windows with annunciation relays and other components etc as per approved drawings, technical specifications and scope of the work for controlling:**				
4.01	33 kV feeder VCB with Static Tri-Vector Energy Meter etc	No			
4.02	33 kV Power transformer VCB with Static Tri-Vector Energy Meter,	No			
5.00	**Erection, testing and commissioning of 36kV, 630A, 25kA for 3 sec, 3-ph double break center rotating type (DBCR), Gang Operated, isolator along with Support Insulators, Operating Mechanism, Base Channel down Pipe and all required accessories complete as per approved drawings, technical specifications and scope of the work**	Set			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
6.00	**Erection, testing and Commissioning of 30kV, 10kA, 1-ph Station Class Lightening Arresters with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware etc as required, as per approved drawings, technical specifications and scope of the work,**	No			
7.00	**Erection, testing and Commissioning of 9kV, 10kA, 1-ph Station Class Lightening Arrester with mounting platform, jumpering from bus bar, earthing connection using 50x6mm GS flat, hardware, etc as required as per approved drawings, technical specifications and scope of the work.**	No			
8.00	**Erection of 12 kV, 1250 A, 25kA for 3 seconds, 3-ph, indoor type Vacuum Circuit breaker and indoor control panel by providing ISMC 100 channel, levelling, alignment and welding on existing cable trench in control room. Erection, testing & commissioning of indoor VCB panel including 3 Nos indoor type Current Transformer, Potential Transformer, indoor mounting type control panel, by providing control cabling between VCB and indoor control panel and required accessories, bi-metallic clamps, A-meter, volt-meter, Relay & accessories complete for following arrangements and protection as per approved drawings, technical specifications and scope of the work. :**				
8.01	Transformer Protection	Set			
8.02	Feeder Protection	Set			
8.03	Bus coupler	Set			
+	**Installation, initial charging, cabling, interconnection cabling, testing and commissioning of 24V, 80 AH (or as per state practice) Ni-Cd or Pb Acid battery on battery stand made of teak wood duly painted with anti rusting paint, battery insulators, inter-battery wiring using 30 sqmm copper single core multi strand cable, terminal connectors, & all other accessories and connectors as per as per approved drawings, technical specifications and scope of the work,**	Set			
10.00	**Design, engineering, construction of foundation, Installation, interconnection cabling, testing and commissioning of 24V, 40 Amp. (or as per state practice) Float-Cum-Boost Battery Charger with full wave rectification for 220 V, 1 phase, 50 Hz AC Input Supply as per approved drawings, technical specifications and scope of the work**	No			
11.00	**415 V, ACDB along with three phase-neutral voltmeter, three phase ammeter and Selector switches, 200 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.**	No			

F Augmentation, Renovation and Modernisation of existing lines and substations

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
12.00	**24 Volts (or voltage as per state practices) Direct Curent Distribution Board (DCDB) Indoor floor mounted comprising of 2P/100A DC Switch Fuse Unit as incommer and 2P/40A switch fuse units for each individual outgoing circuit of indoor control panels, indoor/outdoor VCB panels, control room emergency DC lighting including 20% as spare as per technical specifications, approved drawings and scope of works**	Set			
13.00	**Excavation, laying, welding, refilling, earthing & grounding conductor as per Approved Electrical Layout for each sub-station and erection of riser up to various equipment/gantry structures as per Technical Specification, approved Drawing & Scope of works**	Set			
13.01	75 x 8 mm MS flat for ground mat	MT			
13.02	50 x 6 mm Galvanized GS flat (risers)	MT			
13.03	25 x 3 mm Galvanized GI flat (risers)	MT			
13.04	25 mm dia GI Rod 3 m long for earth mat	MT			
14.00	**Excavation, erection, testing and commissioning of 40 mm dia., 3000 mm long GI pipe earth electrode by providing test link, RCC pit, RCC cover, placed on GI frame, bentonite powder and other accessories complete as per approved drawings, technical specifications and scope of the work for power transformer neutral, station transformer neutral, lightening arresters direct earthing.**	Set			
15.00	**Erection, testing and commissioning of Bus Conductor (Panther Conductor) and droppers (dog conductor) bus jumpers to various equipment using 11 KV and 33 KV insulators, GI Pin, GI Hardware fittings, PG Clamps, T-connectors etc as required as per approved drawings, specifications and scope of the work**	km			
16.00	**Laying, testing and commissioning of Control Cables in cable trench/pipes/underground/overhead laying including their termination at indoor/outdoor terminals including supply of glands, lugs, cable ties, etc as required as per Technical Specification, approved Drawing & Scope of works**				
16.01	2 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
16.02	6 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
16.03	10 Core 2.5 sqmm armored, stranded copper conductor, PVC insulated and PVC sheathed cable	MTR			
17.00	**Laying, erection, termination using indoor & outdoor termination kit, 11KV XLPE, Power armored cables of following sizes as per technical specifications, approved drawings and scope of works.:**				
17.01	3Cx300 sqmm	km			
17.02	3Cx240 sqmm	km			
17.03	3Cx35 sqmm	km			

F	Augmentation, Renovation and Modernisation of existing lines and substations				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
F(VII)	**Erection, Testing & Commissioning of 11 KV CAPACITOR BANK INCLUDING MOUNTING STEEL GALVANISED STRUCTURE AND ACCESSORIES AS REQUIRED AS PER DETAILED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS IN FOLLOWING ARRANGEMENTS:**				
1.00	CAPACITOR BANK 600 KVAR - FIXED TYPE SUBSTATION MOUNTED WITH CAPACITOR SWITCH AND ASSOCIATED ACCESSORIES	Set			
2.00	CAPACITOR BANK 1200 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			
3.00	CAPACITOR BANK 1500 KVAR - AUTO TYPE SUBSTATION MOUNTED WITH ALL ASSOCIATED EQUIPMENT LIKE 11 KV VCB, C&R PANEL, CTs, 11 KV 200A ISOLATORS WITH EARTH SWITCH, RVT, 11 KV STATION CLASS LA, RED OXIDE / ALUMINIUM PAINTING, 2.5 SQ.MM. PVC ARMOURED STRANDED COPPER CONTROL CABLES, METERING EQUIPMENT WITH ENERGY METER, PROTECTION CIRCUIT AND EQUIPMENT, EARTHING, 16 MM DIA MS NUTS & BOLTS ETC AS REQUIRED AS PER APPROVED TECHNICAL SPECIFICATIONS, DRAWING AND SCOPE OF WORKS	Set			
	Total				
	% discount, if any:				

Schedule-3 (7/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

All prices in Indian Rupees

G HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.00	**Survey, route alignment & pole spotting, preparation of survey report and uploading in the web portal after approval of Project Manager**	Km			
2.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**				
2.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
2.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
2.03	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
3.00	**Excavation of pole pit (of depth 1/6th of pole length) in soft rock where blasting is not required as per scope of work, approved drawings and specifications:**				
3.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
3.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
3.03	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
4.00	**Excavation of pole pit (of depth 1/6th of pole length) in hard rock where blasting is required as per scope of work, approved drawings and specifications:**				
4.01	8 m/140 kgs PCC Poles (PCC Pole as per state practice)	No			
4.02	11 m long H-Beam 152x152 mm, 37.1 kg/mtr	No			
4.03	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980)	No			
5.00	**Erection of following types of poles for 11 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**				
5.01	8 m/140 Kgs PCC Poles with RCC Base plate/pad including refilling by brick ballast/ stone bolder as required - (state practices of PCC pole and base plate/stone to be used)	No			
5.02	8 m/140 Kgs PCC Poles with RCC Base plate/pad - Cement concreting 0.5 cmt	No			
5.04	11 m long H-Beam 152x152 mm, 37.1 kg/mtr - Cement concreting 0.65 cmt	No			
5.06	9 M long Steel Tubular poles with welded steel base plate of Designation 540 SP 28 (IS 2713, Pt I, II, III 1980) - Cement concreting 0.5 cmt	No			
6.00	**Erection, testing & commissioning of Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure, DO mounting channel, Transformer clamping set, bracket, clamps, cross bracings, bracings, strain clamp, guarding channels, back clamp and MS nut, bolts & washers etc including red oxide and aluminium painting as per technical specification, approved drawings and scope of work.**	MT			
7.00	**Erection, testing & commissioning of earthing arrangement as per technical specification, approved drawings and scope of work.**				
7.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
7.02	Spike earthing made of 20mm dia solid GI rod	Set			
7.03	Erection of 8 SWG GI Coil 115 tonnes (1.85 kg)	No			
7.04	8 SWG GI Wire, GI nuts, bolts & washers	MT			

G	HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
8.00	**Erection, testing & commissioning of Distribution Transformer Substation earthing using 3 Nos pipe earthing using 40mm dia GI pipe 3000 mm long, as per IS 1161 and as per REC construction drawings, making earth grid using 50x6mm GS Flat and riser as per scope of work, approved drawings and technical specifications,**	Set			
9.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**				
9.01	Normal soil	No			
9.02	Soft rock soil where blasting is not required	No			
9.03	Hard rock soil where blasting is required	No			
10.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set			
11.00	**Erection, testing & commissioning of Porcelain / Polymer Insulators with mounting hardware, fittings as per technical specification, approved drawings and scope of work.**				
11.01	11 KV 45 KN Disc Insulator with hardware fittings	set			
11.02	11 KV Pin insulators with GI Pin	set			
12.00	**Removal of existing LT overhead line conductor and fixtures including shifting to Employer's store and erection, testing & commissioning of ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic conductor, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work.**				
12.01	6/2.59 + 1/2.59 mm (30 mm² Al. Area) - Weasel	km			
12.02	6/3.35 + 1/3.35 mm mm (50 mm² Al. Area) - Rabbit	km			
13.00	**Erection, testing & commissioning of 12kV, 600A, 25kA for 3sec, 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 technical specifications, scope of works and approved drawings**	Set			
14.00	**Erection, testing & commissioning of Distribution Transformer with all accessories as per as per technical specification, approved drawings and scope of work.**				
14.01	Single Phase 10 KVA	No			
14.02	Single Phase 16 KVA	No			
14.03	Three Phase 16 KVA	No			
14.04	Three Phase 25 KVA	No			
14.05	Three Phase 63 KVA	No			
14.06	Three Phase 100 KVA	No			
15.00	**Erection, testing & commissioning of Distribution Class 9 KV, 10 KA Lightening Arrester (Set of 3 units) for DT as per technical specification, approved drawings and scope of work.**	Set			
16.00	**Erection, testing & commissioning of 11 kV, 3-ph, Drop Out fuse units (set of 3 units) along with Support Insulators, Base Channel, fuse barrel etc. complete as per technical specifications, scope of works and approved drawings**	Set			
17.00	**Erection, testing & commissioning of LT Distribution box with metering and LT control mechanism as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
17.01	Single Phase 10 KVA	No			
17.02	Single Phase 16 KVA	No			
17.03	Three Phase 16 KVA	No			
17.04	Three Phase 25 KVA	No			
17.05	Three Phase 63 KVA	No			
17.06	Three Phase 100 KVA	No			

G	HIGH VOLTAGE DISTRIBUTION SYSTEM (HVDS)				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
18.00	**Erection, testing & commissioning of 1.1 KV PVC insulated, PVC sheathed, Aluminium Conductor, Stranded, unarmoured cable for connection of transformer LV bushing to Distribution Box and Distribution box to overhead line as per Scope of work, technical specification and approved drawings:**				
18.01	2CX16 sqmm aluminium conductor cable	km			
18.02	4Cx16 sqmm aluminium conductor cable	km			
18.03	3.5CX25 sqmm aluminium conductor cable	km			
	Total				
	% discount, if any:				

Schedule-3 (8/8)

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(Schedule of rates and prices)

Bidder's Name & Address:

Installation / Erection Charges :

H METERING

Sl. No.	Description	Unit	Quantity	Unit Erection Charges	Total Erection Charges (4x5)
1	2	3	4	5	6
1.00	**Feeder Metering:**				
1.01	Erection, testing & commissioning of 33 KV feeder Metering at 33/11 kV substation and intermidiatory points using 33 kV/110 V, 3 ph 4 wire CT ratio 400-200/5 A outdoor oil immersed type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS nuts & bolts, meter with MS meter box (trivector DLMS compliant category 'A' meter suitable for substation/feeder metering, 3 ph 4 W, 110 V, 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set			
1.02	Erection, testing & commissioning of 11 KV feeder Metering at 33/11 kV substation and intermidiatory points using 11 kV/110 V, 3 ph 4 wire CT ratio 300-150/5 A outdoor oil immersed metering equipment type metering equipment including supporting steel fabricated structure, earthing coil, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia MS NUTS & bolts, meter (HT trivector DLMS compliant category A meter suitable for substation/feeder metering, 3 ph, 4 W, 110 V, 5 A, accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, cable glands double compression brass, DC cross arm (100x50x6 mm), danger board, GI earth wire etc as per specification, approved drawing & scope of works	Set			
2.00	**Erection, testing & commissioning of Distribution Transformer metering on LT side using ring type current transformer of suitable ratio, MS meter box, including supporting steel fabricated structure, earthing using 8 SWG GI wire, 2Cx2.5 sqmm copper control stranded unarmoured cable, 16 mm dia nuts & bolts, energy meter (3 ph 4 w 240 V 5 A accuracy class 0.5s with GSM (GPRS compatible) modem, ring type lugs, terminal block, double compression brass cable glands, danger board, etc as per specification, approved drawing & scope of works for following rating of Distribution Transformers as per specification, approved drawing & scope of works:**				
2.01	Three Phase 16 KVA	No			
2.02	Three Phase 25 KVA	No			
2.03	Three Phase 63 KVA	No			
2.04	Three Phase 100 KVA	No			
2.05	Three Phase 200 KVA	No			
2.06	Three Phase 315 KVA	No			
3.00	**Erection, testing & commissioning by Shifting of existing meters at Accessible/call bell location outside the premises by providing new service cable, GI wire, meter box, etc. and all other associated materials as per specification, approved drawing & scope of works:**				
3.01	Shifting, testing & commissioning of 1-Ph meter outside the premises by providing new service cable 2Cx2.5 Sqmm Armoured Aluminium cable, 8 SWG GI service / Earthing wire, Push -fit type metallic meter box for 1-ph meter, etc as required.	Set			
3.02	Shifting, testing & commissioning of 1-Ph meter outside the premises by providing new service cable 2Cx4.0 Sqmm Armoured Aluminium cable, 8 SWG GI service / earthing wire, Push -fit type metallic meter box for 1-ph meter, etc as required.	Set			

H	METERING				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
3.03	Shifting, testing & commissioning of 3-Ph meter outside the premises by providing new service cable 4Cx6.0 Sqmm Armoured Aluminium cable, 8 SWG GI service / earthing wire, Push -fit type metallic meter box for 3-ph meter, etc as required.	Set			
3.04	Shifting, testing & commissioning of 3-Ph meter outside the premises by providing new service cable 4Cx10.0 Sqmm Armoured Aluminium cable, 8 SWG GI service / earthing wire, Push -fit type metallic meter box for 3-ph meter, etc as required.	Set			
4.00	**Erection, testing & commissioning by providing new static meter replacing existing defective/stopped/electromagnetic meters as per specification, approved drawing & scope of works:**				
4.01	Replacement of 1-Ph 2 wire, 5-30Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set			
4.02	Replacement of 3-Ph 4 wire, 10-40Amp, 1.0 Accuracy class static electronic meter with metallic meter box and wooden board. Old meter is to be deposited in the owner stores.	Set			
5.00	**Erection, testing & commissioning of following type of Earthing arrangement as per technical specification, approved drawings and scope of work.**				
5.01	40 mm dia., 3000 mm long GI pipe earth electrode with test link, RCC pit, RCC cover plate on GI frame, bentonite powder and other accessories complete	Set			
5.02	Spike earthing made of 20mm dia solid GI rod	Set			
5.03	8 SWG GI Wire	MT			
5.04	8 SWG GI Coil 115 tonnes (1.85 kg)	No			
6.00	**Erection, testing & commissioning of LT Distribution Box made of Cold Rolled MS sheet of 20 SWG thick, IP 54 without welding joints, deep drawn process of following types as per technical specification, approved drawing & scope of works:**				
6.01	225x285x120 mm incoming 2Cx25 sqmm, outgoing 8 Nos. 2Cx10 sqmm	No			
6.02	418x300x120 mm incoming 4Cx35 sqmm, outgoing 4 Nos. 4Cx16 sqmm	No			
7.00	**Erection, testing & commissioning of LT XLPE Power Cables including their termination materials like glands, lugs, tagging etc. as per technical specifications, approved drawings and scope of the work.**				
7.01	4 Core 35 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km			
7.02	2 Core 25 Sq. mm armoured, stranded aluminium conductor, XLPE cable	km			
8.00	**Erection, testing & commissioning of Outdoor mounting type LTCT-cum-metering box made of MS sheet of thickness not less than 18 SWG CRCA sheet by deep drawn method, dust and moisture vermin, weather proof with degree of protection with trivector 3 Ph energy meter, suitable bus bars, earthing bus, earthing terminals, box illumination, front door operated with proper locking arrangement, lugs, mounting channel frame, internal wiring with FRLS cables, danger plate, numbering, back clamps, hardware as per scope of the work, technical specifications and approved drawings suitable for following transformer:**				
8.01	11/0.4 KV Distribution Transformer 63 KVA 3 phase Aluminium wound DTR	No			
8.02	11/0.4 KV Distribution Transformer 100 KVA 3 phase Aluminium wound DTR	No			
8.03	11/0.4 KV Distribution Transformer 200 KVA 3 phase Aluminium wound DTR	No			
8.04	11/0.4 KV Distribution Transformer 315 KVA 3 phase copper wound DTR	No			

H	METERING				
Sl. No.	**Description**	**Unit**	**Quantity**	**Unit Erection Charges**	**Total Erection Charges (4x5)**
1	**2**	**3**	**4**	**5**	**6**
	Total				
	% discount, if any:				

Schedule-4

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY

(SUMMARY OF TAXES & DUTIES APPLICABLE ON EQUIPMENTS & MATERIALS)

Bidder's Name and Address:

Sl. No.	Item Nos.	Total Price (Rs.)
1	**TOTAL EXCISE DUTY**	
	Total Excise Duty for direct transaction between the Contractor and the Employer (indentified in Schedule 1 as 'Direct') which are not included in the Ex-works price as per the provision of the Bidding Documents, as applicable: (a) On Schedule 1 @ rate ..... (Item-wise details to be enclosed)	
2	**TOTAL SALES TAX/VAT**	
	Total Sales Tax/VAT for direct transaction between the Contractor and the Employer (indentified in Schedule 1 as 'Direct') which are not included in the Ex-works price as per the provision of the Bidding Documents, as applicable: (a) On Schedule 1 @ rate..... (Item-wise details to be enclosed)	
3	**TOTAL OCTROI/ENTRY TAX**	
	Total Octroi/Entry Tax as applicable for destination site/state on all items of supply, as per the provisions of the Bidding Documents, on all items of Schedule 1 @rate ..... (Item-wise details to be enclosed)	
4	**TOTAL OTHER TAXES & DUTIES**	
	Total Others levies payable in India (please specify) as applicable for destination site/state on all items of supply, as per the provisions of the Bidding Documents, on all items of Schedule 1 @rate ..... (Item-wise details to be enclosed)	
5	**GRAND TOTAL [1+2+3+4]**	

Note: The reimbursement of Excise Duty, Sales Tax/VAT and other levies as per Sl. No. 2 & 3 above subject to provision of ITB Clause 11.4 shall be only against those items for which the Mode of Transaction indicated in Schedule - 1 is 'Direct'. In case of those items in the said Sechedule-1 against which the mode of transaction has been mentioned as 'Direct/Bought-out' or has been left blank, the same deemed to be 'Bought-out' for the purpose of Evaluation and award of Contract and the price indicated in Schedule 1 against such items shall be deemed to be inclusive of all such taxes, duties and levies.

Date:
Place:

Signature:
Printed Name:
Designation:
Common Seal:

Schedule-5

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY
(GRAND SUMMARY)

Bidder's Name and Address:

Sl. No.	Description	Total Price (Rs.)
1	**TOTAL SCHEDULE NO. 1**	
	Plant and Equipment	
2	**TOTAL SCHEDULE NO. 2**	
	Local Transportation, Insurance and other Incidental Services	
3	**TOTAL SCHEDULE NO. 3**	
	Installation / Erection Charges	
4	**TOTAL SCHEDULE NO. 4**	
	Taxes and Duties	
5	**Schedule No 5: GRAND TOTAL [1+2+3+4]**	

Date: Signature:

Place: Printed Name:

Designation:

Common Seal:

Rural Electrification works in XXXX (Name of Project) Project in XXXX (Name of State) under DDUGJY

Bidder's Name and Address (Sole Bidder) :

Name:
Address:

To:
XXXX (Name and Address of Employer)

Dear Sir,

We declare that the ratings, performance figures and availability of the system furnished by us for subject Package covered under this specification are guaranteed by us. We further declare that in the event of any deficiencies in meeting the guarantees in respect of the characteristics mentioned below as established after conducting the factory test, you may at your discretion, reject or accept the equipment after assessing the liquidated damages as specified in the relevant clauses of Bid document.

Equipment	**Guaranteed losses at rated output (KW per unit)**	
	Copper/Aluminium Loss at 75 degree C at rated current	**Iron loss at rated voltage and frequency**
Power Transformers:		
10MVA, 33/11kV, 3 ph.		
8MVA, 33/11kV, 3 ph.		
5MVA, 33/11kV, 3 ph.		
3.15MVA, 33/11kV, 3 ph.		
1.6MVA, 33/11kV, 3 ph.		
Station Transformer:		
100KVA, 11/0.433kV, 3ph		
Distribution Transformers:		
10KVA, 11/0.250kV, 1ph.		
16KVA, 11/0.250kV, 1ph.		
16KVA, 11/0.433kV, 3ph.		
25KVA, 11/0.433kV, 3ph.		
63KVA, 11/0.433kV, 3ph.		
100KVA, 11/0.433kV, 3ph		
200KVA, 11/0.433kV, 3ph		
315KVA, 11/0.433kV, 3ph		

(Signature)
(Printed Name)
(Designation)
(Common Seal)

Date : --
Place :