

E- TENDER DOCUMENT

FOR

Comprehensive Maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU-Chiraila Pauthu/New Sonnagar section of DFCCIL under CGM/DDU unit for 24 months



DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED

(A Government of India Undertaking)

MINISTRY OF RAILWAYS

CGM/DDU/DFCCIL OFFICE

Manas Nagar Railway Colony,
Pt.Deen Dayal Upadhyaya Nagar (Mughalsarai)
Chandauli-232101 (Uttar Pradesh)

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TOP SHEET

Tender No:- DFC-EL-DDU-MNT-GS-359-01		Date: 02.09.2022
Name of work	Comprehensive Maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU-Chiraila Pauthu/New Sonnagar section of DFCCIL under CGM/DDU unit for 24 months	
Approx. Cost	Rs. 2,88,09,818/-(including GST) (Rs. Two Crore Eighty eight Lakh Nine Thousand Eight Hundred Eighteen only)	
Bid security	Rs. 2,94,100 (Rs. Two Lakh Ninety Four Thousand One Hundred only) Or Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of earnest money deposit detailed above. Or Labour Cooperative Societies shall deposit only 50% of above earnest money deposit detailed above.	
Completion Period	Total 24 Months	
Date of Opening	01.10.2022 at 15:30 hrs.	

For and on behalf of
CGM/DDU, DFCCIL Office

Dedicated Freight Corridor Corporation of India Limited
(A Government of India Undertaking)
MINISTRY OF RAILWAYS

Tender No. DFC-EL-DDU-MNT-GS-359-01
Date: 02.09.2022

M/s _____

NOTICE INVITING E- TENDER

The Chief General Manager/DDU/DFCCIL OFFICE, Manas Nagar Railway Colony, Pt. Deen Dayal Upadhyay Nagar (Mughalsarai) Chandauli-232101 (U.P.) , invites **E - Tenders in single packet system** on prescribed forms from firms/companies meeting qualifying requirements and having requisite experience and financial capacity for the following works:-

Tender No.	DFCC/ EL/DDU/Maintenance/GS/359/01
Name of Work	Comprehensive Maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU-Chiraila Pauthu/New Sonnagar section of DFCCIL under CGM/DDU unit for 24 months
Estimated Cost	Rs. 2,88,09,818/-(including GST) (Rs. Two Crore Eighty eight Lakh Nine Thousand Eight Hundred Eighteen only)
Period of Contract	Total 24 (Twenty Four) Months
Bid security	Rs. 2,94,100 (Rs. Two Lakh Ninety Four Thousand One Hundred only) Or Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of earnest money deposit detailed above. Or Labour Cooperative Societies shall deposit only 50% of above earnest money deposit detailed above.
Date of Sale (Online)	From Date 02.09.2022
Issue of Corrigendum, if any	On or after Date 02.09.2022 (on www.ireps.gov.in)
Date & Time of submission of tender	01.10.2022 upto 15:00 hrs
Date & Time of opening of tender.	01.10.2022 at 15:30 hrs

TENDER FORM (First Sheet)

Place:.....

Date:

Tender No.

Name of Work

Chief General Manager,
Dedicated Freight Corridor Corporation of India Limited,
Manas Nagar Railway Colony,
Pt. Deen Dayal Upadhaya Nagar
(Mughalsarai)
Chandauli-232101 (Uttar Pradesh)

I / We have read the various conditions of tender attached hereto and agree to abide by the said conditions. I / We also agree to keep this offer open for acceptance for a period of **60 days** from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our "Bid Security". I / We offer to do the work for **"Comprehensive Maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in of DFCCILDDU-Chiraila Pauthu/New Sonnagar under CGM/DDU unit for 24 months"** at the rate quoted in attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects within **24 (Twenty Four) months from the date of issue of letter of acceptance of the tender.**

2. I / We also hereby agree to abide by the all the DFCCIL/Indian Railway Standard General Conditions of Contract, with all correction slip up to date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by DFCCIL in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR) with all correction slip up-to-date for the present contract.
3. A Bid security of Rs.has already been deposited online/submitted as Bank Guarantee bond. Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:
 - a) I / We do not submit the Performance Guarantee within the time specified in the Tender document;
 - b) I / We do not execute the contract document within Seven days after receipt of notice issued by DFCCIL that such documents are ready; and
 - c) I / We do not commence the work within fifteen days after receipt of orders to that effect.
4. I/We am/are a Startup firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid upto (Copy enclosed) and hence exempted from submission of Bid Security.
5. We are a Labour Cooperative Society and our Registration No. iswithand hence required to deposit only 50% of Bid Security.
6. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Witnesses:

(1) _____

(2) _____

Address of the Tenderer(s)

Signature of Tenderer(s)

Date _____

TENDER FORM (Second Sheet)

1. Instructions to Tenderers and Conditions of Tender: The following documents form part of Tender / Contract:

- (a) Tender Forms – First Sheet and Second Sheet
- (b) Special Conditions/Specifications (enclosed)
- (c) Bill(s) of quantities (enclosed)
- (d) Standard General Conditions of Contract and Standard Specifications (Works and Materials) of Indian Railways as amended/corrected upto latest correction slips, copies of which can be seen in the office of CGM/DDU/DFCCIL or obtained from the office of the Chief Engineer, _____ Railway on payment of prescribed charges.
- (e) Standard Schedule of Rates (SSOR) as amended / corrected upto latest correction slips, copies of which can be seen in the office of CGM/DDU/DFCCIL or obtained from the office of the Chief Engineer, _____ Railway on payment of prescribed charges.
- (f) All general and detailed drawings pertaining to this work which will be issued by the Engineer or his representatives (from time to time) with all changes and modifications.

2. Drawings for the Work: The Drawing for the work can be seen in the office of the CGM/DDU/DFCCIL and / or Chief Engineer, _____ Railway at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based generally on the drawing mentioned above, will be given by the Engineer or his representative from time to time.

3. The Tenderer(s) shall quote his / their rates as a percentage above or below the Standard Schedule of Rates (SSOR) of _____ Railway as applicable to _____ Division except where he/they are required to quote item rates and must tender for all the items shown in the Bill(s) of Quantities attached. The quantities shown in the attached Bill(s) of Quantities are given as a guide and are approximate only and are subject to variation according to the needs of the Railway. The Railway does not guarantee work under each item of the Bill(s) of Quantities. The tenderer(s) shall quote rates / rebates only at specified place in Tender Form supplied by Railway. Any revision of rates / rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be summarily ignored and will not be considered.

4. Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.

5. The works are required to be completed within a period of 24 months from the date of issue of acceptance letter.

6. Bid Security:

(a) Subject to exemptions provided under General Conditions of Contract (GCC), the tender must be accompanied by a Bid Security as mentioned in tender documents, failing which the tender shall be summarily rejected.

(b) The Tenderer(s) shall keep the offer open for a minimum period of 60 days (in case of two packet system of tendering 90days) from the date of closing of the Tender. It is understood that the tender documents have been issued to the Tenderer(s) and the Tenderer(s), is / are permitted to tender in consideration of the stipulation on his / their part that after submitting his / their tender subject to the

period being extended further, if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to DFCCIL/ Railway. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposited or Bank guarantee bond submitted as Bid Security for the due performance of the above stipulation, shall be forfeited to the Railway.

(c) If his tender is accepted,

- (i) the Bid Security mentioned in sub para(a) above deposited in cash through e-payment gateway will be retained as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract;
- (ii) the Bid Security mentioned in sub para(a) above submitted as Bank guarantee bond, will be encashed as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.

The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation to the Bid Security that may happen thereto while in their possession, nor be liable to pay interest thereon.

(d) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond towards either the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security so retained as per sub para(c) above, to the Contractor.

7. Rights of the Railway to deal with Tender: The authority for the acceptance of the tender will rest with the Railway. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/ their tender nor the Railway to assign reasons for declining to consider or reject any particular tender or tenders.

8. If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the Railway reserves the right to reject such tender at any stage.

9. If any partner(s) of a partnership firm expires after the submission of its tender or after the acceptance of its tender, the Railway shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the firm retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the Railway shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.

10. Eligibility Criteria:

10.1 Technical Eligibility Criteria:

(a) The tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or
- (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or

(iii) One similar work costing not less than the amount equal to 60% of advertised value of the tender.

(b) (1) In case of tenders for composite works (e.g. works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges – substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of each component of tender, or
- (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of each component of tender, or
- (iii) One similar work each costing not less than the amount equal to 60% of advertised value of each component of tender.

Note for b (1): Separate completed works of minimum required values shall also be considered for fulfillment of technical eligibility criteria for different components.

(b)(2) In such cases, what constitutes a component in a composite work shall be clearly pre-defined with estimated tender cost of it, as part of the tender documents without any ambiguity.

(b) (3) To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in clause 7 of the Standard General Conditions of Contractor through subcontractor fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Chief Engineer in writing.

However, if required in tender documents by way of Special Conditions, a formal agreement duly notarised, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfilment of technical eligibility. Such subcontractor must fulfill technical eligibility criteria as follows:

The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract, costing not less than 35% value of work to be subletted, in last 5 years, ending last day of month previous to the one in which tender is invited through a works contract.

Note: for subletting of work costing up to Rs 50 lakh, no previous work experience of subcontractor shall be asked for by the DFCCIL/Railway.

In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract, with prior approval of Chief Engineer in writing.

Note for Item 10.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of closing of

tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

Notes:

(a) Following will be considered as similar work:

Similar nature of work of this tender is:- Tenderers having experience / competence of “*Satisfactory execution/maintenance of any electrical work related to HT/LT installation at Station Buildings/Staff Quarters/Service Buildings*”. The similar work should be executed by him/them in Railway / PSUs/ other Govt./Semi govt. Agencies/Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender.

(b) ELECTRICAL CONTRACTOR LICENSE:

Contractor must have valid Class-‘A’, Electrical Contractor License issued from appropriate government authority to execute HT & LT works.

10.2. Financial Eligibility Criteria: The tenderer must have minimum average annual contractual turnover of V/N or ‘V’ whichever is less; where

V= Advertised value of the tender in crores of Rupees

N= Number of years prescribed for completion of work for which bids have been invited.

The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.

The tenderers shall submit requisite information as per Annexure-VIB, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

Note: JVs shall not be considered.

NAME OF BIDDER/JV PARTNER:

Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Contractual Turnover for last 3 years			

1. The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.
2. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years in respect of the bidder or all members constituting the bidder.
3. Contents of this form should be certified by a Chartered Accountant duly supported by Audited Balance Sheet duly certified by the Chartered Accountant.

SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor’s reports. _____

(Signature of Chartered Accountant)

Name of CA: _____

Registration No: _____

(Seal)

11. System of verification of Tenderer's credentials :-

Railway board letter no. 2017/Trans/01/Policy dated 08.02.2018, accordingly following changes have been approved by Railway board.

For the works tenders, it has been decided to adopt the affidavit-based system of credential verification. The tenderer shall submit along with the tender document, documents in support of his/their claim to fulfill the eligibility criteria as mentioned in the tender document. Each page of the copy of documents/certificates in support of credentials, submitted by the tenderer, shall be self-attested/digitally signed by the tenderer or authorized representative of the tendering firm. Self-attestation shall include signature, stamp and date (on each page). Only those documents which are declared explicitly by the tenderer as “documents supporting the claim of qualifying the laid down eligibility criteria”, will be considered for evaluating his/their tender. The system shall be applicable once it is made operational in IREPS. This system is already being followed by some of Railway/DFCCIL PSUs.

1. In all works tender documents, followings para may be added in the section describing the qualification and eligibility criteria.

“The tenderers shall submit a notarized affidavit on a non-judicial stamp stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed as Annexure-C. Non submission of an affidavit by the bidder shall result in summary rejection of his/their bid. And it shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested by which they/he is qualifying the Qualifying Criteria mentioned in the tender document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned”.

With the submission of the affidavit as mentioned above, the practice of verification of tenderer(s) documents by the Railway/DFCCIL may be dispensed with.

- a) The Railway/DFCCIL reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall when so have required by the Railway/DFCCIL, make available such information, evidence and documents as may be necessary for such verification. Any verification or lack of such verification, by the Railway/DFCCIL shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any right of the Railway/DFCCIL thereafter.
- b) In case any wrong information submitted by the tenderer, the contract shall be terminated, Earnest Money Deposit (EMD), Performance Guarantee (PG) and Security Deposit (SD) of contract forfeited and agency barred for doing business on entire Indian Railway/DFCCILs for 5 (five) years.

2. The tenderers shall provide satisfactory documentary evidences acceptable to Railway/DFCCIL along with the tender to show that:

3. They have an established technically competent and adequate staffs organization to ensure that the services required under this tender can do satisfactorily.
4. They have sufficient equipments; plants and machinery to meet the obligations under the contract and to complete the work contract all within the stipulated time schedule and accepted by him.
5. The tenderer should submit the details of similar works done in the past.
6. The tenderer should submit the attested copies of the certificates obtained from the agencies wherever the works have completed successfully. These certificates should indicate the details of installation and successful commissioning of the similar type of equipments executed by the tenderer.
7. The tenderer will submit, along with offer list of work in hand indicating description of work, contract value, approximate value of balance work yet to be done and date of award of work.
8. They have adequate financial resources to meet the obligations under the contract. They have also required submitting the report from recognized bank of financial institutions.

12. Tenderer Credentials:

Documents testifying tenderer previous experience and financial status should be produced along with the tender.

Tenderer(s) who is / are not borne on the approved list of the Contractors of _____ Railway shall submit along with his / their tender:

- (i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.
- (ii) Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past.
- (iii) The list of personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- (iv) A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Annexure-C. Non submission of a copy of certificate by the bidder shall result in summarily rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self attested / digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.
- (v) The Railway reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Railway, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the Railway shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the Railway there under.

- (vi) (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of upto five years.
- (b) In case of any information submitted by tenderer is found to be false, forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the railway shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of upto five years.
- 13.** Non-compliance with any of the conditions set forth therein above is liable to result in the tender being rejected.

(SPECIAL CONDITIONS OF CONTRACT)

PART-I
CHAPTER-II
SPECIAL CONDITIONS OF CONTRACT

1.2.1 INTRODUCTION

Dedicated Freight Corporation of India (DFCCIL) is a Public Sector Undertaking under the administrative control of Government of India (Ministry of Railways) for construction, maintenance and operation of the Dedicated Rail Freight Corridors. At present the company is undertaking construction of Eastern & Western corridors and has its corporate office at New Delhi and Field Units at various cities associated with CGM unit.

CGM/DDU unit have jurisdiction from **DDU-Chiraila Pauthu/New Sonnagar section**

1.2.2 Definitions

1.2.2.1 In the Conditions of Contract, the following terms shall have the meanings assigned here under except where the context otherwise requires:

- i) "RAILWAY" shall mean the President of the Republic of India or the Administrative Officers of the Railway/DFCCIL or of the successor Railway authorized or any other officer of DFCCIL authorized to deal with any matters which these presents are concerned on his behalf.
- ii) "CHIEF GENERAL MANAGER" shall mean the officer in administrative in-charge of the project in charge of APL-1 section (DDU-Chiraila Pauthu/New Sonnagar) and shall mean and include their successors, of the successor DFCCIL.
- iii) "DEPUTY CHIEF PROJECT MANAGER" shall mean the officer in charge of lot wise or department /S&T/Electrical/Finance wise (Engineering department) of the DFCCIL include their successors of and shall mean and the successor DFCCIL.
- iv) PROJECT MANAGER/ DEPUTY PROJECT MANAGER/ASSISTANT PROJECT MANAGER/JR PROJECT PAMAGER shall mean the officer department wise (Engineering /S&T/ Electrical/ Finance Department) of the DFCCIL and shall mean and include their successors of the success of DFCCIL.
- v) "TENDER or BID" means the offer (Technical and/or Financial) made by individual, firm, Company, corporation, or Consortium for the execution of the works.
- vi) "TENDERER" shall mean the person/ the firm or company whether incorporated or not who tenders for the work with a view to execute the works on contract with DFCCIL and shall include their personal representatives, successors and permitted assigns.

- vii) “WORKS” shall mean the works contemplated in scope and schedules set forth in the tender forms and required to be executed according to terms and condition mentioned.
- viii) “Bill of Quantities (B.O.Q.)”/ “Schedule of Rates” means list of items of work, their quantities and rates as accepted and forming part of contract agreement.
- ix) “EMPLOYER” means the Dedicated Freight Corridor Corporation of India Limited, A Govt. of India Undertaking (DFCCIL in abbreviation) acting through its Managing Director or any other authorized officer and shall include their legal successors in title and permitted assignees.
- xi) “CONTRACT” shall mean and include the Agreement or Letter of Acceptance, the accepted Bill of Quantities and Rates, the General Conditions of Contract, Special Conditions of Contract, Appendix to Tender, Form of Bid, and Instructions to the Tenders and other Tender Documents.
- xii) “CONTRACTOR” shall mean the person or firm, company, corporation, whether incorporated or not who enters into the contract with DFCCIL and shall include legal representatives of such individual or persons comprising such firm or company or successors of such firm or company as the case may be such individual, or firm or company.
- xiii) “ENGINEER OR ENGINEER IN CHARGE” means the Chief General Manager of DFCCIL/ DDU(Employer), or any other officer authorized by the Employer to act on his behalf and for the purpose of operating the contract. “Engineers Representative” shall mean officer authorized by DFCCIL in direct charge of works.
- xv) “ACCEPTING AUTHORITY” shall mean the Chief General Manager DDU of DFCCIL or any other officer authorized for dealing with the works for the purpose of this tender/Contract.
- xvi) Definitions mentioned in these tender documents elsewhere will be followed. In Case there is an ambiguity in any definition, the decision of CHIEF GENERAL MANAGER /DDU/ DFCCIL regarding the interpretation shall be final and binding.

1.2.3 GENERAL DESCRIPTION OF SITE AREA & CLIMATIC CONDITIONS

- 1.2.3.1** The tenderer(s) are requested to visit the area of work and ascertain himself/ themselves with the proposed works / services, surroundings and prevailing law & order conditions.

1.2.4 SCOPE OF WORK –

The scope of work covers “Comprehensive Maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU-Chiraila Pathu/New Sonnagarsection of DFCCIL under CGM/DDU unit for 24 months”.

- 1.2.4.1** Place of work- In the jurisdiction of DFCCIL, **DDU-Chiraila Pathu/New Sonnagarsection** under CGM DDU. The work shall be executed under supervision of authorized representative of CGM/DDU, GM/EL/DDU. If required by DFCCIL any other station/Site may be included under Schedule of work and no additional charges shall be given for this.

1.2.5 TIME SCHEDULE

1.2.5.1. TIME OF START AND COMPLETION

1. The completion period for said work is **24 (Twenty-Four) months**.
2. The Contractor shall be expected to mobilize the man power as per instruction received from competent authority of DFCCIL to start the work.
3. If the Contractor fails to provide manpower at each station as per the awarded work within 15 days, DFCCIL shall without prejudice to any other right or remedy, be at liberty to forfeit the full Earnest Money Deposit and security money along with Performance Guarantee of the Contractor.

1.2.6 Contractor's Staff :

1. First the contractor personal should report to concerned officers (PM/DPM/APM/JPM) for technical scrutiny and verification of educational qualifications and obtained the competency certificate to perform the duty.
2. Duty hours in each shift shall be of 8 hrs duration, the shift hours will be fixed by site supervisor with the approval of sectional-in-charge.

1.2.6.1 Qualification of the contractor's Personnel for E&M operations:

1. **Supervisor In-charge (Highly Skilled):**
He should have minimum qualification & experience as details given in table under Para 1.2.6.1(a) below.
 2. **Technicians/Operator (Skilled):**
They should have minimum qualification & experience as details given in table under Para 1.2.6.1(a) below.
 3. **Helpers/Housekeeping staff (Un-Skilled):**
They should have minimum qualification & experience as details given in table under Para 1.2.6.1(a) below.
- (a) The contractor shall ensure the required minimum educational qualifications & experience for his deployed Supervisors, Technicians and Helpers as tabulated below:

EDUCATIONAL QUALIFICATION
<p>Staff Qualification: Following stipulation are made:-</p> <p>Supervisor staff (Highly Skilled): The supervisory staff posted by the contractor should at least be Diploma/Degree holder in Electrical / Electronics Engineering discipline with relevant working knowledge/experience of 1 year.</p> <p>Technician (Skilled): The technician posted by the contractor should at least be ITI holder in any discipline with relevant working knowledge/experience of 1 year OR should be minimum 10th pass with relevant working knowledge/experience of 2 years.</p> <p>Other staff (Un-skilled): All other staff deployed by the contractor for carrying out schedule maintenance works should be minimum Eight pass.</p>

(b) Scrutinizing test of the contractor's personnel:

All the personnel desired to be deputed for this work including supervisors have to undergo a scrutinizing test at office and site and Candidates found suitable will be finally put on job. The suitable candidates will be given an Identity card and a competency certificate valid for a period

of currency of contract which they have to keep with them while on duty and for their movements in the DFCCIL work spots..

The contractor will be required to obey faithfully the instructions of the DFCCIL's site in-charge, supervisor and ensure the safety at all times. In the event of any accident at the site of the work established in the departmental enquiry to have been caused due to disregarding and negligence on the part of the contractor on the procedure of the execution of the work as set forth hereinafter or any other instructions given by the Engineer or his representative the contractor will be liable to pay the actual cost of damages attributable to the contractor as liquidated damages as assessed by the Engineer.

(c) **Medical fitness certificates:**

All such selected staff of contractor shall medically fit for Railway's working circumstances round the clock. The contractor's personnel shall be healthy, physically fit, eye sight normal with spectacles, BP/Diabetes etc., disabling / debilitating diseases controllable by drugs, no contagious/ infectious diseases, generally good physique.

(d) **Police verification:**

The contractor shall ensure police verification for all the staff deployed by him against subject work and to certify to the DFCCIL administration that the **“staff is free from criminal record”**.

(e) **Commencement of work at field:**

The contractor shall commence equipment operation work at field within 15 days from obtain a letter from competent authority of DFCCIL duly stating actual date of commencement of subject work and accordingly the completion period of contract will be reckoned.

(f) **Subletting of Contract:**

The contractor shall not assign/sublet the contract in the interest therein or the part thereof to any other party or partner(s) without the consent of the DFCCIL.

(g) **Photo Identity Cards ,Uniform & PPE equipments to the Contractor Staff Deployed:**

The deployed staff should be taken on duty after approval of DFCCIL and necessary photo identity cards of the staff deployed shall be issued by the contractor duly attested by the DFCCIL In-charges. The Contractor shall submit a list of suitable persons to be deployed for subject manning and housekeeping work.

The personnel who are found to be qualified and suitable in the scrutiny by representative of CGM/DDU of the respective depot shall only be allowed to work. However, the contractor shall be solely responsible for the conduct of the personnel deputed by him for the work.

The contractor shall arrange Identity cards valid only for a period of currency of contract for the suitable persons whom they have to keep with them while on duty and for their movements in the DFCCIL work spots.

The age of the contractor's personnel deputed for duty should be more than 18 years and less than 58 years as on date of commencement of work.

- (h) **UNIFORM:** Orange colour dungaree / allover with Retro reflective bond of min 2” width to be provided. Contractor will ensure minimum 3 uniforms for staff so that the staff are always in their protective uniform at work. The uniform shall bear Logo & Name of the Contracting Agency.

The contractor's staff shall not carry or display or exhibit any kind of advertisement on his person at DFCCIL/Railway premises.

The contractor's personnel should have knowledge of Local language Hindi / English for speaking/writing.

The contractor's personnel should not carry any unauthorized/dangerous/explosives in the complex and should not consume alcohol/intoxicating drugs etc. during duty hours.

These staff should reside close to the IMDs/IMSDs for easy approach during emergencies. Residential addresses and phone numbers of specified staff should be made available with IMD/IMSD in-charge.

The DFCCIL reserves the right to ask the contractor to remove any contractor's personnel from duty without assigning any reason whatsoever. The decision of DFCCIL's competent authority will be final and binding on the contractor.

Any changes in the list shall be done with prior approval of DFCCIL authority.

1.2.6.2 Depot at Site:

- i. The Purchaser has established Integrated maintenance depot (IMD) and Integrated Maintenance Sub depot (IMSD) at various stations. Any theft or loss of tools issued to contractor personal, shall be recovered from the Contractor.
- ii. **Security to Purchaser's stations:** In addition to the maintenance work, contractor's personal shall provide the security of all the instrument installed at stations. Any miscreants should inform on duty DFCCIL representative, sectional in-charge, and DFCC security personal or TPC.

1.2.6.3 Knowledge of Rules and Sectioning:

1. All contract staff shall be fully conversant with the "Rules & Safety Procedures" while working in stations as laid down in operation and maintenance manuals.
2. Competency certificates for working in electrified areas will be issued by DFCCIL as per the scope of work.
3. Safety precautions to be followed as per safety/maintenance manual.

1.2.7 Right to Alter the Scope of Work:

The Employer reserves the right "to alter the scope of work".

1.2.7.1 The latest General conditions of Contract governing the performance of the works covered of the Engineering Department of the Railway/DFCCIL and its amended/correction slip may be perused in the Office of CGM/DDU of respective division.

1.2.7.2 If there is any conflict between "Special conditions" and "General conditions of contract", the conditions laid down in "Special conditions" will be sustained.

1.2.7.3 Inspection:

Quality of schedule operation and upkeeping and other works carried out by the contractor are subject to periodical inspections by Purchaser's Engineers of various levels as per the schedules laid down by DFCCIL. Any shortfall in the quality of work shall be subject to penalties/Recoveries as per prevailing conditions.

1.2.7.4 DEDUCTION OF INCOME TAX AT SOURCE:

In terms of new section 194-C inserted by the finance act 1972, in the income tax 1961, the DFCCIL shall at the time of arranging payments to the contractor for carrying out any work (including supply of labour for carrying out any work) under the contract, be entitled to deduct income tax at source on income comprised in the sum of each payment.

1.2.7.5 DEDUCTION OF TAX AT SOURCE:

All statutory and govt. charges will be deducted at source in effect from time to time.

1.2.7.6 Legal Charges:

A fee of Rs. 200/- per legal document, like partnership deed or power of attorney executed before or after the execution of the contract, will be recovered from the contractor for obtaining legal Advice from Law Officer.

1.2.7.7 Completion of Work :

The contractor shall commence the work as specified in “**Scope of the work and Special conditions**” and shall complete the work in all respects as specified in tender details.

1.2.7.8 The DFCCIL attach utmost importance to the timely completion of the work on or before the date contracted for. In this connection, the attention of the contractor is specially invited to the clauses regarding 'Liquidated damages' and termination of contract owing to default of contractor provided for in General Conditions of Contract.

1.2.7.9 Insurance:

The contractor shall take out and keep in force a policy or policies of insurance against all liabilities of the contractor or the purchaser at common law or under any status in respect of accidents to person who shall be employed by the contractor in or about the site of the contractor's office for the purpose of carrying out the works on the site. The contractor shall also take out and keep in force a policy or policies of insurance against all recognized risks to their offices and depots. Such insurance shall in all respects be to the approval of the purchaser and if he so requires in his name.

1.2.8 VARIATION IN CONTRACT QUANTITIES:

The DFCCIL reserves the right to alter the designs and drawings. If due to change of drawing or design or any other reasons, there be variations, either increase or decrease in quantities, payment will be made only for the actual quantities executed at the accepted rates. If there be sufficient cause the DFCCIL may grant extension of the date of completion suitably. Such circumstances shall in no way affect or vitiate the contract or alter the character thereof, or entitle the contractor to damages or compensation thereof except as provided for in this contract.

I) Quantity variation for individual item and overall quantity will be dealt as per prevailing SOP rules of DFCCIL on the date of tender opening date.

II) In all matters of dispute, the decision of the tender accepting authority shall be final and binding.

1.2.9 PRICE VARIATION CLAUSE:

PRICE VARIATION CLAUSE in Works Contracts is dealt with in accordance with provisions of latest GCC with latest amendments & correction slips.

As per Railway Board's letter no. 2017/Trans/01/Policy dated 08/02/2018, Since the Cost of advertisement value of this tender is less than Rs 5 crore, so PVC will not be applicable.

No price variation will be applicable in this work.

1.2.10 ELECTRICAL CONTRACTOR LICENSE:

Contractor must have valid Class-‘A’, Electrical Contractor License issued from appropriate government authority to execute HT & LT works.

1.2.11 NON-PERFORMANCE OF THE CONTRACT CONDITIONS**1.2.11.1 Penalties****A) Recovery due to shortfall in staff per Supervisor, Skilled / Un-skilled staff:**

The staff should be available 24 hours X 7 days of the week. The contractor should ensure the availability of all time staff at stations. The deployed staff should give their attendance to the site in-charge before leaving the station. No staff should leave the work site without intimating the DFCCIL’s representatives. Failing to do so will be treated as absent.

In case of absentee of staff, the contractor should ensure the suitable replacement to smooth operation. If the contractor fails to provide the suitable replacement a penalty of **1000/- per day of Supervisor and 500/- per day Skilled / Un- skilled staff** to deducted from contractor’s monthly bill.

B) Recovery Due To Poor operation / Fail to Provide Power Block:

If breakdown occurs due to operation mistake, if unnecessary Train detention occur proved in joint findings a penalty of **Rs.20,000/- on flat rate basis per occasion. For detention less than or more than hour, penalty shall be imposed on pro-rata basis.**

C) Recovery due to wrong operation of equipment:

On duty contractor personnel shall follow the instructions of DFCCIL representative on duty for the maintenance of station. If the contractor personnel perform any wrong operation of equipment, a penalty of **₹5,000/- per occasion, if there is no operational delay and no financial repercussion.** However, if there is any financial repercussion, in that case, penalty will in consonance with the loss as approved by tender accepting authority. Also, if the train services are affected particular operator shall be debarred from duties against subject agreement in addition to levy of penalty.

The cost of the damages/loss, if any, caused due to the negligence/fault of the contractor’s personnel, to the DFCCIL property shall be recovered from the contractor. The recovery shall be made inclusive of all contingencies by the DFCCIL.

D) Recovery due to contractor’s personnel is found without Identity card:

If the contractor’s personnel are found without Identity card, found in untidy condition, having improper conduct, found not obeying the instructions of TPC Sectional in-charges or any other officials of DFCCIL, a penalty of **₹500/-** shall be levied and recovered from Contractor’s bill for each such instance. If such deficiencies are found to be more than 5 in a month, it may be a ground for termination of the contract. Also, the contractor’s personnel shall be dealt according to the DFCCIL rules in force from time to time.

F) Recovery Due To fails to return unutilized DFCCIL supply materials:

The material issued to the deployed staff for minor maintenance/replacement of General Power Supply installation and released T&P should be handed over to the depot in-charge at depot premises after completion of day’s work. **If the contractor fails to return such materials, the cost of such materials will be recovered at twice the book rate or twice the market rate enhanced.**

G) Recovery Due To state of Intoxication

While working, contractor's personnel should not smoke or consume any alcohol / liquor or be in a state of intoxication. In case if it is noticed any time that they are either smoking or under influence of intoxication, penalty of **Rs. 10,000/- per occasion per incident** shall be imposed to the contractor and the particular contractor's person shall not be allowed to duties further period of contract.

The penalties as mentioned above may be imposed simultaneously..

H) Reporting of Accidents: The Contractor shall be responsible for the safety of all employees directly or through petty Contractors or sub-contractor employed by him on the works and shall report serious accidents to any of them however and wherever occurring on the works to the Engineer or the Engineers Representative and shall make every arrangement to render all possible assistance.

1.2.12 SETTLEMENT OF DISPUTES - DFCCIL ARBITRATION RULES

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be dealt as per latest GCC with amendments and correction slips issued.

1.2.13 ORDER OF PRIORITY OF CONTRACT DOCUMENTS:

The documents forming the Contract agreement are to be taken as mutually explanatory of one another. For the purposes of interpretation in the case of disputes the priority of the documents shall be in accordance with the following sequence:

- i) The Contract Agreement.
- ii) Letter of Acceptance.
- iii) Form of bid
- iv) General Information
- v) Notice Inviting Tender (with Annexes)
- vi) Instructions to Tenderers
- vii) Special Conditions of Contract
- viii) Annexures
- ix) Bill of Quantities (BOQ)
- X) General Conditions of Contract

1.2.14 Jurisdiction of Courts:

In case of any disputes/differences between contractor & DFCCIL the jurisdiction shall be of Chandauli Courts only.

1.2.15 In case of any deviation in downloaded copy of the tender documents, the Master Copy kept in the office of Chief General Manager/DDU/ DFCCIL, will prevail and the interpretation of CGM/DDU will prevail.

1.2.16 LABOUR:

1.2.16.1 Wages to Labour: The Contractor shall be responsible to ensure compliance with the provision of the Minimum Wages Act, 1948 (hereinafter referred to as the “said Act”) and the Rules made there under in respect of any employees directly or through petty Contractors or sub-contractors employed by him for the purpose of carrying out this contract.

If, in compliance with the terms of the contract, the Contractor supplied any labour to be used wholly or partly under the direct orders and control of the Railways whether in connection with any work being executed by the Contractor or otherwise for the purpose of the Railway such labour shall, for the purpose of this Clause, still be deemed to be persons employed by the Contractor.

If any moneys shall, as a result of any claim or application made under the said Act be directed to be paid by the Railway, such money shall be deemed to be moneys payable to the Railway by the Contractor and on failure by the Contractor to repay the Railway any moneys paid by it as aforesaid within seven days after the same shall have been demanded, the Railways shall be entitled to recover the same from Contractor’s bills/Security Deposit or any other dues of Contractor with the Government of India.

1.2.16.2 The Contractor shall be responsible to ensure compliance with the provisions of the Apprentices Act, 1961 ,provisions of the Payment of Wages Act, 1936, provision of the contract labour (Regulation and Abolition) Act, 1970 and the Contract labour (Regulation and Abolition) Central Rules 1971 ,Provisions of Employees Provident Fund and Miscellaneous Provisions Act, 1952;Provisions of “The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996” and “The Building and Other Construction Workers’ Welfare Cess Act, 1996”;Provision of Workmen’s Compensation Act: Provision of Mines Act ,provisions of Payment of Wages act & Minimum Wages actand the Rules and Orders issued there under from time to time .The Contractor shall be responsible to ensure compliance with the provisions of all labour laws as per **latest General condition of contract** with modifications and correction slips issued .

1.2.16.3 Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website ‘www.shramikkalyan.indianrailways.gov.in’. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation of Portal shall be done as under:

- (a) Contractor shall apply for one-time registration of his company/firm etc. in the **Shramikkalyan portal** with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor’s registration in the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LOAs issued in his favour.
- (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LOA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
- (d) After approval of LOA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
- (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour& payments made thereof after each wage period.
- (f) While processing payment of any ‘On Account bill’ or ‘Final bill’ or release of ‘Advances’ or ‘Performance Guarantee / Security deposit’, contractor shall submit a certificate to the Engineer or Engineer’s representatives that “I have uploaded the correct details of contract labours

engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

1.2.17 PRICES AND PAYMENT

Amounts payable to contractor in accordance with accepted schedules of prices and rates and terms and conditions of payment mentioned herein. The total prices for the completed works/services are the actual prices payable to the Contractor as per the terms and conditions of the contract.

1.2.17.1 SCHEDULE OF PRICES

The unit rates of manpower given in schedule of rates in tender papers are considered (as per minimum wages act) for construction and maintenance activity published by Govt. Of India Ministry of labour and employment office of the Chief Labour Commissioner (C) noticed dated 23.04.2021, F-no 1/20/(3)2020-LS-II with provision of rest giver/reliever of 16%. The tenderers are advised to quote rate judiciously against the total estimated cost of work so as to ensure minimum wages act and all labour laws etc. If it is found that the quoted rate by tenderer is not as per minimum wages criteria for schedule 1 then the offer of the tenderer may not be considered. The actual payment to be made against any item of schedule of rates, shall be derived after loading the schedule of rates with the tenderer's quoted percentage. The prices so obtained shall be the unit prices for the various items of schedule given in schedule of rates.

1.2.17.2 PAYMENT TERMS

- (a) The Contractor will have to maintain the log register in prescribed format duly verified by DFCCIL site in-charge. The billing will be done monthly at the end of every month on production of bills by contractor. Payment will be made after verification of all works/supply of material/manpower etc by DFCCIL representative. Complete details regarding GST registration number, PAN No, Bank detail should be printed on Contractor's Bill. The contractor will have to produce verified month-wise attendance sheet of all deputed manpower in support of payment against Schedule-1.
- (b) The contractor shall display of notices in English and Hindi/local vernacular language in the workplace and other wise make all workers aware regarding the minimum rates of wages fixed, hours of work, wage period, abstract of laws & rules made there under, date & place of payment, Name, address & contact details of the Labour Enforcement Officer.
- (c) The contractor shall maintain the Register of Muster Roll, Register of Wages, Register of Fines, Register of deductions for damages/loss, Register of Overtime at the workplace in the prescribed formats under the law.
- (d) The contractor shall issue monthly wage slips to all workers showing the details of the gross wages, deductions if any and the net wages.
- (e) The Contractor shall submit Annual Return in the prescribed form to the concerned Labour Enforcement Officer.
- (f) **Proof of Payment of Wages:** Bank remittance of salaries of all the contractor's workers and to produce the documents to the effect to Railways/DFCCIL for claiming monthly bills against schedule-1.
- (g) **Weekly Rest:** The contractor shall also provide weekly rest on staggered basis to all workers and comply with all other provisions of the law.
- (h) Any dispute regarding labour deployment as per LABOUR ACT i.e. payment, weekly rest, extra work, leave, medical benefit, VDA or any other claim of deployed labour should be set right by the contractor.

1.2.17.3 Taxes and Duties:-

All the taxes & duties applicable shall be followed as per the prevailing laws/provisions of State and central government.

1.2.17.4 GST:-

GST Registration number should be provided by the contractor to DFCCIL & registration number must be mentioned in each invoice.

1.2.17.5 MODE OF PAYMENT:

All payments to the Contractors shall be made through Electronic Clearing System (ECS)/NEFT/RTGS.

1.3.1 Security Deposit: The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the DFCCIL/Railways as part of security for the due and faithful fulfillment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to the Contractor.

Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India, or may be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the Railway may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract.

The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.

Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

1.3.2 (1) (i) Refund of Security Deposit: Security Deposit mentioned in sub clause (1) above shall be returned to the Contractor along with or after, the following:

- (a) Final Payment of the Contract as per clause 51.(1) of GCC **and**
- (b) Execution of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor **and**

(c) Maintenance Certificate issued, on expiry of the maintenance period as per clause 50.(1) of GCC, in case applicable.

1.3.2. (2) (ii) Forfeiture of Security Deposit: Whenever the contract is rescinded as a whole under clause 62 (1) of GCC for these conditions, the Security Deposit already with railways under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of GCC for these conditions, the Security Deposit shall not be forfeited.

1.3.6.(3) No interest shall be payable upon the Bid Security and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16.(4)(b) of GCC for this clause will be payable with interest accrued thereon.

1.3.6.(4) Performance Guarantee

The procedure for obtaining Performance Guarantee is outlined below:

(a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21(Twenty one) days, i.e. from 22nd day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day.

In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit Bid Security and other dues payable to the contractor against that particular contract, subject to maximum of PG amount. In case a tenderer has not submitted Bid Security on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

The failed Contractor shall be debarred from participating in re-tender for that work.

(b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the original contract value:-

- (i) A deposit of Cash;
- (ii) Irrevocable Bank Guarantee;
- (iii) Government Securities including State Loan Bonds at 5% below the market value;
- (iv) Pay Orders and Demand Drafts tendered by any Scheduled Commercial Bank of India;
- (v) Guarantee Bonds executed or Deposits Receipts tendered by any Scheduled Commercial Bank of India;
- (vi) Deposit in the Post Office Saving Bank;
- (vii) Deposit in the National Savings Certificates;
- (viii) Twelve years National Defence Certificates;
- (ix) Ten years Defence Deposits;
- (x) National Defence Bonds and
- (xi) Unit Trust Certificates at 5% below market value or at the face value whichever is less. Also, FDR in favour of DFCCIL (free from any encumbrance) may be accepted.

- (c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value.
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.
- (g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
- (i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
 - (ii) Failure by the Contractor to pay President of India any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.
 - (iii) The Contract being determined or rescinded under clause 62 of GCC for these conditions.

PART – I

CHAPTER- III

SCOPE OF WORK & EXPLANATORY NOTES

1.3.1 Scope of Work:

The scope of work covers “Comprehensive maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU -Chiraila Pathu /New Sonnagar section of DFCCIL under CGM/DDU unit for 24 months”.

PARTICULARS OF SCHEDULE OF ITEMS

Schedule-1	Providing man power for maintenance of General Power Supply (E & M) items for DFCCIL Stations, IMD, IMSDs, Staff quarters, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets for 24months.
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The particular shall cover providing High skilled/ Overall in-charge for supervising in daily shift at IMD location, Skilled Person for executing different E& M maintenance activities (one person in all three shifts at every station/IMD/IMSD) and Un-Skilled Person for executing different E&M maintenance activities (two persons in day shift and one person at evening and one person at night shift at every station/IMD/IMSD).

Schedule-2	Supply of essential maintenance spares.
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The particular shall cover supply of essential maintenance spares. The material should be of reputed brand, make and as per relevant standard specification. **The contractor will obtain approval of DFCCIL regarding brand, make, specifications etc before supplying the material at IMD/IMSD.**

Schedule-3	Minor works related to maintenance activity of E & M assets.
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The particular shall cover minor works related to maintenance activity of E & M assets.

Schedule-4	Comprehensive maintenance of split AC units installed at DFCCIL Stations/DFCCIL office , IMD, IMSDs, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets.
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The particular shall cover comprehensive maintenance of split AC units installed at DFCCIL Station Buildings/office, IMD,IMSDs, ALHs & RHs including replacement of defective / worn out parts and servicing of assets.

1.3.2 Explanatory Notes:-

- 1. Schedule 1** – Providing man power for maintenance of General Power Supply (E & M) items for DFCCIL Stations/office, IMD, IMSDs, Staff quarters, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets for 24months.

This item includes round the clock availability of manpower for Highly skilled/ Overall in-charge for supervising in daily shift at IMD location, Skilled Person for executing different E& M maintenance activities (one person in all three shifts at every station /IMD/IMSD) and Un-Skilled Person for executing different E&M maintenance activities (two persons in day shift and one person at evening and one person at night shift at every station IMD/IMSD). Maintenance of all the equipment along with minor repair works will be the responsibility of the contractual staff.

Following are the schedule works:-

A. MAINTENANCE SCHEDULE FOR DISTRIBUTION TRANSFORMER

1. 0 MAINTENANCE SCHEDULE

Recommended Maintenance Schedule for Transformer of Capacities less than 1000 KVA Transformer)

- A) Monthly Inspection of Oil level in transformer (Check tightness of connections), All connections tightness and Dehydrating breather (Check that air passages are clear & check colour of active agent).
- B) Quarterly Inspection of Bushing and Examine for cracks & dirt deposits.
- C) Half yearly Inspection of Non Conservator transformer (Check for moisture under cover), Cable boxes, gasketed joints, gauges and general paintwork (Inspect for leaks & cracks etc.).
- D) Yearly Inspection of Transformer oil (Check di-electric strength and water content, Check for acidity and sludge), Check values of Earth resistance & Relay, alarms and their circuits etc (Examination relay and alarm contacts, their operation, fuses etc, Check relay accuracy.
- E) In addition to above, also to be checked Foundation of transformer, Termination of HT/LT cable and visual inspection of transformer.

Note:

- 1. The silica gel may be reactivated by heating to 150-200⁰C.
- 2. Every time when the oil is changed, oil seal should also be changed.
- 3. No work should be done on any transformer unless it is disconnected from all external circuits and the tank and all windings have been solidly earthed.

In case of anything abnormal occurring during service, maker's advice should be obtained giving him complete particulars regarding the nature and extent of occurrence, together with the nameplate particulars.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

B. MAINTENANCE SCHEDULE FOR SUB-STATION

1.0 Monthly Maintenance Proforma

STATION:

LOCATION:

DATE:

Items	Work to be done	Work done/ Remark if any
Switch yard		
Earth pits	Cleaning	
	Watering	
Earth connections	Check all connections both at earth pits and metal parts	
Yard	Growth of unwanted shrubs etc. Keep the yard free from shrubs, garbage etc.	
Transformer		
Buchholz Relay	Check gas collection	
Oil level	Check oil level in conservator	
Connections	Open terminal box cover and Check connections visually for flash/spark marks	
Dehydrating breather	Check all passages	
	Check colour of silica gel	
Cleaning	Clean entire transformer externally	
Control Panel Room		
Load (amp.)	Check load balancing, If found unbalance; dispute the load equally on all phases.	
MCCB/Fuse	Provide proper size of MCCB/Fuse according to load condition	

1.1 Quarterly Maintenance Proforma

STATION:

Note: In addition to monthly maintenance, carry out following works:

Items		Work to be done	Work done/Remark if any	
Switch yard				
	Support Insulators	Clean and examine for cracks		
Transformer			TR-1	TR-2
	Bushing	Clean and examine for cracks		
		Check for oil seepage		
Control Panel Room				
	LT Bus Bars	Clean and check visually for overheating, flash/spark marks. Tighten all connections.		

1.2 Half Yearly Maintenance Proforma

STATION:

LOCATION:

DATE:

Signature of Tenderer

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Note: In addition to quarterly maintenance, carry out following works:

Items		Work to be done	Work done/Remark if any				
Transformer			TR-1		TR-2		
	Oil	Check BDV, if BDV<30 KV/cm, do filtration to restore quality of oil					
	Cable box, gasketed joints and gauges	Inspect for leakage and cracks					
Control Panel Room							
	ACB		ACB1	ACB2	ACB3	ACB4	ACB5
		Clean with lint free cloth					
		Clean fixed and moving contact					
		Clean and lubricate operating					

1.3 Yearly Maintenance Proforma

STATION:

LOCATION:

DATE:

Note: In addition to half yearly maintenance, carry out following works:

Items	Work to be done	Work done / Remark if any
Switch yard		
Concreting/coping of the supports	Take preventive action, if there are cracks or the coping of concreting is coming off.	
Gravel/crushed rock	Check leveling, oil stain and dust accumulation. Spray water to remove oil stain and accumulated dust. Maintain leveling to avoid formation of water pools.	
Earth resistance	Measure the earth resistance of individual equipment earth pit	
	1. Major sub-station :1.0 ohms	
	2. Small sub-station : 2.0 ohms	
Earth connection of metal parts	Check the earth connection of metal parts is properly connected to the earth.	
AB switches	Check the line and earth connections	
	Lubricate and check proper operation	
HT lighting arresters	Measure IR value between HV terminal and earth, if low, replace it. Check the line and earth connection.	
Bus bars	Tightness the connections properly from the bus bars and bars to the lines.	
Insulators	Clean and check all insulators for any crack or damage, Change if required.	
Transformer		
Winding	Measure IR value between	

	HV-Earth } HV-LV } min. 2 M ohm/kV LV-Earth } If low, take corrective action.	
Oil	Check BDV, if <30KV/cm, do filtration to restore quality of oil. Perform dissolve gas analysis (DGA) to check for incipient faults	
Buchholz relay	Clean and check components of floats, alarm contact and their operation. Replace if necessary. Check accuracy of relay. Change the setting, if necessary	
Earth resistance	Check earth resistance of neutral and body. If high, take corrective action	
Body	Check for peelings/rusting/damage. Repaint, as required.	

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

C. MAINTENANCE SCHEDULE FOR DIESEL GENERATOR SET (DG Set)

1. GENERAL CHECKS BEFORE STARTING THE ENGINE

- Check and correct cooling water level.
- Check belt tensions.
- Clean radiator fins by blowing air in the opposite direction
- Check lube oil level, top up if required with same brand and grade of oil.
- Check oil level of oil bath filter and clean air cleaner as required.
- Check clamping, tighten if required.
- Drain once 200ml. of diesel from bottom of fuel tank to remove sediments.
- Check and ensure sufficient quantity of fuel in tank.
- Check battery terminals and connections for proper tightness – top up electrolyte, if required
- Clean engine and premises.

2. A - CHECK MAINTENANCE OF DIESEL ENGINE

Proposal of Daily preventive maintenance –

- Lubrication- Check engine oil level.
- Check & record parameter of DG set
- Check battery voltage
- Air System - Check pre-cleanse dust pan weekly.
- Cooling System- Check coolant level.
- Fuel System- Drain sediments from fuel tanks.
- Drain air tank.
- Check and correct leaks.
- Drain fuel filter/Water separator daily.

Proposal of Weekly preventive maintenance –

- Lubrication- Check engine oil level.
- Fuel System- Drain sediments from fuel tanks.

- c) Air System - Check pre-cleanse dust pan weekly.
- d) Check air clearance restriction cleaner, change air cleaner element if required.
- e) Cooling System- Check coolant level.
- f) Other Maintenance- Drain air tank. Check and correct leaks. Drain fuel filter/Water separator daily. Check battery status and maintain properly.
- g) No load testing

3. B- CHECK (EVERY 225-250 HRS. OR 6 MONTHS WHICHEVER IS EARLIER) MAINTENANCE OF DIESEL ENGINE

SN.	Proposed Maintenance	Work Involved	Remarks
1.	Cleaning lubrication oil	<p>arm up the engine and stop.</p> <p>emove drain plug and drain engine oil in a pan of 20 ltrs. Capacity.</p> <p>efit drain plug.</p> <p>ill the recommended new engine oil to H mark on dipstick.</p>	
2.	Changing of lube oil filter	<p>lean filter head and its surroundings before removing it.</p> <p>emove the filter and clean the gasket surface.</p> <p>ill the new filter with clean lubricating oil and apply a light film of lube oil to the gasket sealing surface.</p> <p>it the filter manually.</p>	
3.	Checking of cooling system	<p>repeat all A-checks</p> <p>heck fan hub and fan drive arrangement.</p> <p>heck seal of radiator cap.</p>	
4.	Changing of fuel filter and water separator	<p>1. Repeat all A-checks</p> <p>2. Remove the two filters from the dual filter adapter.</p> <p>3. Fill the new filters with clean fuel and apply a light film of lube oil to the seal.</p> <p>it the filters manually.</p> <p>Drain sediments from fuel tank.</p>	
5.	Checking of air filter/ system	<p>Repeat all A-checks</p> <p>lean air filter in reverse direction using dry air with maximum pressure 0.5kg/sq.cm.</p>	

6.	Other checks	Repeat all A-checks. Check electrolyte level and specific gravity of battery. Add distilled water if required. Check terminals tightness and clean the battery. Secure all connectors in engine electrical system.	
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**4. C- CHECK (EVERY 475-500 HRS. OR 12 MONTHS WHICHEVER IS EARLIER)
MAINTENANCE OF DIESEL ENGINE**

S.N.	Proposed	Work Involved	Remarks
1.	Checking of lubrication system	Repeat all A & B checks. Clean breather.	
2.	Checking of cooling system	Repeat all A & B checks. Check coolant conditions. Check recovery bottle and seal. Check connections and sealing of radiator. Clean radiator externally by blowing pressurized air in the reverse direction of the flow of radiator fan.	Do not spill water on radiator fans
3.	Checking of fuel system	Repeat all A & B checks. Check all joints in fuel lines and tighten Check feed pump and clean baby filter.	
4.	Checking of air filter/ system	Repeat all A & B checks.	
5.	Other checks	Repeat all A & B checks. Check AVMs (anti-vibration mountings) and replace if required.	

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

D. MAINTENANCE SCHEDULE FOR C & R Panel & DISTRIBUTION BOARD

[MDB, APFC Panel, Emergency Panel, Sub Distribution Boards, Residential quarters Distribution Boards, Pump Panel, Fire Alarm Control Panel, Feeder Pillar and DBs(TPN/SPN)]

Following activates shall be monitored at C&R panels

1. CB ON
2. CB OFF
3. Spring Charge
4. L/R Switch Position on C&R Panel
5. Protection Operated by Trial Tripping from Relay
6. Common trip circuit healthy
7. Trip Circuit Healthy
8. Trip Circuit Healthy
9. DC /AC Failure Indication
10. Operating of DC fail relay

- I. Daily Maintenance for checking all indication lamps working, illumination lamp/ power socket working.
- II. Monthly Maintenance for proper opening / interlocking of panels, checking of fuse / MCB rating, check and ensure that L/R switch is at remote position.
- III. Half yearly Maintenance for Control Panel interior & external surface, Relay/Contractors with air blower. All control connections, Earthing connections wherever provided, inter panel coupling, Multi-core Cable Glands, Dressing of wiring, Check door bidding for dust proofing, checking and ensure that relay healthy indication is glowing, check that all unused wires are insulated.
- IV. Check the condensation to ensure the specified insulating level in the Circuit Breaker (CB), if condensation is detected, clean the circuit-breaker.
- V. Check all protection (Like DMCR, WTI trip, O/C & E/F etc.) and communication connections as and when required.
- VI. Check any damage to the paint, scratches and other damage regularly to avoid corrosion
- VII. Check insulation resistance of multi-core cables.
- VIII. Check wiring continuity, Armoured connections and continuity to earth.
- IX. Checking of Earthing of equipment, Doors, Panel to main grid and its continuity.
- X. Checking of all internal equipment i.e. Space Heater/ Light/ MCB/ Door Switch/ Thermostat etc.
- XI. The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

E. MAINTENANCE OF CABLE AND END TERMINATION

Repairs of cables as and when required on discretion of Engineer in-charge involve replacement of a section of the defective cable by a length of new cable and insertion of two straight joints. All repairs and new joints in connection with repairs should be made in the same manner as joints on new cables. In some cases, where the insulation has not been damaged severely, or where moisture has not obtained ingress into the insulation; it may only be necessary to install a joint at the point of cable failure.

In case of cable termination filled with liquid insulating compound, it is necessary to check periodically on discretion of Engineer in-charge the compound level in the termination boxes and to add compound if required.

All new cables should be tested for insulation resistance before jointing and after satisfactory results are obtained cable jointing and termination work should commence on discretion of Engineer in-charge.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

F. MAINTENANCE FOR FIRE EXTINGUISHER

Check periodically to ensure that they are ready to operate properly and safely and give reasonable assurance that the fire extinguisher is fully charged. Verify the same to Engineer in-charge that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely attached and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage.

Note: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face

1. Remove and check ring (safety) pin for freedom of movement. Replacement, if bent or if removal appears difficult.
2. Visually inspect the pressure gauge:
 - a. If bent, damaged or improper gauge, depressurize and replace.
 - b. If pressure is low or high and temperature/pressure relationship has been ruled out
 - c. If pressure is low, check for leaks.
 - d. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.
3. Inspect discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged, replace with proper part(s).
4. Check weight of extinguisher and compare to proper weight specified on extinguisher nameplate. If discrepancy is noted, remove nozzle or hose assembly and follow Complete Maintenance/Recharge Procedure for recharging.
5. Replace the extinguisher on the wall hanger making sure that it fits the bracket properly – replace the bracket if necessary.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

G. Maintenance of internal & external wiring including street lighting, light fitting, fixtures, wiring, earthings & switches and erection of the items as and when required or on discretion of Engineer in-charge at the mentioned locations.

A	At Station Building
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1	LED Light fixtures
a)	Internal lighting
i	Different Watts of Fitting
ii	Different Watts of Light fitting
iii	Different Watts of Circular Light fitting
iv	Different Watts of Square fitting
v	Bulkhead fitting
vi	Emergency Light fitting with battery backup
b)	External lighting
2	Ceiling fan/wall mounted fan/exhaust fan
3	Modular type switch with indicator
4	Modular type socket outlet with switch
5	Modular type socket outlet with Isolator
B	IMD
6	LED Light fixtures
a)	Internal lighting
i	Different Watts of Light fitting
ii	Different Watts of Circular Light fitting
iii	Different Watts of Square fitting
iv	Emergency Light fitting with battery backup
b)	External lighting-
7	Ceiling fan/wall mounted fan/exhaust fan
8	Modular type switch with indicator
9	Modular type socket outlet with switch
C	IMSD
10	LED Light fixtures
a)	Internal lighting
i	Different Watts of Light fitting
ii	Different Watts of Bulkhead fitting
iii	Emergency Light fitting with battery backup
b)	External lighting
11	Ceiling fan/wall mounted fan/exhaust fan
12	Modular type switch with indicator

13	Modular type socket outlet with switch
D	Staff Quarter Type-1
14	Different Watts of Light fitting
15	Ceiling fan
16	Exhaust fan
17	Modular type switch with indicator
18	Modular type socket outlet with switch
19	AC Socket outlet with Isolator
20	Geyser Socket outlet with Isolator
21	Bell Push with Buzzer
22	TV Point
	Common for Each Block
23	Bulkhead fitting
E	Staff Quarter Type-2
24	Different Watts of Light fitting
25	Ceiling fan
26	Exhaust fan
27	Modular type switch with indicator
28	Modular type socket outlet with switch
29	AC Socket outlet with Isolator
30	Geyser Socket outlet with Isolator
31	Bell Push with Buzzer
32	TV Point
	Common for Each Block
33	Bulkhead fitting
F	Staff Quarter Type-3
34	Different Watts of light fitting
35	Ceiling fan
36	Exhaust fan
37	Modular type switch with indicator
38	Modular type socket outlet with switch
39	Modular type socket outlet with switch
40	AC Socket outlet with Isolator

41	Geyser Socket outlet with Isolator
42	Bell Push with Buzzer
43	TV Point
44	Common for Each Block
45	Different Watts of Bulkhead fitting
46	Common for Staff quarter at Each Location
47	Different Watts of External lighting
48	Street Light
49	Electrical items installed (if any) at ANCILLARY BUILDINGS, as and when required in concern with DFCCIL's representative.
50	Electrical items installed (if any) at ALHs also as and when required in concern with DFCCIL's representative.

Maintenance procedure:

Cleaning of the luminaries to be carried out periodically to optimize light output due to fumes, smoke and dust. Cleaning frequency depends on the environment in which the fixture operates and as per requirement on discretion of Engineer in-charge. Remove the main plug before cleaning in order to avoid electrical shock.

1. Use a soft cloth to wipe down the outside casing.
2. Do not use harsh liquids or chemicals for cleaning the diffuser. The diffuser can lose its transparency after reacting with the cleaning chemical.
3. Always be sure to dry all parts completely before plugging the unit back
4. Always check broken wires, switches etc. in order to avoid damage to the luminaire as well as possible electric shock or fire.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

H. OPERATION & MAINTENANCE OF SUBMERSIBLE PUMPS

1.0 Testing:

Following tests are to be conducted as and when required or on discretion of Engineer in-charge.

- 1.1 INSULATION TEST:** Connect one lead of a megger tester to the rising main and the other lead to the read core of the motor cable. A reading of 2 Mega ohms or more indicates that the motor winding, cable and cable joints are sound. If the reading is less than 2 Mega ohms, the fault is either in the wiring or the pump is locked by sand or other foreign substances.

- 1.2 DIRECTION OF ROTATION TEST:** Check the above-ground wiring against the wiring diagram. Test the operation of all the above ground electrical equipment's, with the motor cable disconnected. If the operation of the equipment is normal, reconnect the motor cable, close the gate valve and reopen it three quarters of a turn only. Switch on the motor. If the overload release device trips or other fault occurs, it is an indication that cable connections are wrong or the pump is sand blocked. Try to reverse the direction

of rotation for about three seconds only. If the pump still does not start, it must be raised to the surface to be cleared of obstruction.

If the pump is sand locked, recheck the level at which the pump suction is set. The pump suction and motor base must be in the solid casing (pump housing) and not opposite the well screen.

1.3 OPERATING HEAD TEST: Close the gate valve at the surface completely. Check the pressure gauge reading, ammeter reading and the distance gauge from the center of the pressure gauge dial to the water level in the well.

Compute the total head by adding the pressure gauge reading and the distance dial to the water level in the well.

The total head obtained should be approximately the same as expected.

1.4 AIR LOCKED TEST: Close the gate valve at the surface completely. Check the pressure gauge and ammeter reading. Check the line voltage in all the phases while the pump is in operation. If the discharge from the pump is into an elevated reservoir or tank separate the pipe system at the ground level immediately after the gate valve at the ground surface, and check the meter current and discharge rate obtained at this point.

A lower than normal reading of line current without any discharge at all will show the air locked pump.

An increase in discharge and motor current will prove that the trouble is in the system beyond the gate valve and not in the pump or system below ground level.

1.5 LOW DISCHARGE TEST: Close the gate valve at ground surface for a sufficient long time, to check the ammeter and pressure gauge reading. Check the water level in the well. Calculate the closed valve head developed by the pump. If this value is considerably less than the design total head, while the ammeter reading is higher than that specified by the manufacturer on the test sheet, the existence of following faults confirm.

1. Mechanical friction in pump or motor
2. Riser pipe developing a hole or leak developing in the system below the ground level.
3. The pump being worn by sand, there is an increase in mechanical friction.

1.6 PUMPING RATE TEST:

A. The test procedure to test whether the pumping rate greater than the rate of recuperation of well will include closing of the gate valve at the surface completely and then opening on turn only. If the trouble is corrected this proves that the pump discharge is too high for the yield of the well.

B. If the trouble persists; close the gate valve further, a small part of a turn at a time, until the trouble ceases. Leave the gate valve stem. Remove the gate valve handle to prevent authorized interference.

2.0 OPERATION OF SUBMERSIBLE PUMPS: Before operating the pump, the direction of rotation is checked. To ascertain the correct direction of rotation, let the motor run in both directions with the stop valve closed. The direction of rotation is changed by interchanging two of the phases. The pressure gauge will show different readings for the two directions. The direction which gives the higher pressure is correct one. When running freely, the correct direction of rotation can also be judged from the amount of water pumped.

2.1 STARTING AND INITIAL RUN:

The pump is started with sluice valve closed or slightly open. During the initial run, it is checked as to whether the pumped water is clear or muddy and whether any impurity is being pumped. If the water contains sandy or gritty particles or the impurities, care is taken not to stop pumping, otherwise the particles will settle inside the pump and on top of the non-return valve (if fitted), and may choke or seize the pump. The pump must be run with valve fully open (at not more than 40% discharge), until the sand content falls. The valve is then opened slowly to its full extent. Pumping is continued in this manner until it is possible to pump with a fully-open valve, without pumping excess sand. Generally, the permissible limit is up to 25 grains of sand per cubic meter of water (0.001 per cent, on volume basis, or 0.0025 per cent by weight). When the pumped water is clear, the pump may be stopped and restarted as required.

2.2 SHUT-DOWN PERIODS

The pump should not be allowed to remain stationary for more than 14 days at a stretch as, otherwise, lime, iron and other substances tend to settle in the bearings and impeller gaps, and block the pump rotor. If operating conditions require the pump to remain stopped for a longer period, it should be started and allowed to run for at least 5 minutes once every 14 days and preferably once every 8 days. Only then the pump will be ready for instant resumption of service at any time.

3.0 COMMON CAUSES OF BREAKDOWN OF SUBMERSIBLE PUMPS

The most common cause of breakdown of submersible pumps is the burning of motors. The following are the common causes of burning of the motor.

3.1 Uniform Burning of Motor Winding Due to Formation of Insulating Layer:

If the temperature of the winding exceeds the maximum allowable limit, it may result in the burning of the motor. This is generally caused by formation of an insulating layer around the motor surface, due to silt or grit gathered on the motor frame. The burning in this case is uniform. Whenever the motor is taken out, the surface should be cleaned and repainted before lowering.

3.2 BURNING OF MOTOR DUE TO OVERLOADING

A power overload occurs when the pump requires more power from the motor than the rated motor. Such a situation could lead to the overloading of winding, thus burning the motor. Power overloads can occur if the pump is run far away from the duty point specified on the pump and motor. In the field, such conditions normally happen if the assessment of total head to be developed by the pump is not made properly. To avoid this, the motor selected should have adequate output.

3.3 BURNING OF MOTOR DUE TO VOLTAGE FLUCTUATION

Submersible motors are designed to function without any problem, in the voltage range of $\pm 10\%$ of the rated voltage. When the voltage exceeds the limit, the output of the motor increases, leading to overheating and burning of the winding. It is always advisable to have a voltmeter and an ammeter fixed on the switchboard as near the motor as possible. Necessary action could then be taken, in case the variation in voltage is more than the permissible limit. It is safer to have a motor of horse power about 10 to 15 per cent more than the rated power for the pump, so that some overload can be sustained. In case of fluctuating voltage conditions, a 3 phase voltage stabilizer should be provided.

3.4 BURNING OF MOTOR DUE TO SINGLE PHASING

Single phasing of the motor is frequent in the field. In most cases, the missing of phase can also be due to malfunctioning of the switch gear. Inadequate capacity of fuses can also lead to this hazard.

Further, single phasing can occur due to damage of the power cable. This can happen at the time of pump installation. Great care must be taken to avoid any damage or bending of the cable at the time of installation of the pump set.

It is recommended that economy should not be considered in the choice of switch gear for quality and capacity. It is always advisable to have a single-phasing presenter installed with the pump set.

3.5 BURNING OF MOTOR DUE TO EXCESSIVE NUMBER OF STARTS

The starting current of all motors is much higher than the current required for normal running. Consequently, if the number of times the pump is started is high and in quick succession, the winding will not have time to dissipate the heat developed in starting and will overheat. This will weaken the insulation and result in the winding burning. The permissible switching frequency depends on the motor horse power. The maximum switching allowed is 20 times and 15 times an hour for motors upto 5 hp, and 7.5 to 100 hp, respectively. If the motor does not start to run and build up to full speed as soon as it is switched on, it must be switched off immediately and should not be started again until about 5 minutes have elapsed.

3.6 BURNING OF MOTORS DUE TO ELECTRICAL DISCHARGE

Electrical discharge can occur between winding and earth or between turns. The cause can be direct sparking or accidental jumping of current from one conductor to another. The contact between winding and earth, due to defect in insulation of the wire or puncture of the wire at the time of winding, could also cause the damage.

3.7 WRONG REPAIR AND REPLACEMENT

The spare parts used in the repair of motor, starter and pump may be improper quality and capacity, which may cause burning of motor due to non-matching of characteristics. The parts replaced should be genuine, purchased from authorized dealers of reputed manufacturers.

In addition to burning of submersible motor, the following are the other causes responsible for breakdown of submersible pumps:

a) Damage to motor and pump:

The submersible pump and motor unit is aligned by manufacturer or in repair workshop. Rough handling in transportation and carriage to the site of installation may cause misalignment which will be noticed only after lowering of the unit. Misalignment may cause vibrations leading to damage to motor and pump parts, and overloading of motor resulting in the burning of the windings.

The motor and pumps should be assembled and checked for free movement in the shop, and packed in wooden containers of size matching the equipment. The box should be carried carefully to the site and should be opened only at the time of lowering.

b) Heavy fine-Sand Pumping:

Submersible pump will provide long service life if the sand content of the water is limited to 28-40 ppm. With sand pumping, the service life of the pump is reduced drastically. Sand in water damaged the rubbing surface of the neck ring and impeller and cause more clearance. Too high a

clearance result in high vibrations which reduce the discharge and overload the motor. Vibrations disturb the motor alignment and ultimately burn the motor.

c) Loose and Electrical Column pipe:

A loosely bolted and non-rigid column pipe to which a submersible pump is attached can cause vibrations in the whole system. These vibrations will ultimately damage the pump due to misalignment and lead to the breaking of motor or its burning.

Flanges and other types of joints must be properly matched and tightened with an ordinary nut and a check nut. The pipe should be kept at the center of the housing and on one side.

d) Fallen Pumps and Motors:

The falling down of pumps and motors is due to vibrations, and faulty repair, i.e. non-replacement of worn studs and water hammer. Fishing is easier with a fallen pump than a detached motor. For fishing the fallen motor, the manufacturer should be asked to provide a mechanical clamp from the bottom of the motor to the discharge nipple over the non-return valve, which can be attached to a wire rope. This wire rope should be brought up to the top of the well so that in case of an accidental fall, the motor can be easily pulled out. This will not only save the motor but well itself because, many a time, the well is abandoned because of the failure to fish out the motor.

e) Seizure of Pump or Motor Bearing

Seizure of the pump bearing can result when the pump runs dry. This can happen due to a fall in water level during summer or over pumping of the tube well. The pump can be safeguarded from dry running by installing a pneumatic water level indicator, observing it periodically and extending the column pipes to cater to situation of falling water, if required.

3.0 DO'S AND DONT'S FOR SUBMERSIBLE PUMP

DO'S:

1. Do ensure that motor is filled with adequate quantity of clear, cold water before coupling to the pump.
2. Do ensure that no air is trapped while filling water in the motor.
3. Do avoid sharp bend to cable.
4. Do ensure that pump set never touches the bore well bottom.
5. Do ensure that the pump set is at least 3m above the mud accumulated in well.
6. Do ensure that in case of extreme urgencies, disassembly should be carried out only by trained mechanic with proper tools.

DONT'S:

1. Do not fill distilled water in the pump.
2. Do not connect water filling plug to tap.
3. Do not run motor without water even for short time.
4. Do not pull power cable.
5. Do not use any gasket between pump and motor.
6. Do not tamper with important assembly setting like axial play of pump and motor.
7. Do not use vice to hold the motor, use 'V' shaped wooden hooks.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

I. Maintenance of RO with water cooler

R.O. System 25 LPH /etc output capacity - All in all repair & maintenance of Reverse Osmosis system including replacement of all components/parts e.g. Pump, Membrane, Filters, Power Supply, S.V., F.R., Housings, PVC connecting pipes, Water sensors, UV lamps and any other parts of Machine etc. as required. The job includes servicing of all the machines quarterly and also as and when required on receiving the complaints or as directed by Engineer in charge.

1. Daily check & operation of water cooler.
2. Cleaning of water tank once in a month.
3. Checking of water leakage from water cooler & if there is water leakage rectify the same.
4. Check & ensure proper working of water cooler daily.
5. Maintain record & submit to concern Engineer In charge.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

J. Maintenance of Solar panels

Once a fortnight the surface of the panels should be wiped clean with wet rag to remove dust, fallen leaves & bird dropping etc. Only water to be used and no other cleaning agent for cleaning. In addition, maintenance of Secondary battery of Solar Panel is required on discretion of Engineer in-charge. Still general periodical maintenance of battery should be carried out. For efficient working of SPV system certain precautions are to be observed as given below.

1. Precautions and Preventive Steps Please ensure that:

- a) SPV Modules are connected in parallel and SPV Panel output voltage is less than 25 Volts under normal sunshine condition (for 12 V System/Module).
- b) All connections are properly made tight and neat using the crimped Red (for +ve) and Black (for -ve) wires supplied by the manufacturer in order to avoid reverse connection. c) The rating of the fuse in the charge controller is not changed.
- c) The SPV Panel is installed facing SOUTH and with the correct 'Angle of tilt'.
- d) There is no shadow on any part of the SPV Panel at any time of the day, to get maximum power.
- e) SPV Modules are protected against any act of vandalism and accidental strike or hit by heavy objects, like stone, hammer etc. If the SPV Panel is installed on ground, it must be fenced properly to protect it from cattle and to prevent from any damage/theft. Fencing should be made in such a way that no shadow should fall on SPV Panel at any time of the day.
- f) Battery Bank is placed on a rack or platform insulated from ground and located in a well-ventilated room and also sufficient clearance is there over the battery.
- g) First the Battery Bank, then SPV Panel and then Load is connected to SPV Charge Control Unit and for disconnection reverse sequence is adopted.
- h) Battery terminals are never shorted even momentarily as shorting will result in heavy spark and fire. (To avoid the same connect the cable at Charge Controller end 'First' and then Battery end.)

- i) Never connect the Load directly to the SPV Panel as SPV Panel may give higher/lower voltage than required by the Load Equipment and hence the equipment may be damaged permanently.
- j) Blocking diode is provided at the array output for protection against reverse polarity.
- k) Make sure that the Solar PV module gets direct sunlight throughout the day where you install it.
- l) The Green indicator on Charge controller is only an indication for charging. It will glow even at small amount of charging. So to ensure efficient charging, the availability of direct sunlight over the Solar PV module for the maximum hours of the day should be ensured.
- m) It is not heat but light that produces energy. So let direct sunlight to fall on the module surface without shades.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

K. Maintenance of other E&M items:

In addition to above listed items, any other E&M Electrical items required for maintenance as and when required or on discretion of Engineer in-charge at the mentioned locations.

Manpower deployment:

- a) The Contractor should provide a Supervisor in-charge who will be overall in-charge and look after General power supply arrangement of DDU-Chiraila Pauthu /New Sonnagar section and also supervise the staff deployed at all stations for 24X7 in three shift.
- b) Supervisor in-charge will prepare round the clock maintenance report and maintain a register for the same and make it available if asked by DFCCIL officials. All communication regarding maintenance, failure and other miscellaneous will be done by supervisor in-charge only and he is responsible for providing all information of General power supply arrangement of DDU Chiraila Pauthu /New Sonnagar section.
- c) Stations shall be manned round the clock for all days including Holidays & Sundays. Availability of manpower shall be strictly followed, failing of which penalty will be imposed as per contract condition.
- d) Rest, Leave and absent of staff shall be managed by the contractor itself. Contractor should have to maintain staff availability 24x7 without fail and suitable replacement should be provided immediately.
- e) Contractor shall provide all the services included in the schedule every day i.e. Monday to Sunday. The contractor at his own cost shall arrange weekly rest, Leave etc. to the manpower engaged by the contractor and the rates shall be quoted accordingly.
- f) Minimum wages as per CLC ,New Delhi /DFCCIL rules etc should be ensured by the contractor .Rates shall be quoted accordingly.
- g) DFCCIL shall have the authority to advice the contractor to remove or replace any work man/men whom he consider incompetent unsuitable or harmful.
- h) Operation of all the equipment of E&M along with minor repair works will be responsibility of the contract staff.

- i) All major tools and plants and safety gadgets shall be arranged by DFCCIL. However, contractor staff will carry with them hand tools for carrying out the operations and minor repair works.
- j) The contractor should provide working Mobile no. to all his staff for communication and also submit list of communication number to DFCCIL for 24x7 monitoring and execution of work.
- k) DFCCIL shall be empowered to impose any penalty as deemed fit for violation of any on the schedule 1 should be quoted accordingly. The payment of minimum wages to employee of all shift is a safety concern or any other instructions issued by the competent authority in this respect from time to time.
- l) Each on duty operator should work under the instruction of DFCCIL supervisor in-charges.
 1. If performance of any contractor's staff is not found up to the mark, he should be replaced by suitable person within a week. If the staff is not replaced will be treated as absent and penalty shall be imposed as per conditions of contract.
 1. The outsourced person shall at all-time maintain absolute integrity and devotion to duty and conduct himself/herself in a manner conducive to the best interests, credits and prestige of DFCCIL.

(m) **Suitable reliever:**

Maintenance of E&M assets work will be on all days including Sunday. It is responsibility of the contractor to arrange necessary relief, weekly rest, Leave etc. to the personnel following the HOER/labour laws etc. It is for information of the contractor that generally for necessary relief, weekly rest, Leave etc. a minimum 16% of extra staff/money per location are required to complete 3 shifts daily for one month. The contractor should keep all these things in mind and the rates should be quoted accordingly.

2. SCHEDULE- 2 - Supply of essential maintenance spares

This item includes supply of essential maintenance spares as mentioned below:-

1	Call bells buzzer/Dind dong.	Nos	5
2	Single pole MCB 6A-32A	Nos	50
3	Single pole Neutral MCB 6A-32A	Nos	50
4	Double pole MCB 6A- 32A	Nos	50
5	RCCB AC typerating-32A, Leakage current-30mA	Nos	50
6	Fan regulator electronics 100 watt	Nos	50
7	Condenser 2.25mfd, 440V	Nos	50
8	Condenser 2.5 mfd, 440V	Nos	50
9	Condenser 4 mfd, 440V	Nos	50
10	6A Angle holder	Nos	50
11	6A Pendent holder	Nos	50
12	6A Batten holder	Nos	50
13	63A fuse unit/ fuse switch	Nos	10
14	16 A Kit kat Rewireable Porcelain Fuse Carrier & Base.	Nos	50
15	63 A Kit kat Rewireable Porcelain Fuse Carrier & Base.	Nos	25
16	DIN Type HRC fuse 63Amp	Packet	20
17	HRFR PVC insulated Industrial cable 2.5sq mm Multi strand copper	Meter	900

18	HRFR PVC insulated Industrial cable 4 sq mm Multi strand copper	Meter	450
19	HRFR PVC insulated Industrial cable 6 sq mm Multi strand copper	Meter	450
20	HRFR PVC insulated Industrial cable 10 sq mm Multi strand copper	Meter	250
21	PVC conduit pipe 25 mm dia (midium)	Meter	200
22	Box type PVC casing caping (6 feet length) size 25mmx16mm	Nos	200
23	6A modular one way switch	Nos	75
24	16A modular one way switch	Nos	75
25	6A 2 pin modular socket	Nos	75
26	6A 3 pin modular socket	Nos	75
27	6A/16A modular socket	Nos	75
28	Aluminium lugs		
a	4 sqmm lug	Nos	50
b	6 sqmm lug	Nos	50
c	10 sqmm lug	Nos	50
d	25 sqmm long barrel lug	Nos	25
e	35 sqmm long barrel lug	Nos	25
f	50 sq mm long barrel lug	Nos	25
g	70 sqmm long barrel lug	Nos	25
h	120 sqmm long berrel lug	Nos	25
i	150 sqmm long berrel lug	Nos	25
j	185 sqmm long berrel lug	Nos	25
k	240 sqmm long berrel lug	Nos	25
l	300 sqmm long berrel lug	Nos	10
m	400 sqmm long berrel lug	Nos	10
n	25 sqmm short barrel lug	Nos	25
o	35 sqmm short barrel lug	Nos	25
p	50 sqmm short barrel lug	Nos	25
q	70 sqmm short barrel lug	Nos	50
r	120 sqmm short barrel lug	Nos	50
s	150 sqmm short barrel lug	Nos	25
t	185 sqmm short barrel lug	Nos	25
29	Copper lugs		
a	4 sqmm lug	Nos	50
b	6 sqmm lug	Nos	50
c	10 sqmm lug	Nos	50
d	25 sqmm long barrel lug	Nos	25
e	35 sqmm long barrel lug	Nos	25
f	50 sq mm long barrel lug	Nos	25
g	70 sqmm long barrel lug	Nos	25
h	120 sqmm long berrel lug	Nos	25
i	150 sqmm long berrel lug	Nos	25
j	185 sqmm long berrel lug	Nos	25
k	240 sqmm long berrel lug	Nos	25
l	300 sqmm long berrel lug	Nos	10
m	400 sqmm long berrel lug	Nos	10

n	25 sqmm short barrel lug	Nos	25
o	35 sqmm short barrel lug	Nos	25
p	50 sqmm short barrel lug	Nos	25
q	70 sqmm short barrel lug	Nos	25
r	120 sqmm short barrel lug	Nos	25
s	150 sqmm short barrel lug	Nos	25
t	185 sqmm short barrel lug	Nos	25
30	LED tube light 18 W	Nos	50
31	LED tube light 22 W	Nos	50
32	LED light 70 W	Nos	20
33	Fan	Nos	20
34	Exhaust Fan	Nos	20
35	Cable 3x120 sqmm armoured Al cable	Mtr.	500
36	Cable 2x10 sqmm armoured Al cable	Mtr.	1000
37	Cable 4x50 sqmm armoured Al cable	Mtr.	500
38	Cable 4x25 sqmm armoured Al cable	Mtr.	1000
39	Cable 4x16 sqmm armoured Al cable	Mtr.	1000
40	Cable 3x95 sqmm armoured Al cable	Mtr.	500
41	Supply of Octagonal Pole (Dip Galvanized in single dip average 70 micron) 6 mtrs. Long Top dia 70 mm, Bottom Dia. 135 mm. Sheet thickness 3 mm, in single Section with base Plate (220 x 220 x 12 mm (L x B x H) with 700 mm Long Double Arm Bracket and 04 Nos. 16 mm dia. x 600 mm long (100 mm. thread projectional), foundation Bolts, complete with smart pack Junction Box with G A MCB and Stud terminals (For mounting inside base plate) and Internal. wiring for terminal to fitting with 2 x 2.5 Sq. min. Cable of Ploycab, Finolex, Plaza). Make of Pole: Bajaj, Bansal, Jindal or similar.	Each	20

3. Schedule -3 –Minor works related to maintenance activity of E & M assets

A. Item-1–This item includes minor works as and when required for Collecting, transporting from DFC store to site, laying, testing & commissioning of HL/LT cables of different sizes. Laying direct in ground (including excavation, sand cushioning, protection bricks covering, and refilling the trench etc.), direct in RCC /metal pipe in road/track crossing and on surface required as per relevant technical specifications.

B. Item-2– This item includes minor works as and when required for Earthing with 40 mm dia. GI pipe class B, 3-meter-long earth erected as per IS 3044/1985b (latest version) to achieve earth resistance less than 5 ohms, including construction of masonry enclosure with hinged cover plate of cast iron with locking arrangement (approx. Size 400 x400 mm) on top, connection from earth electrode to switch gear / pole as per drawing.

C. Item-3 – This item includes minor work of Horizontal boring under railway track/road for laying 120mm dia DWC double walled corrugated pipes at the depth of 1.4meter to 2.1 meter from formation level (level of earth below ballast) as per drawing and directed by engineer in -charge by trenchless technology excluding the cost of DWC pipes.

4. Schedule-4 -Comprehensive maintenance of split AC units installed at DFCCIL Stations, IMD,

IMSDs, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets.

A. Item-1 – This item includes Comprehensive running maintenance of split/window/tower type AC units of 1.5/2.0 Ton capacity installed at DFCCIL Stations, IMD, IMSDs, ALHs & RHs for 02 years (07 months in a year March to September in each year as per maintenance schedule 'M' 'O' & 'P').

➤ **MAINTENANCE SCHEDULE OF A.C. UNITS**

Schedule-'M'

1. Weekly Schedule

- ❖ Check the earth connections.
- ❖ Check the vibration due to blower motor and compressor.
- ❖ Cleaning of condenser and equipments.
- ❖ Check fuses.

2. Monthly Schedule

In addition to weekly schedule, following checks should be done -

- ❖ Check the supply voltage, insulation resistance of compressors I.e., 1 Mega Ohms, earth connections, tightness of connections, starter and danaite contact and ensure that exhaust fan and blades are secured.
- ❖ Check the leakage of gas for entire system.
- ❖ Check the function of thermostat.
- ❖ Check the body heat of blower motor.
- ❖ Check the contactors contact or relay.

3. Quarterly Schedule

In addition to Weekly and Monthly schedule, following checks should be done –

- ❖ Measuring the IR value of the compressors and blower motors.
- ❖ Measuring of the ohm value of the compressor.
- ❖ The proper operation of relay, alarm with starting and running condensers.
- ❖ Checking of wire terminal connections tighten the same, burnt/ carbonized wire should be replaced by proper size.

4. Half Yearly Schedule

In addition to Weekly, Monthly and Quarterly schedule, following checks should be done -

- ❖ Check the strainer with the help of petrol. Pumps and clean the contact switches.
- ❖ Megger the wire of blower
- ❖ Charge the gas if required.
- ❖ Check the functioning of thermostat.

➤ **MAINTENANCE SCHEDULE 'O'**

- ❖ The contractor shall rectify defects noticed during the breakdown of any AC.
- ❖ The normal time period for rectification of fault will be 12 hours.
- ❖ The nature of repair involve in breakdown may be either repairs or replacement of certain accessories which includes starting relay, starting capacitor, running capacitor. overload protection

thermostat repair and replacement, if compressor, condenser, fan motor, fan blades aligning of unit properly on foundation.

- ❖ In event of fault of compressor, the contractor shall replace the same from his spare stock available with him and arrange to repair the compressor from authorized service agency as specified in special condition of contract.
- ❖ Necessary gas charging will be done by the contractor in event of failure of any unit. Transport if required will be done by the contractor.
- ❖ The items noticed defective during the routine inspection by the Section In-charge or his authorized representative shall also be done as break down and shall be rectified /replaced by the contractor.
- ❖ The routine maintenance as specified in schedule 'M' and break down maintenance as specified in schedule 'O' shall be done by contractor at site.
- ❖ Whenever compressor replacement/ repair is involved, the contractor shall also replace capillary tube and strainer without fail, similarly complete system tube work shall be cleaned from inside by using petrol or by circulating CTC using a small pump from outside.

A. **Item-2** – This item includes Complete repairing and over hauling of tower/window/split type AC units (described in item no 1) during switching off period i.e. November to February as per technical specification.

SCOPE OF WORK

1) Comprehensive maintenance of AC units will cover regular, and systematic examination, adjustment, lubrication, gas charging oiling, greasing, filter cleaning etc. in addition tab the repairs, rewinding & replacement of following equipments as and when required are also included.

a) Compressor, b) blower motor, c) selector switches, d) condenser fan, e) thermostat, f) relay, g) cooling coils, h) blower drum, i) condenser, j) overload protection, k) air filter, l) capillary, m) pumping motors, n) solenoid switches, o) float valve to control the water level in storage tank, p) metallic body of the entire machine is to be maintained in good condition duly painted and without vibration noise etc.

2) The contractor will have to replace compressors also within 24 hours of defect is highlighted in addition to other items mentioned above whenever compressor become defective. The repairing of the compressor will have to be done through original manufacturer or his authorized dealer or agent. The advantage of unit exchange scheme may be explored.

3) AC units will be handed over to the contractor at the place where these are installed and the same will be handed over back to Railway in good working condition by the contractor after expiry of the contract to the authorized representative of the DFCCIL. The contractor shall ensure the working of the machine in good with desire and effective cooling since 1 April to 31 October of every year.

4) The work should be carried out as per latest ISS and IE rules for AC's and water coolers maintenance.

5) The AC units before repairing should got inspected by the authorized representatives of Section In-charges.

6) All the released material shall have returned and deposited to the concerned supervisor depot.

7) Initially the contractor shall immediately replace defective AC units and water coolers by his own spare units where the repairs is involved for more than 2 hours in consultation with authorized railway representative.

➤ **MAINTENANCE SCHEDULE 'P'**

- i. In event of fault of compressor, the contractor shall replace the same from his spare part stock available with him and arrange to repair the compressor from M/s or their authorized service agency has specified in special condition of contract.
- ii. He will replace the capillary and filter also, similarly system tube work will be cleaned from inside by using petrol or by circulating CTC using a small pump from outside.

➤ **TECHNICAL CONDITION**

- ❖ The contractor shall have to maintain a service register kept with the concerned Section In-charge/ Senior Executive/Executive depot and shall be duly entered and signed after attending periodical maintenance, said break down call, repair & replacement etc. as and when arise.
- ❖ Any part required to be taken out from the AC unit for repair or replacement shall be taken out only after the approval of authorized representative of Section In-charge, similarly the defective part whichever has been repaired/ replaced shall be duly entered in the service register. No part of the component of the AC units shall be removed without approval and knowledge of Section In-charge or his authorized representative of the DFCCIL/DDU .
- ❖ Prior planning shall be done for the periodical maintenance of all AC units and the schedule of maintenance should be given to this office with a copy of field in charge.
- ❖ DFCCIL shall in no way be responsible for the contractor's manpower of their property during the period of maintenance.
- ❖ The work shall be carried out by the contractor conforming to latest ISS and IE rules and as per instructions of the Section In-charge or his authorized representative. The work and material should be conforming to railway's specification supplied by original manufacturer or their authorized dealer only.
- ❖ The contractor has to keep qualified authorized representative at site of work on his behalf and offered all necessary facilities of inspection to authorized officials of
- ❖ The AC units installed at all stations/office including IMDs, MSDs, ALHs, of DFCCIL/DDU unit is offered for Comprehensive maintenance. Being important location and related to staff complaints, it is desired to have "Zero Failure".
- ❖ The AC units are provided subjected to outdoor weather condition and voltage fluctuation of Power Supply from UPPCL/DVVNL, the contractor shall have to maintain these protective devices against the above climate conditions and voltage fluctuation at his own cost.
- ❖ The contractor will hold sufficient nos. of spare parts which will be 5% of total holding in case of compressors (type wise) and 10% of total holding in case of other spares like blower motor, starting relay, running capacitors, Electronics components etc. healthier AC units.
- ❖ Sufficient amount of gas R-32/F-12/F-22 (which will be charged by the contractor in case of leakage of the system) shall be arranged by the contractor at his cost.

(ANNEXURES)

ANNEXURE – A

CERTIFICATION OF FAMILIARISATION

- A. I/We hereby solemnly declare that I/We have visited the site of work and have familiarized myself/ourselves of the working conditions there in all respects and in particular, the following:
- a) Topography of the Area.
 - b) Availability of manpower.
 - c) Availability of tools and machinery.
 - d) The existing roads and access to the site of work.
 - e) Climatic condition and law & order situation in project area.
- B. I/We have kept myself/ourselves fully informed of the provisions of this tender document comprising Instructions to the Tenderers, General Conditions of the Contract, Special Conditions, special terms and conditions apart from information conveyed to me/us through various other provisions in this tender document.
- C. I/We have quoted my / our rates as “Percentage above / at par” of costs as per Schedule of Items Rates and Quantities (BOQ) **in Offer Sheet**, taking into account all the factors given above.

(Signature of Tenderer/s)

ANNEXURE – B

SUPPLEMENTARY AGREEMENT

Articles of Agreement made on this in the year and between DFCCIL acting through the Chief General Manager hereinafter called as one party and of the second part.

Where the party hereto of the second part executed an agreement with the party hereto of the first part being agreement No. dated for the performance of herein called the principal agreement.

And whereas it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on “date last extended” and whereas the party hereto of the second part has executed the work to the entire satisfaction of the party hereto of the first part and whereas the party hereto of the first part already made payments to the party hereto of the second part diverse sums from time to time aggregating to **Rs.** including the final bill bearing voucher No. dated (the receipt of which is hereby acknowledged by the party hereto of the second part) in full and final settlement of all his claim under the principal agreement.

Now it is hereby agreed by and between the parties in the consideration of sums already paid by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement including / excluding security deposit, the party hereto of the second part have no further dues / claims against the party hereto of the first part under the said principal agreement.

It is further agreed by and between the parties that they party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said principal agreement.

It is further agreed and understood by and between the party that in consideration of the payment already made under the agreement the said principle agreement shall finally discharged and rescinded all the terms and conditions including the arbitration clause.

It is further agreed and understood by and between the parties that the arbitration clause contained in the said principal agreement shall cease to have any effect and / or shall seems to be nonexistent for all purposes.

Signature of the Tenderer/s

For & on behalf of

Witness of the signatures

Witness

.....

1.

2.

AFFIDAVIT

FORMAT FOR CERTIFICATE TO BE SUBMITTED / UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

I.....(Name and designation)**appointed as the attorney/authorized signatory of the tenderer (including its constituents), M/s..... (hereinafter called the tenderer) for the purpose of the Tender documents for the work of as per the tender No..... of(Railway)** , do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/we the tenderer (s) am/are signing this document after carefully reading the contents.
2. I/We the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the tender documents from Indian Railway website www.ireps.gov.in . I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the railway Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. **I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.**
6. **I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.**
7. I/we certify that I/we the tenderer(s) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
8. I/we understand that if the contents of the affidavit submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the Bid Security besides banning of business for a period of upto five year. Further, I/we (insert name of the tenderer) **.....and all my/our constituents understand that my/our offer shall be summarily rejected.
9. I/we also understand that if the contents of the affidavit submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/Security Deposit and Performance guarantee besides any other action provided in the contract including banning of business for a period of upto five year.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed)

DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER

VERIFICATION

I/We above named tenderer do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

**The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public .

ANNEXURE-D

(Guarantee –Bond offered by bank to DFCC in connection with the execution of Contracts)
(SD)

GUARANTEE BOND FORMAT
(To be used by approved Schedule Banks)

1. In consideration of the Employer DFCCIL (herewith called “ The Employer”) having agreed to exempt _____(hereinafter called “The said Contractor(s) from the demand, under the terms and conditions of an Agreement No..... dated _____made between _____ and _____ for _____(hereinafter called the “ The Said Agreement “) of **security deposit** for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. _____(Rupees _____only), we , _____(indicate the name of the bank) (hereinafter referred to as “ The Bank”) at the request of contractor(s) do hereby undertake to pay to the Employer an amount not exceeding Rs. _____against any loss or damage caused to or suffered or would be caused to or suffered by the Employer by reason of any breach by the said contractor(s) of any of the terms and conditions contained in the said Agreement.
2. We _____(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur merely on a demand from the DFCCIL stating that the amount claimed is due by way of loss or damages caused to or would be caused to or suffered by the DFCCIL by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. _____.
3. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s)/ Supplier(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present is being absolute and unequivocal. The payment so made by us under this Bond shall be valid discharges of our liability for payment hereunder the Contractor(S)/Supplier(s) shall have no claim against us for making such payment.
4. We _____(indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____the Employer/DFCCIL certify that terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges the Guarantee. Unless a demand or claim

under this Guarantee is made on us in writing on or before the _____, we shall be discharged from all liability under this Guarantee thereafter.

5. At any time during the period in which this guarantee is valid the Employer may request for its extension and the Bank will extend this guarantee under the same condition for the required time at the cost of the Contractor.
6. We _____ (indicate the name of Bank) further agree with the DFCC that the DFCC shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extent time of performance by the said Contractor(s) from time to time any of the powers exercisable by the DFCCIL against the said Contractor(s) and to forbear or enforce any of terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the DFCCIL or any indulgence by the DFCCIL to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties for the said reservation would relieve us from the liability.
7. This Guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s)/Supplier(s).
8. We _____, (indicate the name of Bank) lastly undertake not to revoke this Bank Guarantee during its currency except with the previous consent of the DFCCIL in writing.

IN WITNESS WHEREOF we of the Bank have signed and stamped this guarantee on this day of..... being herewith duly authorized.

Bank Seal Signature of Bank Authorize Official with Seal

Name: -----
Designation: -----
Address:

Witness:

1. Name:.....
Designation:.....
Address:
2. Name:.....
Designation:.....
Address:.....

ANNEXURE-E

Format of Bank Guarantee for Performance Security

Bank Guarantee No. :.....

Dated :.....

To,
Chief General Manager/DDU /DFCCIL OFFICE
Manas Nagar Railway Colony,
Pt.Deen Dayal Upadhyay Nagar (Mughalsarai)
Chnadauli-232101 (Uttar Pradesh)

Reference: - Contract No. -----, Awarded on -----

This deed of guarantee made this day of _____ between _____ (Name of Bank) having registered office at _____ and branch office at _____ (hereinafter referred to as “Bank”) of the one part, and Dedicated Freight Corridor Corporation of India Limited (hereinafter called the “Client”) of the other part.

Whereas Dedicated Freight Corridor Corporation of India Limited has awarded the contract no. _____ for construction of _____ (hereinafter called “the Contract”) to M/s _____ its registered office at _____ (hereinafter called the “the Contractor”).

Whereas the contractor is bound by the said Contract to submit to the Employer an irrevocable performance security guarantee bond for a total amount of Rs. _____ (Rs in words).

Now, we the undersigned (name of the Bank official), of the Bank being fully authorized to sign and to incur obligations for and on behalf of the Bank hereby declare that the said Bank will guarantee the Employer the full amount of Rs.-----
----- (Rs. In words) as stated above.

After the Contractor has signed the aforesaid contract with the Employer, the Bank further agrees and promise to pay the amount due and payable under this guarantee without any demure merely on a demand from the Employer stating that the amount claimed is due by way of loss or damage cause to or would be caused or suffered by the Employer by reason of any breach by the said contractor of any of the terms or conditions contained in the said agreement or by reason of the contractor failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However our liability under this guarantee shall be restricted to an amount not exceeding Rs. ----- (in words) only.

We ----- (indicate the name of Bank), further undertake to pay to the Employer any money so demanded notwithstanding any dispute or dispute raised by the contractor in any suit or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.

The Payment so made by us (name of Bank) under this bond shall be a valid discharges of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

We------(indicate the name of bank), to further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till at all the dues of the Employer under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged by -----

(Designation & address of contract signing authority) on behalf of Employer certify that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor and accordingly discharges this guarantee.

Not with standing anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the Employer or until (date of validity/extended validity) whichever is earlier and no claim shall be valid under the guarantee unless notice in writing, thereof is given by the Employer within validity/extended validity period of guarantee from the date aforesaid.

Provided always that we(name of bank) un conditionally undertakes to renew this guarantee or to extend the period of guarantee from year to year before the expiry of the period or the extended period of guarantee, as the case may be on being called upon to do so by the Employer. If the guarantee is not renewed or the period extended on demand, we ----- (name of bank) shall pay the Employer the full amount of the guarantee on demand without demur.

We------(indicate the name of Bank), to further agree with the Employer that the Employer shall have the fullest liberty without our consent and without effecting in any manner out of obligation hereunder to vary any of the terms and conditions of the said contract from time to time or to postpone for any time or from time to time any to power exercisable by the Employer against the said contractor and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liabilities by reason of such variation, or extension being granted to the said contractor for any forbearance act or omission on the part of the Employer or any indulgence by the Employer to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties for the said reservation would relieve us from the liability.

The Guarantee hereinbefore contained shall not be affected by any change in the constitution of Bank or of the Contractor.

The expression “The Employer”, “The Bank” and “The Contractor” hereinbefore used shall include their respective successors and assigns.

We----- (name of the bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing. Notwithstanding anything to the contrary contained hereinbefore:

- i) Our liability under this Bank Guarantee shall not exceed and restricted to Rs. ----
----- (in words).

- ii) This Bank Guarantee shall be valid up to -----, unless extended on demand by Employer.
- iii) The Bank is liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if Employer serve a written claim or demand on or before-----
--

IN WITNESS WHEREOF we of the Bank have signed and stamped this guarantee on this day of ----- being herewith duly authorized.

Bank Seal

Signature of Bank Authorize Official with Seal

Name :-----
Designation:-----
Address :

Witness:

1. Name :.....
Designation :.....
Address :
2. Name :.....
Designation:.....
Address :.....

ANNEXURE-F

_____ DFCCIL

CONTRACT AGREEMENT OF WORKS

CONTRACT AGREEMENT NO. _____ DATED _____

ARTICLES OF AGREEMENT made this _____ day of _____ 20____ between DFCCIL hereafter called the "Employer" of the one part and _____ herein after called the "Contractor" of other part.

WHEREAS the Contractor has agreed with the DFCCIL for performance of the works _____ set forth in the Bill(s) of Quantities hereto annexed upon the Standard General Conditions of Contract, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Specifications of _____ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the applicable Standard Schedule of Rates (SSOR) of _____ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Special Conditions and Special Specifications, if any and in conformity with the drawings here-into annexed AND WHEREAS the performance of the said works is an act in which the public are interested.

NOW THIS INDENTURE WITNESSETH that in consideration to the payments to be made by the DFCCIL, the Contractors will duly perform the said works in the said Bill(s) of Quantities set forth and shall execute the same with great promptness, care and accuracy in a workman like manner to the satisfaction of the DFCCIL and will complete the same in accordance with the said specifications and said drawings and said conditions of contract on or before the _____ day of _____ 20____ and will maintain the said works for a period of _____ Calendar months from the certified date of their completion and will observe, fulfill and keep all the conditions therein mentioned (which shall be deemed and taken to be part of this contract, as if the same have been fully set forth herein), AND the DFCCIL, both hereby agree that if the Contractor shall duly perform the said works in the manner aforesaid and observe and keep the said terms and conditions, the DFCCIL will pay or cause to be paid to the Contractor for the said works on the final completion thereof the amount due in respect thereof at the rates specified in the Bill(s) of Quantities hereto annexed.

Contractor _____ (Signature)

DFCCIL: Designation

Address _____ (For CGM/DDU/DFCCIL)

Date _____

Date _____

Signature of **Witnesses** (to Signature of Contractor) with address:

Witnesses:

(GENERAL CONDITIONS OF CONTRACT)

GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract 2022 of the Indian Railways shall be followed with its latest correction slips and amendments issued from Indian Railways.

The General Conditions of Contract 2022 of the Indian Railways, along with its latest correction slips and amendments, will form part of the tender/contract documents.

In case, there is an ambiguity in any definition, the decision of DFCCIL regarding the interpretation shall be final and binding.

Wherever there is conflict in any condition between GCC and special condition mentioned in tender documents. The condition mentioned in special condition of contract will prevail. However DFCCIL's decision in this connection shall be final and binding.

(FINANCIAL OFFER)

Schedule of Rates & Quantities				
Name of work: Comprehensive maintenance of E & M assets of various station buildings, IMD, IMSD, staff quarter, ALHs & RH locations in DDU -Chiraila Pauthu/New Sonnagar section of DFCCIL under CGM/DDU unit for 24 months.				
Item Description	Unit	Total Qty	Unit Rate including GST	AMOUNT
SCHEDULE 1- Providing man power for maintenance of General Power Supply (E & M) items for DFCCIL Stations, IMD, IMSDs, Staff quarters, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets for 24months.				
Providing High skilled/Overall in-charge for supervising in daily shift at IMD location.(1 person is required to be present in day shift only at each IMD/IMSD)(Total IMD/IMSD=2)(Total shift in two years =2x730)	Shift	1460	1252	1827920
Providing Skilled Person for executing different E& M maintenance activities (one person should be present in all three shifts at every station/location). (Total location=5).Total shift in two years=5x3x730)	Shift	10950	1066	11672700
Providing Unskilled Person for executing different E&M maintenance activities (Two persons in day shift and one person at evening and one person at night shift at every station/location)(Total locations=5)(Total shift in two years=5x4x730)	Shift	14600	756	11037600
Total value of Schedule -1				2,45,38,220
For schedule 1, the contractor should quote rate judiciously so as to follow minimum wages fixed by CLC New Delhi.				
Item Description	Unit	Total Qty	Unit Rate including GST	AMOUNT
SCHEDULE-2, Supply of essential maintenance spares				
1. Call bells buzzer/Ding dong.	Nos	5	311.00	1,555.00
2.Single pole MCB 6A-32A	Nos	50	231.00	11,550.00
3.Single pole Neutral MCB 6A-32A	Nos	50	717.00	35,850.00
4.Double pole MCB 6A- 32A	Nos	50	740.00	37,000.00
5.RCCB AC type rating-32A, Leakage current-30mA	Nos	50	2,750.00	1,37,500.00
6.Fan regulator electronics 100 watt	Nos	50	260.00	13,000.00
7.Condenser 2.25mfd, 440V	Nos	50	33.00	1,650.00
8.Condenser 2.5 mfd, 440V	Nos	50	35.00	1,750.00
9. Condenser 4 mfd, 440V	Nos	50	42.00	2,100.00
10. 6A Angle holder	Nos	50	34.00	1,700.00

11. 6A Pendent holder	Nos	50	32.00	1,600.00
12. 6A Batten holder	Nos	50	34.00	1,700.00
13. 63A fuse unit/ fuse switch	Nos	10	4,527.00	45,270.00
14. 16 A Kit kat Rewireable Porcelain Fuse Carrier & Base.	Nos	50	276.00	13,800.00
15. 63 A Kit kat Rewireable Porcelain Fuse Carrier & Base.	Nos	25	446.00	11,150.00
16. DIN Type HRC fuse 63Amp	Nos	20	385.00	7,700.00
17. HRFR PVC insulated Industrial cable 2.5sq mm Multi strand copper	Meter	900	47.50	42,750.00
18. HRFR PVC insulated Industrial cable 4 sq mm Multi strand copper	Meter	450	69.77	31,396.50
19. HRFR PVC insulated Industrial cable 6 sq mm Multi strand copper	Meter	450	104.27	46,921.50
20. HRFR PVC insulated Industrial cable 10 sq mm Multi strand copper	Meter	250	177.00	44,250.00
21. PVC conduit pipe 25 mm dia (midium)	Meter	200	26.00	5,200.00
22. Box type PVC casing caping (6 feet length) size 25mmx16mm	Nos	200	25.00	5,000.00
23. 6A modular one way switch	Nos	75	45.00	3,375.00
24. 16A modular one way switch	Nos	75	137.00	10,275.00
25. 6A 2 pin modular socket	Nos	75	106.00	7,950.00
26. 6A 3 pin modular socket	Nos	75	132.00	9,900.00
27. 6A/16A modular socket	Nos	75	208.00	15,600.00
28. 4 sqmm Aluminium lug	Nos	50	2.00	100.00
29. 6 sqmm Aluminium lug	Nos	50	2.20	110.00
30. 10 sqmm Aluminium lug	Nos	50	2.80	140.00
31. 25 sqmm long barrel Aluminium lug	Nos	25	6.20	155.00
32. 35 sqmm long barrel Aluminium lug	Nos	25	9.90	247.50
33. 50 sq mm long barrel Aluminium lug	Nos	25	14.30	357.50
34. 70 sqmm long barrel Aluminium lug	Nos	25	22.00	550.00
35. 120 sqmm long berrel Aluminium lug	Nos	25	36.00	900.00
36. 150 sqmm long berrel Aluminium lug	Nos	25	46.00	1,150.00
37. 185 sqmm long berrel Aluminium lug	Nos	25	58.00	1,450.00
38. 240 sqmm long berrel Aluminium lug	Nos	25	89.00	2,225.00
39. 300 sqmm long berrel Aluminium lug	Nos	10	111.00	1,110.00
40. 400 sqmm long berrel Aluminium lug	Nos	10	157.00	1,570.00

41. 25 sqmm short barrel lug	Nos	25	4.40	110.00
42. 35 sqmm short barrel lug	Nos	25	6.60	165.00
43. 50 sqmm short barrel lug	Nos	25	10.20	255.00
44. 70 sqmm short barrel lug	Nos	50	15.40	770.00
45. 120 sqmm short barrel lug	Nos	50	28.00	1,400.00
46. 150 sqmm short barrel lug	Nos	25	35.00	875.00
47. 185 sqmm short barrel lug	Nos	25	45.00	1,125.00
48. 4 sqmm Copper lug	Nos	50	6.60	330.00
49. 6 sqmm Copper lug	Nos	50	7.30	365.00
50. 10 sqmm Copper lug	Nos	50	9.10	455.00
51. 25 sqmm long barrel Copper lug	Nos	25	43.00	1,075.00
52. 35 sqmm long barrel Copper lug	Nos	25	68.00	1,700.00
53. 50 sq mm long barrel Copper lug	Nos	25	97.00	2,425.00
54. 70 sqmm long barrel Copper lug	Nos	25	156.00	3,900.00
55. 120 sqmm long berrel Copper lug	Nos	25	267.00	6,675.00
56. 150 sqmm long berrel Copper lug	Nos	25	339.00	8,475.00
57. 185 sqmm long berrel Copper lug	Nos	25	425.00	10,625.00
58. 240 sqmm long berrel Copper lug	Nos	25	650.00	16,250.00
59. 300 sqmm long berrel Copper lug	Nos	10	814.00	8,140.00
60. 400 sqmm long berrel Copper lug	Nos	10	1,151.00	11,510.00
61. 25 sqmm short barrel Copper lug	Nos	25	30.00	750.00
62. 35 sqmm short barrel Copper lug	Nos	25	44.00	1,100.00
63. 50 sqmm short barrel Copper lug	Nos	25	68.00	1,700.00
64. 70 sqmm short barrel Copper lug	Nos	25	108.00	2,700.00
65. 120 sqmm short barrel Copper lug	Nos	25	199.00	4,975.00
66. 150 sqmm short barrel Copper lug	Nos	25	250.00	6,250.00
67. 185 sqmm short barrel Copper lug	Nos	25	322.00	8,050.00
68. LED tube light 18 W	Nos	50	850.00	42,500.00
69. LED tube light 22 W	Nos	50	950.00	47,500.00
70. LED Light 70W	Nos	20	3350	67,000.00
71. Fan	Nos	20	1999	39,980.00
72. Exhaust Fan	Nos	20	1490	29,800.00
73. Cable 3×120 Sqmm Armoured AL cable	Mtr	500	1240	6,20,000.00

74. Cable 2×10 Sqmm Armoured AL cable	Mtr	1000	95	95,000.00
75. Cable 4×50 Sqmm Armoured AL cable	Mtr	500	600	3,00,000.00
76. Cable 4×25 Sqmm Armoured AL cable	Mtr	1000	230	2,30,000.00
77. Cable 4×16 Sqmm Armoured AL cable	Mtr	1000	125	1,25,000.00
78. Cable 3×95 Sqmm Armoured AL cable	Mtr	500	490	2,45,000.00
79. Supply of Octagonal Pole (Dip Galvanised in single dip average 70 micron) 6 mtrs. Long Top dia 70 mm, Bottom Dia. 135 mm. Sheet thickness 3 mm, in single Section with base Plate (220 x 220 x 12 mm (L x B x H) with 700 mm Long Double Arm Bracket and 04 Nos. 16 mm dia. x 600 mm long (100 mm. thread projectional), foundation Bolts, complete with smart pack Junction Box with G A MCB and Stud terminals (For mounting inside base plate) and Internal. wiring for terminal to fitting with 2 x 2.5 Sq. mm. Cable of Ploycab, Finolex, Plaza). Make of Pole: Bajaj, Bansal, Jindal or similar	Each	20	13959	2,79,180.00
Total value of Schedule -2				27,80,668.00
Item Description	Unit	Total Qty	Unit Rate including GST	AMOUNT
Schedule -3 Minor works related to maintenance activity of E & M assets				
Collecting, transporting from DFC store to site, laying, testing & commissioning of HL/LT cables of different sizes. Laying direct in ground (including excavation, sand chusioning, protection bricks covering and refilling the trench etc.), direct in RCC/metal pipe in road/track crossing and on surface required as per relevant technical specifications.	Mtr	4500	64.66	2,90,970.00
Earthing with 40 mm dia GI pipe class B, 3 meter long earth erected as per IS 3044/1985b (latest version) to achieve earth resistance less than 5 ohm, including construction of masonry enclosure with hinged cover plate of cast iron with locking arrangement (approx. size 400 x400mm) on top, connection from earth electrode to switch gear / pole as per drawing.	Numbers	25	1,086.07	27,151.75

Insertation of HDPE Pipe by Horizontal drilling pipe pushing method , under railway track/road etc as per drawing or as directed by Engineer-in-charge.	meters	500	1,260.00	6,30,000.00
Erection & casting of foundation for Octagonal Tubular pole with earth excavation with Cement,Cocrete & sand (1:3:6) & muffing of base foundation as per manufacturer drawings and dimension as required under the Suppression of site incharge	Each	20	2722	54,440.00
Total value of Schedule -3				10,02,561.75
Item Description	Unit	Total Qty	Unit Rate including GST	AMOUNT
Schedule-4 - Comprehensive maintenance of split AC units installed at DFCCIL Stations/office, IMD, IMSDs, ALHs & RHs including replacement of defective / worn out parts and servicing of assets.				
Comprehensive running maintenance of split/window/tower type /cassette AC units of 1.5/2.0 Ton capacity installed at DFCCIL Stations/office, IMD, IMSDs, ALHs & RHs for 02 years (07 months in a year March to September in each year as per maintenance schedule 'M' 'O' & 'P') as per scope of work. Qty - Nos of units x Nos of months=120x14=1680	Nos.	1680	185.47	3,11,589.60
Complete repairing and over hauling of tower/window/split type /Cassette AC units (described in item no.1) during switching off period i.e November to February as per technical specification & scope of work. Qty - Nos of units x Nos of months =15x8=120	Nos.	120	873.15	1,04,778.00
Gas TOP UP tower/window/split type /Cassette AC units	Nos.	60	1200	72,000.00
Total value of Schedule -4				4,88,367.60
Grand Total Value of schedule (A+B+C+D) Including GST				2,88,09,817.35
Total Estimated Value –2,88,09,818/-				
Rs. Two Crore Eighty Eight Lakhs Nine Thousand Eight Hundred Eighteen Only.				

OFFER SHEET

Offer to be filled up by Tenderer(s) in below table

S.N.	Scope of work	Estimated cost (Rs.)	Above/ At Par/ Below	% quoted by bidder	% quoted by bidder in words	Total cost
Colum-1	Colum-2	Colum -3	Colum-4	Colum-5	Colum -6	Colum-7
1	Schedule-1 - Providing man power for maintenance of General Power Supply (E & M) items for DFCCIL Stations, IMD, IMSDs, Staff quarters, ALHs & RHs. including replacement of defective / worn out and servicing of assets for 24months.	2,45,38,220				
2	Schedule-2 - Supply of essential maintenance spares.	27,80,668.00				
3	Schedule-3 - Minor works related to maintenance activity of E & M assets.	10,02,561.75				
4	Schedule-4 - Comprehensive maintenance of split AC units installed at DFCCIL Stations, IMD, IMSDs, ALHs & RHs. including replacement of defective / worn out parts and servicing of assets.	4,88,367.60				

Quoting of rates

1. The above price is inclusive of GST.
2. Tenderer is to quote for individual section(s).
3. For schedule 1, the contractor should quote rate judiciously so as to follow minimum wages fixed by CLC New Delhi.
4. Tenderer should offer rate in above table in % below, above and at par in figures as well as in words.
5. Tenderer must sign the following certificate.
6. The decision of competent authority will be final.

I/We offer and agree to execute the above work at rate uploaded online at www.ireps.gov.in through digital Signature.

Signature of tenderer with seal