



सीएमपीडीआई
cmpdi
A Mini Ratna Company

TENDER DOCUMENT

FOR

**SUPPLY, INSTALLATION,
COMMISSIONING, TESTING AND
COMPREHENSIVE MAINTENANCE OF
150 KWp ROOFTOP MICRO-GRID
SOLAR POWER PLANT IN OFFICE
PREMISES OF CMPDI HQ, RANCHI.**



December, 2019

Central Mine Planning and Design Institute Ltd.

(A Subsidiary of Coal India Ltd.)

**Gondwana Place, Kanke Road,
Ranchi - 834031 (Jharkhand)**



cmpdi
A Mini-Ratna Company

सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीच्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार का एक लोक उपक्रम)

गोन्दवाना प्लेस, काँके रोड, राँची - 834 031, झारखंड (भारत)

Central Mine Planning & Design Institute Limited

(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)

Gondwana Place, Kanke Road, Ranchi - 834 031, Jharkhand (INDIA)

Corporate Identity Number (CIN): U14292JH1975GOI001223

e-TENDER NOTICE

SECTION – I

CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED
(A Subsidiary of Coal India Limited)
Gondwana Place, Kanke Road, Ranchi-834031,
Jharkhand, INDIA.

e-TENDER NOTICE

For the work of Supply, installation, commissioning, testing and comprehensive maintenance of 150 KWp rooftop micro-grid solar power plant in office premises of CMPDI HQ, Ranchi.

TENDER NOTICE NO. : 15 of 2019-20 dt 06.12.2019

Tenders are invited on-line on the website <https://coalindiatenders.gov.in> from the eligible bidders having Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA for the following work:

| Description of work | Estimated Cost of Work without GST (In Rs.) | Earnest Money (In Rs.) | Period of Completion (In days) |
|--|---|------------------------|---|
| Supply, installation, commissioning, testing and comprehensive maintenance of 150 KWp rooftop micro-grid solar power plant in office premises of CMPDI HQ, Ranchi. | ₹ 7662075.30 | ₹ 95800.00 | (a) 270 days for the supply, installation, commissioning and testing of the solar plant. (b) 5 years for the comprehensive maintenance of the solar power plant. |
| Tender inviting authority | Contact Person | | |
| Y.K.Singh, General Manager (E&M), TE & CM, CMPDI. Gondwana Place, Kanke Road, Ranchi-834031, Contact No. 08987788903 | S.S. Singh, Chief Manager (E&M), TE & CM, CMPDI. Gondwana Place, Kanke Road, Ranchi-834031, Contact No. 08987788856 | | |

The contractor is advised to quote the prices of all items as per current market rate excluding the impact of GST.

Note: Input tax credit available.

1. Time Schedule of Tender:

| Sl.No. | Particulars | Date | Time (IST) |
|--------|------------------------------|---|------------|
| a. | Tender Publication Date | Date and Time as mentioned in the website | |
| b. | Document download Start Date | | |
| c. | Document download End Date | | |
| d. | Bid Submission Start Date | | |

| | | |
|----|---|--|
| e. | Bid Submission End Date | |
| f. | Start Date for seeking Clarification on-line | |
| g. | Last Date for seeking Clarification on-line | |
| h. | Date of Pre-bid Meeting | |
| i. | Bid Opening Date | |

For details of qualification requirements, bid security and complete tender document, visit our website www.cmpdi.co.in. & <http://eprocure.gov.in/cppp>. Detailed Tender Notice is available at <https://coalindiatenders.gov.in>,-

NOTE: End user portal agreement of CIL is applicable for CMPDI also.

1. Name of Work:

Tenders are invited on-line on the website <http://coalindiatenders.nic.in> from the eligible bidders having Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA, for the following work.

| Name of work | Estimated cost without GST | Earnest Money | Completion Period |
|--|-----------------------------------|----------------------|---|
| Supply, installation, commissioning, testing and comprehensive maintenance of 150 KWp rooftop micro-grid solar power plant in office premises of CMPDI HQ, Ranchi. | ₹ 7662075.30 | ₹ 95800.00 | (a)270 days for the supply, installation, commissioning and testing of the solar power plant. (b)5 years for the comprehensive maintenance of the solar power plant. |

Note:

The contractor is advised to quote the prices of all items as per current market rate excluding the impact of GST.

Reverse Auction in Tender(s) is applicable for estimated cost of work equal to or more than Rs.1.00 (One) Crore for tenders of HQ only.

| | |
|--|---|
| Tender Inviting Authority | Contact Person(s)/Tender Dealing Officer(s) |
| Y.K.Singh, General Manager (E&M), TE & CM, CMPDI. Gondwana Place, Kanke Road, Ranchi-834031, | S.S. Singh, Chief Manager (E&M), TE & CM, CMPDI. Gondwana Place, Kanke Road, Ranchi-834031, |

Contact No. 08987788903.

Contact No. 08987788856.

2. Time Schedule of Activities:

| Sl. No. | Particulars | Time Schedule |
|---------|--|---|
| a. | Tender e-Publication date | Date & Time as mentioned in the website: https://coalindiatenders.nic.in |
| b. | Document download/ Sale Start Date | |
| c. | Document download & Bid submission End Date | |
| d. | Bid Submission Start Date | |
| e. | Start Date for seeking Clarification on-line | |
| f. | Last Date for seeking Clarification on-line | |
| h. | Date of Pre-Bid Meeting (If required) | |
| i. | Bid Opening Date | |

NOTE (Important):

- i. If the due date of opening falls on a holiday, the Tender will be opened on the next working day.
- ii. In case minimum 03 (three) bids are not received within originally stipulated time, the *Bid Submission End Date* will be extended initially for 02 (two) days and if still less than 03 bids are received, the *Bid Submission End Date* will be extended by another 05 (five) days automatically by the system.
- iii. There will be no physical / manual sale of the Tender Document.
- iv. There is no tender fee and the bidders can download the Tender Document free of cost.
- v. Bidders are advised to download the complete set of the Tender Document, including the tender details.

3. Bid Security/ Earnest Money Deposit (EMD):

The bidder will have to make the payment of EMD through **ONLINE** mode only.

In Online mode the bidder can make payment of EMD either through net banking from designated Bank/s or through NEFT/ RTGS from any scheduled Bank. In case of payment through net-banking, the money will be immediately transferred to CMPDIL's designated Account.

In case of payment through NEFT/RTGS the bidder will have to make payment as per the Challan generated by system on e-Procurement portal and will have to furnish online the UTR Numbers before submission of bid. Bidder will be allowed to submit his / her bid only when the EMD is successfully received in CMPDIL's account and the information flows from Bank to e-Procurement system.

The Earnest Money/ Bid Security of the unsuccessful bidder will be refunded and will not bear any interest.

NOTE:

The process of submission of EMD should be initiated preferably at least 24 hours before End Date and Time of Bid Submission to avoid any system related problems or issues in the payment gateway.

In case of exemption of EMD the scanned copy of document (attested by notary public) in support of exemption will have to be uploaded by the bidder during bid submission. However, this option shall be enabled only in those cases where the exemption of EMD to some bidders is allowed as per NIT.

While submitting the tender on-line the foreign bidder should upload a document (.pdf file) clearly specifying the transaction reference number / documentary evidence showing such remittance, in the space provided against 'Upload EMD exemption document' which should be digitally signed before moving on to the Next Page.

If L1 Bidder is a defaulter and the bidder is EMD exempted then he/she will be asked to deposit the equivalent amount as that of EMD within 7 days of notice otherwise he/she will be disqualified in the subsequent tenders.

4. Pre-bid Meeting:

The pre-bid meeting shall be held in the office of Tender Inviting Authority on the scheduled date & time, only if specified online. Non-attendance of pre-bid meeting will not be a cause for disqualification of the bidder and it shall be presumed that the bidder does not require any clarification. The purpose of the pre-bid meeting will be to clarify issues.

5. Clarification of Bid:

The bidder may seek clarification on-line within the specified period. However, the management will clarify, as far as possible, only the relevant queries.

6. User Portal Agreement:

The bidders have to accept unconditionally the online user portal agreement which contains the acceptance of all the Terms and Conditions of NIT including '*General Terms & Conditions*' and '*Special Terms & Conditions*' and other conditions, if any, along with on-line undertaking in support of the authenticity of the declarations regarding the facts, figures, information and documents furnished by the Bidder on-line through <https://coalindiaticenders.nic.in> in order to become an eligible bidder. No conditional bid shall be accepted.

7. Eligible Bidders:

In order to submit the bid, the bidders have to get themselves registered online on e-Procurement portal of CIL (<https://coalindiaticenders.nic.in>) with valid Digital Signature Certificate (DSC). The bidders should have a Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA. The invitation for bid is open to all bidders including an individual, proprietorship firm, partnership firm,

company registered under company's act or a Joint Venture having eligibility to participate as per eligibility criteria stipulated in [Clause No: 8](#) of the NIT.

NOTE:

Joint Venture shall be allowed for participation in the bid with estimated cost above ₹ 2.0 Crores.

7.1 Requirements of any Joint Venture:

Two or three (but not more than three) companies/ contractors may participate in the tender as Joint Venture (JV). Joint Ventures must comply the following requirements:

- i. Following are the minimum qualification requirements for a joint venture.
 - a. The minimum qualification requirements for Joint Venture: The qualifying criteria parameters e.g. experience, financial resources etc. of the individual partners of the J.V. will be as deliberated under [Clause No. 8](#) of the NIT towards fulfillment of qualification criteria related to the experience.
 - b. The qualifying criteria parameter e.g. financial resources (turnover) of the individual partners of the JV will be added together, for the relevant period, and the total criteria should not be less than as deliberated under [Clause No. 8](#) of the NIT towards fulfillment of qualification criteria related to financial turn over.
- ii. The formation of Joint Venture or change in the Joint Venture character/ partners after submission of the bid and/ or any change in the bidding regarding Joint Venture will not be permitted.
- iii. The bid, and in case of a successful bid, the agreement shall be signed, so as to legally bind all partners jointly and severally and bid shall be submitted with a copy of the Joint Venture Agreement providing the joint and several liabilities with respect to the contract.
- iv. The pre-qualification of a joint venture does not necessarily pre-qualify any of its partners individually or as a partner in any other joint venture or association. In case of dissolution of a joint venture, each one of the constituent firms may pre-qualify if they meet all the pre- qualification requirements, subject to written approval of the employer.
- v. The JV Agreement must include the relationship between joint venture partners in the form of JV Agreement to legally bind all partners jointly and severely for the proposed agreement which should set out the principles for the constitution, operation, responsibilities regarding work and financial arrangements, participation (percentage share in the total) and liabilities (joint and severally) in respect of each and all of the firms in the joint venture. Such JV Agreement must evidence the commitment of the parties to bid for the facilities applied for (if pre-qualified) and to execute the contract for the facilities if their bid is successful.
- vi. One of the partners shall be nominated for being in charge of the contract and shall be designated as **Lead Partner**. This authorization shall be evidenced by a Power of Attorney signed by legally authorized signatories of all the partners at the time of bidding.
- vii. The JV Agreement must provide that the Lead Partner shall be authorized to incur

liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture and the entire execution of the contract shall be done with active participation of the Lead Partner.

- viii. The contract agreement should be signed jointly by each Joint Venture Partners. Subsequent declaration/ letters/ documents shall be signed by the lead partner authorized to sign on behalf of the Joint Venture or by the authorized signatory on behalf of the JV.
- ix. The bid should be signed by all the partners of the Joint Venture.
- x. An entity can be a partner in only one Joint Venture. Bid submitted by Joint Ventures including the same entity as partner will be rejected.
- xi. The JV agreement may specify the share of each individual partner for the purpose of execution of this contract. This is required to fulfill eligibility and also for the purpose of apportioning the value of the contract to that extent to individual partner for subsequent submission in other bids if he intends to do so for the purpose of the qualification in the bid.
- xii. The Earnest money/ Bid security/ Bank guarantee can be submitted by the JV/one or more partners of the JV.
- xiii. The JV agreement must be specific that it is valid for the project for which the bidding is done. If the JV breaks up midway before award of work/during bid validity period the bid will be rejected.

If the JV breaks up midway before award of work/ during bid validity/ after award of work/ during pendency of the contract; in addition to normal penalties as per provisions of the bid document, all the partners of the JV shall be debarred from participating in future bids for a minimum period of 12 months in CMPDIL.

- xiv. JV agreement shall be registered in accordance with the law so as to become legally valid and binding on the members before making any payment.
- xv. JV shall open a bank account in the name of the JV and all payments due to the JV shall be credited by the employer in that account only. To facilitate statutory deductions all statutory documents like PAN/ TIN etc. shall be submitted by the JV before execution of the agreement for the work/ before making any payment.

8. Eligibility Criteria:

8.1 Work Experience:

The Intending bidder must have in its name or proportionate share as a member of Joint Venture experience of having successfully **completed similar** works, as a prime contractor, during last 7(seven) years ending last day of month previous to the one in which bid applications are invited (i.e. eligibility period) should be any of the following:-

- i. **Three similar completed works** each costing not less than the amount **equal to 40%** of the estimated cost put to tender.

Or

- ii. **Two similar completed works** each costing not less than the amount **equal to 50%** of the estimated cost put to tender.

Or

- iii. **One similar completed work** costing not less than the amount **equal to 80%** of the estimated cost put to tender.

In case the bidder is not a prime contractor but a sub-contractor, the bidder's experience as sub- contractor will be taken into account, against suitable document, that the contract in support of qualification is a sub-contract in compliance with the provision of such sub-contract in the original contract awarded to the prime contractor). The document may be issued by the Owner/ Govt. department on behalf of the Owner.

The work experience of only those works shall be considered for evaluation purpose, which are completed on or before the last day of the month previous to one in which e-Tender has been invited (date should be mentioned). **The experience of incomplete/ ongoing works as on the last date of eligibility period will not be considered for evaluation. If the referred work includes construction as well as maintenance after construction, the experience of such work may be considered as acceptable, if the construction part is completed on last day of eligibility period, even if, maintenance work is going on, and the certificate issued clearly stipulates the same.**

While considering the value of completed works, the full value of completed works will be considered whether or not the date of commencement is within the said 7 (seven) years period.

The cost of previous completed works shall be given a weightage to bring them at current price level by adding 5% for each completed year (total number of days/365 considering 365 days per year). This weightage will be applicable after the end date of experience (date of completion of work) before the last day of month previous to one in which e- tender has been invited.

In case the bidder is not a prime contractor but a sub-contractor, the bidder experience as sub-contractor will be taken into account, against suitable document that the contract in support of qualification is a sub contract in compliance with the provision of sub contracts in the original contract awarded to a prime contractor. The documents may be issued by owner/ Govt Department on behalf of the owner.

The definition of similar work shall be as follows:

“Supply, Installation, Commissioning, testing and comprehensive maintenance of micro grid solar power plant as per MNRE guidelines including all allied civil/structural works”

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

- i. Start date & End date of each qualifying experience (similar work).
- ii. Work Order Number / Agreement Number of each experience.
- iii. Name and address of Employer/ Issuing authority for such Work Order for each experience certificate.
- iv. Percentage (%) share of each experience (100% in case of an individual/ Proprietorship firm or a partner in a partnership firm and the actual percentage (%) of share in case of

a Joint-Venture/Consortium).

- v. Executed Value of Work against each experience.
- vi. Confirmation in the form of **Yes/No** regarding submission of similar work experience as defined in the NIT.

NOTE:

In case the bidder is a Joint Venture, the work experience of any one, two or three of the individual partners of JV shall be deliberated here-in-after towards fulfillment of qualification criteria related to the work experience in the following manner: **[Joint Venture, shall be allowed for participation in the bid with estimated cost above ₹ 2.0 Crores only.]**

- a) In case of completion of **single work of similar nature** costing not less than the amount equal to 80% of the estimated cost put to the tender:
 - (i) Any JV partner shall have the experience of having completed successfully a single work of similar nature equal to 80% of the estimated cost put to the tender.

OR

- b) In case of completion of **two works of similar nature** each costing not less than the amount equal to 50% of the estimated cost put to the tender:
 - (i) Any one partner of JV can match the above requirement.

OR

- (ii) At least two partners should each have completed at least one work of similar nature each costing not less than the amount equal to 50% of the estimated cost put to the tender.

OR

- c) In case of completion of three works of similar nature each costing not less than the amount equal to 40% of the estimated cost put to the tender:
 - (i) Any one partner of JV can match the above requirement.

OR

- (ii) Any two partners shall match the above requirement through completion of at least one work of similar nature each costing not less than the amount equal to 40% of the estimated cost put to the tender.

OR

- (iii) All the three partners shall match the above requirement through completion of at least one work of similar nature each costing not less than the amount equal to 40% of the estimated cost put to the tender.

However, during fulfillment of any of the above criteria one of the partners, who is the **Lead Partner** shall have:

- i) More than 50% share in the Joint Venture, and
- ii) Experience of having completed successfully a single work of similar nature equal to at least 40% of the estimated cost put to tender.

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#)):

For work experience, the intending bidder must submit documentary evidence in support of above in the form of:

- i. *Completion Certificate* indicating value and period of work,
- ii. In case of sub-contractor suitable document as per provision of eligibility- if applicable.

The TDS certificate /Bill of Quantity may be submitted during clarification, if sought.

Technical evaluation by the System:

- i. The system shall calculate the period of 7 years backwards starting from the last day of month previous to the e-Publication date of NIT.
- ii. The system shall check the End date of each experience (The system shall not allow more than 3 entries for experience) and accept it as a qualifying experience if the end date of experience falls within the 7 years computed by the system.
- iii. The system shall calculate the value of each qualifying experience by multiplying the value with the % share of experience and adding 5% for each completed year (total No. of days/365) after the end date of experience of work till the last date of month previous to one in which the NIT has been published on e-Procurement portal.
- iv. The system shall check the experience with highest value whether it exceeds 80% of ECV. In case it does not, it shall check the top 2 experiences whether each of them is greater than 50% of ECV. In case, it still does not, the system shall check all 3 qualifying experiences whether each of them exceeds 40% of ECV. The system shall regard the bidder as 'Eligible' if it meets any of the aforementioned criteria or else it shall consider the bidder as 'Ineligible'.
- v. The weightage of 5% every year will be on simple rate and will not be compounded on yearly basis for the purpose of calculating the value of each qualifying experience.
- vi. The work experience of the bidder for those works only shall be considered for evaluation purposes, which are completed before the last date of month previous to one in which NIT has been published on e-Procurement portal. Hence, the works which are incomplete/ongoing, as on the last date of month previous to one in which NIT has been published on e-Procurement portal, shall not be considered against eligibility.
- vii. In case the work is started prior to the eligibility period of 7 years (counted backwards starting from the last day of month previous to the e-Publication date of NIT) and completed within the said eligibility period of 7 years, then the full value of work shall be considered against eligibility.
- viii. In case the experience has been earned by the bidder as an individual or proprietor of a proprietorship firm or partner of a partnership firm, then 100% value of the experience will be considered against eligibility. But if the experience has been earned by the bidder as a partner in a Joint Venture firm then the proportionate value of experience in proportion to the actual share of bidder in that Joint Venture will be considered against eligibility.

8.2 [Financial-Turnover:](#)

Average annual financial turnover during the last 03 (three) years, ending 31st March of

previous financial year should be at least 30% of the estimated cost put to tender.

(The “**Previous Financial Year**” shall be computed with respect to the e-Publication date of NIT).

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

- i. Annual turnover of each of the last 3 years ending 31st March of the previous financial year.
- ii. Name of the Chartered Accountant issuing the Profit and Loss A/c or the Turnover certificate.
- iii. Membership Number of the CA
- iv. In case the bidder is a Joint Venture, the turnover of the individual partners of the JV will be added together for each financial year and is to be furnished as the turnover of the bidder for that particular financial year

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#)):

The intending bidder must submit *Turnover Certificate* from Practicing Chartered Accountant of India containing information as furnished by bidder on-line.

Technical evaluation by the System:

- i. The system will calculate the 30 % of the estimated value (ECV) as the required average turnover of the bidder.
- ii. The system will calculate the average of the financial turnover of 3 years furnished by the bidder by adding 5% for each completed year (total number of days/365) after the end of respective Financial Year (i.e. 31st March) till the last day of month previous to one in which e-Tender has been invited.
- iii. The average shall be compared with the minimum requirement to ascertain the eligibility status of the bidder.
- iv. If any bidder does not submit the Turnover value for any of the 3 years, the system will not disqualify him and instead shall consider all 3 years for computing the average by assuming a value of ‘zero’ for the year for which no information is given by bidder.

8.3 [Permanent Account Number \(PAN\):](#)

The bidder should possess Permanent Account Number (PAN) issued by Income Tax Department, Govt. of India.

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

Confirmation in the form of **Yes / No** regarding possessing of Permanent Account Number (PAN) issued by Income Tax Department, Govt. of India.

NOTE:

In case, the bidder is a *Joint Venture/ Consortium*, PAN Card issued by the Income Tax Department, Govt. of India for each Indian Partner of JV/ Consortium and verifiable *Tax Residency Certificate* of respective country for each foreign partner or JV/Consortium

itself).

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#)):

Photocopy of the PAN Card issued by Income Tax Department, Govt. of India OR the Tax Residency Certificate of the respective country as the case may be.

Technical evaluation by the System:

The system will evaluate “Yes” as eligible and “No” as not eligible.

8.4 [Goods and Service Tax \(Not Applicable for Exempted Goods/Services\):](#)

The bidder should be either

GST Registered Bidder/ Dealer (but not under Composition Scheme)

OR

GST unregistered Bidder/ Dealer

In respect of the above eligibility criteria the bidder is required to furnish the following information online:

i). Confirmation in the form of Yes/No regarding possessing of required document as enlisted in NIT with respect to GST status of the bidder.

Scanned copy of documents to be uploaded by bidders in support of information/declaration furnished online by the bidder against Eligibility Criteria as Confirmatory Document

The following documents depending upon the status w.r.to GST as declared by Bidder in the BOQ sheet:

a) Status: GST registered Bidder/Dealer:(but not under Composition Scheme)

Document: GST Registration Certificate (i.e. GST identification Number) issued by appropriate authority.

b) Status: GST unregistered bidder/Dealer:

Document: A Certificate from a practicing Chartered Accountant having membership number with Institute of Chartered Accountants of India certifying that the bidder is GST unregistered bidder/dealer in compliance with the relevant GST rules.

[In case of JV a Certificate from a practicing Chartered Accountant having membership number with Institute of Chartered Accountants of India confirming the status of JV w.r.to GST in compliance with relevant GST rules or GST Registration Certificate of JV]

Note: In case the work/service is awarded to a Joint Venture participating in the tender they have to submit PAN, GST registration (as applicable in the tender and for the bidder status) etc. in the name of the Joint Venture after Award of Work/Service at the time of execution of agreement/ before the payment of first running on account bill.

If turnover of bidder exceeds exemption limit, the bidder must have GST registration as per GST Act and rules.

8.5 *Digital Signature Certificate (DSC):*

If the bidder himself is the DSC holder bidding on-line, then no document is required. However, if the DSC holder is bidding online on behalf of the bidder, then the Power of Attorney or any sort of legally acceptable document for the authority to bid on behalf of the bidder is required.

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#)):

1. If the bidder himself is the DSC holder bidding on-line then no document is required.

However

If the DSC holder is bidding online on behalf of the bidder then the Power of Attorney or any sort of legally acceptable document for the authority to bid on behalf of the bidder

8.6 *Provident Fund:*

The bidder should possess a Provident Fund Registration Certificate issued by Govt. Dept of any Indian State.

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#)):

Copy of Provident Fund Registration Certificate issued by Govt. Dept of any Indian State

8.7 *Undertaking:*

A commitment is to be uploaded in the form of UNDERTAKING on Bidder's letter head as per the format given in the bid document ([Annexure-A2](#)).

Undertaking is about the genuineness of information furnished online, authenticity of scanned copy of documents uploaded and about other commitments.

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#))

A commitment is to be uploaded in the form of UNDERTAKING on Bidder's letter head as per the format given in the bid document ([Annexure-A2](#)).

Undertaking is about the genuineness of information furnished online, authenticity of scanned copy of documents uploaded and about other commitments.

8.8 *Legal Status of the bidder:*

Scanned copy of documents to be uploaded by bidders ([CONFIRMATORY DOCUMENT](#))

Any one of the following documents:

1. Affidavit or any other document to prove proprietorship/ Individual status of the bidder.
2. Partnership deed containing name of partners
3. Memorandum & Article of Association with certificate of incorporation containing name of bidder.
4. Joint Venture Agreement containing name of partners and lead partner, power of attorney to the lead partner and share of each partner.

(The partnership firm / JV / Consortium is required to submit written consent of all the partners to Arbitration clause.

8.9 Electrical contractor's licence :

The tenderers should have valid electrical contractor's licence issued by Govt. licensing Board. In case tenderer is a partnership firm, the licence shall be valid for that partnership firm. The tenderer shall submit photocopy of complete license showing name of the firm, name of the contractor/s, name and address of the firm. The tenderer shall provide proof of validity of his electrical contractor's license for proprietorship firm or partnership firm or limited company as the case may be.

9 Submission of Bid:

9.1 Online Registration:

In order to submit the Bid, the bidders have to get themselves registered online on the e-Procurement portal of CIL (<https://coalindiatenders.nic.in>) with valid Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA. The online Registration of the Bidders on the portal will be free of cost and one time activity only. The registration should be in the name of bidder, whereas DSC holder may be either bidder himself or his duly authorized person. All the bids are to be submitted online and on the website <https://coalindiatenders.nic.in>. No bid shall be accepted offline.

9.2 User Portal Agreement:

The bidders have to accept unconditionally the online user portal agreement which contains the acceptance of all the Terms and Conditions of NIT including General and Special Terms & Conditions and other conditions, if any, along with on-line undertaking in support of the authenticity of the declarations regarding the facts, figures, information and documents furnished by the Bidder on-line in order to become an eligible bidder. No conditional bid shall be accepted.

The bidder should strictly comply with following instructions:

- i. The bidders are requested to submit offers online giving reference to this tender notice number and date containing offers in two parts in the links Cover-I, OID and Cover-II.
- ii. Two parts of the bid should contain the details as follows:

Part-I / Cover-I and OID:

- ii) Letter of bid
- iii) Details of Earnest Money
- iv) Information on Eligibility/ Qualifying criteria as detailed under [Clause No.8](#) including necessary scanned documents as elaborated there.

Part II / Cover-II:

- i) Prices only in the Excel format as indicated in the Bid document.

9.3 Confirmatory Documents:

All the confirmatory documents as enlisted in the NIT in support of online information

furnished by the bidder are to be uploaded in Cover-I & OID (if asked) by the bidder while submitting the bid online.

All the bidders are to submit the information in objective manner confirmed by the uploaded documents. The documents related to the furnished online information, based on which the auto evaluation takes place will be considered. If the bidder uploads any other document, it will be given no cognizance.

The scanned copy of following documents will be submitted by the bidder online while submitting bid under Cover-I (Part-I).

| SI No | Documents related to Eligibility Criteria | Scanned copy of documents to be uploaded by bidder in support of information/ declaration furnished online by the bidder against Eligibility Criteria as Confirmatory Documents. |
|-------|---|---|
| 1 | Work Experience (Ref. Clause No. 8.1 of NIT) | Bidders required to submit Satisfactory Work Completion Certificate issued by the employer against the Experience of similar work containing all the information as sought on-line. In case of Sub-contractor suitable document as per provision of eligibility, if applicable. Note: In case of JV, above documents of partner(s). |
| 2 | Financial Turnover (Ref. Clause No. 8.2 of NIT) | Financial Turnover certificate for last 3 (three) financial years issued by a Practicing Chartered Accountant having a membership number with Institute of Chartered Accountants of India. (In case of JV, turnover certificate for each individual partner of JV). |
| 3 | Permanent Account Number (PAN) (Ref. Clause No. 8.3 of NIT) | Copy of PAN card issued by Income Tax Department, Govt. of India. (In case of JV/Consortium, PAN Card for each Indian Partner of JV/Consortium and verifiable tax residency certificate of respective country for each foreign partner or JV/ Consortium itself). |
| 4 | Goods and Service Tax (Not Applicable for Exempted Goods/ Services) (Ref. Clause No. 8.4 of NIT) | The following documents establishing the status of bidder w.r.t GST as declared by Bidder in the BOQ sheet: a) Status: GST registered Bidder/Dealer - Document: GST Registration Certificate (i.e. GST identification Number) issued by appropriate authority. b) Status: GST unregistered bidder / Dealer - Document: A Certificate from a practicing Chartered Accountant having membership number with Institute |

| | | |
|----|--|--|
| | | <p>of Chartered Accountants of India certifying that the bidder is GST unregistered bidder/ dealer in compliance with the relevant GST rules.</p> <p>[In case of JV a Certificate from a practicing Chartered Accountant having membership number with Institute of Chartered Accountants of India confirming the status of JV w.r.t GST in compliance with relevant GST rules or GST Registration Certificate of JV]</p> |
| 5 | <p>Digital Signature Certificate</p> <p>(Ref. Clause No. 8.5 of NIT)</p> | <p>1. If the bidder himself is the DSC holder bidding on-line then no document is required.</p> <p>2. If the DSC holder is bidding online on behalf of the bidder then the Power of Attorney or any sort of legally acceptable document for the authority to bid on behalf of the bidder</p> |
| 6 | <p>Provident Fund</p> <p>(Ref. Clause No 8.6 of NIT)</p> | Copy of Provident Fund Registration Certificate issued by Govt. Dept of any Indian State |
| 7 | <p>Undertaking</p> <p>(Ref. Clause No. 8.7 of NIT)</p> | <p>A commitment is to be uploaded in the form of UNDERTAKING on Bidder's letter head as per the format given in the bid document (Annexure-A2).</p> <p>Undertaking is about the genuineness of information furnished online, authenticity of scanned copy of documents uploaded and about other commitments.</p> |
| 8 | <p>Legal Status of the bidder</p> <p>(Ref. Clause No. 8.8 of NIT)</p> | <p><u>Any one of the following documents:</u></p> <ol style="list-style-type: none"> 1. Affidavit or any other document to prove proprietorship/ Individual status of the bidder. 2. Partnership deed containing name of partners 3. Memorandum & Article of Association with certificate of incorporation containing name of bidder. 4. Joint Venture Agreement containing name of partners and lead partner, power of attorney to the lead partner and share of each partner. <p>(The partnership firm / JV / Consortium is required to submit written consent of all the partners to Arbitration clause.</p> |
| 9 | <p>Letter of Bid (LoB)</p> | <p>Letter of Bid (LoB) on the bidder's letter head, in prescribed format (Annexure- A1).</p> <p>Note: In case of JV the LoB is to be signed by all partners</p> |
| 10 | <p>Electrical contractor's licence</p> <p>Clause no. 8.9</p> | The tenderers should have valid electrical contractor's licence issued by Govt. licensing Board. In case tenderer is a partnership firm, the licence shall be valid for that partnership firm. The tenderer shall submit photocopy of complete license showing name of the |

| | | |
|---|------------------------------------|--|
| | | firm, name of the contractor/s, name and address of the firm. The tenderer shall provide proof of validity of his electrical contractor's license for proprietorship firm or partnership firm or limited company as the case may be. |
| 11 | Arbitration Clause (if applicable) | Annexure- A8 |
| Note: Only one file in .pdf format can be uploaded against each eligibility criteria. Any additional/ other relevant documents to support the information/declaration furnished by bidder online against eligibility criteria may also be attached by the bidder in the same file to be uploaded against respective eligibility criteria. | | |
| | | |

9.4 **Letter of Bid:**

The format of Letter of Bid (as given '[ANNEXURE-A1](#)') will be downloaded by the bidder and will be printed/ typed on his letter head. This document will be signed by the bidder or any authorized person of bidder or a DSC holder, bidding online with authorization from the bidder and scanned copy of the same will be uploaded during bid submission in cover-I. This will be the covering letter of the bidder for his submitted bid. The content of the "Letter of Bid" uploaded by the bidder must be the same as per the format downloaded from website and it should not contain any other information, which contradicts the content and spirit of the original format of LOB.

The Letter of bid will be digitally signed by DSC holder submitting bid online and it does not require any physical signature. However, if the Letter of Bid (LOB) bears the physical signature in addition to the digital signature of DSC holder, it will be accepted without questioning the identity of person signing the Letter of Bid.

NOTE:

If there is any change in the contents of Letter of Bid uploaded by bidder as compared to the format of Letter of Bid uploaded by the department with NIT document, then the LOB shall be requested under the head Confirmatory documents and subsequently accepted or rejected as applicable.

9.5 **Price- Bid/ Cover-II/ Part-II:**

The Price bid containing the Bill of Quantity will be in .xls format (password protected) and will be uploaded during tender creation. This will be downloaded by the bidder and he will quote the rates for all items on this Excel file. Thereafter, the bidder will upload the same Excel file during bid submission in Cover-II. The GST rate has already been mentioned in BOQ. The Price-bid will be in Item Rate BOQ format and the bidder will have to quote for all the tendered items and the L-1 will be decided on overall quoted value (i.e. Cost to Company). The Price-bids of the tenderers will have no condition. The Price Bid which is incomplete and not submitted as per instruction given above will be rejected. Any alteration/modification in the Excel format may lead to rejection of bid.

The L-1 bidder will be decided based on cost to the Company. Prior to quoting the rates in the BOQ file, the bidder will select the appropriate Goods and Service tax (GST), status from the following list given in the BOQ:

- I). GST Registered Bidder
- II) GST Unregistered Bidder.

The Price bid file will be digitally signed and uploaded by the bidder in Part-II / Cover-II.

SYSTEM FOR DECISION OF L-1:

The L1 bidder will be decided based on Overall Quoted Value (i.e. Cost to the Company). The system for decision of L-1 bidder will be as follows:

Case – 1: Works / Services for which INPUT TAX CREDIT is not available to the Company.

The overall bid price (Cost to Company) will be rates quoted by the bidder plus applicable rate of GST (Goods & Service Tax). The ranking of the Bidders will be decided based on 'Cost to Company' price. The lowest cost to company price will be ranked as L-1, the next higher price as L-2 and so on calculated by the system.

Case – 2: Works / Services for which INPUT TAX CREDIT is available to the Company.

The overall bid price (Cost to Company) will be rates quoted by the bidder only; GST (Goods & Service Tax) will not be added in this case. The ranking of the Bidders will be decided based on 'Cost to Company' price. The lowest cost to company price will be ranked as L-1, the next higher price as L-2 and so on calculated by the system.

The Contract Value will be the value of the 'Rates quoted by bidder plus amount of GST. The liability of payment of GST by the contractor registered under GST will lie with the contractor. The payment of GST would be made to the contractor only on submission of Bill / Invoice in accordance with the provision of GST Rules. In case of unregistered bidder, the applicable GST will be paid by CMPDIL directly to the concerned Tax Authority.

The Tax Invoice raised by the supplier must be in compliance of relevant GST Acts, rules & notifications made thereunder and should bear the GSTIN number for the supply to CMPDIL HQ as given below:

| State | Unit / HQ | City | GSTIN (Provisional ID) |
|------------------|------------------|---------------|----------------------------------|
| <i>Jharkhand</i> | <i>CMPDI HQ</i> | <i>Ranchi</i> | 20AAACC7475N1ZI |

In addition to above, if any other tax/duties are levied over supply of such goods or services in future, it shall be paid extra.

E-way Bill: *The e-way bill required in connection with supply of goods or services, if any, shall be arranged by the supplier. However, the e-way bill will be arranged by CMPDIL if the supplier/Vendor is unregistered one or if provisions of the relevant Act and the rules*

made there under specifically states that the e-way bill is required to be issued by recipient of goods.)

TDS: *The TDS, if applicable, shall be made at applicable rate from the payment made or credited to the supplier.*

The Price-bids of the tenderers shall have no condition. The Price Bid which is incomplete and not submitted as per instruction given above will be rejected.

Micro & Small Enterprises – Purchase preference will be applicable to the Micro & Small Enterprises, as under, as per provision of “Public Procurement Policy for Micro and Small (MSEs) Order, 2012” and the Govt. of India guidelines issued from time to time, including the latest amendment issued vide F. No. 21 (8)/2018-MA Dated 09.11.2018 : -

“MSEs quoting price within price band of L1+15 percent shall be allowed to supply a portion upto 25% of requirement by bringing down their price to L1 price, where L1 is non MSEs. Out of the said 25%, 4% is earmarked for MSEs owned by Scheduled Cast/ Scheduled Tribe (SC/ST) entrepreneurs and 3% is earmarked for women owned MSEs”.

The vendors should confirm their MSE Registration for the tendered item(s) along with the name of the Registering Authority and also attach a duly Notarized copy of the complete set of valid registration certificate with their offer.

NB:

i. The above mentioned purchase preference will not be applicable for the works, which are not covered under MSME registration.

ii. To avail the benefits as per Public Procurement Policy for MSEs order 2012, MSE bidders must register their Udyog Aadhar Memorandum (UAM) number issued by MSME on the CPPP portal.

iii. The MSME Bidders should enrol their name in the Coal India e-Procurement portal as “Preferential Bidder” either by modifying their profile or while making “On line Bidder enrolment”. The document in support of MSEs should also be uploaded against the specific tender to avail benefits of Public Procurement Policy Order, 2012.

iv. Any MSE registered with District Industry Centre (DIC) or Khadi & Village Industries Commission (KVIC) or Khadi & Industries Board (KVIB) or Coir Board or National Small Industries Corporation (NSIC) or Directorate of Handicrafts and Handlooms or Udyog Aadhar Memorandum or any other body specified by the Ministry of MSME will get the benefits of public procurement policy order, 2012.

10 Bid Submission:

All bids are to be submitted on-line on the website <https://coalindiatenders.nic.in> . No bid shall be accepted off-line unless otherwise specified.

11 System Requirement:

It is the bidder's responsibility to comply with the system requirement i.e. hardware, software and internet connectivity at bidder's premises to access the e-tender website. Under any circumstances, CMPDIL shall not be liable to the bidders for any direct/ indirect

loss or damages incurred by them arising out of incorrect use of the e-tender system or Internet connectivity failures.

12 Auto Extension of Critical Date:

If number of bids received online is found to be less than 03 (three) on End Date of bid submission, then the following critical dates of the Tender will be automatically extended initially for a period of 02 (two) days; and, if the number of bids still remains less than 03 (three), then for another 05 (five) days:

- Last date of submission of Bid.
- Last date of receipt of EMD.
- Date of Opening of Tender.

If any of the above extended Dates falls on Holiday i.e. a non-working day as defined in the e-Procurement Portal then the same is to be rescheduled to the next working day.

This extension will be also applicable in case of receipt of zero bid.

NOTE:

1. The validity period of tender shall be decided based on the final end date of submission of bids.
2. The auto extension shall work on the basis of number of bids received only. It may so happen that any of these bids may be eventually rejected during Tender Opening, Technical evaluation or further process of evaluation resulting the total number of valid bids becoming less than 03(three).
3. After two extensions, the tender shall be opened irrespective of available number of bids on the extended date of opening of tender.

13 Opening of Bid:

- i) Tenders [**Cover-I (Technical-bid)** and **Cover-II (Price-bid)**] will be decrypted and opened online by the Bid Openers with their Digital Signature Certificate (DSC) on the pre-scheduled date & time of tender opening. The bidder can view bid opening remotely on their personalized dash board under “Bid Opening (Live)” link.
- ii) The e-Procurement/tender system will evaluate the Technical bids automatically on the basis of relevant data provided by the bidder, while submitting the bid online. If the parameters furnished by bidder online, in an objective and structured manner, does not confirm to the required eligibility criteria as specified in the NIT, the bid will be automatically rejected by the system and the Price-bid of such bidders shall not be opened by the system.
- iii) After decryption and opening of bids, the system will show the lowest price (Cost to Company) quoted by L-1 bidder without disclosing the identity of any bidder and the total number of bids received/opened.

14 Evaluation of Tender:

- i) Bid evaluation shall be done after taking into consideration overall quoted price by the bidder and effect of Goods and Services Tax (GST), GST Compensation Cess etc. as

applicable. L1 will be decided on the basis of Cost to Company.

- ii) After completion of process, the documents submitted by L-1 bidder in Cover-I will be downloaded by the Evaluator and shall be put up to the Tender Committee. The Tender Committee will examine the uploaded documents against information/declarations furnished by the L-1 bidder online. If it confirms to all of the information/ declarations furnished by the bidder online and does not change the eligibility status of the bidder then the bidder will be considered eligible for award of Contract.
- iii) In case the Tender Committee finds that there is some deficiency in uploaded documents by L-1 bidder then the same will be specified online by Evaluator, clearly indicating the omissions/shortcomings in the uploaded documents and indicating start date and end date allowing 7 days (7 x 24 hours) time for online re-submission by L-1 bidder. The L-1 bidder will get this information on their personalized dash board under "Upload confirmatory document" link. Additionally, information shall also be sent by system generated email and SMS, but it will be the bidder's responsibility to check the updated status/information on their personalized dash board regularly after opening of bid. No separate communication will be made in this regard. Non-receipt of e-mail and SMS will not be accepted as a reason of non-submission of documents within prescribed time. The bidder will upload the scanned copy of all those specified documents in support of the information/ declarations furnished by them online within the specified period of 7 days. If the L1 bidder fails to submit the specified document/s in 7 (SEVEN) days' time or the uploaded documents still contain some deficiency, additional time of 5 days (5 x 24 hours) may be given to the L-1 bidder for re-submission, indicating start date and end date for re-submission of such document/s. It must be noted that maximum 2 chances will be given.
- iv) The tender will be evaluated on the basis of documents uploaded by L-1 bidder online. The L-1 bidder is not required to submit hard copy of any document through offline mode. Any document submitted offline will not be given any cognizance in the evaluation of tender.
- v) In case the L-1 bidder submits requisite documents online as per NIT, then the bidder will be considered eligible for award of Contract.
- vi) In case the L-1 bidder fails to submit requisite documents online as per NIT; or, if any of the information/declaration furnished by L-1 bidder online is found to be incorrect by Tender Committee during evaluation of scanned documents uploaded by bidder, which changes the eligibility status of the bidder, then his bid shall be rejected and EMD of L-1 bidder will be forfeited.
- vii) In case the L-1 bidder is technically eligible but rejection is due to high rate quoted by him then the tender shall be cancelled and retendered.
- viii) In case the L-1 bidder is rejected due to non-compliance of confirmatory documents, then the L-2 bidder will become L-1 bidder and Confirmatory Documents of L-2 bidder shall be evaluated by Tender Committee and the process shall be followed as mentioned in Clause no.(i) to (viii) above.
- ix) The process as mentioned at Clause no. (viii) shall be repeated till the work is either awarded or all the eligible bidders are exhausted

- x) In case none of the bidders complies the technical requirement, then re-tender will be done.
- xi) It is responsibility of Bidders to upload legible/clearly readable scanned copy of all the required documents as mentioned above.

15 Tender cum Reverse Auction:

For work value of INR 100 lakh and above, tender evaluation process will be done through Reverse Auction Process (RAP) and process will be as follows:

- A. The Reverse Auction Process will require option of selection of “Tender cum Auction” in ‘Form of Contract’ in the e-Procurement portal of CIL, at the time of creation of tenders of value INR 100 lakh and above.
- B. Reverse Auction will be initiated after opening of price-bids, as detailed above in case of normal tenders.
- C. Bid opening time will be 11.00 AM on any working day as mentioned in the NIT. Upon opening of the price bids, a reverse auction platform will be created within 2 hours of opening of bids, displaying only the item wise L-1 prices received. However, no indication will be available in the portal to anybody regarding number of bids and names of bidders.

NOTE: Server time shall be the basis of Start time & Closing time for bidding and shall be binding for all. This would be visible to all concerned.

- D. **H-1 bid will be eliminated during price bid opening, if more than three techno-commercially acceptable bids are available as per the evaluation done by system and such bidder will not be allowed to participate in reverse auction.** If two or three bidders have quoted same H-1 land cost (i.e. Cost to Company), the bidder(s) who submitted / frozen the bid later, shall be rejected and will not be allowed to participate in reverse auction.
- E. The ‘**Start Bid**’ price will be either of the followings, which one is lower:
 - 1. L-1 price,
 - OR
 - 2. Approved Estimate / Justified price + 10% + applicable GST including GST Compensation Cess, if any, taking into consideration Input Tax Credit (ITC), if applicable,
- F. The L-1 price/start bid price is landed / cost to the company price on which the auction will be initiated.
- G. If the L-1 price is higher than the Start Bid Price (Estimated / Justified price + 10% + Applicable GST taking into consideration Input Tax Credit, if applicable) and the RAP is not triggered within the scheduled time, it will be retendered.
- H. Initial period of reverse auction will be two hours. There will be auto extension of time by ten minutes in case any reduction is recorded in last ten minutes. The reverse auction will end only when there is no further reduction recorded in the last ten minutes slot.
- I. The Reverse Auction is an auto-generated process, no claim of bidder on outcome of evaluation will be entertained.

- J. **Decremental Value:** The decrement value will be 0.5 % of the start bid price. The reduction by the bidder shall have to be made as per decrement value or in multiple thereof. The Maximum **SEAL PERCENTAGE** will be fixed as 2% of start bid price / last quoted price during reverse auction, whichever is lower.

In order to have ease of submission in reverse auction by the bidders, it is suggested that decrement values may be rounded off to the nearest value as under:

- a. For decrement value upto INR 10, the rounding off may be made to nearest INR 1.
 - b. For decrement value upto INR 11 to INR 100, the rounding off may be made to
 - c. For decrement value upto INR 1001 to INR 10,000, the rounding off may be made to nearest INR 1000: and so on.....
- K. System protects bid and bidder information till auction gets over and displays current L1 price to the bidder in auction hall/process. The system provides bidders' detail along with bid documents at the end of reverse auction process. The log details of entire reverse auction process will be generated by the system, once the process of reverse auction gets completed.
- L. If a bidder does not submit his bid in Reverse Auction, the price quoted by him in the price bid shall be considered as the valid price of the bidder. The status of (L-1, L-2, etc.) bidder shall be evaluated considering either the bid price submitted in Reverse Auction or the price quoted in the price bid, whichever is lower.
- M. Since reverse auction is a sequel to e-tender, the process of finalizing the tender upon completion of the reverse auction will be the same as the tender without reverse auction.
- N. The L-1 bidder after reverse auction has to proportionately reduce the item rates while submitting the breakup of composite price. In case the L-1 bidder fails to submit the break-up of landed price within the stipulated period, the company will be at liberty to place order on the basis of break-up prepared as per para 'F' above for the composite price and the same will be binding on the bidder.
- O. On expiry of the closing of the auction, the bid history showing all the last valid bids offered along with name of the bidders shall be published. All bidders shall have the facility to see and get a print of the same for their record.
- P. The bid history shall reflect only the landed price. The landed price shall also not be same for two bidders even if any bidder makes such an attempt.
- Q. All electronic bids submitted during the reverse auction process shall be legally binding on the bidder. The chronologically last bid submitted by the bidder till the end of the auction will be considered as the valid price bid offered by that bidder and acceptance of the same by CMPDI will form a binding contract between CMPDI and the bidder for entering into a contract. Any bid submitted earlier by the bidder prior to submission of his last bid will not be considered as the valid price bid.
- R. Conditional discounts shall not be considered. If a bidder offers a discount unilaterally after submission of bid, the discount will not be considered for evaluation of offers but will be availed if order is placed on such tenderer.
- S. At the end of the reverse auction, the bidder(s) who has participated in the reverse auction has to upload the breakup of Cost to Company prices in the confirmatory documents. In case of item rate composite works tenders, the reverse auction will be

conducted on the composite cost to company price.

- T. The bidder(s) after reverse auction will be responsible to ensure that the cost to company rate as per the breakup of prices provided by him after the reverse auction and cost to company rate offered by him in the reverse auction is exactly same. The bidder will not be allowed to increase the rate of any item while submitting the break up. While giving the break up, the bidder will have to consider same rate of taxes and duties as quoted while submitting the e-price bid. In case the bidder(s) fail(s) to submit the break-up of cost to company price within stipulated period or the break up given by bidder does not match with total offered price, the Company will be at liberty to place order by proportionately reducing item rates on the basis of the breakup of the e-Price Bid submitted by the bidder along with the initial offer and the same will be binding on the bidder.
- U. If the lowest price received during reverse auction is unreasonable or it is unacceptable on ground of being too high or too low compared with estimated price, the management reserves right to seek justification of the price from lowest bidder. If the price is not considered reasonable, management may not accept such bid and go for another tender process.
- V. In case of disruption of service at the service provider's end while the RAP is online, due to any technical snag or otherwise attributable to the system failure at the server end, the RAP process will start all over again. In such a situation, the last recorded lowest price of prematurely ended RAP, will be the 'Start Bid' price for the restarted RAP. The prices quoted in the prematurely ended RAP will be binding on all the bidders for consideration, if the restarted RAP does not trigger within the stipulated time. A provision to this effect should be made in the NIT.

Disruption and restarting of RAP shall be intimated to all the bidders through system/SMS/e- mail through e procurement portal. All the time stipulations of normal RAP will be applicable to the restarted RAP.

16 Abnormally High Rate (AHR) & Abnormally Low Rate (ALR) items:

Additional performance security shall be applicable if the bid price is below 15% of the justified price, finalized by the owner. The amount of such additional performance security shall be the difference between 85% of the owner's justified price and quoted price.

Additional Performance Security shall be furnished by bidder along with normal performance security. Failure to submit such additional performance security may result into termination of the contract.

This Additional Performance Security will not carry any interest and shall be released in the following manner.

- i. 30% of additional performance security will release after 60% of the total work is completed.
- ii. 50% of additional performance security will release after 80% of the total work is completed.
- iii. 100% of additional performance security will release after total work is completed.

Additional performance security may be furnished in any of the forms as applicable for performance security.

17 One Bid per Bidder:

Each Bidder shall submit only one Bid, either individually, or as a partner in a partnership firm or a Public Limited / Private Limited Company or any legal entity. A Bidder who submits or participates in more than one Bid (other than as a sub-contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the bidders' participation to be disqualified.

18 Refund of EMD:

- a. If EMD is paid by the bidder in online mode (Direct Debit/NEFT/RTGS) then the EMD of rejected bidders will be refunded at any stage directly to the account from where it had been received (except the cases where EMD is to be forfeited).
- b. No claim from the bidders will be entertained for non-receipt of the refund in any account other than the one from where the money is received.
- c. If the refund of EMD is not received by the bidder in the account from which the EMD has been made due to any technical reason then it will be paid through conventional system of e-payment. For this purpose, if required, Tender Inviting Authority will obtain the Mandate-Form from the Bidder.
- d. In case the tender is cancelled then EMD of all the participating bidders will be refunded unless it is forfeited by the department.
- e. If the bidder withdraws his/her bid online (i.e. before the end date of submission of tender) then his/her EMD will be refunded automatically after the opening of tender.
- f. The EMD of successful bidder (on award of Contract) will be retained by CMPDIL and will be adjusted to Performance Security Deposit.

19 Site Visit:

- 19.1. The bidder, at the Bidder's own responsibilities, cost and risk, is encouraged to visit and examine the Site of Works and its surrounding, approach road, soil condition, investigation report, existing works, if any, connected to the tendered work, drawings connected to the work, if / as available and obtain all information that may be necessary for preparing the Bid and entering into a contract for execution of the works. The cost of visiting the Site shall be at the Bidder's own expense.
- 19.2. It shall be deemed that the Bidder has visited the Site/Area and got fully acquainted with the working conditions and other prevalent conditions and fluctuations thereto whether he/she/they actually visits the Site /Area or not and has taken all the factors into account while quoting his/her/their rates.
- 19.3. The Bidder is expected, before quoting his rate, to go through the requirement of materials/workmanship, specification, requirements and conditions of contract.
- 19.4. The Bidder, in preparing the bid, shall rely on the site investigation report referred to in the bid document (if available), supplemented by any information available to the Bidder.

20 Taxes and Duties:

All duties, taxes (excluding Goods and Services Tax (GST) & GST Compensation Cess (if applicable) only) and other levies, royalty, building and construction workers cess (as applicable in States) payable by the bidder/Contractor under the Contract, or for any other cause as applicable on the last date of submission of Bid, shall be included in the rates, prices and the total Bid Price submitted by the Bidder. Applicable GST either payable by bidder or by company under reverse charge mechanism shall be computed by system in BOQ sheet as per predefined logic.

All investments, operating expenses, incidentals, overheads, leads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder.

However, such duties, taxes, levies etc. which is notified after the last date of submission of Bid and/or any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities.

Similarly if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.

The item wise rate quoted by bidder shall be inclusive of all taxes, duties & levies but excluding GST & GST Compensation Cess, if applicable. The payment of GST and GST Compensation Cess by service availer (i.e. CIL/Subsidiary) to bidder/contractor (if GST payable by bidder/contractor) would be made only on the latter submitting a Bill/invoice in accordance with the provision of relevant GST Act and the rules made thereunder and after online filing of valid return on GST portal. Payment of GST & GST Compensation Cess is responsibility of the service provider/contractor.

However, in case bidder/contractor is GST unregistered bidder/dealer in compliance with GST rules, the bidder/dealer shall not charge any GST and/or GST Compensation Cess on the bill/invoice. In such case, applicable GST will be deposited by CIL/Subsidiary directly to concerned authorities.

Input tax credit is to be availed by Paying Authority as per rule.

If CMPDIL fails to claim Input Tax Credit (ITC) on eligible Inputs, input services and Capital Goods or the ITC claimed is disallowed due to failure on the part of supplier / vendor of goods and services in incorporating the tax invoice issued to CMPDIL in its relevant returns under GST, payment of CGST & SGST or IGST, GST (Compensation to State) Cess shown in tax invoice to the tax authorities, issue of proper tax invoice or any other reason whatsoever, the applicable taxes & cess paid based on such Tax invoice shall be recovered from the current bills or any other dues of the supplier / vendor along with interest, if any.

The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the contract of the bidding document.

The Company reserved the right to deduct / withheld any amount towards taxes, levies etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any statutory authority and the Company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

In case of collection of minor minerals in area (both virgin and non-virgin), acquired by the company under the Coal Act, the contractor will have to produce a royalty clearance certificate from the District Authorities before full and final payment.

21 Recovery of any Claim from Vendor/Supplier:

In the event of recovery of any claim towards LD Charges, Penalty, fee, fine or any other charges from the supplier/vendor, the same will be recovered along with the applicable GST and the amount shall be adjusted with the payment to be made to the supplier/vendor against their bill/invoice or any other dues.

Further Security Deposit forfeited will be inclusive of GST.

22 Cost of Bidding:

The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs.

23 Technical Specifications:

The tenderer shall closely study all specifications in detail, which govern the rates for which he is tendering.

24 Currencies of Bid and Payment:

The unit rates and prices shall be quoted by the Bidder entirely in Indian Rupees only.

25 Commencement of Work:

The work shall be deemed to have commenced on the expiry of 10* (ten) days from the issue of Letter of Acceptance of Tender or 7(seven) days after handing over the site of work or handing over reasonable number of working drawings to the contractor or the period of mobilization allowed in the work order for starting the work in special circumstances, whichever is later.

26 Handing Over of Site:

On completion of the work all rubbish, debris, brick bats etc. shall be removed by the contractor at his/their own expense and the site cleaned and handed over to the company and he/they shall intimate officially of having completed the work as per contract.

27 Deployment of Manpower and Machineries:

The tenderer(s) will deploy sufficient number and size of equipment /machineries/vehicles and the technical/ supervisory personnel required for execution of the work.

28 Change in Constitution of the Contracting Agency:

Prior approval in writing of the company shall be obtained before any change is made in the constitution of the contracting agency, otherwise it will be treated as a breach of Contract.

29 Canvassing in Tender:

Canvassing in connection with the tenders in any shape or form is strictly prohibited and tenders submitted by such tenderers who resort to canvassing shall be liable for rejection.

30 Letter of Acceptance (LOA)/Work Order/Agreement:

The Bidder, whose Bid has been accepted, will be notified of the award on-line and also by registered post/speed post by the employer prior to expiration of the bid validity period. The L-1 bidder will get the information regarding award of work on their personalised dashboard on-line. On receipt of Letter of Acceptance (LOA)/Work Order of the tender issued by the Company, the successful tenderer shall execute contract agreement in the company's prescribed form for the due fulfillment of the contract. Failure to enter into the required contract within the specified period in the work order shall entail cancellation of LOA/work order and forfeiture of the Earnest Money. The written contract to be entered into between the contractor and the company, shall be the foundation of the rights of both the parties.

The work shall be deemed to have commenced on the expiry of 10* (ten) days from the issue of Letter of Acceptance of Tender or 7(seven) days after handing over the site of work or handing over reasonable number of working drawings to the contractor or the period of mobilization allowed in the work order for starting the work in special circumstances, whichever is later.

31 Bid Validity:

The Bid Validity Period will be **120 (one hundred twenty) days** from the end date of bid submission. The validity period of tender shall be decided based on the final end date of submission of bids. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request the bidders to extend the period of validity for a specified additional period. The employer's request and the bidder's responses shall be made in writing. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid. The tenderer shall not, during the said period or within the period extended by mutual consent, revoke or cancel his tender or alter the tender or any terms/conditions thereof without consent in writing of the company. In case the tenderer violates to abide by this, the Company will be the Company will be entitled to take action as per [Clause No.32](#) (Modification and Withdrawal of Bid) of NIT

32 Modification and Withdrawal of Bid:

Modification of the submitted bid shall be allowed on-line only before the deadline of submission of tender and the bidder may modify and resubmit the bid on-line as many times as he/she/they may wish.

Bidders may withdraw their bids online within the end date of bid submission and their EMD will be refunded. However, if the bidder once withdraws his bid, he will not be able to resubmit the bid in that particular tender. For withdrawal of bid after the end date of bid submission, the bidder will have to make a request in writing to the Tender Inviting Authority. Withdrawal of bid may be allowed till issue of work order/LOA with the following provision of penal action:

1. The EMD will be forfeited and
2. The bidder will be debarred for 1(One) year from participating in tenders in CMPDIL/Subsidiary.

The Price-bid of all eligible bidders including this bidder will be opened and action will follow as under:

- i). If the bidder withdrawing his bid is other than L 1, the tender process shall go on.
- ii). If the bidder withdrawing his bid is L-1, then re-tender will be done.

Penal action against clauses above will be enforced from the date of issue of such order.

- iii) The standard operating procedure to handle withdrawal of bid after end date of submission is shall be as follows:

Standard Operative Procedure (SOP) for managing the cases of Withdrawal of Bids in e-Procurement System of CIL/Subsidiary

I. The Mode of Withdrawal:

A. Online Withdrawal of Bids:

- a. The system of online withdrawal is available on the portal up to end date of bid submission, where any bidder can withdraw his/her bid which will attract no penal action.
- b. The system of online withdrawal beyond end date of bid submission and till award of contract is **not** available. The bidder can withdraw their bid only offline, which may be considered except for some exceptional cases as mentioned in clause below, either with or without imposition of penalty.

B. Offline Withdrawal of Bids :

- a. A partner of bidder(in case of JV and partnership firms) whose DSC is registered on the e-Procurement portal can access the portal for online withdrawal but when there is a split in the business relationship, the partners whose DSC is not registered on the portal do not have the option of online withdrawal of bid. Hence such partners may opt to use offline method of withdrawal of his/her offer (or express his disassociation from the bidder organization).
- b. Offline withdrawal of bid, beyond end date of bid submission and till award of contract, may be considered by the tender committee.

II. Acceptance of withdrawal by Tender Committee:

Every case of withdrawal under Clause I-(A)(b) and Clause I-(B) shall be put up to Tender Committee for deliberation and further course of action.

The decision of Tender Committee will be binding on the tenderer.

33 Performance Security:

33.1 Performance Security would be **5.00%** of contract amount and should be submitted within 28 days of issuance of LOA by the successful bidder in any of the form given below:

- A Bank Guarantee in the form given in the bid document from any Scheduled bank. The BG issued by outstation bank shall be operative at its local branch at or branch at.....

NOTE: Bank Guarantee against Performance Security shall be applicable if the amount of Performance Security exceeds Rs. 5.0 lakhs.

The Bank Guarantee shall be issued by a Scheduled Bank / Nationalised Bank on **SFMS platform** and shall be irrevocable and unconditional. CMPDI shall have the powers to invoke it notwithstanding any dispute or difference between contractors and CMPDI pending before the court, tribunal, arbitrator or any other authority. The issuing Bank have to send the BG details through SFMS platform to our bank the details of which are as below:

Name of Bank: State Bank of India,

Branch: CMPDI Branch,

IFSC: SBIN0005598,

A/c No: 10106155087,

Address: Gondwana Place, Kanke Road, CMPDIL Campus, Ranchi – 834008.

- Govt. Securities, FDR or any other form of deposit stipulated by the owner and duly pledged in favour of owner.
- Demand Draft drawn in favour of CMPDI Ltd on any Scheduled Bank payable at its Branch at

The Earnest Money/ Bid Security deposited in the form of Bank Guarantee shall be discharged when the Bidder has signed the Agreement and furnished the required Performance Security / 1st part of security deposit.

The bid security deposited in the form of Demand draft / cash may be adjusted against the Performance security (1st part of security deposit) at bidder's option.

If performance security is provided by the successful bidder in the form of bank guarantee it shall be issued either –

- a. at Bidder's option by a Scheduled Bank , or
- b. by a foreign bank located in India and acceptable to the employer.
- c. The validity of the Bank Guarantee shall be for a period of one year or ninety days beyond the period of contract /extended contract period (if any), whichever is more.

Failure of the successful bidder to comply with the requirement as above shall constitute sufficient ground for cancellation of the award of work and forfeiture of the bid security/ earnest money.

In addition to the above penal measures, the bidder will not be allowed to participate in the re-tendering process. The bidder may also be debarred from participating in future tenders in the subsidiary for a minimum period of 12 Months.

33.2 5.00% Performance Security will be refunded within 14 days of the issue of defect liability certificate (taking over certificate with a list of defects).

34 Postponement of Scheduled Date(s):

The Company reserves the right to postpone the date of receipt and opening of tenders or to cancel the tenders without assigning any reason whatsoever.

35 Public Enterprises preference:

The Company reserves its right to allow Public Enterprises purchase preference facility as per prevalent policy.

For withdrawal of bid after the end date of bid submission, the bidder will have to make a request in writing to the Tender Inviting Authority. Withdrawal of bid may be allowed till issue of work order/LOA with the following provision of penal action:

36 Contract Agreement Document(s):

This Tender Notice shall be deemed to be part of the Contract Agreement. The “General Terms & Conditions”, Additional Terms & Conditions, Special Terms & Conditions(if any), Technical Specifications, drawings (if any) and any other document uploaded on portal as NIT document form an integral part of this NIT and shall also form a part of the contract agreement.

37 Sub-letting of Work:

No subletting of work as a whole by the contractor is permissible. Subletting of work in piece rated jobs is permissible with the prior approval of the department. The Contract Agreement will specify major items of supply or services for which the contractor proposes to engage sub-contractor/sub-vendor. The contractor may from time to time propose any addition or deletion from any such list and will submit proposals in this regard to the Engineer-in -Charge/Designated Officer-in-charge for approval well in advance so as not to impede the progress of work. Such approval of the Engineer-in-Charge/Designated Officer-in-Charge will not relieve the contractor from any of his obligations, duties and responsibilities under the contract.

38 Prohibition of Child Labour engagement:

The contractor/contractual Agencies must not engage any Child Labour during the course of execution of the contract work within the meaning and scope of the Child Labour Prohibition & Regulation Act-1986 and its relevant Act and Rules amended from time to time by the Govt. of India.

39 Compliance of Applicable Labour Laws:

The contractor shall abide by the rules & regulations of Labours Laws applicable in their case relating to weekly holidays, overtime allowance, leave with wages and compensatory holidays etc.

The contractor shall strictly implement all relevant provisions enumerated under Contract

Labour (Regulation & Abolition) Act, 1970 and will submit all statutory documents and records as applicable to concerned authorities and shall take full responsibility for obtaining labour license from Central/State Authority as per the Act. He/she/they will also ensure timely submission of statutory returns as applicable in their case.

The contractor shall not pay less than the specified category of minimum wages to the labour engaged by him/her/them as per Minimum Wages Act, 1948 notified by the State Govt. or Central Govt. whichever is higher and as may be in force and the payment has to be released under the Payment of Wages Act 1936. In this matter the decision of the department shall be final and binding. The contractor shall provide benefits / facilities to its employees in accordance with the applicable laws to this locality ie Jharkhand. CMPDI shall be kept completely indemnified against any liability and consequences thereof. The contractor will be responsible to maintain records/documents pertaining to payment of wages to its workmen as desired by State/Central Govt. Laws including Payment of Wages Act, 1936, Equal Remuneration Act, 1976 & Payment of Bonus Act 1965.

The Contractor should maintain all records in Hindi or English as per the provision made in the various statutes including Contract Labour (Regulation & Abolition) Act, 1970 and the Contract Labour (Regulation & Abolition) Central Rules, 1971, Minimum Wages Act, 1948, Workmen Compensation Act, 1923, Employees State Insurance/Act, 1948 etc. and latest amendment thereof. Such records maintained by the contractor shall be open for inspection by the Engineer-in-charge or by the nominated representative of the Principal Employer.

The contractor will strictly regulate the terms of employment of his/her/their employees and manage the discipline as per Industrial Employment (standing orders) Act. 1946.

The contractor shall get himself registered under Employees Provident Funds/ Coal Mine Provident Fund, ESI and miscellaneous provisions registration no. or Code no. allotted for the specific establishment within reasonable time and submit the same to the employer, which are to be obtained before payment of 1st on a/c bill.

The contractor shall maintain records/document in compliance with the payment of bonus Act 1965.

The contractor shall be solely responsible for the payment of wages, including overtime wages to the workmen and ensure its timely payment thereof through Bank.

The Contractor shall abide the rules and regulations of Pradhan Mantri Suraksha Yojana.

The contractor or its workmen shall not at any point of time have any claim whatsoever against the CMPDI.

The contractor shall indemnify the CMPDI in so far as liability incurred by the CMPDI on account of any default by the contractor.

Neither the contractor nor his workmen can be treated as employees of the CMPDI for any purposes. They are not entitled for any claim, right, preference etc over any job/regular employment of the CMPDI.

If the contractor fails to discharge his duties or neglects to perform the work agreed to done under the agreement, the CMPDI is entitled to terminate this agreement as per clause and get the work done by / through other means and claim reimbursement of actual expenses incurred and also damages for the loss incurred on account of failure on the part of the contractor to discharge the duties or to perform the work under the agreement

The Contractor shall in addition to any indemnity provided by the relevant clauses of the agreement or by law, indemnify and keep indemnified, the CMPDI against all claims, damages or compensation under the provisions of Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employer's Liability Act, 1938, Workmen's' Compensation Act, 1923, Employees provident fund, Employees State Insurance or any modification thereof or any other law relating thereto and rules made there under from time to time, as may be applicable to the contract which may arise out of or in consonance of the construction or maintenance or performance of the work under the contract and also against costs, charges and expenses of any suit, action or proceedings arising out of any accident or injury or death.

40 Splitting up of the work:

The Company does not bind itself to accept the lowest tender and reserves the right to reject any or all the tenders without assigning any reasons whatsoever and to split up the work between two or more tenderer(s) or accept the tender in part and not in its entirety.

41 Settlement of Disputes:

It is incumbent upon the contractor to avoid litigation and disputes during the course of execution. However, if such disputes take place between the contractor and the department, effort shall be made first to settle the disputes at the company level.

The contractor should make request in writing to the Engineer-in-charge for settlement of such disputes/ claims within 30 (thirty) days of arising of the cause of dispute/ claim failing which no disputes/ claims of the contractor shall be entertained by the company.

Effort shall be made to resolve the dispute in two stages.

In first stage dispute shall be referred to GM / HoD of the concerned department for the tenders of HQ and to the Regional Director of the respective Regional Institute of CMPDIL for the tenders of RIs. If difference still persist the dispute shall be referred to a committee constituted by the owner. The committee shall have one member of the rank of Director of the company who shall be chairman of the committee.

If differences still persist, the settlement of the dispute shall be resolved in the following manner:

Disputes relating to the commercial contracts with Central Public Sector Enterprises / Govt. Departments (except Railways, Income Tax, Customs & Excise duties)/ State Public Sector Enterprises shall be referred by either party for Arbitration to the PMA (Permanent Machinery of Arbitration) in the department of Public Enterprises.

In case of parties other than Govt. Agencies, the redressal of the dispute may be sought through Arbitration (THE ARBITRATION AND CONCILIATION ACT, 1996 as amended by AMENDMENT ACT of 2015).

42 Settlement of Disputes through Arbitration:

If the parties fail to resolve the disputes/ differences by in house mechanism, then, depending on the position of the case, either the employer/ owner or the contractor shall give notice to other party to refer the matter to arbitration instead of directly approaching Court.

The contractor shall, however, be entitled to invoke arbitration clause only after exhausting the remedy available under the Clause 40.

- i. In case of parties other than Govt. agencies, the redressal of disputes/ differences shall be sought through Sole Arbitration as under.

Sole Arbitration:

“In the event of any question, dispute or difference arising under these terms & conditions or any condition contained in this contract or interpretation of the terms of, or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of a person, appointed to be the arbitrator by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be). The award of the arbitrator shall be final and binding on the parties of this Contract.”

- a) In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, or his/her award being set aside by the court for any reason, it shall be lawful for the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.
 - b) It is further a term of this contract that no person other than the person appointed by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to Arbitration at all.
- ii. In case of Govt. agencies, the redressal of disputes/ differences shall be sought through Sole Arbitration as under.

Sole Arbitration:

“In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred to either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by secretary to the Govt. of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may take further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the parties finally and conclusively. The Parties to the dispute shall equally the cost of arbitration as intimated by the Arbitrator”.

As per circular circulated by e-procurement division vide E-192732,

It is directed to refer to Department of Public Enterprises guidelines issued vide OM No. 4(1)/2011-DPE (PMA)-GL dated 12.06.2013, No. 4(1)/2011-DPE(PMA) dated 24.03.2014, No. 4(1)/2011-DPE (PMA) dated 26.03.2014 and No. 4(1)/2013-DPE(PMA)/FTS-1835

dated 14-04-2017 regarding the resolution of commercial disputes between Central Public Sector Enterprises (CPSEs) inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments) through PMA (Permanent Machinery of Arbitration) mechanism.

2.To make the mechanism more effective and binding on the disputing parties, a new mechanism namely administrative Mechanism for Resolution of CPSEs Disputes (AMRCD) having two level (tier) structure has been evolved in consultation with various stakeholders to replace the existing PMA mechanism which stands wound up from the date of issue of this OM.

3.Applicability

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs) / Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such disputes or difference shall be taken up by either party for its resolution through AMRCD.

4.As per the approved new mechanism to resolve the commercial dispute the following structure and procedure shall be followed by the concerned disputing parties :

A.Structure:

i.At the First level (tier), such commercial disputes shall be referred to a Committee comprising of Secretaries of the Administrative Ministries/Departments to which the disputing CPSEs/Parties belong and Secretary-D/O Legal Affairs. The Financial Advisors (Fas) of the two concerned Administrative Ministries/Departments will represent the issues related to the dispute in question before the above Committee. In case the two disputing parties belong to the same Ministry/Department the above said Committee will comprise Secretary of the administrative Ministry/Department concerned, Secretary-D/o Legal Affairs and Secretary-Department of Public Enterprises. In such a case, the matter may be represented before the Committee by the FA and one joint Secretary of that Ministry/Department.

Further, in case of dispute between CPSE and State Government Department/Organization, the above said Committee will comprise the Secretary of the Ministry/Department of the Union to which the CPSE belongs and Secretary-D/O Legal Affairs and a senior officer nominated by the Chief Secretary of the State concerned. In such a case, the matter will be represented before the Committee by the FA of the concerned administrative Ministry/Department and the concerned Principal Secretary of the State Government Department/Organization.

ii.In case the dispute remains unresolved even after consideration by the above Committee, the same will be referred the Second level (tier) to the Cabinet Secretary, whose decision will be final and binding on all concerned.

B.Procedure:

- i. At the First level (tier), the claiming party (Claimant) will approach the FA of its administrative Ministry/Department for representing the dispute before the Secretary of its administrative Ministry/Department. The Secretary of administrative Ministry/Department of claiming party will intimate the same to the Secretary of administrative Ministry/Department of responding party (Respondent) and Secretary-D/O Legal Affairs and thereafter meetings will take place in the administrative Ministry/Department of the claiming party to examine the facts and resolve the dispute or matter. The FAs of the concerned administrative Ministries/Departments will represent the issues related to the dispute in question before the above Committee. After arriving at a decision by the Committee, the Secretary of the administrative Ministry/Department of the claiming party will write down the decision and it will be signed jointly by both the Secretaries and Secretary-D/o Legal Affairs. A copy of the decision will be communicated by the Secretary of the administrative Ministry/Department of the claiming party to each party to the dispute for implementation.

In case where one party (1st party) to the dispute is a Department/Organisation of a State Government the procedure for admitting the dispute will be same as above, however, all meetings in connection with resolution of the dispute will be held in the administrative Ministry/Department (Union) of other party (2nd Party) irrespective of the position of the 1st Party whether as a Claimant or Respondent. The presentation of the issues before the above Committee in this case will be done by the FA of the concerned Administrative Ministry/Department and concerned Principal Secretary of the State Government Department/Organization.

- ii) The Committee of Secretaries at the First level (tier) shall finalise its decision within 3 months after having received the reference/notice in writing regarding the dispute from the concerned aggrieved party.

5.Appeal

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through its administrative Ministry/Department, whose decision will be final and binding on all concerned.

6.Arbitration Clause

- (i)The CPSEs will ensure inclusion of a clause in all the existing and future commercial contracts between CPSEs Inter-se and CPSEs and Government Departs/Organizations as under :

“In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments / Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be

taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)2013-DPE(GM)/FTS-1835 dated 22.05.2018”.

(ii)The on-going contracts shall also be suitably amended accordingly.

7.Disposal of pending cases in PMA

All pending cases with Sole Arbitrator-PMA and Appellate Authority shall stand transferred with immediate effect to concerned administrative Ministries/Departments to be dealt with as per above mentioned laid down mechanism of dispute resolution. All cases in which the hearing has been completed by Sole Arbitrator, the award will be made by Sole Arbitrator. Appeal, if any, made against such case will be with the Cabinet Secretary at Second level (tier).

8.All administrative Ministries/Departments concerned with Central Public Sector Enterprises/Port Trusts etc are requested to bring these guidelines to the notice of all CPSEs under their administrative control for strict compliance.

43 Legal Jurisdiction:

Matters relating to any dispute or difference arising out of this tender and subsequent contract awarded based on this tender shall be subject to the jurisdiction of District Court of the place, where the subject work is to be executed.

44 Drawing:

All relevant drawings regarding the subject work are available in the office of the HOD(Civil) /TE/ CMPDIL. The bidders who wish to see any other drawing not available in the tender document may do so in the office of the HOD(Civil) /TE / CMPDIL before the end date of Bid Submission. All the relevant drawings regarding the subject work available in the office of HOD(Civil) /TE /CMPDIL shall be a part of the Agreement of the subject.

45 Pre-Contract Integrity Pact:

(Applicable for tenders with estimated cost exceeding Rs. 2.00 Crores):

The bidder is required to go through the integrity pact which is the part of bid document. The bidder, submitting the bid shall accept the Integrity Pact as given in the bid document. Name, address and contact No. of the Independent External Monitor (IEM) nominated for this tender:

| Sl. No. | Name | Address | Contact Number |
|----------------|--|---|--|
| i | Shri CHET RAM KOLI, Retired Principal Commissioner of Income Tax | Flat No.1701 Imperia, Mahavir Millenium, Near Sidhachal, Vasant Vihar,Thane(W), Maharashtra-400610. | Mobile : 9869479987 e-mail: cr_koli@yahoo.com |

| | | | |
|----|--|--|---|
| ii | Shri Jagdish Prasad Meena, IAS (Retd.) | Flat A1/401, Bharat Apartments, Plot 8, Sector-18A, Dwarika, New Delhi-110075. | Mobile No. 08802334455 e-mail: meenajp@gmail.com |
|----|--|--|---|

NOTE : After getting the work, the contractor has to register his firm on Contract Labour Information Portal i.e CLIP (<https://www.coalindia.in> → Our People → CLIP) and thereafter update the detail of contractor's workers engaged by him on the said portal. The contractor will be liable to follow the guidelines and direction related to CLIP issued from time to time. This will be applicable apart from the provision of Contractor Labour (Regulation & Abolition) Act, 1970 and Rules, 1971 and also provisions of other labour laws

(Tender Inviting Authority)
Designation,
Department,
Address.

SECTION – II

Format of “Letter of Bid” (for Works & Services Tenders)

LETTER OF BID

To,
The Tender Committee,
Central Mine Planning & Design Institute, Ranchi.

Sub. : Letter of Bid for the work “-----”

Ref. : 1. NIT No.: “-----”

2. Tender Id No. : “-----”

Dear Sir,

This has reference to above referred bid. I/we have read and examined the conditions of contract, Scope of Work, technical specifications, BOQ and other documents carefully.

I /We am/are pleased to submit our bid for the above work. I/We hereby unconditionally accept the bid conditions and bid documents in its entirety for the above work and agree to abide by and fulfil all terms and conditions and specifications as contained in the bid document.

I/we here by submit all the documents as required to meet the eligibility criteria as per provision of the bid notice/document.

I/We hereby confirm that this bid complies with the Bid validity, Bid security and other documents as required by the Bidding documents.

If any information furnished by me/us towards eligibility criteria of this bid is found to be incorrect at any time, penal action as deemed fit may be taken against me/us for which I/We shall have no claim against CMPDIL.

Until a formal agreement is prepared and executed, this bid and your subsequent Letter of Acceptance/Work Order shall constitute a binding contract between us and Central Mine Planning and Design Institute, Ltd, Ranchi.

Should this bid be accepted, we agree to furnish Performance Security within 28 days of issue of letter of acceptance and commence the work within 10 days of issue of letter of acceptance. In case of our failure to abide by the said provision Central Mine Planning and Design Institute, Ltd, Ranchi shall, without prejudice to any other right or remedy, be at liberty to cancel the letter of acceptance/ award and to forfeit the Earnest Money and also debar us from participating in future tenders for a minimum period 12 months.

(This document is digitally signed by the DSC holder authorised by the bidder and therefore no physical signature is required)

PROFORMA for Undertaking to be submitted by Bidder/s (On Bidder's Letter Head) for Genuineness of the Information furnished on-line and authenticity of the Documents uploaded on-line in support of his Eligibility:

Format of UNDERTAKING

I / We Proprietor/Partner/Legal Attorney/ Director/
Accredited Representative of M/S., solemnly declare that:

1. I/ We am/ are submitting Bid for the work.....against
NIT No/Tender ID..... Dated..... and I/ we offer to execute the
work in accordance with all the terms, conditions and provisions of the bid.
2. I / Our Partners / Directors don't has/have any relative as employee of Central Mine
Planning and Design Institute, Ltd, Ranchi.
3. All information furnished by us in respect of fulfillment of eligibility criteria and
qualification information of this Bid is complete, correct and true.
4. All copy of documents, credentials and documents submitted along with this Bid are
genuine, authentic, true and valid.
5. I/ We hereby authorize department to seek references / clarifications from our Bankers.
6. We hereby undertake that we shall register and obtain license from the competent
authority under the contract labour (Regulation & Abolition Act) as relevant, if applicable.
7. * I/ We hereby confirm that we have registration with CMPF / EPF Authorities. We shall
make necessary payments as required under law.
8. * I/ We have not been banned or delisted by any Govt., or Quasi Govt. Agencies or PSUs
(In case of JV, all partners are covered).

Or

* I / Wehave been banned by the organization named “_____”
for a period of..... year/s, effective from
to.....(in case of JV, name(s) of the JV Partner(s)).

9. If any information and document submitted is found to be false/ incorrect at any time,
department may cancel my/our Bid and action as deemed fit may be taken against
me/us, including termination of the contract, forfeiture of all dues including Earnest
Money and banning/ delisting of our firm and all partners of the firm etc.

[* Delete whichever is not applicable.]

**(The concerned department may specify any other specific undertaking to be taken
from the bidder/s while framing the NIT)**

Mandate Form for ELECTRONIC FUND TRANSFER / INTERNET BANKING PAYMENT.

To

**Central Mine Planning & Design Institute Limited,
Gondwana Place, Kanke Road, Ranchi -834008.**

Sub:Authorization for release of payment due from Central Mine Planning & Design Institute Limited, Gondwana Place, Kanke Road, Ranchi through Electronic Fund transfer/ Internet Banking.

(SBI-NET)

Ref: Order No. _____ Date _____ and/or Tender/Enquiry/Letter No. _____ Date _____

(Please fill in the information in CAPITAL LETTERS, Please TICK wherever it is applicable).

1. Name of the Party : _____
2. Address of the Party : _____
City _____ PIN Code _____
3. E- Mail Id _____
4. Permanent Account Number _____

5. Particulars of Bank

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---------|--|--|--|---------|--|--|--|-------------|--|-------------|--|--|--|--|--|--|--|--|--|--|--|
| Bank Name | | | | | | | | | | | Branch Name | | | | | | | | | | | |
| Branch Place | | | | | | | | | | | Branch City | | | | | | | | | | | |
| PIN Code | | | | | | | | | | | Branch Code | | | | | | | | | | | |
| MICR No. | | | | | | | | | | | | | | | | | | | | | | |
| (9 Digits code number appearing on the MICR Band of the cheque supplied by the Bank. Please attach Xerox copy of a cheque of your bank for ensuring accuracy of the bank name, branch name and code number) | | | | | | | | | | | | | | | | | | | | | | |
| RTGS CODE | | | | | | | | | | | | | | | | | | | | | | |
| Account Type | Savings | | | | Current | | | | Cash Credit | | | | | | | | | | | | | |
| Account Number (as appearing in the Cheque Book) | | | | | | | | | | | | | | | | | | | | | | |

4. Date from which the mandate should be effective:

I hereby declare that the particulars given above are correct and complete. If any transaction is delayed or not effected for reasons of incomplete or incorrect information. I shall not hold Central Mine Planning & Design Institute Limited responsible. I also

undertake to advise any change in the particulars of my account to facilitate updation of records for purpose of credit of amount through SBI Net.

Place:

Date:

Signature of the party/Authorized Signatory.

Certified that the particulars furnished above are correct as per our records.

Banker's Stamp:

Date:

**(Signature of the Authorized official from
the Banks)**

Format for NON-BANNING or DELISTING CERTIFICATE

Our firm has not been suspended, banned or de-listed by any Government or Quasi-Government agencies or PSU's.

Date:

Signature of the Bidder with seal of the
firm

Bank Guarantee Proforma for PERFORMANCE SECURITY / GUARANTEE

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

**(TO BE ISSUED BY ANY NATIONALISED/ SCHEDULED BANK AUTHORISED BY RBI
TO ISSUE A BANK GUARANTEE)**

To,

**Central Mine Planning & Design Institute Limited,
Gondwana Place, Kanke Road, Ranchi -834031**

In consideration of the **Central Mine Planning & Design Institute Limited**, having its Registered office at **Gondwana Place, Kanke Road, Ranchi -834031** (hereinafter called to as the “Employer” which expression shall unless repugnant to the context or meaning thereof, include all successors, administrators and assigns) having awarded to _____ *[Name & Address of the Contractor]* (hereinafter called to as “Contractor” which expression shall unless repugnant to the context of meaning thereof include its successors, administrators, executors and assigns) the work _____ *[Name of the Work]* by issue of Letter of Award No. _____ *[Work Order/Letter of Intent No.]* and the same having been unequivocally accepted by the Contractor resulting into a Contract Agreement dated _____ valued at _____ *[value of Work Order]* (hereinafter called ‘the Contract’) and the Employer having agreed to accept Performance Bank Guarantee of ____ *[indicate figure]*% of the Contract Sum _____ *[amount in figures and words]* from a Nationalized/Scheduled Bank for due performance of the work executed by the Contractor as per the terms & conditions contained in the said Contract.

We, _____ *[name of the Bank]*, of _____ *[address of the Bank]* (hereinafter called to as “Bank” which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer immediately on demand and or, all money payable by the Contractor to the extent of _____ *[amount of guarantee in figures and words]*, at any time from _____ to _____ without any demur, reservation, recourse, contest or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrecoverable and shall continue to be enforceable as per the terms & conditions contained in the said Contract.

The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time, to extend the validity of time of Performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting this Guarantee, to postpone, from time to time, the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forebear or to enforce any

covenants contained or implied in the Contract, between the Employer and the Contractor or any other course or remedy or security available to the Employer. The Bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to matter aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor in first instance, without proceeding against the Contractor and notwithstanding any security or other Guarantee that the Employer may have in relation to the Contractor's liabilities.

Dated this _____ day of _____ at _____

For and on behalf of the Bank.

Signature _____

Name _____

Designation _____

Common Seal of Bank _____

Proforma for EXECUTION OF AGREEMENT.

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

This agreement is made on day of between (Name of Company) having its registered office at (hereinafter called the 'COMPANY' which expression shall, unless repugnant to the subject or context, include its successors and assignees) of the one part and (Name of the Contractor) carrying on business as a (partnership/ proprietorship/ Ltd. Co. etc.) firm under the name and style (Hereinafter called the 'said Contractor' which expression shall, unless the context requires otherwise include them and their respective heirs, executors, administrators and legal representatives) of the other part.

Whereas the Company invited tenders for the work of “.....” and whereas the said Contractor/Firm submitted tender for the said work and deposited a sum of ₹..... as Earnest Money and whereas the tender of the said contract has been accepted by the Company for execution of the said work.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1) In this agreement words and expressions shall have the same meaning as are respectively assigned to them in the tender papers hereinafter referred to.
- 2) The following documents which are annexure to this agreement should be deemed to form and be read and construed as part of this agreement viz.
 - i) Annexure-A: Tender Notice (Page ... to ...)
 - ii) Schedule–A: General terms & conditions. (Page ... to ...)
 - iii) Schedule-B: The probable Quantities and Amount (Page ...to ...)
 - iv) Schedule-C: Negotiation letters
 - v) Schedule-D: Letter of Acceptance/Work Order (Page ... to ...)
 - vi) Schedule-E: Drawings (Page ... to ...)
- 3) In consideration for the payment of the sum of Rs.....(W/O Value; both in words and figures) or such other sum as may be arrived at under the clause of the specification relating to Payment by items measurements at unit prices by the Company, the said Contractor shall, subject to the terms & condition contained herein execute and complete the work as described and to the extent of probable quantities as indicated in Schedule B with such variations by way of alteration, addition to or reduction from the said works.
- 4) The company has converted a sum of Rs. only, from the amount of Rs. deposited by the said contractor as Earnest Money, into 'Initial Security Deposit' of 1% of the awarded work value. The excess/balance amount of earnest money shall be adjusted in the RA Bill(s).
- 5) The said contractor hereby covenants with the company that the Company shall retain a sum of Rs. or such sum as may be arrived at based on the executed value of the work, as security deposit for the fulfilment of the contract to the satisfaction of the Company.

IN WITNESS WHEREOF THE parties herein have set their hands and seals the date and year above written.

1 Partner.

Signature

2 Partner

Signature

On behalf of M/s.....The Contractor, as one
of the constituted attorney, In the presence of –

1. Name _____ Address:

Signature

Occupation:_____

Signed byon behalf of (Name of Company) in
presence of -

Signature

1. Name: _____ Address:

Signature

INTEGRITY PACT

Between

Central Mine Planning and Design Institute Limited (CMPDI) hereinafter referred to as “Principal” And

..... hereinafter referred to as “The Tenderer/Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract for The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Tenderers/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the international Non-Governmental Organization “Transparency International” (TI). Following TI’s national and international experience, the Principal has appointed external independent Monitors (refer Clause 26 of Terms and Conditions) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section-1: Commitments of the Principal

- (1) The principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of the contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
 2. The Principal will, during the tender process treat all Tenderers with equity and reason. The Principal will in particular, before and during the tender process. Provide to all Tenderers the same information and will not provide to any Tenderer confidential/additional information through which the Tenderer could obtain an advantage in relation to the tender process or the contract execution.
 3. The principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section–2: Commitments of the Tenderer/Contractor

- (1) The Tenderer/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - i. The Tenderer/Contractor will not, directly or through any other person or firm offer, promise or give to any of the Principal’s employees involved in the tender process

or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- ii. The Tenderer/Contractor will not enter with other Tenderers into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - iii. The Tenderer/Contractor will not commit any offence under the relevant Anti-corruption Laws of India, further the Tenderer/Contractor will not use improperly for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship regarding plans, technical proposals and business details including information contained or transmitted electronically.
 - iv. The Tenderer/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Tenderer/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section-3: Disqualification from tender process and exclusion from future contracts.

If the Tenderer, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Tenderer into question, the Principal is entitled to disqualify the Tenderer from the tender process or to terminate the contract, if already signed, for such reason.

- (1) If the Tenderer/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Tenderer/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Tenderer and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
- (2) The Tenderer accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freshly and after obtaining independent legal advice.
- (3) If the Tenderer/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

- (4) A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section-4: Compensation for Damages

- (1) If the Principal has disqualified the Tenderer from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Tenderer liquidated damages equivalent to 3% of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.
- (3) The Tenderer agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Tenderer/Contractor can prove and establish that the exclusion of the Tenderer from the tender process or the terminate of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Tenderer/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section-5 - Previous transgression.

- (1) The Tenderer declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Tenderer makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section-6: Equal treatment of all Tenderers/ Contractors/ Subcontractors

- (1) The Tenderer/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreement with identical conditions as this one with all Tenderers, Contractors and Subcontractors.
- (3) The Principal will disqualify from the tender process all Tenderers who do not sign this Pact or violate its provisions.

Section-7: Criminal charges against violating Tenderers/ Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Tenderer, Contractors or Subcontractor, or of an employee or a representative or an associate of a Tenderer, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section-8: External Independent Monitor / Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal).

- (1) The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representative of the parties and performs his functions neutrally and independently. He reports to the Chairpersons of the Board of the Principal.
- (3) The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Tenderer/Contractor/Subcontractor with confidentiality.
- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meeting.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the "Principal" and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) Monitor shall be entitled to compensation on the same terms and being extended to/provide to Outside Expert Committee members/Chairman as prevailing with Principal.
- (8) If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not within reasonable time, taken visible action to proceed against such offences or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (9) The word "Monitor" would include both singular and plural.

Section-9: Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all the Tenderers 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite lapse of this pact as specified above, unless it is discharged/determined by the Chairperson of the Principal.

Section-10: Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Ranchi.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(Sign for Principal)

Place:

Date:

(Sign for the contractor/Tenderer)

Place:

Date:

Witnesses:

1.

2.

PROFORMA FOR WRITTEN CONSENT FOR ARBITRATION CLAUSE

(Applicable for Partnership Firm & Joint Venture)

We, all the Partners of M/s
(Partnership Firm/ Joint Venture), do hereby give our written consent for acceptance of the
following Arbitration Clause of the NIT for the Work
“
.....” tendered by CMPDIL, vide NIT No.
..... dated
..... and Tender Id

A. Settlement of Disputes.

It is incumbent upon the contractor to avoid litigation and disputes during the course of execution. However, if such disputes take place between the contractor and the department, effort shall be made first to settle the disputes at the company level.

The contractor should make request in writing to the Engineer-in-charge for settlement of such disputes/ claims within 30 (thirty) days of arising of the cause of dispute/ claim failing which no disputes/ claims of the contractor shall be entertained by the company.

Effort shall be made to resolve the dispute in two stages.

In first stage dispute shall be referred to concerned CGM/GM. If difference still persist the dispute shall be referred to a committee constituted by the owner. The committee shall have one member of the rank of Director of the company who shall be chairman of the committee.

If differences still persist, the settlement of the dispute shall be resolved in the following manner:

Disputes relating to the commercial contracts with Central Public Sector Enterprises / Govt. Departments (except Railways, Income Tax, Customs & Excise)/ State Public Sector Enterprises shall be referred by either party for Arbitration to the PMA (Permanent Machinery of Arbitration) in the department of Public Enterprises.

In case of parties other than Govt. Agencies, the redressal of the dispute may be sought through Arbitration (THE ARBITRATION AND CONCILIATION ACT, 1996 as amended by AMENDMENT ACT of 2015).

B. Settlement of Disputes through Arbitration

If the parties fail to resolve the disputes/differences by in house mechanism, then, depending on the position of the case, either the employer/owner or the contractor shall give notice to other party to refer the matter to arbitration instead of directly approaching Court. The contractor shall, however, be entitled to invoke arbitration clause only after exhausting the remedy available under the clause 16.

In case of parties other than Govt. agencies, the redressal of disputes/differences shall be sought through Sole Arbitration as under.

Sole Arbitration:

In the event of any question, dispute or difference arising under these terms & conditions or any condition contained in this contract or interpretation of the terms of, or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of a person, appointed to be the arbitrator by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be). The award of the arbitrator shall be final and binding on the parties of this Contract.

(a) In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, or his/her award being set aside by the court for any reason, it shall be lawful for the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.

(b) It is further a term of this contract that no person other than the person appointed by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to Arbitration at all.

Subject as aforesaid, Arbitration and Conciliation Act, 1996 as amended by Amendment Act of 2015, and the rules thereunder and any statutory modification thereof for the time being in force shall be deemed to apply to the Arbitration proceedings under this clause.

The venue of arbitration shall be the place from which the contract is issued or such other place as the Competent Authority of CIL/ CMD of Subsidiary Company (as the case may be) at his discretion may determine.

Applicable Law: The contracts shall be interpreted in accordance with the laws of the Union of India.

Signature of Partners of Partnership Firm/ Joint Venture :

1. Name of Partner :Signature :

2. Name of Partner :Signature :

3. Name of Partner :Signature :

Note : This CONSENT has to be signed by each Partner of Partnership Firm/ Joint Venture

SECTION – III

SCOPE OF WORK AND TECHNICAL SPECIFICATION

A. GENERAL

Central Mine Planning and Design Institute, Ranchi has its HQ in Ranchi, Jharkhand. It receives a good amount of solar radiation which can be converted to usable source of electricity by installation of Photovoltaic solar power plant. A photovoltaic plant with solar panels mounted over the rooftop of various office buildings (as mentioned in the BOQ) having total capacity of 150 kWp is proposed.

B. LOCATION

The CMPDI HQ is located in Ranchi which is capital city of the Jharkhand. This city is one of the planned city of India. The latitude and longitude of the place are 23°35'N and 85°34'E respectively.

C. EXISTING POWER SUPPLY & DISTRIBUTION SYSTEM

To cater the loads of CMPDI HQ office complex, one substation of capacity 2 X 630 kVA, 11 kV/0.433 kV has been provided. The sub-station is located inside the office premises. 3 DG sets of capacity of 500 kVA, 250 kva, 250 kva have also been installed as a stand by source of power.

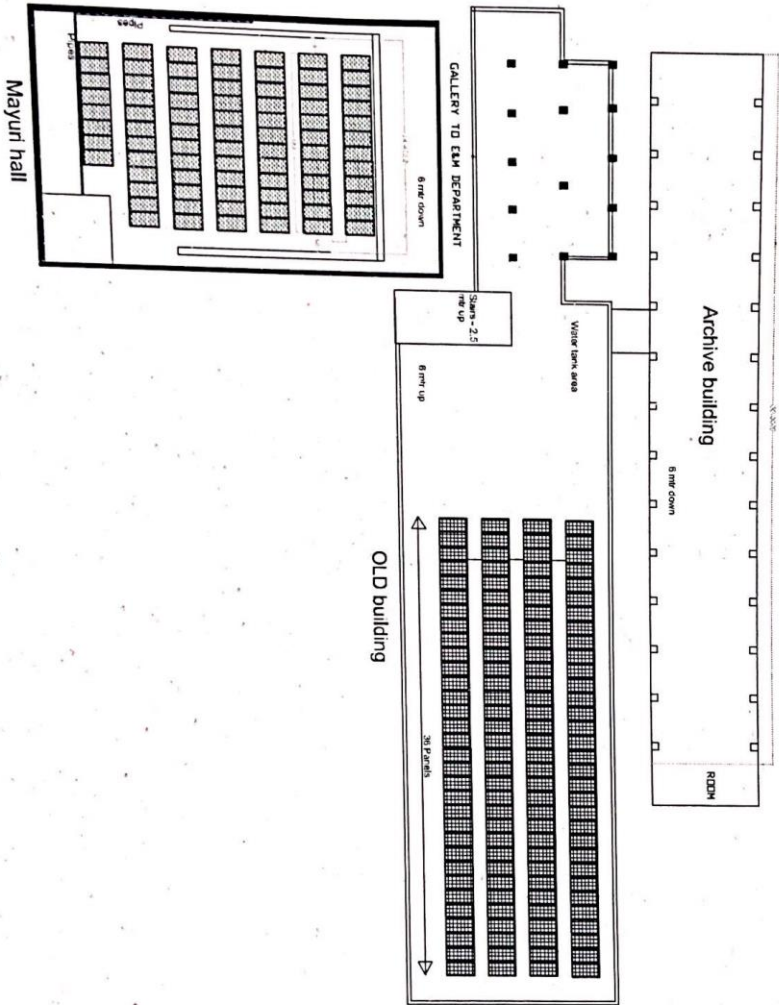
The substation receives power at 11 kV from JSEB through one no. single circuit overhead line. Power received from JSEB is brought to 11 kV, 400 A vacuum circuit breakers kiosks. Primary control of the transformers is done through these kiosks. LT supply is being distributed through a 433 V Main switchboard panel located in the sub-station building. For further distribution of power within the building as well as external distribution, downstream distribution boards are provided at different locations of the office building. Separate distribution circuits are being used for power, lighting and UPS loads.

The loads mainly comprise of the office lighting & fan, Air-conditioning, pumps, computers etc.

D. SCOPE OF WORK:

The scope of work includes detail design, preparation of drawings including all design calculations, equipment selection, supply of equipment, installation and Commissioning including all necessary auxiliaries, civil & structural works, performance test, handing over 150 kWp grid tied solar power plant and comprehensive maintenance of the plant including all of its equipments for 5 years. The following drawings have been attached for reference purpose only:

Drawing: 2



NOTES

 : Represents existing PV modules]

 : Represents proposed PV modules]

Proposed PV system

Type : SH-Poly

Wp : 320

Dimension : 1956 x 992 mm

Quantity : 80 nos.

Total capacity : 25.6 KWP

Inverter type : String inverter, 25 kW

Azimuth : 2 degree w.r.t south towards west

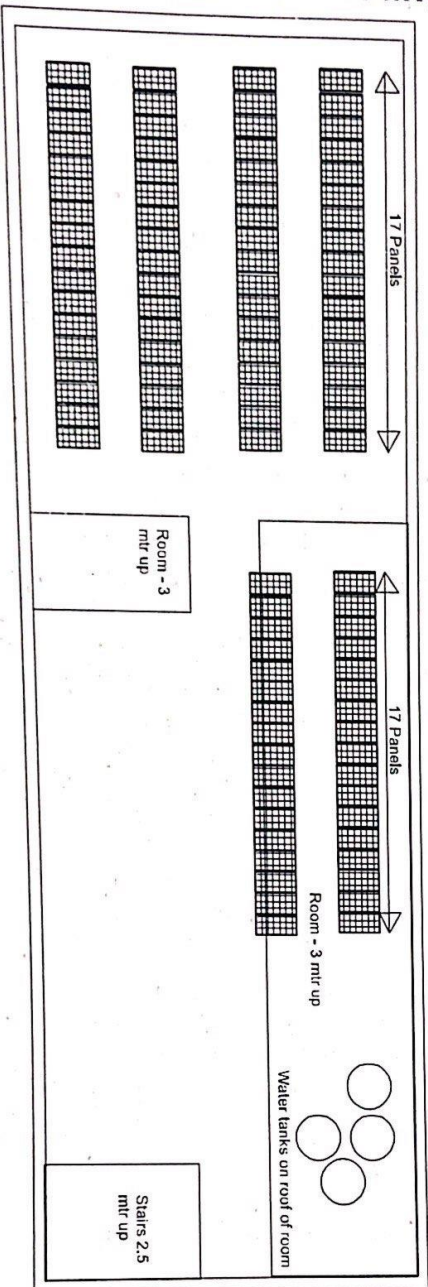
Module inclination : 19 degree

Dimension:

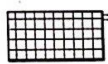
All dimensions are in metres, unless specified otherwise. Dimension shown in the plan is indicative, and may vary slightly as per site condition.

PLAN OF MAYURI & EXPLORATION BUILDING

Drawing: 9



NOTES:



: Represents existing PV modules



: Represents proposed PV modules

No proposed PV panel is being proposed

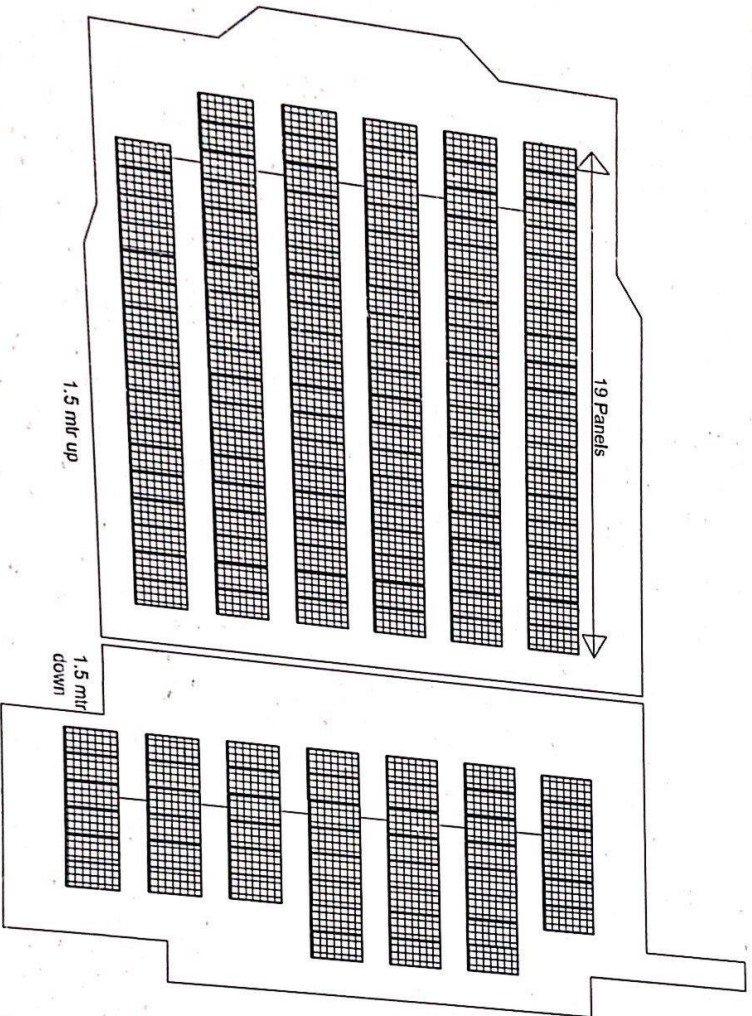
Dimension:

All dimensions are in metres, unless specified otherwise.

Dimension shown in the plan is indicative, and may vary slightly as per site condition.

PLAN OF R&D BUILDING

Drawing: 10



NOTES:



: Represents existing PV modules



: Represents proposed PV modules

No proposed PV panel is being proposed

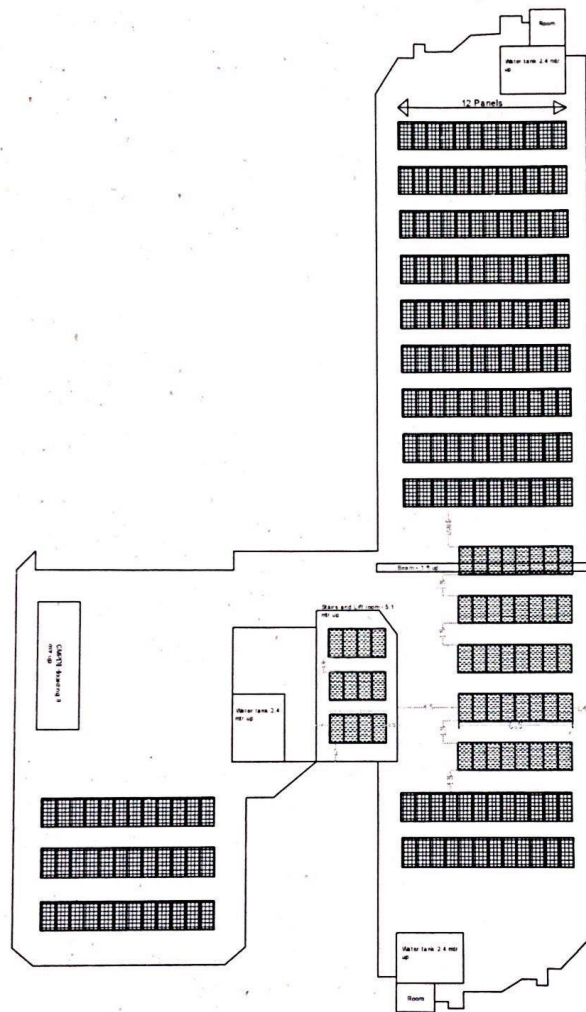
Dimension:

All dimensions are in metres, unless specified otherwise.



Dimension shown in the plan is indicative, and may vary slightly as per site condition.

PLAN OF COMMUNITY HALL

Drawing: 1



NOTES

-  Represents existing PV modules
-  Represents proposed PV modules

Proposed PV system

Type : Si-Poly
 Wp : 320
 Dimension : 1956 x 992 mm
 Quantity : 52 nos.
 Total capacity : 16.6 kWp
 Inverter type : String inverter, 15 kW
 Azimuth : 15 degree w.r.t south towards west
 Module inclination : 19 degree

Dimension:

All dimensions are in metres, unless specified otherwise.
 Dimension shown in the plan is indicative, and may vary slightly as per site condition.



Scanned with
CamScanner

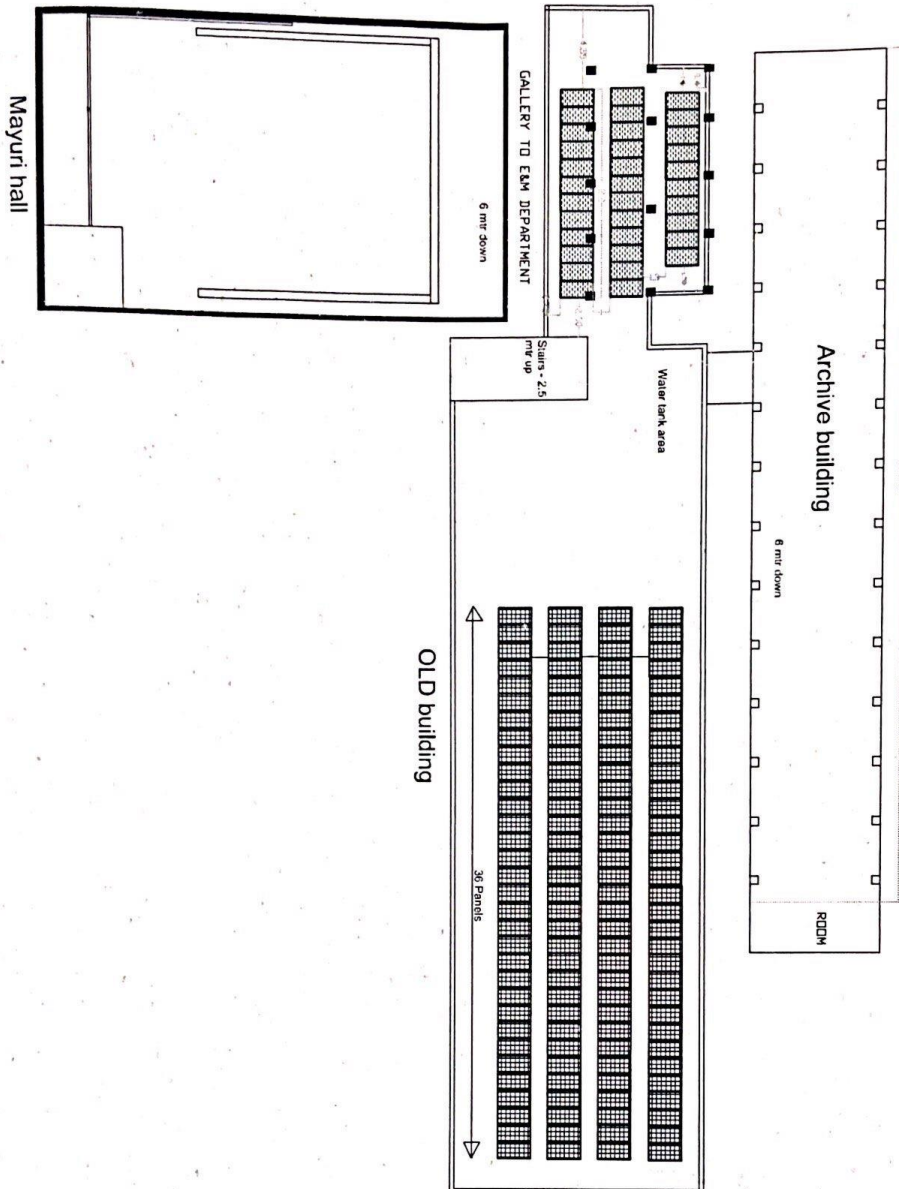
PLAN OF CPEI BUILDING

NTS

Drawing: 3


Attachment: 150 kWp Roof top Solar_CMPDI HQ (compiled).pdf

No. #6



PLAN OF MAYURI & EXPLORATION BUILDING

NOTES:

 : Represents existing PV modules]

 : Represents proposed PV modules]

Proposed PV system

Type : Si-Poly

WP : 320

Dimension : 1956 x 992 mm

Quantity : 34 nos.

Total capacity : 10.88 kWp

Inverter type : String inverter, 10 kW

Azimuth : 2 degree w.r.t south towards west

Module inclination : 19 degree

Dimension:

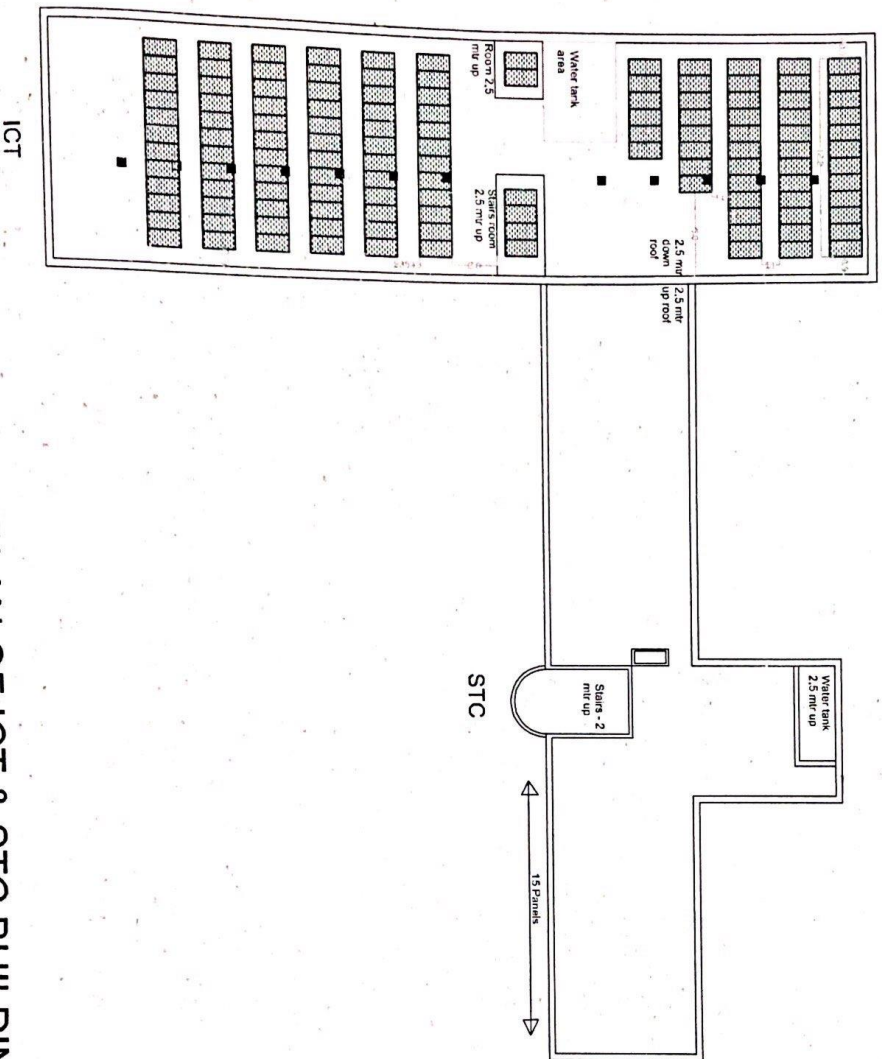
All dimensions are in metres, unless specified otherwise.
Dimension shown in the plan is indicative, and may vary slightly as per site condition.



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11/11/2018

Drawing: 4



PLAN OF ICT & STC BUILDING

NOTES:



: Represents existing PV modules



: Represents proposed PV modules

Proposed PV system

Type : Si-Poly

W/p : 320

Dimension : 1956 x 992 mm

Quantity : 128 nos.

Total Capacity : 41 kWp

Inverter type : String inverter, 10 kW - 4 nos.

Azimuth : 18 degree wrt south towards west

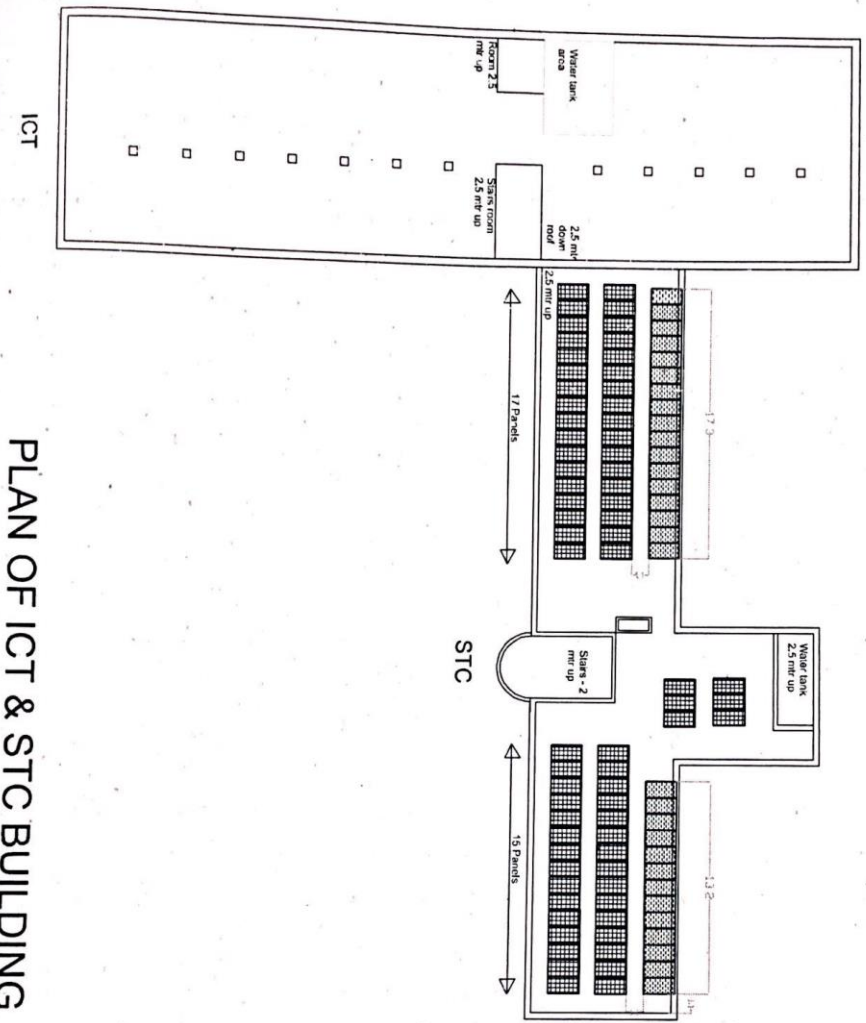
Module inclination : 19 degree

Dimension:

All dimensions are in metres, unless specified otherwise.


Dimension shown in the plan is indicative, and may vary slightly as per site condition.


Drawing: 5



PLAN OF ICT & STC BUILDING

NOTES:

 : Represents existing PV modules

 : Represents proposed PV modules

Proposed PV system

Type : Si-Poly

Wp : 320

Dimension : 1956 x 992 mm

Quantity : 30 nos.

Total capacity : 9.6 kWp

Inverter type : String inverter, 10 kW

Azimuth : 18 degree w.r.t south towards west

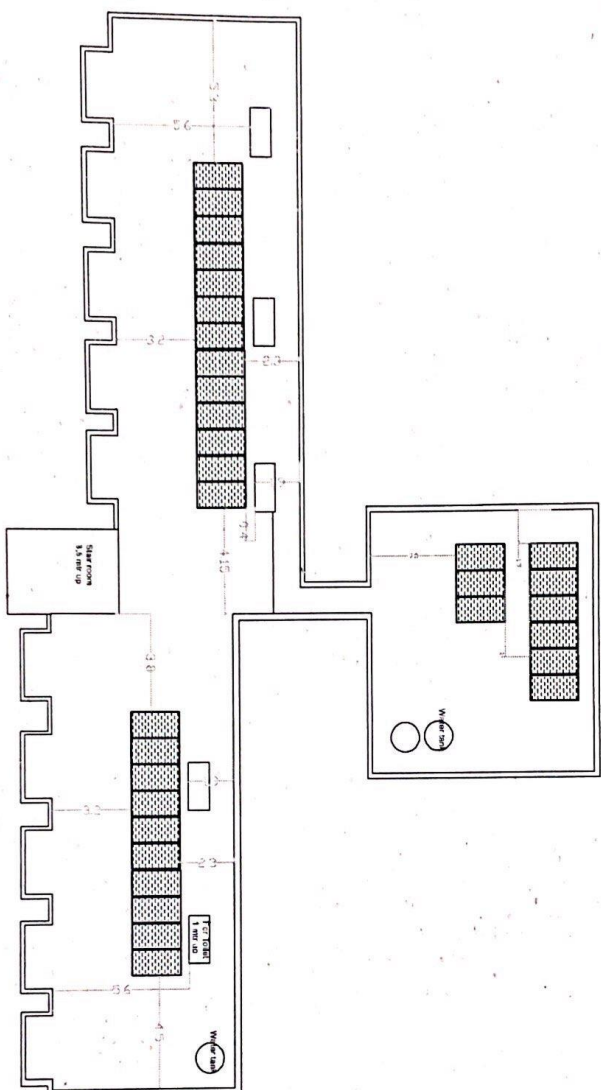
Module inclination : 19 degree

Dimension:

All dimensions are in metres, unless specified otherwise.

Dimension shown in the plan is indicative, and may vary slightly as per site condition.

Drawing: 6



PLAN OF CHUMRI BUILDING

NOTES:



: Represents existing PV modules]



: Represents proposed PV modules]

Proposed PV system

| Type | : Si-Poly |
|------|-----------|
| W | 300 |

Wp : 320

Dimension : 1956 x 992 mm

Quantity : 32 nos.

Total capacity : 10.24 kWp

Inverter type : String inverter, 10 kW

Azimuth : 18 degree w.r.t south towards

west

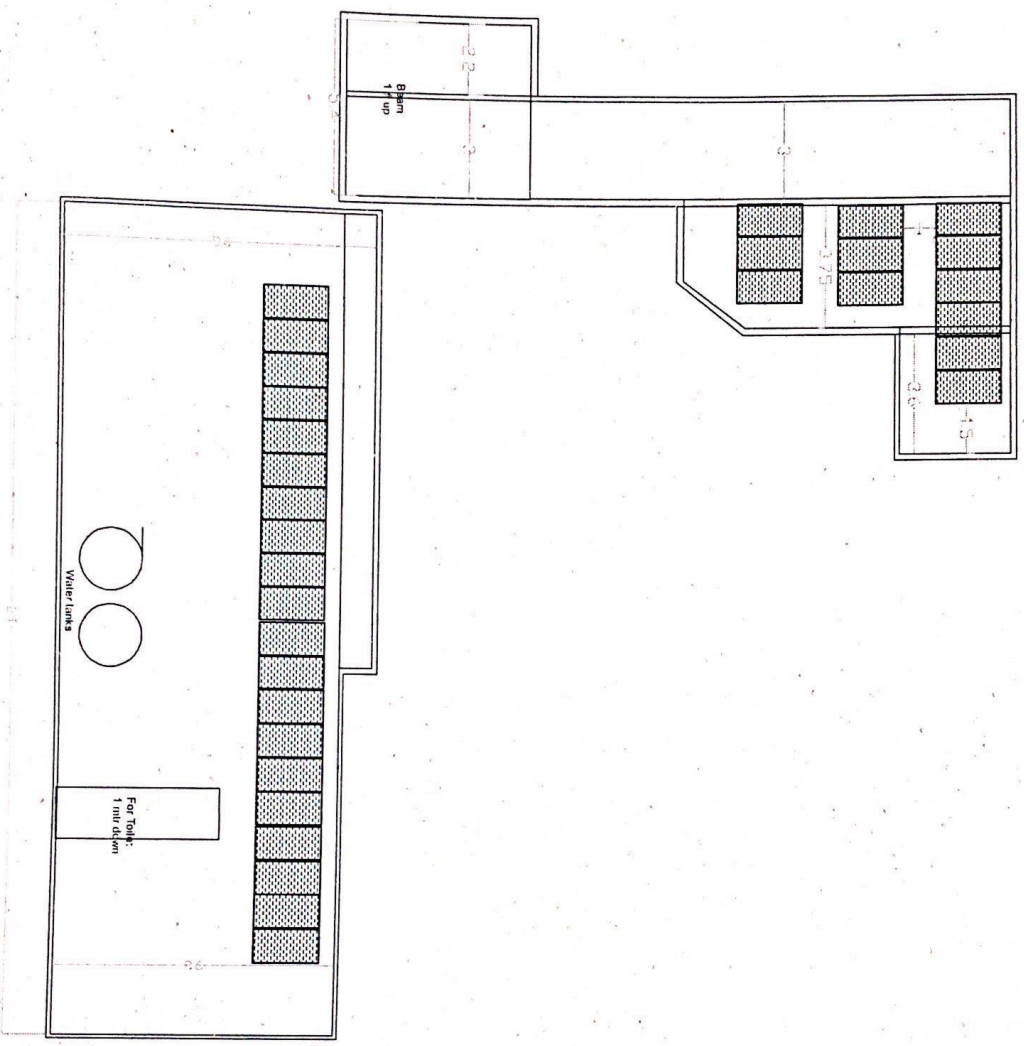
Module inclination : 19 degree

Dimension:

All dimensions are in metres, unless specified otherwise.


Dimension shown in the plan is indicative, and may vary slightly as per site condition.


Drawing: 7



PLAN OF DISPENSARY & PUMP HOUSE

NOTES:

 : Represents existing PV modules

 : Represents proposed PV modules

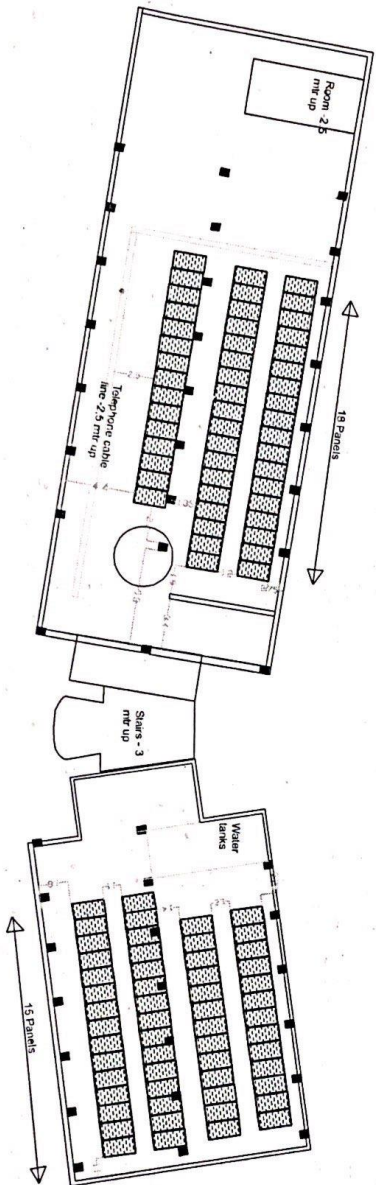
Proposed PV system

Type : Si-Poly
Wp : 320
Dimension : 1956 x 992 mm
Quantity : 32 nos.
Total capacity : 10.24 kWp
Inverter type : String inverter 10 kW
Azimuth : 4 degree w.r.t south towards west
Module inclination : 19 degree west

Dimension:

All dimensions are in metres, unless specified otherwise.
Dimension shown in the plan is indicative, and may vary slightly as per site condition.

Drawing: 8



PLAN OF RI-3 BUILDING

NOTES:



: Represents existing PV modules



: Represents proposed PV modules

Proposed PV system

Type : Si-Poly

Wp : 320

Dimension : 1956 x 992 mm

Quantity : 107 nos. (51 on west & 56 on east building)

Total capacity : 34.24 kWp

Inverter type : String inverter, 15 kW + 20 kW

Azimuth : 9 degree w.r.t south towards west for west side building & 9 degree w.r.t south towards east for east side building.

Module inclination : 19 degree

Dimension:

All dimensions are in metres, unless specified otherwise.

Dimension shown in the plan is indicative, and may vary slightly as per site condition.

NTS



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ELECTRICAL SCOPE OF WORK:

- a) Supply, installation and commissioning of approximately 150 kWp solar power plant along with all accessories.
- b) The Solar Power plant would be grid connected and should be capable to interconnect/synchronize with other generation sources i.e. regarding the generated power consumption, priority needs to be given for internal consumption first and thereafter any excess power can be exported to grid.
- c) Optimal use of the shadow free area in the office premises for maximum power generation per sq.mt.
- d) Calculate and justify the inclination angle of the solar PV modules for maximum average power generation.
- e) Detailed calculation showing the amount of solar insolation (both from Direct and Diffused radiation) available at various instant of the day.
- f) Array sizing must be done in consultation with the CMPDI officials.
- g) Proper and judicial use of DC and AC cable. The cables must be properly laid in GI coated cable tray / trench, so that proper and efficient monitoring of the solar power plant can be carried out.
- h) Laying of cable of suitable sizes from solar power plant to substation and inter-connection with existing power supply system as per requirement.
- i) Supply and installation of MCCB/MCB switch board panel in the substation for connection of the proposed system with existing system as per requirement.
- j) Supply, installation and commissioning of an efficient, user friendly and informative Data Acquisition System as per the specification given.
- k) Supply, installation and commissioning of all the protective devices as per specification given.
- l) Construction of required numbers of earth pits as per relevant IS with bentonite clay filling material having all the characteristics for proper earth protection and lightning protection.

CIVIL SCOPE OF WORK:

CIVIL SCOPE OF WORK:

1.0 General:

- a) Supply, installation and commissioning of the array structure for PV module mounting keeping in view the maximum load bearing capacity above roof top of various office buildings as shown in the drawing and as per specification.
- b) Calculate and justify the mounting points of the above structures.
- c) Necessary Steel structures including priming and painting work, PCC and RCC work for mounting structure along with the necessary chequered plates/grating.
- d) Providing maintenance facilities like ladders, walkways (as per drawing) water point at strategic points for cleaning and maintenance purpose.

2.0 DESIGN/ENGINEERING

2.0.1 Design Criteria

All detailed design and working drawings will be developed with proper co-ordination and inter-relation with solar energy system equipment. The design of RCC structure shall be carried out in general as per code of practice of plain and reinforced concrete for general buildings construction BIS 456-2000 and other relevant standards including up-to-date amendments. The steel structure shall be designed and fabricated as per Code of practice for use of structural steel in general building construction BIS 800 (latest edition) with up to date amendments and other relevant IS standards. The building/structure shall conform to local by-laws, rules and regulations for industrial buildings and as per relevant Indian Standards. Latest codes of practice with amendments up to date shall be strictly followed. In the absence of BIS codes, British standards Institution or the approved international codes could be considered for design as per its applicability and justification.

- 46 The bidder shall be responsible for and shall pay for any alterations of the work due to any discrepancies, errors or omissions in the design and drawings or other particulars supplied by him, whether such design, drawings or other particulars have been approved by customer or not.

2.0.2 Load consideration

Loads to be considered in design shall be as per relevant BIS codes of practices. Generally, in design the effect of dead loads, live loads, load due to impact, vibration, erection, wind load, seismic loads, dust load and load due to surcharge and moving vehicles, effect of blasting etc. wherever applicable shall be considered. The loads due to equipment shall be supplied by the bidders. In general, live load, wind loads, etc shall be as per BIS-875 (latest edition). Seismic loads to be considered in design shall be as per BIS 1893 (latest edition). Effect due to blasting is to be considered while designing the structures, as per the following parameters and reference may be made to BIS: 6922 with latest revision:

The topography factor for the calculation of design wind pressure shall be calculated as per BIS 875 read with the latest amendment.

2.0.3 Analysis & Design

All RCC and steel structure shall be designed in accordance with relevant IS Codes of practice of latest revision. In the analysis of structures, the worst loading combination of equipment loads, their impact, wind/seismic loads and other loads as envisaged shall be considered.

2.0.4 Design drawing & detailed engineering

Broadly all the dimensions as given in NIT drawings are to be followed for bidding purpose. **These dimensions are indicative & may require changes during detail design.**

2.0.4.1 Preparation

All the drawings shall be prepared in accordance with the provision of latest Indian Standards. All drawings shall be sufficiently detailed and dimensioned to help in speedy construction, fabrication and erection of structures. Wherever, any structure is presented in more than one sheet of drawings, same scale and notations shall be used in all the sheets for linking the drawings with each other. All modifications made in structure during various stages of construction should be duly incorporated in working drawings.

Bar bending schedule, detailed material list and specification of works shall be prepared / detailed. Working drawing shall also include general arrangement drawings showing plans at different levels with sectional elevations. Separate detailed drawing shall be prepared for inserts and anchor bolts including their fixing details. The design drawings associated with steel structure should show the force in the members, complete details of all members, joints, gusset plates, welding, riveting, bolting, etc. The drawings should also show the weight of each assembly/sub-assembly as far as possible. In addition to design drawings, fabrication drawings shall also to be prepared, showing item-wise details, erection units, materials list, details of fasteners with assembly, etc.

2.0.4.2 Submission of Design/Drawings

The contractor shall submit all the relevant detail design calculations, general arrangement/detail drawings, bar bending schedule, detailed material lists, specification of works including contour plan for approval of owner / consultant on standard size sheet.

Scrutiny and approval of drawings may be carried out through the consultant engaged by owner. All design details and drawings shall be submitted for approval of the following:

General Arrangement Drawings

Detail design calculations

All detail civil/structural/fabrication drawings

Any other drawings relevant for execution/fabrication of civil/structural works

Contractor shall submit for approval six sets of drawings along with detailed design calculations including analysis of force/stress in the structure along with the source from where data, except BIS codes, have been taken. Photocopies of such data should be submitted along with the design.

2.0.4.3 Procedure of Approval of drawings

47 The Owner shall have the final say in the approval of drawings. Drawings so submitted will become the property of the Owner. The approval of the drawings does not absolve the Contractor from the overall responsibility of the plant for its successful operation. The Contractor shall be responsible for and shall pay for any alterations of the work due to any discrepancy, errors or omissions in the drawings or particulars supplied by him, whether Owner has approved such drawings or other particulars.

48 Approval by Owner / Consultant

49 Design & drawing, submitted by the contractor, shall be scrutinized by owner. Out of four sets of drawing submitted to the owner, one copy will be sent to contractor after scrutiny comments, modification or approval as the case may be. The contractor shall carry out the necessary rectification in drawings after discussion with owner in a reasonable time as agreed upon mutually and re-submit six copies of such revised drawings for approval of owner. Revised drawings shall then be scrutinized and approved if the comments made by the Owner are incorporated / taken care of. One copy of such drawing will be sent to the Contractor after approval.

2.0.4.4 As built drawings

Contractor shall make necessary correction / modification in the drawing as per actual work and shall prepare as built drawing. The Contractor shall supply such 8 (eight) sets of prints of as built drawing to the Owner along with one set of reproducible drawings on polyester paper in ink. The same will hold good for other documents also to be supplied by the Contractor under the heading of basic scope. All drawings should be prepared on AutoCAD in standard format and CD containing such drawing shall also be supplied along with hard prints.

2.0.4.5 Technical specifications

50 **The enclosed technical specifications are only for guideline of the bidders and are not exhaustive. As such bidder should plan the work and items in detail and if in bidder's opinion some items/work are not covered in the specifications, they should include the same in their tender.**

51 Requirements for the performance of Civil and Structural Works are given below.

DETAILED SCOPE

i. General

The civil and structural work under, its scope shall cover all aspects of work, collection of rainfall data, detailed survey, preparation of preliminary drawings with proper co-ordination and inter relation with equipment, detailed design and preparation of the complete civil and structural working drawings, execution and erection of the complete civil and structural works as per system requirement and land development.

The execution of civil and structural work consists providing all labour, supervision, materials, scaffolding, construction equipment, tools and plants, supply, transportation, and all incidental items not specified but implied for successful completion of the works in accordance with drawing and specification including any fee, tax, royalty as may be applicable in the work zone.

The nature of work shall generally involve chemical testing of construction water for corrosive action of chemical and other deleterious materials, earth work in filling and excavation in all types of soil and rock, dewatering, shoring, back filling around completed structures, disposal and form work, fabrication and erection of structural/miscellaneous steel, inserts, anchor bolts and other ancillary items.

The drawings as mentioned elsewhere in this contract documents give a general idea about the work to be performed.

These are preliminary drawings for bidding purpose only and are by no means the final drawings showing the full range of the work under the scope. Work has to be executed according to approved working drawings, fabrications drawings with additions, alterations and modification made from time to time as required or approved by the customer.

Structural arrangement for supporting the panels of the solar panel installation system to be made of structural steel supported over RCC foundation.

Painting of the structural members will be under scope of the present tender.

Approach ladder/ Walkways (as per drawing) to be provided to the structures for accessing to roof for maintenance purpose.

Water connection to solar panel supporting is also under the scope of the present tender.

ii. Other Works and requirements

- a. Development works such as grading/ leveling /dressing of the site etc.
- b. Cleaning.
- c. Construction, Fabrication, Erection and Commissioning
- d. Perception and remedial measures for safety
- e. Other miscellaneous works/services/requirements etc. as may be necessary for successful commissioning of the solar panel system

Clearance of site before start of work

Site will be handed over to the contractor in 'as it is' condition. Any site preparation work including cleaning, cutting, filling, levelling, grading, removal, etc. before start of the actual work shall be done by the contractor to the full satisfaction of Engineer-in-charge.

Site Clearance after completion of work

After the completion of work the contractor shall remove scaffolding, sheds rubbish and surplus materials except which are required for rectification of defects. Contractor shall hand over the site in clean and tidy condition after cleaning the total area including floor, drains etc. fit for the use by the owner.

Layout and Levels

The layout and levels of all structures, etc. shall be laid by the contractor at his own cost from the general grid of the plot and bench marks given by the Engineer-in-charge for checking the detailed layout and correctness of the layout and levels. But the contractor shall be solely responsible for correctness of layout and levels.

Construction, Fabrication, Erection and Commissioning, overheads and supervision

a) Specifications

The specifications are intended for general description of the work, quality and workmanship. The specifications are not, however intended to cover minute details and the work shall be executed according to the relevant Indian Standard codes of practices or to the recommendations of relevant American and British Standard in cases where Indian Standard codes are not available for such works. These specifications shall have precedence in anything contrary to this stated anywhere in this document. Some important and relevant BIS Codes to be followed are mentioned in the Technical specifications attached hereto.

b) Construction Method and Equipment

52 The Contractor shall submit drawings and write ups indicating a broad outline of how he intends to execute the work.

c) Installation/Erection and Supervision

53 It will be the contractor's responsibility to bring, receive and keep the materials in safe custody in proper condition. Responsibility of handling the materials during manufacturing, transit and handling at site rests with the contractor.

54 All the equipment will have to be installed and fitted with accessories as per approved drawing. Entire tools and tackles, manpower and any other material required for successful installation will be supplied by the contractor. The contractor shall furnish the list of requirement of engineers, supervisors and other skilled personnel to carry out the job properly.

Inspection and testing

55 Test for Material/Workmanship

56 All tests required for materials, quality of work and any other tests as required/desired by the Engineer-in-charge shall be at Contractor's cost. The frequency and mode of testing shall be as per latest relevant BIS codes.

Perception and remedial measures

Perception and remedial measures for the entire area under the scope keeping in view the adjoining natural and artificial features such as hill slopes, nallah,

buildings, silos etc.

Any other works/services/requirements whether specifically indicated or not and found necessary to be incorporated on later date for safety and efficient operation of the plant shall also be deemed to have been covered within the scope of work of this tender.

3.0 GENERAL REQUIREMENTS

- 57 a) Any other requirement whether specifically indicated or not, but found necessary to be incorporated at a later date for safe and efficient operation of the system shall also be deemed to have been covered within the scope of work of this tender.
- 58 b) Wherever required dewatering shall be done by the contractor to avoid damage of equipment, structural, etc. and timely completion of work.
- 59 c) If any certification or approvals are to be taken from electrical inspector/statutory bodies, the same shall be the responsibility of the contractor.
- 60 d) As per system requirement envisaged in the NIT documents, various parameters, specifications may undergo changes during detail engineering stage. This shall be carried out by the contractor without any increase in cost.
- 61 e) All safety regulations, code of practices for power supply, manufacturer, installation, erection, commissioning etc. envisaged by the State Govt./Central Govt. or any authorities/bodies shall be strictly complied without any increase in cost.

62 All Acts and regulations will be followed during construction stage.

E. TECHNICAL SPECIFICATIONS

1.0 DEFINITION

A Grid Tied Solar Photo Voltaic (SPV) power plant shall consist of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU), Maximum Power Point Tracker (MPPT), Inverter, Controls & Protections, interconnecting cables and switches. PV Array shall be mounted on a suitable structure. Grid tied SPV system shall be without battery and should be designed with necessary features to supplement the grid power during day time. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable.

Solar PV system shall consist of following equipment/components.

- Solar PV modules consisting of required number of crystalline PV modules,

MPPT etc.

- Canopy based Grid connected Power Conditioning Unit with Remote Monitoring System.
- Mounting structures
- Junction Boxes.
- Earthing and lightening protections
- IR/UV protected PVC Cables, pipes and accessories.

2.0 SOLAR PHOTOVOLTAIC MODULES:

- a) The PV modules used should be indigenous and under Domestic Content Requirement (DCR) category. However, imported cells can be used in the Solar PV modules.
- b) The PV modules used shall qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules shall conform to IEC 61730 Part-1- requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.
- c) As the PV modules are to be used in a highly corrosive atmosphere throughout their lifetime, they shall conform to IEC 61701/IS 61701.
- d) The net rated and certified capacity of solar PV array capacity at Standard Testing Conditions (STC) should not be less than allocated capacity kWp i.e. 150 kWp DC and should comprise of solar crystalline modules of minimum 320 Wp. Module capacity less than minimum 320 Wp shall not be accepted.
- e) Each solar module shall consist of redundantly interconnected photovoltaic cells and peak power rating shall not be less than 320 Wp.
- f) To connect the solar modules interconnection cables shall be provided. Photoelectric conversion module-efficiency shall be greater than or equal to 16%. Modules shall be made of high transmittivity glass front surface giving high encapsulation gain and silicon rubber edge sealant for module protection and mechanical support.
- g) The module mismatch losses for modules connected to an inverter should be less than 0.5%.

- h) SPV module shall have module safety class-II and should be highly reliable, light weight and must have a service life of more than 25 years
- i) Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
- j) PV modules must be tested and approved by one of the IEC authorized test centers.
- k) The SPV module shall be made up of high transmissivity glass & front surface shall give high encapsulation gain and the module shall consist of impact resistance, low iron and high transmission toughened glass. The module frame shall be made of corrosion resistant material, which shall be electrically compatible with the structural material used for mounting the modules, preferably having anodized aluminum.
- l) The SPV modules should have suitable encapsulation and sealing arrangements to protect the silicon cells from environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules.
- m) The module frame should have been made of Aluminium or corrosion resistant material, which shall be electrolytically compatible with the structural material used for mounting the modules with sufficient no. of fasteners.
- n) All materials used for manufacturing solar PV module shall have a proven history of reliability and stable operation in external applications. It shall perform satisfactorily in relative humidity up to 100% with temperature between -40°C to +85°C and shall withstand adverse climatic conditions, such as high speed wind, blow with dust, sand particles, saline climatic / soil conditions and for wind 150 km/hr on the surface of the pane
- o) The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power as per drawing.
- p) The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
- q) The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.

- r) The IV curves at STC should be provided by bidder.
- s) Only those crystalline modules which are supplied and installed for a capacity more than 1 MW till date shall be considered for existing project. On this account, Bidder shall provide full information, to the satisfaction of the Company, before placing final order for the modules.
- t) Company or its authorized representative reserves the right to inspect the modules at the manufacturer's site prior to dispatch.
- u) Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each modules (This can be inside or outside the laminate but must be able to withstand harsh environmental condition.)
- Name of the manufacturer of the PV module.
 - Name of the manufacturer of Solar Cells.
 - Month & year of the manufacture (separate for solar cells and modules).
 - Country of origin (separately for solar cells and module).
 - I-V curve for the module Wattage, I_m , V_m and FF for the module.
 - Unique Serial No and Model No of the module.
 - Date and year of obtaining IEC PV module qualification certificate.
 - Name of the test lab issuing IEC certificate.
 - Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.
 - Radio-Frequency Identification (RFID)
- v) Other general requirement for the PV modules as follows:-

| SI.No. | Electrical parameters at standard test condition | Required value |
|---------|--|---------------------------------|
| 1. 0 | Nominal power output (Wp) | ≥ 320 |
| 2. 0 | Module Efficiency | Greater than or equal to 16.0 % |
| 3. 0 | Power output P max (W) at NOCT | Greater than 220 |

3.0 Warranty/Guarantee:

3.1 Material Warranty:

The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than ten (10) years from the date of sale to the original.

- a. Defects and/or failures due to Manufacturing.
- b. Defects and/or failures due to quality of materials.
- c. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty the bidder shall replace the module(s).

3.2 Performance Warranty:

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% after ten years period of the full rated original output.

The relevant standards are as follows:

- IEC 61215/IS14286 :
- IEC 61730 :
- IEC 61701/IS 61701:
- ISO 9001 and ISO 14001:

4.0 Array Structure:

- a) Hot dip galvanized MS mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum insolation. However to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements. The array structuring shall be done in consultation with CMPDI.
- b) The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where the PV system is proposed to be installed (like Delhi- wind speed of 150 km/ hour). It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to CMPDI. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.
- c) The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759.

- d) Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Aluminium structures also can be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.
- e) The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.
- f) Regarding Civil structures the bidder need to take care of the load bearing capacity and need to arrange suitable structures accordingly.
- g) Modules shall be isolated electrically from the MMS through EPDM sheet of appropriate thickness and all the modules shall be separately earthed through proper earthing arrangements.
- h) Cable-ties shall be used to properly hold the cables / wires on the backside of PV modules. GI pipe with appropriate size shall be used to guide cables from PV array to junction box and to Inverter. The minimum height between cable guide and ground shall be 6 inch and the cable guide shall be supported on ground at appropriate locations so as to avoid any bending of the guide.
- i) For multiple module mounting structures located in a single row, the alignment of all modules shall be within an error limit of 10 mm in vertical / horizontal line.
- j) The bidder should design the structure height to retain and increase aesthetics of the building. The clearance between the lower edge of the mounting structure/module and the ground shall be sufficient for parking of light motor vehicle. Contractor shall also take care of the ease of movement of manpower for cleaning and maintenance purpose. Further, Contractor shall also consider all shading factors including parapet wall, overhead tanks, antenna, hoardings etc. to offer better plant performance.
- k) The total load of the structure (when installed with PV modules) on the terrace shall be less than 60 kg/m². Roof treatment must be done to avoid seepage after installation work is over.
- l) The relevant Standards are:
 - IS 2062: 1992 :
 - IS 4759 :

5.0 JUNCTION BOXES:

- a) The junction boxes are to be provided in the PV array for termination of connecting cables. The junction boxes shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands.
- b) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP 65 standard and IEC 62208 shall be provided. The hinged door shall be provided with EPDM rubber gasket to prevent water entry and single compression cable glands. There must be provision for earthing and shall be placed at 5 feet height or above (feasible height) for ease of accessibility.
- c) Each Junction Box shall have high quality suitable capacity Metal Oxide Varistors (MOVs) / surge arrestors, suitable Reverse Blocking Diodes. The junction boxes shall have suitable arrangement for monitoring and disconnection for each of the groups.
- d) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.

5.1 DC Distribution Board or DC Junction Box:

- a) DC Distribution panel shall be provided to receive the DC output from the array field.
- b) DC DPBs shall have steel sheet enclosure of dust & vermin proof conforming to IP 65 protection. The bus bars shall be made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

5.2 AC Distribution Board or AC Junction Box:-

- a) AC Distribution Panel Board (ACDB) shall control the AC power from PCU/ inverter, and should have necessary protective devices such as MCB/MCCBs, Protection fuses, Surge protection devices. Interconnection from ACDB to mains at LT Bus bar shall be provided while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS:60947 part I, II and III.
- c) The change-over switches, cabling work shall be undertaken by the bidder as part of the project.

- d) All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415V/230 V , 50 Hz.
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels shall have protection of IP65 or better.
- g) Should conform to Indian Electricity Act and rules (till last amendment).
- h) All the 415V AC devices/ equipment like bus support insulators, circuit breakers, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.
Supply voltage variation- $\pm 10 \%$
Supply frequency variation - ± 3 Hz.
- i) The relevant Standards are:
➤IS:60947:

6.0 PCU/ARRAY SIZE RATIO:

- a) The combined wattage of all inverters should not be less than rated capacity of power plant under STC.(90 % of rated capacity can be accepted)
- b) Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

6.1 PCU/INVERTER:

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter of suitable capacity and the associated control and protection devices. All these components of the system are termed as "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter. The power conditioning unit/inverter should also be DG set interactive. Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

- PCU Mounting : As per design
- Switching devices : IGBT/ MOSFET
- Control : DSP(Digital Signal Processing)

- Nominal AC output voltage : 415 V, 3 Phase, 50 Hz.
and frequency
 - Output frequency : 50 Hz.
 - Ambient temperature : -10 deg. C to 65 deg. C.
 - Humidity : 95 % non-condensing.
 - Protection of Enclosure : IP-20 (Min.) for Indoor.
: IP-65 (Min.) for outdoor.
 - No-load losses : Less than 1% of rated power.
 - Inverter efficiency (minimum) : 98%.
 - THD : less than 3.0%.
 - P.F. : Greater than 0.9.
 - MPPT Voltage range (V) : 300(or less) to 800(or more)
 - Grid Voltage tolerance : -20% to + 15%.
- a) Three phase PCU/ inverter shall be used with power plant system.
 - b) PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
 - c) The output of power factor of PCU inverter shall be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
 - d) Built-in meter and data logger to monitor plant performance through external computer shall be provided.
 - e) The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068- 2(1,2,14,30)/Equivalent BIS Standard.
 - f) The charge controller/ MPPT units environmental testing should qualify IEC 60068- 2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/ enclosures should be IP 65(for outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.
 - g) The PCU/ inverters should be tested from the MNRE approved test centres / NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

6.2 INTEGRATION OF PV POWER WITH GRID:

The output power from SPV shall be fed to the inverters which converts DC

produced by SPV array to AC and shall feed into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be automatically disconnected from the grid. Future provision for synchronization of PV system with DG set shall also be made. Four pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

Relevant Standards are as follows:

- IEC 61683/IS 61683:
- IEC 60068- 2(1,2,14,30):
- IEC 529:

7.0 DATA ACQUISITION SYSTEM / PLANT MONITORING:

- a) Data Acquisition System shall be provided for each of the solar PV plant.
- b) Data Logging provision for plant control and monitoring, time and date stamped system data logs for analysis with high quality, suitable personnel computer shall be provided. Metering and Instrumentation for display of systems parameters and status indication shall also be provided.
- c) Temperature probes for recording the Solar panel temperature and ambient temperature shall be provided complete with readouts integrated with the data logging system.
- d) All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and displayed on the digital front panel at real time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.
- e) Computerized DC String/Array monitoring and AC output monitoring shall be provided as part of the inverter and/or string/array combiner box or separately.
- f) String and array DC Voltage, Current and Power, Inverter AC output voltage and current (All 3 phases and lines), AC power (Active, Reactive and Apparent), Power Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored.
- g) The time interval between two sets of data shall not be more than 10 minutes. (A min. of 6 samples of data shall be recorded per hour).

- h) Data Acquisition System shall have real time clock, internal reliable battery backup (2 hours) and data storage capacity to record data round the clock for a period of min. 1 year. Computerized AC energy monitoring shall be provided in addition to the digital AC energy meter.
- i) The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.
- j) All instantaneous data shall be shown on the computer screen.
- k) Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- l) Provision for Internet monitoring and download of data shall be also incorporated.
- m) Remote Server and Software for centralized Internet monitoring system shall also be provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and environment monitoring system.
- n) The following parameters shall be accessible via the operating interface display in real time separately for solar power plant:
 - ✚ AC Voltage.
 - ✚ AC Output current.
 - ✚ Output Power
 - ✚ Power factor.
 - ✚ DC Input Voltage.
 - ✚ DC Input Current.
 - ✚ Time Active.
 - ✚ Time disabled.
 - ✚ Time Idle.
 - ✚ Power produced
 - ✚ Protective function limits (Viz-AC over voltage, AC under voltage, over frequency, under frequency ground fault, PV starting voltage, PV stopping voltage).

7.1 NOC/Meter arrangement:

PV array energy production: Digital Energy Meters shall be provided to log the actual value of AC/DC voltage, current & energy generated by the PV system provided.

- i. The selected vendor has to provide necessary meters and obtain the necessary NOC from the local DISCOM/CESU as per net meter guideline of OERC.
- ii. All the meters shall be as per local DISCOM/CESU standard and shall be of 0.5 accuracy class.
- iii. Any other modification/changes required with the present system to get NOC from DISCOM/CESU will be in the scope of the bidder.

7.2 Solar Radiation and Environment Monitoring System:

- a) Computerized solar radiation and environment monitoring system shall be installed on the building along with the solar PV power plant.
- b) The system shall consist of various sensors, signal conditioning, data acquisition, LCD display and remote monitoring.
- c) Global and diffuse beam solar radiation in the plane of array (POA) shall be monitored on continuous basis.
- d) Ambient temperature and relative humidity near PV array, control room temperature, at the level of array plane shall be monitored on continuous basis.
- e) Solar PV module back surface temperature shall also be monitored on continuous basis.
- f) Simultaneous monitoring of DC and AC electrical voltage, current, power, energy and other data of the plant for correlation with solar and environment data shall be provided.
- g) Solar radiation and environment monitoring system shall have real time clock, internal reliable battery backup and data storage capacity to record data round the clock for a period of min. 1 year.
- h) The data shall be recorded in a common work sheet chronologically date wise. The data file should be MS Excel compatible. The data shall be represented in both tabular and graphical form.
- i) All instantaneous data shall be shown on the computer screen.
- j) Historical data shall be available for USB download and analysis.
- k) Provision for Internet monitoring and download of data shall be incorporated.
- l) Remote Monitoring and data acquisition through Remote Monitoring System software at the owner /CMPDI location with latest software/hardware configuration and service connectivity for online / real time data monitoring/control complete to be supplied and operation and maintenance/control to be ensured by

the supplier. Provision for interfacing these data on CMPDI server and portal in future shall be made.

8.0 POWER CONSUMPTION:

Regarding the generated power consumption, priority need to be given for internal consumption first and thereafter any excess power can be exported to grid through net metering solar PV system

9.0 PROTECTION:

The system should be provided with all necessary protections like Earthing, Lightning and grid islanding as follows:

9.1 LIGHTNING PROTECTION:

The SPV power plants shall be provided with lightning & overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standard. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

9.2 SURGE PROTECTION:

Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement).

9.3 EARTHING PROTECTION:

- a) Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition the lightning arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of E&M Department/CMPDI as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.
- b) Earth grid resistance shall not be more than 1 ohm. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

9.4 GRID ISLANDING:

- a) In the event of a power failure on the electric grid, it is required that any independent power-producing inverter attached to the grid turns off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.
- b) A manual disconnect 4pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.
- c) Relevant Standards are as follows:
 - IEC 62305:
 - IS:3043-1987:

10.0 CABLES:

Cables of appropriate size to be used in the system shall have the following characteristics:

- a) Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards IS 7098-I-II
- b) Temp. Range: – 10°C to + 80°degree C.
- c) Voltage rating : 660V/1000V.
- d) Excellent resistance to heat, cold, water, oil, abrasion, UV radiation.
- e) Flexible.
- f) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- g) Cable Routing/ Marking: All cable/wires are to be routed in GI cable tray and suitably tagged and marked with proper manner by good quality ferrule or by other means (weather resistant) so that the cables are easily identified.
- h) The Cables should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.
- i) The ratings given are approximate. Bidder shall indicate size and length as per system design requirement. All the cables required for the plant shall be provided

by the bidder. Any change in cabling sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.

- j) Multi Strand, cable shall have annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation shall be provided for UV protection for armoured cable for underground laying. All cable trays including covers shall be provided. All cables shall conform to latest edition of IEC/ equivalent BIS Standards.
- k) The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.
- l) The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2 %.

GENERAL TERMS AND CONDITIONS

1. Definitions

i) The word "Employer" or "Company" or "Owner" wherever occurs in the conditions, means the Central Mine Planning & Design Institute Limited, represented at Head Quarters of the Company by the General Manager (Civil)/TE&CM, CMPDI or his authorized representatives or any other officer specially deputed for the purpose who will employ the contractor.

ii)The word" Principal Employer" wherever occurs, means the officer nominated by the Company to function on its behalf.

iii)The word "Contractor/ Contractors" wherever occurs means the successful bidder /bidders who has/have deposited the necessary Earnest money and has/have been given written intimation about the acceptance of tender and shall include legal representative of such individual or persons composing a firm or a company or the successors and permitted assignees of such individual, firm or Company, as the case may be and any constitutional, or otherwise change of which shall have prior approval of the employer.

iv) "Site" means the land and places including any building and erection thereon, over, under, in or through which the Permanent works or Temporary works designed by the Engineer-in-Charge are to be executed and any other lands and places provided by the Employer for working space or any other purpose as may be specifically designated in the Contract as forming part of the site.

v) The term "Sub-Contractor" as employed herein, includes those having a direct contract with Contractor either on piece rate, item rate, time rate or any other basis and it includes one who furnishes work to a special design according to the plans or specifications of this work but does not include one who merely supplies materials.

vi) "Accepting Authority" shall mean the management of the company and includes an authorized representative of the company or any other person or body of persons empowered on its behalf by the company.

vii) "Engineer-in-charge" shall mean the officer nominated by the company in the Civil Engineering cadre/ discipline who is competent to direct supervisors and authorised to be in charge of the works for the purpose of this contract. The Engineer-in-Charge /Designated Officer in Charge, who is of an appropriate seniority, will be responsible for supervising and administering the contract, certifying payments due to the contractor, valuing variations to the contract, awarding extension of time and valuing compensation events. The Engineer-in-Charge /Designated Officer in Charge may further appoint his representatives i.e. another person/Project Manager or any other competent person and notify to the contractor who is directly responsible for supervising the work being executed at the site, on his behalf under their Delegation of Powers of the company. However, overall responsibility, as far as the contract is concerned, will be that of the Engineer-in-Charge/Designated Officer in Charge.

viii) The "Contract" shall mean the notice inviting tender, the tender as accepted by the Company, the work order issued to the contractor, and the formal contract agreement executed between the company and the contractor together with the documents referred to therein including general terms and conditions, special conditions, if any, scope of work, frozen terms & conditions/technical parameters/scope of work and revised offer, if any, specifications, drawings, including those to be submitted during progress of work, schedule of quantities with rates and amounts.

ix) A "Day" shall mean a day of 24 hours from midnight to midnight.

x) The "Work" shall mean the works required to be executed in accordance with the contract/work order or parts thereof as the case may be and shall include all extra or additional, altered or substituted works or any work of emergent nature, which in the opinion of the Engineer-in-charge, become necessary during the progress of the works to obviate any risk or accident or failure or become necessary for security.

xi) "Schedule of Rates" referred to in this conditions shall mean the standard schedule of rates prescribed by the company and the amendments issued from time to time.

xii) "Contract amount" shall mean:

a) in the case of turnkey / lump sum contracts the total sum for which tender is accepted by the company.

b) in the case of other types of contracts the total sum arrived at based on the individual rate(s) / percentage rate(s) quoted by the tenderer for the various items shown in the Schedule of Quantities" of the tender document as accepted by the Company with or without any alteration as the case may be.

xiii) "Written notice" shall mean a notice or communication in writing and shall be deemed to have been duly served if delivered in person to the individual or to a member of the contractors firm or to an office of the company for whom it is intended, or if delivered at or sent by registered mail / e-mail to the last business address known to him who gives the notice.

xiv) "The constructional plant" means all appliances, tools, plants or machinery of whatsoever nature required in or about the execution, completion or maintenance of the works but does not include materials or other things intended to form part of the permanent work.

xv) "Letter of Acceptance of Tender" means letter giving intimation to the tenderer that his tender has been accepted in accordance with the provisions contained in that letter.

xvi) "Department" means the Civil Engineering Department of Coal India Limited or any of its subsidiary companies/units represented by the appropriate authority.

xvii) "Act of insolvency" means as it is designed by Presidency Town Insolvency Act or Provincial Insolvency Act or any act amending such originals.

xviii) The words indicating the singular only also include the plural and vice-versa where the context so requires.

xix) "Drawings"/"Plans" shall mean all:

a. drawings furnished by the owner with the bid document , if any, as a basis for proposals,

b. working drawings furnished by the Owner after issue of letter of acceptance of the tender to start the work,

c. subsequent working drawings furnished by the owner in phases during progress of the work, and

d. drawings, if any, submitted by the contractor as per provision of the contract and duly approved by the owner.

xx) "Codes" shall mean the following, including the latest amendments, and/or replacements, if any:

a. Bureau of Indian Standards relevant to the works under the contract and their specifications.

b. Indian Electricity Act and Rules and Regulations made there under.

c. Indian Mines Act and Rules and Regulations made there under.

d. Any other Act, rule and regulations applicable for employment of labour, safety provisions, payment of provident fund and compensation, insurance etc.

2. Contract Documents and Miscellaneous Provisions :

The following documents shall constitute the contract documents :

i) Articles of Agreement.

ii) Letter of Acceptance of Bid/ Work Order indicating deviation, if any, from the conditions of contract incorporated in the tender document issued to the bidder.

iii) Notice Inviting Tender and Instructions to Bidders.

iv) Conditions of Contract including General Terms & Conditions of contract, Additional Terms & Conditions, Special Terms & Conditions, and Commercial Terms & Conditions etc.- as applicable.

v) Frozen terms & conditions / technical parameters and revised offer, if any.

vi) Specifications/ scope of Work, if any.

vii) Schedule of quantities (or Bill of Quantities) along with accepted rate.

viii) Contract drawings and work programme.

ix) Safety Code etc. forming part of the tender,

x) Integrity Pact (If applicable).

2.1 The contractor shall enter into and execute contract agreement in the prescribed form. The cost of the stamp papers for the contract agreement shall be borne by the contractor. Two sets of contract document/agreements shall be prepared and signed by both the parties. One of the sets shall be stamped "Original" and the other "Duplicate". The duplicate copy will be supplied to the contractor free of cost and the original is to be retained by the company.

For additional copy, cost to be charged. All additional copies should be certified by the Engineer-in-Charge.

The contractor shall keep copy of these documents on the site/place of work in proper manner so that these are available for inspection at all reasonable times by the Engineer-in-charge, his representatives or any other officials authorized by the company for the purpose.

2.2 The contract document shall not be used by the contractor for any purpose other than this contract and the contractor shall ensure that all persons employed for this contract strictly adhere to this and maintain secrecy, as required of such documents.

2.3 The local Court, where the subject work is to be executed shall have exclusive jurisdiction in all matter arising under this contract.

2.4 The Contract Agreement will specify major items of supply or services for which the contractor proposes to engage sub-contractor/sub-vendor. The contractor may from time to time propose any addition or deletion from any such list and will submit proposals in this regard to the Engineer-in-Charge / Designated Officer in charge for approval well in advance so as not to impede the progress of work. Such approval of the Engineer-in-Charge / Designated Officer in Charge will not relieve the contractor from any of his obligations, duties and responsibilities under the contract.

2.5 Acceptance of Offer :

"Letter of Acceptance"- is an acceptance of offer by the company. The tenderer should acknowledge the receipt of the order within 10 days of mailing of LOA and any delay in acknowledging the receipt will be treated as a breach of contract and compensation for the loss caused by such breach will be declared by the company by forfeiting EMD.

3. Discrepancies in contract documents & Adjustments thereof

The documents forming part of the contract are to be treated as mutually explanatory of one another and in case of discrepancy between schedule of quantity, the specifications and/or drawing, the following order of preference shall be observed;

- a) Description in Bill of Quantities of work.
- b) Particular specification and special conditions, if any
- c) Drawings.
- d) General specifications.
- e) BIS Specifications.

3.1 In the event of varying or conflicting provision in any of the document(s) forming part of the contract, the Accepting Authority's decision/clarification shall hold good with regard to the intention of the document or contract as the case may be.

3.2 Any error in description, quantity or rate in Bill of Quantities or any omission there from, shall not vitiate the contract or release the contractor from discharging his obligations under the contract including execution of work according to the Drawings and Specifications forming part of the particular contract document.

4.0 Security Deposit:

4.1 Security Deposit shall consist of two parts;

- a) Performance Security to be submitted at award of work and
- b) Retention Money to be recovered from running bills.

The security deposit shall bear no interest.

4.2 Performance Security should be 5.00% of contract amount and should be submitted within 28 days of issuance of LOA by the successful bidder in any of the form given below :

- A Bank Guarantee in the form given in the bid document :- The BG shall be issued by a Scheduled Bank/ Nationalised Bank on SFMS platform and shall be irrevocable and unconditional. CMPDI shall have the powers to invoke it notwithstanding any dispute or difference between contractors and CMPDI pending before the court, tribunal, arbitrator or any other authority. The Issuing Bank have to send the BG details through SFMS platform to our bank the details of which are as below :

Name of Bank: State Bank Of India

Branch: CMPDI Branch,

IFSC: SBIN0005598

A/C No.: 10106155087

Address: Gondwana Place, Kanke Road, CMPDIL Campus, Ranchi-834008

- Govt. Securities, FDR or any other form of deposit stipulated by the owner and duly pledged in favour of owner.

- Money (Demand Draft) drawn in favour of “CMPDI Ltd” on any Scheduled Bank payable at its Branch at Ranchi.

The bid security deposited in the form of Demand draft/ cash may be adjusted against the Performance security (1st part of security deposit) at bidder's option.

If performance security is provided by the successful bidder in the form of bank guarantee it shall be issued either –

(a) at Bidder's option by a Scheduled Bank , or

(b) by a foreign bank located in India and acceptable to the employer.

The validity of the Bank Guarantee shall be for a period of one year or ninety days beyond the period of contract /extended contract period (if any), whichever is more

Failure of the successful bidder to comply with the requirement as above shall constitute sufficient ground for cancellation of the award of work and forfeiture of the bid security.

In addition to the above penal measures, the bidder will not be allowed to participate in the re tendering process. The bidder may also be debarred from participating in future tenders in the subsidiary for a minimum period of 12 Months.

4.3 5.00% Performance Security should be refunded within 14 days of the issue of defect liability certificate (taking over certificate with a list of defects).

4.4 All running on account bills shall be paid at 95% (ninety five percent) of work value. The balance 5% shall be treated as retention money and will be second part of security deposit.

4.5 Retention Money should be refunded after issue of No Defect Certificate.

The Company shall be at liberty to deduct/appropriate from the security deposit such sums as are due and payable by the contractor to the company as may be determined in terms of the contract, and the amount appropriated from the security deposit shall have to be restored by further deduction from the contractors subsequent on account running bills, if any.

If security deposit is submitted in the form of bank guarantee, the original instrument thereof shall be retained by CMPDI after its relinquishment/absolution and returned only against specific request.

Failure of successful bidder to comply with the requirement as above shall constitute sufficient ground for cancellation of the award of work and forfeiture of the Bid Security.

4.7 REFUND OF SECURITY DEPOSIT: The refund of security deposit shall be subject to company's right to deduct/ appropriate its due against the contractor under this contract or under any other contract.

On completion of the entire work and issue of defect liability certificate (taking over certificate with a list of defects) by the Engineer-in-charge, **Performance Security Deposit (5.00% of contract amount) i.e 1st part of the security deposit.**

(Performance Security) shall be refunded as elaborated at Cl. No.4.3.

Retention Money shall be refunded to the contractor after issue of No Defect Certificate by the Engineer-in-Charge on the expiry of Defect Liability Period of six months , subject to the following conditions:

a) Any defect/defects in the work, if detected after issue of defect liability certificate (Taking over certificate with list of defects) is/are rectified to the satisfaction of the Engineer-in-Charge within the said defect liability period of six months or on its due extension till completion of the rectification works as required.

b) In the case of building work or other work of similar nature, the refund shall be made on the expiry of the said six months period or at the end of one full monsoon period i.e. June to September, whichever is later in point of time and any defects such as leakages in roof, effloresces in walls, dampness, defects in drainage etc. should be rectified to the satisfaction of Engineer-in-Charge.

NB: In case of Maintenance contracts, that ends with successful completion of work, where question of Defect Liability Period does not arise (e.g. sweeping / cleaning, horticulture, tank cleaning, jungle cutting, grass cutting, surface dressing etc.), the performance security and retention money (second part of bid security) can be released simultaneously after completion of work and taking over by department.

4.8 Additional performance security: (applicable for item rate as well as percentage rate tenders):

Additional performance security shall be applicable if the bid price is below 15% of the justified price, finalized by the owner. The amount of such additional performance security shall be the difference between 85% of the owner's justified price and quoted price.

Justified price shall be finalized by the owner on the basis of prevalent market rate of materials and labour analysed as per standard analysis of rate of CPWD/ NBO, and shall be binding on the bidder.

Additional performance security shall be furnished by bidder along with normal performance security.

Failure to submit such additional performance security may result into termination of the contract.

This additional performance security will not carry any interest and shall be released in the following manner:

i) 30% of Additional performance security will be released after 60% of the total work is completed.

ii) 50% of Additional performance security will be released after 80% of the total work is completed.

iii) 100% of Additional performance security will be released after total work is completed.

Additional Performance Security shall be in accordance with the clause 14 of the NIT and should be submitted within 28 days of issuance of LOA by the successful bidder in any of the form given below :

- A Bank Guarantee in the form given in the bid document :- The BG shall be issued by a Scheduled Bank/ Nationalised Bank on SFMS platform and shall be irrevocable and unconditional. CMPDI shall have the powers to invoke it notwithstanding any dispute or difference between contractors and CMPDI pending before the court, tribunal, arbitrator or any other authority. The Issuing Bank have to send the BG details through SFMS platform to our bank the details of which are as below :
Name of Bank: State Bank Of India
Branch: CMPDI Branch,
IFSC:SBIN0005598
A/C No.: 10106155087
- Address: Gondwana Place, Kanke Road, CMPDIL Campus, Ranchi-834008 Govt. Securities, FDR or any other form of deposit stipulated by the owner and duly pledged in favour of owner.
- Demand Draft drawn in favour of “CMPDI Ranchi” on any Scheduled Bank payable at its Branch at Ranchi.

If additional performance security is provided by the successful bidder in the form of bank guarantee it shall be issued either –

(a) at Bidder's option by a Scheduled Bank , or

(b) by a foreign bank located in India and acceptable to the employer.

The validity of the Bank Guarantee shall be for a period of one year or ninety days beyond the period of contract /extended contract period (if any), whichever is more.

If security deposit is submitted in the form of bank guarantee, the original instrument thereof shall be retained by CMPDI after its relinquishment/absolution and returned only against specific request.

Failure of successful bidder to comply with the requirement as above shall constitute sufficient ground for cancellation of the award of work and forfeiture of the Bid Security.

4.9 Refund of Security Deposit regarding Specialized Item of Works (shall be applicable only when relevant item exists in the contract and shall be for 10% of value of such items in the contract or for 10% of value of contract with such specialized items only).

a) For some specialized items of work such as anti-termite treatment, waterproofing work, kiln seasoned and chemically treated wooden shutters, or any other item of work deemed as such 'specialized' by Engineer-in-Charge that are entrusted to specialized firms or contractors who associate specialized agencies, the contractor / firm executing the work should be asked to give a specific guarantee that they shall be responsible for removal of any defects cropping up in these works executed by them during the guarantee period. The form of the guarantee to be executed by the contractors shall be as enclosed.

b) 10.00 % of the security (performance security and retention money) deposited / deducted from the bills of the contractors, relevant to the item(s), shall be refunded to him after expiry of Guarantee period. The security amount relevant to the item(s) of work, may be released

after 12 months of completion of work against equivalent BG and furnishing Guarantee as at (a) above.

4.10 Refund of security deposit for contracts with supply installation and commissioning of equipment i.e with Mechanical & Electrical Works (shall be applicable only when relevant item exists in the contract)

For some specialized contracts like Pump house, Intake well etc. there may be Civil works as well as Mechanical and Electrical works. For such works 10.00 % as security deposit (performance security and retention money)- deposited / deducted from the bills of the contractors shall be refunded to him after expiry of guarantee period, which will be one year from the date of commissioning of equipment/ completion of work and/or rectification of any defect which may be detected in the individual equipment for the whole system under the contract, whichever is later.

In addition, all types of manufacturers guarantee/warranty wherever applicable are to be issued/ revalidated in the name of the owner by the contractual agency and will be covered with relevant counter guarantee. Bank guarantees furnished against Performance Security and Retention Money shall be validated for a period 90 days beyond the guarantee period.

5. Deviations/Variations in Quantities and Pricing.

The quantities given in the "Schedule of Quantities" are based on estimates and are meant to indicate the extent of the work and to provide a uniform basis for tendering and any variation either by addition or omission shall not vitiate the contract.

5.1 The company through its Engineer-in-Charge or his representative shall, without radically changing the original scope and nature of the work, under contract, have power to make any alterations in or additions to or substitution of the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work.

The contractor shall be bound to carry out the work(s) in accordance with the instructions given to him in writing by the Engineer-in-Charge or his representative on behalf of the company. Such altered or additional or substituted work, which shall form part of the original contract, shall be carried out by the contractor on the same terms and conditions in all respects on which they agreed to do the main work and at the same rate/rates as are specified in the contract/ work-order.

5.2 The right is reserved to cancel any items of work included in the contract agreement or portion thereof in any stage of execution if found necessary to the work and such omission shall not be a waiver of any condition of the contract nor invalidate any of the provisions thereof.

5.3 If the additional, altered or substituted work includes any class of work for which rate/rates is/are not specified in the contract/work order, rates for such items shall be determined by the Engineer-in-Charge as follows:

a) In the case of percentage tenders, if the rate for the extra item of work executed is available in the company's approved SOR, it will be paid at the schedule rate plus or minus the accepted percentage as per contract.

However, if the extra item is not available in company's approved SOR, then the rate for such extra item(s) shall be dealt as at (c) below.

b) In case of item rate tenders, the rate for extra item shall be derived from the rate for similar item or near similar item / class of work available in the agreement schedule of work or by analysis of rates as at below and the lower rate out of the above two shall be considered.

In case of composite item rate tenders, where two or more schedule of quantities for similar item description may form part of the contract, the applicable rates shall be taken from the Schedule of Quantities of that particular part in which the deviation is involved, failing that at the lowest applicable rate for the similar item of work in the other schedule of quantities.

For derivation of rates based on analysis, the same shall be done by analysis on prevalent market rate of materials and labour based on standard norms of analysis of rate of C.P.W.D/ N.B.O.

c) In the case of extra item(s) that are completely new, and are in addition to the items contained in the contract, the contractor may within 15 days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis. The Engineer-in-Charge shall determine the rate(s) by analysis based on prevalent market rate of material and labour and on standard norms of analysis of rate of CPWD / NBO.

d) In case of combined tender with partly item rate for non-schedule items & partly percentage tenders for SOR items, the rate for extra item shall be derived as at (b) & (c) above in case of non-schedule items rates and in case of percentage rates for SOR items the rate for extra item shall be derived as at (a) above.

In case of any difference between the contractor and the Engineer-In Charge as to the fixation of rates, the matter shall be referred to the accepting authority of the company i.e. GM(C) of the company or Staff Officer(C) for the work awarded at Company Hqrs. level and Area level respectively, whose decision shall be final and binding on the contractor.

5.4 Alteration in the quantities shall not be considered as a change in the condition of the contract nor invalidate any of the provision thereof provided that a deviation estimate / revised estimate / supplementary agreement for the item(s) involved is made. Such approval shall be from appropriate authority.

5.5 Payment for such deviated items [additional/ altered / substituted items of work of the agreement schedule] shall be made in the contractors running on account bills, till the revised estimate / deviation estimate regularizing these items are sanctioned by the competent authority of the company, at the provisional rates and shall not exceed :

a) 75% of the rate recommended by the Engineer-in-Charge to the accepting authority of the company i.e. GM(C) of the company or SO(C) of the Area, if the rate is directly available in the SOR of the company/ if the rate is derived from available rate of BOQ.

b) 50% of the rate recommended by the Engineer-in-Charge to the accepting authority of the company, i.e. GM(C) of the company or SO(C) of the Area , if it is analysed item rates based on prevalent market rates of materials and labour following CPWD / NBO norms.

Total payment for such extra items of work shall not exceed 10% of work order / agreement value / approved deviation estimate value. Also total payment including extra items of work shall not exceed the work order / agreement / approved deviation estimate value.

5.6 PROVISIONS FOR DEALING WITH VARIATIONS IN RESPECT OF ABNORMALLY HIGH RATE AND ABNORMALLY LOW RATE ITEMS.

The abnormally high rate items are those whose quoted rates are more than 20% of the justified rates decided by the owner.

The abnormally low rate items are those whose quoted rates are less than 20% of the justified rates decided by the owner.

In case of Item Rate Tenders, the revision of rates for (i) abnormally high rate items and (ii) abnormally low rate items, shall become operative under the following circumstances:-

For increase in quantity of more than 25% in respect of works executed below plinth level and 10% in respect of works executed above plinth level.

Quantity variation beyond the limit mentioned above shall be dealt by arriving at new rate based on

prevalent market rate of materials and labour analysed as per standard analysis of rate of CPWD/NBO. Payment of extra quantity over the permitted quantity as explained above would be made on the basis of the new analysed rate.

The variation in quantity of abnormally low rate items for item rate tenders shall not be permitted below 25% for the items below plinth level and below 10% for the items above plinth level of the agreement schedule quantity, but in exceptional cases with written consent of Engineer-in-Charge arising out of technical necessity.

The above provisions shall be applicable for item rate tenders only and not applicable for percentage rate tenders for works based on standard schedule of rates of the company.

For the purpose of operation, the following works shall be treated as works related to foundation, unless otherwise defined in the contract.

- a) For Buildings: All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.
- b) For abutments, piers and well steining : All works up to 1.2m above the bed level.
- c) For retaining walls, wing walls, compound walls, chimneys, overhead reservoirs / tanks and other elevated structures: all works up to 1.2 metres above the ground level.
- d) For reservoirs / tanks (other than overhead reservoirs / tanks): All works up to 1.2 metres above the ground level.
- e) For basement : all works up to 1.2m above ground level or up to floor 1 level whichever is lower.

For Roads, all items of excavation and filling including treatment of sub base

5.7 The time of completion of the originally contracted work shall be extended by the company in the event of any deviation resulting in additional cost over the awarded value, if requested by the contractor as follows:-

- (i) In the proportion which the additional cost of the altered, additional or substituted work (in value) bears to the original tendered value plus.
- (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

5.8 The company through its Engineer-in-Charge or his representative, on behalf of the company, shall have power to omit any part of the work in case of non-availability of a portion of the site or for any other reason and the contractor shall be bound to carry out the rest of the work in accordance with the instructions given by the Engineer-in-Charge. No claim from the Contractor shall be entertained/ accepted on these grounds.

5.9 In the event of any deviation being ordered which in the opinion of the contractor changes radically the original scope/nature of the contract, the contractor shall under no circumstances suspend the work, either original or altered or substituted, and the dispute/disagreement as to the nature of deviation and the rate/rates to be paid for such deviations shall be resolved separately with the company as per the procedures/ norms laid down hereafter.

6. Time for Completion of Contract, Extension thereof, Defaults and Compensation for Delay

Time is the essence of the contract and as such all works shall be completed within the time stipulated in the contract/ work order. The work shall, throughout the stipulated period of contract, be carried out with all due diligence on the part of the contractor.

Immediately after the contract is concluded i.e. LOA / Work Order is issued, the Engineer-in-Charge and the contractor shall agree upon a detailed time and progress chart prepared based on BAR CHART/ PERT CPM techniques on the basis of a construction schedule submitted by the contractor at the time of executing contract showing the order in which the work is proposed to be carried out within the time specified in the LOA /work order.

For the purpose of this detailed time and progress chart, the work shall be deemed to have commenced on the expiry of 10* (ten) days from the issue of Letter of Acceptance of Tender or 7(seven) days after handing over the site of work or handing over reasonable number of working drawings to the contractor or the period of mobilization allowed in the work order for starting the work in special circumstances, whichever is later.

* For Specialized Works/ High Value Works (above Rs. 5 crores), the period shall be 30 days.

6.1 If the contractor, without reasonable cause or valid reasons, commits default in commencing the work within the aforesaid time limit, the company shall, without prejudice to any other right or remedy, be at liberty, by giving 15 day's notice in writing to the contractor to commence the work, failing which to forfeit the Earnest Money deposited by him and to rescind the Letter of Acceptance of Tender/Work Order and also to debar the contractor to take part in the future re-tender.

The Company may debar such defaulting Contractors from participating in future Tenders for a minimum period of 12(twelve) months.

6.2 If the contractor fails to complete the work and clear the site on or before the date of completion or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the company on account of such breach, pay as compensation (Liquidated Damages):

i) @ half percent ($\frac{1}{2}$ %) of the contract amount/Revised Contract amount whichever is less, per week of delay.

OR

ii) ½ % of the contract-value of group of items/ revised completion value of group of items whichever is less, per week of delay, for which a separate period of completion is originally given.

The aggregate of such compensation/ compensations shall not exceed:

i) 10% (ten) percent of the total amount of the contract/ Revised contract amount, whichever is less.

OR

ii) 10% of the contract-value of group of items/ revised completion value of group of items whichever is less, for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the company.

In the event of recovery of any claim towards LD Charges, Penalty, fee, fine or any other charges from the supplier/vendor, the same will be recovered along with the applicable GST and the amount shall be adjusted with the payment to be made to the supplier/vendor against their bill/invoice or any other dues.

Further Security Deposit forfeited will be inclusive of GST.

6.2.1 The company, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time of completion, may allow further extension of time at its discretion with or without the levy of L.D. In the event of extension granted being with L.D, the company will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half percent of the contract value of the works for each week or part of the week subject to a ceiling as described at Cl.6.2.

6.2.2 The company, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.

6.2.3 The company, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.

6.2.4 In the event of such termination of the contract as described in clauses 6.2.2 or 6.2.3 or both, the company, shall be entitled to impose penalty/LD as deliberated at Clause 10. Additionally the contractor shall be debarred from participating in the future tenders for a minimum period of 12 months.

6.3 The company may at its sole discretion, waive the payment of compensation on request received from the contractor indicating valid and acceptable reasons if the entire work is completed within the date as specified in the contract/work order or as validly extended date without stipulating any compensation for delay.

6.4 Extension of date of completion: On occurrences of any events causing delay as stated here-under, the contractor shall intimate immediately in writing to the Engineer-in-Charge.

a) Force Majeure:

i) Natural phenomena like unprecedented flood and draught, earthquakes & epidemics.

ii) Political upheaval, civil commotion, strikes, lockouts, acts of any Govt. (domestic/foreign) including but not limited to war, proprieties, and quarantine embargoes.

The successful bidder/ contractor will advise in the event of his having to resort to this clause by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition.

In the event of delay due to Force Majeure for more than one month the contract may be terminated at the discretion of the company. Termination under such circumstances will be without any liability on either side.

For delays arising out of Force Majeure, the bidder / contractor will not claim extension in completion date for a period exceeding the period of delay attributable to the clauses of Force Majeure and neither company nor bidder / contractor shall be liable to pay extra cost (like increase in rates, remobilization advance, idle charges for labour and materials etc.) provided it is mutually established that Force majeure conditions did actually exists.

b) Serious loss or damage by fire and abnormally bad weather.

c) Non-availability of stores which are the responsibility of the company to supply as per contract.

d) Non-availability of working drawings in time, which are to be made available by the company as per contract during progress of the work.

e) Delay on the part of the contractors or tradesmen engaged by the company not forming part of the contract, holding up further progress of the work.

f) Non-availability or breakdown of tools and plant to be made available or made available by the company.

g) The execution of any modified or additional items of work or excess quantity of work.

h) Any other causes which, at the sole discretion of the company, is beyond the control of the contractor.

6.4.1 A HINDRANCE REGISTER shall be maintained by both department and the contractor at site to record the various hindrances, as stated above, encountered during the course of execution.

Hindrance register will be signed by both the parties. The contractor may also record his observations in the Hindrance Register. In case the contractor has a different opinion for hindrance and a dispute arises then the matter would be referred to the EIC and or the next higher authority whose decision would be final & binding on the contractor & the decision to be communicated within 15 days.

6.4.2 The contractor shall request the company in writing for extension of time within 15 days of happening of such event causing delay stating also, the period for which extension is required. The company may, considering the genuinity of the request, give a reasonable extension of time for completion of the work. Such extension shall be communicated to the contractor in writing by the company through the Engineer-in- Charge within 1(one) month of the date of receipt of such request.

6.4.3 The opinion of the Engineer-in-charge, whether the grounds shown for the extension of time are or are not reasonable, is final. If the Engineer-in-charge is of the opinion that

the grounds shown by the contractor are not reasonable and declines to the grant of extension to time, the contractor cannot challenge the soundness of the opinion.

The opinion of the Engineer-in-charge that the period of extension granted by him is proper or necessary is not, however, final. If the contractor feels that the period of extension granted is inadequate he can appeal to the GM(Civil)/ CM(Civil) of the company for consideration on the question whether the period of extension is or is not proper or necessary.

6.4.4 Provisional extension of time may also be granted by the Engineer-in-Charge during the course of execution, on written request for extension of time within 15(fifteen) days of happening of such events as stated above, reserving the company's right to impose/ waive penalty at the time of granting final extension of time as per contract agreement.

6.4.5 When the period fixed for the completion of the contract is about to expire, the question of extension of the contract may be considered at the instance of the Contractor or the Department or of both. The extension will have to be by party's agreement, express or implied.

In case the contractor does not apply for grant of extension of time within 15(fifteen) days of the hindrance occurring in execution of the work and the department wants to continue with the work beyond the stipulated date of completion for reason of the work having been unavoidably hindered, the Engineer-incharge can grant extension of time even in the absence of application from the contractor.

Such extension of time granted by the Engineer-in-Charge is valid provided the contractor accepts the same either expressly or implied by his actions before and subsequent to the date of completion. Such extension of time shall be without prejudice to Company's right to levy compensation under the relevant clause of the contract.

The contractor shall however use his best efforts to prevent or make good the delay by putting his endeavors constantly as may be reasonably required of him to the satisfaction of the Engineer-in Charge.

7. Material Supply & other facilities :

The contractor shall at his own expense, provide all materials required for the work, unless otherwise specified, and the rates quoted by the contractor shall be for finished work inclusive of all materials required for completion of the work as specified in the contract.

* The company may, of its own or at the request of the contractor, supply such materials as may be

Specified, if available, at rate/rates to be fixed by the Engineer-in-charge.

7.1 For the materials which the company has agreed to supply for the contract, the contractor shall give in writing of his requirements in accordance with the agreed phased programme to the Engineer-in-charge sufficiently in advance.

The value of materials so supplied shall be set off or deducted from the payment to be made for the items of work in which such materials have been consumed, or from any sum then due or to become due to the contractor thereafter.

7.2* The company will supply steel both reinforcement and structural and cement at the following rates inclusive of all taxes. The contractor shall bear all the cost for transportation; handling and storage from the issuing store of the company to contractor's work site store.

i) Reinforcement Steel *:-

a) M.S. Round : Rs.

b) Tor Steel : Rs.

c) Structural Steel : Rs.

ii) Cement * : Rs.

[* delete whichever is not applicable]

7.3 If the steel is issued by the department, the wastage of steel shall be the barest minimum. The wastage allowed from theoretical quantity will be upto a maximum of 5% to cover the wastage due to cutting into pieces, bending and other factors. No cut pieces or scrap less than 2 mtr. in length will be taken by the department. Efforts should be made to use the cut pieces of 2 mtr. or above length as far as possible.

If the wastage of steel is more than the permissible variation mentioned above the cost of excess wastage made by the contractor shall be recovered at double the issue rates indicated above, or 115% of prevailing market rate along with GST and any other Tax applicable during the period of work, whichever is more.

No allowances shall be entertained on account of Rolling Margin for the steel either issued by the department or procured by the contractor.

7.4 If the cement is issued by the department, the variation of 5% will be permitted over the theoretical consumption of cement for value of work upto Rs.10.00 lakhs and 3% for value of work above Rs.10.00 lakhs. In the event of cement consumed is more/less than specified above, the recovery for the quantity of cement consumed in excess or less than the specified quantity shall be made at double the issue rate or 115% of prevailing market rate along with GST and any other Tax applicable during the period of work, whichever is more.

7.5 In case the department is not able to supply cement/steel as per the provisions of the contract, the Engineer-in-Charge may allow, with the approval of GM/HOD(Civil) of the company, the contractor in writing for procurement of cement/ steel from the approved sources and the extra on this account including transport charges, if any, over the issue rate shall be reimbursed to the contractor on production of authentic documents. Transportation of cement/ steel from the place of purchase to the site of work and proper storage of cement/steel at site shall be contractor's responsibility. He should maintain proper account of cement/steel issued/procured by him and should allow inspection of his godown and his cement/steel account by the concerned Engineer-in-charge or any other authorized officers of the company. Contractor should draw materials from the company on the basis of actual requirement as assessed by the Engineer-in-Charge on "as and when required" basis.

7.6 Recovery of cost of materials issued on sale A/c will be made as per actual consumption basis but the Engineer-in-Charge will have the discretion for making full recovery while processing a particular bill or asking for the return of the balance materials if the work is not progressing satisfactorily.

The contractor shall keep accurate record of materials issued by the company, maintain proper account for the materials received and consumed in the work and shall be open to check by the Engineer-in-Charge or his authorized representative. The contractor shall ensure that such materials are consumed for the contract works only and the Register for

the aforesaid account shall be signed both by the representatives of Engineer In Charge and the contractor.

7.7 All materials, tools and plants brought to site by the contractor including the materials supplied by the company shall be deemed to be held in lien by the company and the contractor shall not have the right to remove the same from the site, without the written permission of the Engineer-in-Charge. The company shall not however be liable for any loss, theft or damage due to fire or other cause during this period of lien, the responsibility for which shall lie entirely on the contractor.

7.8 The contractor shall bear the cost of loading, transportation to site, unloading, storing under cover as required etc. as may be necessary for the use and keeping the materials in good condition.

7.9 Any surplus materials issued by the company, remaining after completion or termination of the contract, shall be returned by the contractor at his cost to the place of issue and the Engineer-in-Charge shall accept the same at the rate not exceeding the rate at which these were originally issued taking into consideration the deterioration or damage, if any, that may have been caused during the custody of the contractor. In the event, the contractor fails to return the surplus materials out of those supplied by the company, the Engineer-in-Charge may, in addition to any other liability which the contractor would incur in this regard, by giving notice in writing require the contractor to pay the amount at double the issue rate for such unreturned surplus materials or 115% of the prevailing market rate along with GST and any other Tax applicable during the period of work, whichever is more.

7.10 On completion or on termination of the contract and on complete recovery of secured advance paid by the company, if any, in respect of materials brought to site, the contractor with due permission of the Engineer-in-Charge shall be entitled to remove at his expenses all surplus materials originally supplied by him and upon such removal, the same shall become the property of the contractor.

7.11 All charges on account of GST or any other applicable taxes, duties or levies on materials obtained for the works from any source (excluding materials supplied by the company) shall be borne by the contractor.

7.12 The contractor shall arrange necessary electricity at his own cost for the work and his own establishment. However, if available and feasible the company may arrange electricity at one point near the work site and necessary recovery of cost of energy consumed will be made at rates prescribed by the company from time to time. Energy meter for this purpose shall be provided by the contractor.

7.13 The contractor shall arrange necessary water for the work and his own establishment and nothing extra will be paid for the same. Such water used by the contractor shall be fit for construction purposes.

However, if available and feasible the company may arrange water, at the written request of the contractor, to the extent possible, at one point near the work site for which recovery @ 1% of the contract value of work done will be made from the contractor's bills. The contractor shall make his own arrangement of water connection and laying of pipe lines from main source of supply. Department do not guarantee to maintain uninterrupted supply of water. No claim of damage or refund of water charges will be entertained on account of such break down.

7.14 Explosives, detonators and other inflammable materials shall not be used in the execution of the work at site by the contractor without prior written permission of the

Engineer-in-Charge. Transportation and storage of such materials shall be done in specified manner in accordance with the law in force. The contractor shall also obtain license under such laws for, transportation, storage, use and all other operations, connected with the handling of the same.

8. Quality Assurance - Materials and Workmanship

The contractor shall carry out and complete the work in every respect in accordance with the contract and shall ensure that the work conforms strictly to the drawings, specifications, (as enclosed or in absence of enclosed specifications current CPWD/BIS specifications) instructions of the Engineer-in-Charge. The Engineer-in-Charge may issue, from time to time, further drawings, detailed instructions/ directions in writing to the contractor. All such drawings, instructions/directions shall be consistent with the contract documents

and should be reasonably inferable there from, along with clarifications/ explanations thereof, if necessary. However, the contractor will be solely responsible for design and erection of all temporary structures required in connection with the work.

8.1 For Quality Assurances of all the Civil Engineering Works the norms/ guidelines laid down by the company herein and elsewhere will form part of the contract for the purpose of quality of works.

8.2 The contractor shall be responsible for correct and complete execution of the work in a workman like manner with the materials as per specification which shall be subject to the approval of the company. All work under execution in pursuance of the contract shall be open to inspection and supervision by the Engineer-in-Charge or by his authorized representative or any other official of higher rank or any other person authorized by the company in his behalf & the contractor shall allow the same.

8.3 All materials to be provided by the contractor shall be in conformity with the specifications/schedule of work as per the contract and the contractor shall furnish proof, if so required by the Engineer-in-Charge to his satisfaction that the materials do so comply.

8.4 The contractor shall immediately after the award of work draw up a schedule giving dates for submission of samples as required or necessary as per the specification for approval of Engineer-in-Charge who shall approve, if found acceptable, promptly so that there is no delay in the progress of the work of the contractor or of the work of any of the sub-contractor.

On receipt of samples as per schedule, the Engineer-in-Charge shall arrange to examine/test with

reasonable promptness ensuring conformity of the samples with the required specification and complying with the requirements as per contract documents keeping in view that the work shall be in accordance with the samples approved by him. The contractor shall be bound to furnish fresh sample, if disapproved by the Engineer-in-Charge, for his approval. The contractor shall not start bringing materials at the site unless the respective samples are approved. Materials conforming to approved samples shall only be brought to site. However, Engineer-in-Charge's approval for any sample, design / drawings (permanent / temporary structures) shall not alter contractor's full responsibility whatsoever for the performance and safety of the executed job.

Samples are to be supplied by the contractor at his own cost. The cost involved in tests shall be borne by the contractor. If any test is ordered by the Engineer-in-Charge which is to be carried out by any independent person or agency at any place other than the site

even then the cost of materials and testing charge etc. shall be borne by the contractor. If the test shows that the materials are not in accordance with the specifications, the said materials shall not be used in the work and removed from the site at contractors cost.

8.5 The company, through the Engineer-in-Charge, shall have full powers to reject any materials or work due to a defect therein for not conforming to the required specification, or for materials not being of the required quality and standard or for reasons of poor workmanship or for not being in accordance with the sample approved by him. The contractor shall forthwith remedy the defect/replace the materials at his expense and no further work shall be done pending such rectification/replacement of materials, if so instructed by the Engineer-in-Charge.

In case of default on the part of the contractor, the Engineer-in-Charge shall be at liberty to procure the proper materials for replacement and/or to carry out the rectifications in any manner considered advisable under the circumstances and the entire cost & delay for such procurement/rectification shall be borne by the contractor.

8.6 The Engineer-in-Charge shall be entitled to have tests carried out for any materials, according to the standard practice followed for such tests, other than those for which satisfactory proof has already been furnished by the contractor who shall provide at his expense all facilities which the Engineer-in-Charge may require for the purpose. All such expenses born by the contractor are not to be paid separately by the employer and shall be assumed covered in accepted prices.

The cost of any other tests, if so required by the Engineer-in-Charge, shall be borne by the company. However if the test shows the workmanship or materials not to be in accordance with the provision of the contract or the instruction of Engineer-in-Charge the cost shall be borne by the contractor. .

8.7 Access to the works: The Engineer-in-charge and any person authorized by the company shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles are being obtained for the works and the contractor shall afford every facility for and every assistance in or in obtaining the right to such access.

8.8 Inspection of works: i) No work shall be covered up or put out of view without the approval of the Engineer-in-charge or the Engineer-in-charge's representative or any other officer nominated by the company for the purpose and the contractor shall afford full opportunity for the EIC or EIC's representative or any other officer nominated by the company for the purpose to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. the contractor shall give due notice to the Engineer-in-charge's representative whenever any such work or foundations is ready or about to be ready for examination and the Engineer-in-charge's representative shall, without unreasonable delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such work or foundations.

ii) The contractor shall uncover any part or parts of the works or making openings in or through the same as the Engineer-in-Charge may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of Engineer-in-charge.

If any such part or parts have been covered up or put out of view after compliance with the requirement of sub-clause above and are found to be executed in accordance with the contract, the expenses of uncovering, making openings in or through and making good the

same shall be borne by the Employer, but in any other cases all costs shall be borne by the contractor.

8.9 Removal of Improper Work and Materials:

i) The Engineer-in-charge shall during the progress of the works have power to order in writing from time to time:

a) The removal from the site, of any materials which in the opinion of Engineer-in-charge, are not in accordance with the contract/ work order/ approved sample.

b) The substitution with proper and suitable materials.

c) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment there from, of any work which in respect of materials or workmanship is not in accordance with the contract.

ii) In case of default on the part of the contractor in carrying out such order, the Engineer-in-charge shall be entitled to employ and pay other agency to carry out the same and all expenses consequent thereon shall be recoverable from the contractor or may be deducted from any amount due or which may become due to the contractor.

8.10 Devaluation of Work : In lieu of rejecting work done or materials supplied not in conformity with the contract/work order/approved samples, the Engineer-in-charge or any other officer nominated by the company for the purpose may allow such work or materials to remain, provided the Engineer-in-Charge/the officer nominated by the company is satisfied with the quality of any materials, or the strength and structural safety of the work, and in that case shall make such deduction for the difference in value, as in his opinion may be reasonable.

8.11 Final Inspection of Work: The Engineer-in-charge and any other officer nominated by the company for the purpose shall make final inspection of all work included in the contract/work order, or any portion thereof, or any completed structure forming part of the work of the contract, as soon as practicable after notification by the contractor that the work is completed and ready for acceptance. If the work is not acceptable to the Engineer-in-charge at the time of such inspection, he shall inform the contractor in writing as to the particular defects to be remedied before final acceptance can be made.

8.12 Defects appearing after acceptance: Any defects which may appear within the defect liability period and arising, in the opinion of the Engineer-in-charge, from lack of conformance with the drawings and specifications, shall, if so required by the Engineer-in-charge in writing, be remedied by the contractor at his own cost within the time stipulated by the Engineer-in-charge. If the contractor fails to comply, the Engineer-in-charge may employ other persons to remedy the defects and recover the cost thereof from the dues of the contractor.

8.13 Site Order Book : A Site Order Book is a Register duly certified by the Engineer-in-charge regarding number of pages it contains, each page being numbered, name of work, name of contractor, reference of contract/ work order and the aforesaid certificate should be recorded on its first page.

Site Order Books shall be maintained on the sites of works and should never be removed there from under any circumstances. It shall be the property of the company. The Engineer-in-Charge or his authorized representative shall duly record his observations regarding any work which needs action on the part of the contractor like, improvement in the quality of work, failure to adhere to the scheduled programme etc. as per contract/work order. The

contractor shall promptly sign the site order book and note the orders given therein by the EIC or his representative and comply with them. The compliance shall be reported by the contractor in writing to EIC in time so that it can be checked.

The Site Order Book will be consulted by the Engineer-in-Charge at the time of making both running on account and final bills of the contractor. A certificate to this effect should be given in the Measurement books by the Engineer-in-Charge or his representative.

8.14 Samples and Testing of Materials: All the materials to be procured by the contractor and to be used in work shall be approved by the Engineer-in-Charge in advance, and shall pass the tests and analysis required by him, which will be as specified in the specifications of the items concerned and or as specified by BIS or the IRC / MORTH standard specifications acceptable to the Engineer-in-Charge. The method of sampling and testing shall be as per the relevant BIS, IRC/ MORTH and other relevant standards and practices. Minor minerals like sand, stone chips etc. shall be conforming to relevant BIS standards. All bought out items including Cement and Steel shall be procured from such manufacturers who hold valid license conforming to relevant BIS standards for manufacturing of such items.

8.15 Storage of Materials: Materials shall be so stored as to ensure the preservation of the quality and fitness for the work. When considered necessary by the Engineer-in-charge, they shall be placed on wooden platforms or other hard, clean surfaces and not directly on the ground.

Materials shall be placed under cover when so directed and the contractor shall erect and maintain at his own cost temporary weather-proof sheds at the work site for the purpose. Stored materials shall be so located as to facilitate prompt inspection. All stored materials shall be inspected at the time of use in the work, even though they may have been inspected and approved before being placed in storage or during storage.

8.16 Defective Materials: All materials not conforming to the requirements of the specifications shall be considered as defective, and all such materials, whether in place or not shall be rejected. They shall be removed immediately by the contractor at his expenses and replaced with acceptable material.

No rejected material, the defects of which have been subsequently corrected, shall be used on the work until approval in writing has been given by the Engineer-in-Charge. Upon failure on the part of the contractor to comply with any instruction of the Engineer-in-charge made under the provisions of this article within the time stipulated by the Engineer-in-charge, the Engineer-in-charge shall have authority to remove and replace defective material and recover the cost of removal and replacement from the contractor.

Further all such defective material lying at site not removed and replaced within 30 days after issue of notice by the Engineer-in-charge, if the Engineer-in-charge so decides shall dispose off such material in any manner without any further written notice to the contractor.

9. Measurement and Payments

Except where any general or detailed description of the work in the Bill of Quantities or specifications of the contract/ work order provides otherwise, measurement of work done shall be taken in accordance with the relevant standard method of measurement published by the Bureau of Indian Standards (BIS) and if not covered by the above, other relevant Standards/practices shall be followed as per instructions of the Engineer-in-Charge.

9.1 All items of work carried out by the contractor in accordance with the provision of the contract having a financial value shall be entered in the Measurement Book as prescribed by the company so that a complete record of the measurements is available for all the works executed under the contract and the value of the work executed can be ascertained and determined there from. Measurements of completed work / portion of completed work shall be recorded only in the Measurement Books.

9.2 Measurement shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative.

9.3 Before taking measurements of any work, the Engineer-in-Charge or the person deputed by him for the purpose shall intimate the contractor to attend or to send his representative to attend the measurement. Every measurement thus taken shall be signed and dated by both the parties on the site on completion of the measurement. If the contractor objects to any measurements, a note to that effect shall be made in the Measurement Book / Log Book and signed and dated by both the parties.

9.4 The measurement of the portion of work/items of work objected to, shall be re-measured by the

Engineer-in-Charge himself or the authority nominated by the company for the purpose in the presence of the contractor or his authorized representative and recorded in the M.B. which shall be signed and dated by both the parties. Measurements so recorded shall be final and binding upon the contractor and no claim whatsoever shall thereafter be entertained.

In case the contractor or his authorized representative does not attend to the joint measurements at the prefixed date and time after due notice, the measurements taken by the Engineer-in-Charge or his representative shall be final and binding on the contractor.

Measurement of the extra items of work or excess quantities of work duly authorized in writing by the Engineer-in-Charge shall also be taken and recorded in the M.B. based on the existing items in the SOR of the company and if such items do not exist in the company's SOR, the description of the work shall be as per actual execution. Payment for such extra items will be based on the rates to be derived as described in the relevant clauses of the contract/ work-order.

9.5 No work shall be covered up or put out of view without the approval by the Engineer-in-Charge and recording of measurements and check measurement thereof duly accepted by the contractor. The contractor shall provide full opportunity to the Engineer-in-Charge or his representative to examine and measure all works to be covered up and to examine the foundations before covering up.

The contractor shall also give notice to Engineer-in-Charge whenever such works or foundations are ready for examination and the Engineer-in-Charge shall without unreasonable delay arrange to inspect and to record the measurements, if the work is acceptable and advise the contractor regarding covering of such works or foundations.

9.6 In case of items which are claimed by the contractor but are not admissible according to the department, measurements of such items, will be taken for record purposes only and without prejudice so that in case it is subsequently decided by the department to admit the contractor's claims, there should be no difficulty in determining the quantities of such work. A suitable remark should, however, be made against such measurements to guard against payment in the ordinary way.

9.7 Payments: The running on account payments may be made once in a month or at intervals stipulated in the work order/ contract agreement.

9.7.01 Running on account bill/bills for the work executed/ materials supplied in accordance with the work order/ contract shall be prepared on the basis of detailed measurements recorded as described hereinbefore and processed for payments.

9.7.02 Payment of on account bill shall be made on the Engineer-in-Charge's certifying the sum to which the contractor is considered entitled by way of interim payment for the following :

a) The work executed as covered by the bill/bills after deducting the amount already paid, the security deposit and such other amounts as may be deductible or recoverable in terms of the work order/ contract.

b) (i) Payment for excess quantity of work done with the written instructions of the Engineer-in-Charge for items already appearing in the bill of quantities of work with approved rates, will be made along with the on account bills only up to 10% of the quantity provided in the agreement subject to overall value of work not exceeding the agreement value.

(ii) The GM(Civil) of the company and / or the Staff Officer(C) of the Area may authorize interim

payment for excess work done up to 20 % of the quantity of work provided in the Bill of Quantity of the work awarded from Company level and Area level respectively subject to overall value of work done does not exceed the contract value. This however, shall not be applicable for High Value Items.

c) Extra items of work executed will be paid on specific written authorization of GM(C) of the company or Staff Officer (Civil) of the Area provided that the value of such extra items of work when added together is not more than 10% of the contract value and the total gross payment including excess quantity does not exceed the contract value.

Balance amount on account of excess quantity and extra items of work executed shall be paid after the deviation estimate / revised estimate regularizing the extra items and excess quantities of work is sanctioned by the competent authority of the company with the concurrence of the Finance Department of the company.

d) On the Engineer-in-Charge's certificate of completion in respect of the work covered by the contract / final measurements of the work certified by the Engineer In Charge or his representative.

E-way Bill: The e-way bill required in connection with supply of goods or services, if any, shall be arranged by the supplier/vendor. However, the e-way bill will be arranged by CIL/Subsidiary if the supplier/vendor is unregistered one or if provisions of the relevant Act and the rules made there under specifically states that the e-way bill is required to be issued by recipient of goods.

9.7.03 The measurements shall be entered in the M.B for the work done up to the date of completion and evaluated based on the approved rates for the items in the contract agreement/sanctioned revised estimate. In case of extra items of work, the rates shall be derived as stated in the relevant clause of the contract.

The payments shall be released against the final bill subject to all deductions which may be made on account of materials supplied, water supply for construction, supply of

electricity and any other dues payable by the contractor to the company, and further subject to the contractor having given to the Engineer-in-Charge a no claim certificate.

The contractor shall indemnify the company against proof of depositing royalty on account of minor

minerals used in the work before the final bill is processed for payments. The final payment to be made will also be subject to Clause-4.6 & 4.7 of the General Terms & Conditions of the contract.

9.7.04 Any certificate given by the Engineer-in-Charge for the purpose of payment of interim bill/bills shall not of itself be conclusive evidence that any work/materials to which it relate is/are in accordance with the contract and may be modified or corrected by the Engineer-in-Charge by any subsequent certificate or by the final certificate.

9.7.05 The company reserve the right to recover/enforce recovery of any overpayments detected after the payment as a result of post payment audit or technical examination or by any other means, notwithstanding the fact that the amount of disputed claims, if any, of the contractor exceeds the amount of such overpayment and irrespective of the facts whether such disputed claims of the contractor are the subject matter of arbitration or not.

The amount of such overpayments shall be recovered from subsequent bills under the contract, failing that from contractor's claim under any other contract with the company or from the contractor's security deposit or the contractor shall pay the amount of over payment on demand. In case of contractor's non-payment on such demand, the same should be realised from the contractor's dues, if any, with Coal India Limited or any of its subsidiaries.

9.7.06 The contractors are required to execute all works satisfactorily and according to the specifications laid down in the contract/ work order. If certain items of work, executed by the contractor, are below specifications, the contractor should re-do them according to the specifications and instructions of EIC and if the contractor fails to rectify the defect within the time and in the manner specified by the EIC, the work shall be got re-done or rectified by the department at the risk and cost of the contractor. Engineer-in-Charge may accept such work of below specifications provided the department is satisfied with the quality of such works and the strength/ structural safety of such works. In that case Engineer-in-Charge shall make such deductions for the difference in value, as in his opinion is reasonable and is approved by the accepting authority of the company i.e. GM/HoD(C) of the company in this case or any other officer nominated by GM/HoD(C) for the purpose.

9.7.07 Payment Stage: The payment stage involved will be as under,

- i. Signature of Subordinate Engineer(Civil)/ EA(Civil)/ Sr. Overseer(C) / Overseer(C) in MB' s both in pages recording measurements, abstract of bill & the duly filled in bill form.
- ii. Signature of Sr. Officer(C)/ Asstt. Manager(Civil) with appropriate check measurements in the MB's and the bill form.
- iii. Signature of Dy. Manager(C)/ Manager(C) with appropriate check measurements in MB's and the bill form.
- iv. Signature of Engineer-in-Charge as per definition as at clause 1(vii) of the General Terms and Conditions, as a token of acceptance for payment of the bill. The EIC may sign in the abstract of the bill in the MB & the bill form. In between stage iii) and iv) accountal checking may be made by the concerned Accounts Officer/ Accountant.

(In case of non-availability of officials as at (i) above, company may authorize suitable executives for the works outlined at (i). Further for check measurement also company may authorize Executives based on availability.

9.7.08 Secured Advance: Secured advance can be paid for items of materials required for execution of the work and covered under categories A & B and supplied by the contractor at work site, supported by necessary vouchers, challans, test certificates etc. after execution of indemnity bond as per prescribed Form of the company on non-judicial stamp paper of prescribed value.

This advance shall be recovered in four equal installments or as per consumption whichever is higher. Engineer-in-Charge shall recover at his discretion all or any part of secured advance paid, if in his opinion the work is not progressing satisfactorily or the security of these materials at site is not adequately taken care of by the contractor. Secured advance shall be payable for contracts of value above Rs.50.00 lakhs only.

Secured advance for structural steel sections, reinforcement steel and cement, collected at site, will be paid up to 75% of the corresponding stock yard prices of SAIL for the corresponding steel items and Govt. approved/ D.G.S.D. prices for cement, if the same exist.

In case of non-availability of Govt. approved prices of cement & steel and for the materials falling under Category - A and B the secured advance will be paid at the basic rate available in the approved schedule of rates of the company plus or minus the overall percentage on which the work was awarded, provided such rate is not more than 60% of the quoted rate of the contractor for the actual work.

At any point of time the outstanding recoverable secured advance shall not be more than 10% of the contract value.

Items against which secured advance can be granted:

Category-A

Civil:

1. Bricks.
2. Stone and brick aggregate.
3. Stones.
4. Finished products of brass, iron and steel such as doors & windows frames, wire mesh, gate, GI Sheets.
5. Pre-cast R.C.C. products such as pipes, jali, water storage tanks etc.
6. Doors & Window fittings.
7. Pipes and sanitary fittings of CI, SCI & HCI

Electrical :

1. Steel conduits
2. G.I. Pipes
3. I.C. Boards

4. Switchgears (Air circuit breakers and Air break switches)
5. C.I. Boxes.
6. A.C.S.R. Conductors
7. A.C. Plant & Machinery
8. Pumps
9. Generating sets (without oil)

Items against which secured advance can be granted:

Category- B

Civil:

1. Glazed tiles, terrazzo tiles and similar articles.
2. Marble slabs.
3. Asbestos cements products.
4. Finished timber products such as doors, windows, flush doors, particle boards (subject to mandatory test being satisfactory) etc.
5. Bitumen in sealed drums.
6. Bitumen felt.
7. Polythene pipes and fittings and tanks.
8. Sanitary fittings and pipes of S.W., porcelain and chinaware materials
9. Laminated / Safety, one way vision, and bullet proof glasses.
10. Chemical required for anti-termite treatment (in sealed drums).
11. Paints, varnishes, distempers, pigment, spirits etc.

Electrical:

1. Transformers
2. Oil-filled switch gears.
3. L.T. &H.T. Cables
4. Fans
5. Storage and Dry Batteries
6. Insulation tapes.
7. Epoxy cable compounds.
8. Electric light fittings.
9. Wooden battens, casing & capping and wooden boards.
10. Flexible wires.
11. PVC materials.

12.Oil and lubricants.

13.Rubber materials.

14.Glass wool, thermocole & other insulating materials.

15.Porcelain H.T. and L.T. insulators.

In addition to indemnity bond, for materials listed under Category-B, the contractor shall be required to provide necessary insurance cover of equivalent value of materials.

Items against which no secured advance shall be granted:

Civil:

1. Glass products other than those indicated in Category-B.

2. Sand and moorum

3. Chemical compounds other than those indicated in Category-B.

Electrical:

1. Glass gloves and shades

2. Bulbs and tubes

3. Petrol and diesel

4. Freon and other refrigeration gases.

9.8 Income tax deduction @ 2% (Two percent) of the gross value (excluding GST) of each bill or at the rate as amended from time to time, shall be made unless exempted by the competent authority of the Income Tax Department.

GST on Works Contracts (if applicable) and Building and Construction Workers Cess (as applicable in States) shall be payable by the contractor. If, however, the company is asked to make deduction from the contractor's bills, the same shall be done and a certificate to this effect shall be issued to the contractor for dealing with the State Govt. and the company does not take any responsibility to do anything further in this regard.

9.9 No interest shall be payable on the amounts withheld, under the terms of the Contract Agreement/Workorder.

10 Termination, Cancellation, Suspension and Foreclosure of Contract

The company shall, in addition to other remedial steps to be taken as provided in the conditions of contract be entitled to cancel the contract in full or in part, and whether the date of completion has or has not elapsed, by notice in writing if the contractor:-

a) makes default in proceeding with the works with due diligence and continues to do so even after a notice in writing from the Engineer-in-Charge, then on the expiry of the period as specified in the notice

Or

b) commits default/breach in complying with any of the terms and conditions of the contract and does not remedy it or fails to take effective steps for the remedy to the satisfaction of the Engineer-in-Charge, then on the expiry of the period as may be specified by the Engineer-in-Charge in a notice in writing.

Or

c) obtains a contract with the company as a result of ring tendering or other non-bonafide methods of competitive tendering

Or

d) shall offer or give or agree to give any person in the service of the company or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for act/acts of favour in relation to the obtaining or execution of this or any other contract for his company.

Or

e) fails to complete the work or items of work with individual dates of completion, on or before the

date/dates of completion or as extended by the company, then on the expiry of the period as may be specified by the Engineer-in-Charge in a notice in writing.

Or

f) transfers, sublets, assigns the entire work or any portion thereof without the prior approval in writing from the Engineer-in-Charge. The Engineer-in-Charge may by giving a written notice, cancel the whole contract or portion of it in default.

10.1 The contract shall also stand terminated under any of the following circumstances:

a) If the contractor being an individual in the case of proprietary concern or in the case of a partnership firm any of its partners is declared insolvent under the provisions of Insolvency Act for the time being in force, or makes any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors amounting to proceedings for liquidation or composition under any Insolvency Act.

b) In the case of the contractor being a company, its affairs are under liquidation either by a resolution passed by the contractors company or by an order of court, not being a voluntary liquidation proceedings for the purpose of amalgamation or reorganization, or a receiver or manager is appointed by the court on the application by the debenture holders of the contractor's company, if any.

c) If the contractor shall suffer an execution being levied on his/their goods, estates and allow it to be continued for a period of 21 (twenty-one) days.

d) On the death of the contractor being a proprietary concern or of any of the partners in the case of a partnership concern and the company is not satisfied that the legal representative of the deceased proprietor or the other surviving partners of the partnership concern are capable of carrying out and completing the contract. The decision of the company in this respect shall be final and binding which is to be intimated in writing to the legal representative or to the partnership concern.

10.2 On cancellation of the contract or on termination of the contract, the Engineer-in-charge shall have powers:

a. To take possession of the site, any materials, constructional plant, equipment, stores etc. thereon and carry out balance work through any means or through any other agency.

b. To give the contractor or his representative of the work 7 (seven) days notice in writing for taking final measurement for the works executed till the date of cancellation or

termination of the contract. The Engineer-in-Charge shall fix the time for taking such final measurement and intimate the contractor in writing. The final measurement shall be carried out at the said appointed time notwithstanding whether the contractor is present or not. Any claim as regards measurement which the contractor is to make shall be made in writing within 7 (seven) days of taking final measurement by Engineer-In-charge as aforesaid and if no such claim is received, the contractor shall be deemed to have waived all claims regarding above measurements and any claim made thereafter shall not be entertained.

c. After giving notice to the contractor to measure up the work of the contractor and to take such whole or the balance or part thereof, as shall be unexecuted out of his hands and to give it to another contractor or take up departmentally, to complete the work. The contractor whose contract is terminated shall not be allowed to participate in future bidding for period of minimum twelve months.

In such an event, the contractor shall be liable for loss/damage suffered by the employer because of action under this clause and to compensate for this loss or damage, the employer shall be entitled to recover higher of the following:

i) Forfeiture of security deposit comprising of performance guarantee and retention money and additional performance security, if any, at the disposal of the employer.

Or

ii) 20% of value of incomplete work. The value of the incomplete work shall be calculated for the items and quantities remaining incomplete (as per provision of agreement) at the agreement rates including price variation as applicable on the date, when notice in writing for termination of work was issued to the contractor.

The amount to be recovered from the contractor as determined above, shall, without prejudice to any other right or remedy available to the employer as per law or as per agreement, will be recovered from any money due to the contractor on any account or under any other contract and in the event of any shortfall, the contractor shall be liable to pay the same within 30 days. In case of failure to pay the same the amount shall be debt payable.

In the event of above course being adopted by the Engineer-in-charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased materials, equipment or entered into agreement or made advances on any account or with a view to the execution of work or performance of the contract. And in case action is taken under any of provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum for any work thereof or actually performed under this contract unless and until the engineer-in-charge has certified in writing the performance of such work and value payable in respect thereof and he shall only be entitled to be paid the value so certified.

The need for determination of the amount of recovery of any extra cost/expenditure or of any loss/damage suffered by the company shall not however arise in the case of termination of the contract for death/demise of the contractor as stated in 10.1(d).

10.3 Suspension of Work:

Suspension of work – The Company shall have power to suspend the work. The contractor shall on receipt of the order in writing of Engineer-in -charge (whose decision shall be final and binding on the contractor), suspend the progress of work or any part thereof for such

time in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage, or endanger the safety thereof for any of the following reasons:

- a) on account of any default on the part of the contractor, or
- b) for proper execution of the works, or part thereof, for reasons other than the default of the contractor or,
- c) for safety of the works, or part thereof.

The contractor shall, during such suspension properly protect and ensure the works to the extent necessary and carry out the instruction of the Engineer-in-charge. If the suspension is ordered for reasons (b) & (c), the contractor shall be entitled to an extension of time equal to the period of every such suspension plus 25%. This shall also be applicable for completion of the item or group of items of the work for which a separate period of completion as specified in the contract and of which the suspended work forms a part.

The contractor shall carry out the instructions given in this respect by the Engineer-In Charge & if such suspension exceeds 45 (forty five) days, the contractor will be compensated on mutually agreed terms.

10.4 Foreclosure of contract:

If at any time after acceptance of the tender the company decides to abandon or reduce the scope of work for any reason whatsoever the company, through its Engineer-in-Charge, shall give notice in writing to that effect to the contractor and contractor shall act accordingly in the matter. In the event of abandonment, the contractor shall have no claim to any payment of compensation or otherwise whatsoever, other than those mentioned below:-

- a) to pay reasonable amount assessed and certified by the Engineer-in-Charge of the expenditure incurred, if any, by the contractor on preliminary works at site e.g. temporary access roads, temporary construction for labour and staff quarters, office accommodation, storage of materials, water storage tanks and water supply for the work including supply to labour/ staff quarters, office etc.
- b) to pay the contractor at the contract rates full amount for works executed and measured at site up to the date of such abandonment.
- c) to pay for the materials brought to site or to be delivered at site, which the contractor is legally liable to pay, for the purpose of consumption in works carried out or were to be carried out but for the foreclosure, including the cost of purchase and transportation and cost of delivery of such materials. The materials to be taken over by the company should be in good condition and the company may allow at its discretion the contractor to retain the materials in full or in part if so desired by him and to be transported by the contractor from site to his place at his own cost with due permission of the EIC.
- d) to take back the materials issued by the company but remaining unused, if any, in the work on the date of abandonment/reduction in the work, at the original issue price less allowance for any deterioration or damage caused while in custody of the contractor.
- e) to pay for the transportation of tools and plants of the contractor from site to contractor's place or to any other destination, whichever is less.

10.4.01 The contractor shall, if required by the Engineer-in-Charge, furnish to him books of accounts, papers, relevant documents as may be necessary to enable the Engineer-in-Charge to assess the amounts payable in terms of clauses 10.4(a) (c) & (e) of the contract.

The contractor shall not have any claim for compensation for abandonment of the work, other than those as specified above.

11. Carrying out Part Work at Risk & Cost of Contractor.

If the progress of the work or of any portion of the work is unsatisfactory, the Engineer-in-Charge, after giving the contractor 15 days' notice in writing, without cancelling or terminating the contract, shall be entitled to employ another Agency for executing the job or to carry out the work departmentally or contractually through tendering / limited tendering process, either wholly or partly, debiting the contractor with cost involved in engaging another Agency or with the cost of labour and the prices of materials, as the case may be. The certificate to be issued by the Engineer-in-Charge for the cost of the work so done shall be final and conclusive and the extra cost, if any, shall be borne by the contractor. However, when this clause is invoked, penalty will not be applicable other than on account of delayed completion.

The value of the work taken away shall be calculated for the items and quantities taken away at the agreement rates including price variation as applicable on the date, when notice in writing for taking away part work was issued to the contractor. The contractor, from whom part work is being taken out, shall not be allowed to participate in the tendering process if any.

If the expenses incurred by the department is less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

12. Completion Certificate / Defect Liability Certificate

Except in cases where the contract provides for "Performance Test" before issue of Defect Liability certificate, in which case the issue of Defect Liability certificate shall be in accordance with the procedure specified therein, the contractor shall give notice of completion of work, as soon as the work is completed, to the Engineer-in-Charge. The Engineer-in-Charge and or any other Officer, nominated for the purpose by the company, shall within 30 (thirty) days from the receipt thereof, inspect the work and ascertain the defects/deficiencies, if any, to be rectified by the contractor as also the items, if any, for which payment shall be made at reduced rate.

If the defects, according to the Engineer-in-Charge are of a major nature and the rectification of which is necessary for the satisfactory performance of the contract, he shall intimate in writing the defects and instruct the contractor to rectify the defects/remove deficiencies within the period and in the manner to be specified therein. In such cases Defect Liability Certificate will be issued by the EIC after the above rectifications are carried out/ deficiencies are removed by the contractor to the satisfaction of EIC

In the event there are no defects or the defects/ deficiencies are of a minor nature and the Engineer-in-Charge is satisfied that the contractor has already made arrangements for rectification, or in the event of contractor's failure to rectify the defects for any reason whatsoever, the defects can be rectified by the company departmentally or by other means and the 50% of the security deposit of the contractor shall be sufficient to cover the cost thereof, he shall issue the Defect Liability Certificate (Taking Over Certificate with list of

defects)indicating the date of completion of the work, defects to be rectified, if any, and the items, if any, for which payment shall be made at reduced rate indicating reasons there for and with necessary instructions to the contractor to clear the site/place of work or all debris/ waste materials, scaffoldings, sheds, surplus materials etc. making it clean.

12.1 In cases where separate period of completion for certain items or groups of items are specified in the contract, separate Defect Liability certificate for such items or groups of items may be issued by the Engineer-in-Charge after completion of such items on receipt of notice from the contractor only in the event the work is completed satisfactorily in every respect.

Refund of security deposit and payment of final bill shall, however, be made on completion of the entire contract work, but not on completion of such items of work.

12.2 Before the date fixed for completion of work, the work as well as the site of work are to be made clean after removal of rubbish, scaffolding, surplus materials, temporary structures etc.

12.3 In case of contractor's failure to clear the site, the EIC shall have right to get the work done. The cost thereof shall be recovered from the final bill of the contractor.

13. Additional Responsibilities of the Contractor(s)

The cost on account of the "Additional Responsibilities of the Contractors" under this clause is deemed to be included in the tendered rates.

i) The company reserves the rights to let other contractors also work in connection with the Project and the contractor/contractors shall co-operate in the works for the introduction and stores and materials and execution of his/their works.

ii) The contractor/contractors shall keep on the work site during the progress a competent and experienced Resident Engineer exclusively for the work and necessary assistants who shall represent the contractor(s). The contractor shall employ, on the site in connection with the execution and maintenance of the work, technical and managerial staff as mentioned below.

| Sl.No. | Value of Work | Manpower Requirement |
|--------|-----------------------|--|
| 1 | More than 10 Crores | One Resident Engineer (Degree Holder), One Engineer (Degree Holder), Two Engineers (Diploma Holder) |
| 2 | 5 Crores to 10 Crores | One Resident Engineer (Degree Holder), Two Engineers (Diploma Holder) |
| 3 | 2 Crores to 5 Crores | One Resident Engineer (Diploma Holder), One Engineer |

| | | |
|---|----------------------|--|
| | | (Diploma Holder) |
| 4 | 50 lakhs to 2 crores | One Resident Engineer (Graduate/ Diploma Holder) |

For works below Rs. 50 lakhs, the deployment of manpower shall be as assessed by Engineer.

The contractor shall intimate the Engineer-in-Charge in writing the names, qualifications, experience and full postal address of each and every technical personnel employed at site by him.

The contractor(s) shall not be allowed to execute the work unless he/they engage the required technical staff as assessed by Engineer-in-charge or as specifically mentioned in the bid. The delay on this account, if any, shall be the contractor's responsibility.

Important instructions shall be confirmed to the contractor(s) in writing. If the contractor/contractors in course of the works finds/find any discrepancy between the drawing, forming part of the contract documents and the physical conditions of the locality or any errors or omissions in drawings except those prepared by himself / themselves and not approved by the Engineer-in-Charge. It shall be his/their duty to immediately inform the Engineer-in-Charge in writing and the Engineer-in-Charge shall verify the same. Any work done after such discovery and without intimation as indicated above will be done at the risk of the contractor/contractors.

iii) The contractor / contractors shall employ only competent, skillful and orderly men to do the work. The Engineer-in-Charge shall have the right to ask the contractor/ contractors to remove from the work site any men of the contractor/contractors who in his opinion is undesirable and the contractor/contractors will have to remove him within 3 (three) hours of such orders.

The contractor shall employ apprentices in the execution of the contract work as required under Apprentices Act.

The contractor shall further be responsible for making arrangements at his own cost, or accommodation and social needs of the staff and workers under his employment.

iv) Precautions shall be exercised at all times by the contractor(s) for the protection of persons (including employees) and property. The safety required or recommended by all applicable laws, codes, statutes and regulations shall be observed by the contractor(s). In case of accidents, the contractor(s) shall be responsible for compliance with all the requirements imposed by the Workmen's Compensation Act or any other similar laws in force and the contractor shall indemnify the company against any claim on this account.

All scaffoldings, ladders and such other structures which the workmen are likely to use shall be examined by the Engineer-in-Charge or his authorized representative whenever they want and the structure must be strong, durable, and safe and of such design as required by Engineer-in-Charge.

In no case any structure condemned by the Engineer-in-Charge or his authorized representatives shall be kept on the work and such structure must be pulled down within

three hours of such condemnation and any certificate or instructions, however, shall in no way absolve the contractor/contractors from his/their responsibility, as an employer, as the company shall in no way be responsible for any claim.

The contractor / contractors shall at all times exercises reasonable precautions for the safety of employees in the performance of his/their contract and shall comply with all applicable provisions of the safety laws drawn up by the State Govt. or Central Govt. or Municipalities and other authorities in India. The contractor/contractors shall comply with the provision of the safety hand book as approved and amended from time to time by the Government of India.

v) The contractor / contractors shall familiarize themselves with and be governed by all laws and rules of India and Local statutes and orders and regulations applicable to his/ their work.

vi) The contractor shall maintain all records as per the provision made in the various statutes including Contract Labour (Regulation & Abolition) Act, 1970 and the Contract Labour (Regulation & Abolition) Central Rules, 1971, Minimum Wages Act, Workmen Compensation Act etc. and latest amendment thereof. Such records maintained by the contractor shall be opened for inspection by the Engineer-in-Charge or by the nominated representative of the Principal Employer.

vii) The contractor/ contractors shall provide facilities for the sanitary necessities of all persons employed on the work shall be constructed and maintained in the number, manner and place approved or ordered by the Engineer-in-Charge. The contractor/ contractors shall vigorously prohibit committing of nuisance at any other place. Cost of all works under this item shall be covered by the contractor/contractor's tendered rates.

viii) The contractor/contractors shall furnish to the Engineer-in-Charge or his authorized representative with work reports from time to time regarding the contractor / contractors organization and the progress made by him / them in the execution of the work as per the contract.

ix) All duties, taxes (excluding Goods and Services Tax and GST Compensation Cess (If applicable) only) and other levies, royalty, building and construction workers cess (as applicable in States), whether local, municipal, provincial or central pertaining to the contract payable by the bidder/Contractor under the Contract (during the entire period of contract), or for any other cause as applicable on the last date of submission of Bid, shall be included in the rates, prices and the total Bid Price submitted by the Bidder. All investments, operating expenses, incidentals, overheads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder.

However, such duties, taxes, levies etc. which is notified after the last date of submission of Bid and/or any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities.

Similarly if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.

The item wise rate quoted by bidder shall be inclusive of all taxes, duties & levies but excluding GST & GST Compensation Cess, if applicable. The payment of GST and GST Compensation Cess by service availer (i.e. CIL/Subsidiary) to bidder/contractor (if GST

payable by bidder/contractor) would be made only on the latter submitting a Bill/invoice in accordance with the provision of relevant GST Act and the rules made thereunder and after online filing of valid return on GST portal. Payment of GST & GST Compensation Cess is responsibility of contractor.

However, in case bidder/contractor is GST unregistered bidder/dealer in compliance with GST rules, the bidder/dealer shall not charge any GST and/or GST Compensation Cess on bill/invoice. In such case, applicable GST will be deposited by CIL/Subsidiary directly to concerned authorities.

Input tax credit is to be availed by paying authority as per rule.

If CIL/Subsidiary fails to claim Input Tax Credit(ITC) on eligible Inputs, input services and Capital Goods or the ITC claimed is disallowed due to failure on the part of supplier/vendor of goods and services in incorporating the tax invoice issued to CIL/Subsidiary in its relevant returns under GST, payment of CGST & SGST or IGST, GST (Compensation to State) Cess shown in tax invoice to the tax authorities, issue of proper tax invoice or any other reason whatsoever, the applicable taxes & cess paid based on such Tax invoice shall be recovered from the current bills or any other dues of the supplier/vendor along with interest, if any.

The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the contract of the bidding document.

The company reserves the right to deduct/ withhold any amount towards taxes, levies, etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any statutory authority and the company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

In case of collection of minor minerals in area (both virgin and non-virgin), acquired by the Company under the Coal Act, the contractor will have to produce a royalty clearance certificate from the District Authorities before full and final payment.

x) The contractor / contractors shall make his / their own arrangement for all materials, tools, staff and labourer required for the contract, which shall include cost of lead, lift, loading, unloading, railway freight, recruiting expenses and any other charges for the completion of the work to entire satisfaction of the company.

xi) The contractor / contractors shall make their own arrangement for carriage of all materials to the work site at his/their own cost.

xii) The work shall not be sublet to any other party, unless approved by Engineer-in-Charge, in writing. Prior permission is required to be taken from the owner for engagement of sub-contractor in part work/ piece rated work.

xiii) a) No fruit trees or valuable plants or trees with trunk diameter exceeding 150mm shall be pulled, destroyed or damaged by the contractor/contractors or any of his/their employees without the prior permission of the company, failing which the cost of such trees or plants shall be deducted from the contractor/contractors dues at the rate to be decided by the company. The rates quoted are supposed to include clearance of shrubs and jungles and removal of such trees up to 150 mm dia., as will be permitted by the Engineer-in-Charge in writing.

b) Anything of historical or other interest or of significant value unexpectedly discovered on the site is the property of the employer. The Contractor is to notify the Nodal Officer or his

nominee of such discoveries and carry out the Nodal Officer or his nominee's instructions for dealing with him.

xiv) The contractor / contractors shall not pay less than the minimum wages to the labourer engaged by him/them as per Minimum Wages Act or such other legislation or award of the minimum wage fixed by the respective State Govt. or Central Govt. as may be in force. The contractor / contractors shall make necessary payments of the provident fund for the workmen employed by him for the work as per the laws prevailing under provisions of CMPF and allied scheme and Miscellaneous Provisions Act, 1948 or Employees Provident Fund and Miscellaneous Provisions Act 1952 as the case may be.

xv) All accounts shall be maintained properly and the company shall have the right of access and inspection of all such books of accounts etc., relating to payment of labourer including payment of provident fund considered necessary and the company may arrange for witnessing the payment to the labourer by its representatives.

xvi) The contractor shall in additions to any indemnity provided by the relevant clauses of the agreement or by law, indemnify and keep indemnified for the following:

a) The company or any agent or employee of the company against any action, claim or proceeding

relating to infringement or use of any patent or design right and shall pay any royalties or other charges which may be payable in respect of any article or material included in the contract.

However, the amount so paid shall be reimbursed by the company in the event such infringement has taken place in complying with the specific directions issued by the company or the use of such article or material was the result of any drawing and/or specifications issued by the company after submission of tender by the contractor. The contractor must notify immediately after any claim being made or any action brought against the company, or any agent or employee of company in respect of any such matter.

b) The company against all claims, damages or compensation under the provisions of payment of Wages Act, 1938, Minimum Wages Act, 1948, Employer's Liability Act, 1938, The Workmen's Compensation Act, 1923, Industrial Dispute Act, 1947, Mines Act as applicable, Employees State Insurance Act 1948 and Maternity Benefit Act, 1961, Acts regulating P.F. or any modification thereof or any other law relating thereto and rules made there under from time to time, as may be applicable to the contract which may arise out of or in consequence of the construction or maintenance or performance of the work under the contract and also against costs, charges and expenses of any suit, action or proceedings arising out of any accident or injury.

c) The company against all losses and claims for injuries or damages to any third party or to any property belonging to any third party which may arise out of or in consequence of the construction or maintenance or performance of the work under the contract and against all claims/demands proceedings/damages, cost charges and expenses whatsoever in respect of or in relation thereto.

xvii) The contractor is under obligation to hand over to the company the vacant possession of the completed building structures failing which the Engineer-in-Charge can impose a levy upon the contractor upto 5% of the total contract value for the delay in handing over the vacant possession of the completed works after giving a 15 (fifteen) days notice to the contractor.

xviii) **Insurance** - The contractor shall take full responsibility to take all precautions to prevent loss or damage to the works or part thereof for any reasons whatsoever (except for reasons which are beyond control of the contractor or act of God, e.g. flood, riots, war, earthquake, etc.) and shall at his own cost repair and make good the loss/damage to the work so that on completion, the work shall be in good order and condition and in conformity with the requirements of the contract and instructions of the Engineer-in-charge.

The contractor/contractors shall take following insurance policies during the full contract period at his own cost:

a). In the case of construction works, without limiting the obligations and responsibilities under the contract, the contractor shall take insurance policy for the works and for all materials at site so that the value of the works executed and the materials at site up to date are sufficiently covered against risk of loss/damage to the extent as permissible under the law of insurance. The contractor shall arrange insurance in joint names of the company and the contractor. All premiums and other insurance charges of the said insurance policy shall be borne by the contractor.

The terms of the insurance policy shall be such that all insurance claims and compensations payable by the insurers, shall be paid to the Employer and the same shall be released to the contractor in installments as may be certified by the Engineer-in-charge for the purpose of rebuilding or replacement or repair of the works and/or goods destroyed or damaged for which payment was received from the insurers. Policies and certificates for insurance shall be delivered by the contractor to the EIC for his approval before the starting date. Alterations to the terms of insurance shall not be made without the approval of EIC.

b). Where any company building or part thereof is used, rented or leased by the contractor for the purpose of storing or using materials of combustible nature, the contractor shall take separate insurance policy for the entire building and the policy shall be deposited with the company.

c) The contractor shall at all times during the tenure of the contract indemnify the company against all claims, damages or compensation under the provision of the Workmen's Compensation Act and shall take insurance policy covering all risk, claims, damages, or compensation payable under the Workmen's Compensation Act or under any other law relating thereto.

d) The contractor shall ensure that the insurance policy/ policies is/are kept alive till full expiry of the contract by timely payment of premiums and it/they shall not be cancelled without the approval of the company and a provision is made to this effect in all policies, and similar insurance policies are also taken by his sub-contractors if any. The cost of premium shall be borne by the contractor and it shall be deemed to have been included in the tendered rate.

e) In the event of contractor's failure to effect or to keep in force the insurance referred to above or any other insurance which the contractor is required to effect under the terms of the contract, the company may effect and keep in force any such insurance and pay such premium/premiums as may be necessary for that purpose from time to time and recover the amount thus paid from any moneys due to the contractor.

THE CLAUSE 13(xviii) SHALL BE APPLICABLE FOR WORKS OF ESTIMATED VALUE OF OVER Rs.50 LAKHS.

xix) **Setting Out:** The contractor shall be responsible for the contract and proper setting out of the works and correctness of the position, reduced levels, dimensions and alignment of

all parts of the work including marking out the correct lay out in reference to the permanent bench mark and reference points. Only one permanent bench mark and basic reference lines shall be marked and shown to the contractor as basic data.

The contractor shall have all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of work any error is detected in respect of the position, levels, dimensions or alignment of any part of the work, the contractor on being required to do so by the Engineer-in-Charge or his representative shall at the expenses of the contractor rectify such errors to the satisfaction of Engineer-in-Charge unless such error is due to incorrect data supplied by the Engineer-in-Charge.

xx) On receipt of Letter of Acceptance of Tender / Work Order the contractor shall forthwith Register and obtain License from the competent authority under the Contract Labour (Regulation & Abolition) Act 1970, the Contract Labour (Regulation & Abolition) Central Rules, 1971 and submit certified copies of the same to the Engineer-in-Charge and the Principal Employer.

xxi) The contractor shall be registered with the concerned State Govt. and the Central Govt. in respect of Sales Tax Act and the certificate having details of Registration No., period of validity etc. should be submitted to the Engineer-in-Charge.

xxii) The contractor shall, in connection with works, provide and maintain, at his own cost, all lights, security guards, fencing when and where necessary as required by the Engineer-in-Charge for the purpose of protection of the works, materials at site, safety of workmen and convenience of the public.

xxiii) All materials (e.g. stone, moorum and other materials) obtained in the course of execution of the work during excavation and dismantling etc. shall be the property of the company and the same may be issued to the contractors, if required for use in the works at the rates to be fixed by the Engineer-in-Charge.

xxiv) Unless otherwise specifically provided for, dewatering of excavation pits, working areas etc. shall be the contractor's responsibility and is to be carried out at his own cost as per instructions of EIC. The rates quoted by the contractor shall be deemed to include the dewatering costs.

xxv) Approval by the Nodal Officer/Engineer-in-Charge or his nominee: The contractor shall submit specifications and drawings showing the proposed temporary work to the Nodal Officer/Engineer-in-Charge or his nominee, who is to approve them if they comply with the specifications and drawings.

The contractor shall be responsible for design of Temporary Works.

The Nodal Officer/Engineer-in-charge or his nominee's approval shall not alter the contractor's responsibility for design of the Temporary Works.

14. Defects Liability Period:

In addition to the defect/s to be rectified by the contractor as per terms of the contract/ work order, the contractor shall be responsible to make good and remedy at his own expense the defect/s mentioned hereunder within such period as may be stipulated by the Engineer-in-Charge in writing:

a) Any defect/defects in the work detected by the Engineer-in-Charge within a period of 6 (six) months from the date of issue of Defect Liability certificate / completion certificate.

b) In the case of building works or other works of similar nature any defect in the work detected by the Engineer-in-Charge within a period of 6 (six) months from the date of issue of Defect Liability certificate/ completion certificate or before the expiry of one full monsoon period i.e. June to September whichever is later in point of time.

14.1 A programme shall be drawn by the contractor and the Engineer-in-Charge for carrying out the defects by the contractor detected within the defect liability period and if the contractor fails to adhere to this programme, the Engineer-in-Charge shall be at liberty to procure proper materials and carry out the rectifications in any manner considered advisable under the circumstances and the cost of such procurement of materials and rectification work shall be chargeable to the contractor and recoverable from any of the pending dues of the contractors.

The defect liability period can be extended by the company on getting request from the contractor only for valid reasons.

There will be no defect liability period for works like Grass Cutting, Jungle Cutting, Surface Dressing & any other work of similar nature to be decided by the Engineer-in-Charge.

15. Operating and Maintenance Manual:

If “as built” drawings and/or Operating and Maintenance Manual are required the contractor shall supply them by the dates as per instruction of the Engineer-in-charge.

If the contractor does not supply the drawings and/or Manual by the dates as stated above, or they do not receive the Nodal Officer or his nominee’s approval, the Nodal Officer or his nominee shall withhold the amount as stated in the agreement.

16. Settlement of Disputes:

It is incumbent upon the contractor to avoid litigation and disputes during the course of execution. However, if such disputes take place between the contractor and the department, effort shall be made first to settle the disputes at the company level.

The contractor should make request in writing to the Engineer-in-charge for settlement of such disputes/ claims within 30 (thirty) days of arising of the cause of dispute/ claim failing which no disputes/ claims of the contractor shall be entertained by the company.

Effort shall be made to resolve the dispute in two stages.

In first stage dispute shall be referred to GM / HoD of the concerned department for the tenders of HQ and to the Regional Director of the respective Regional Institute of CMPDIL for the tenders of RIs. If difference still persist the dispute shall be referred to a committee constituted by the owner. The committee shall have one member of the rank of Director of the company who shall be chairman of the committee.

If differences still persist, the settlement of the dispute shall be resolved in the following manner:

Disputes relating to the commercial contracts with Central Public Sector Enterprises / Govt. Departments (except Railways, Income Tax, Customs & Excise duties)/ State Public Sector Enterprises shall be referred by either party for Arbitration to the PMA (Permanent Machinery of Arbitration) in the department of Public Enterprises.

In case of parties other than Govt. Agencies, the redressal of the dispute may be sought through Arbitration (THE ARBITRATION AND CONCILIATION ACT, 1996 as amended by AMENDMENT ACT of 2015).

Settlement of Disputes through Arbitration:

If the parties fail to resolve the disputes/ differences by in house mechanism, then, depending on the position of the case, either the employer/ owner or the contractor shall give notice to other party to refer the matter to arbitration instead of directly approaching Court.

The contractor shall, however, be entitled to invoke arbitration clause only after exhausting the remedy available under the Clause 40.

- iii. In case of parties other than Govt. agencies, the redressal of disputes/ differences shall be sought through Sole Arbitration as under.

Sole Arbitration:

“In the event of any question, dispute or difference arising under these terms & conditions or any condition contained in this contract or interpretation of the terms of, or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of a person, appointed to be the arbitrator by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be). The award of the arbitrator shall be final and binding on the parties of this Contract.”

- c) In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, or his/her award being set aside by the court for any reason, it shall be lawful for the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.
 - d) It is further a term of this contract that no person other than the person appointed by the Competent Authority of CIL / CMD of Subsidiary Company (as the case may be) as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to Arbitration at all.
- iv. In case of Govt. agencies, the redressal of disputes/ differences shall be sought through Sole Arbitration as under.

Sole Arbitration:

“In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred to either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by secretary to the Govt. of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may take further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the parties finally and conclusively. The Parties to the dispute shall equally the cost of arbitration as intimated by the Arbitrator”.

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ADDITIONAL TERMS AND CONDITIONS

The following additional terms and conditions are also acceptable to the company. The tenderers are requested not to quote any further additional conditions in the tender.

1. Mobilization Advance

- i) No mobilization advance is payable for works whose estimated value is less than Rs.100.00 lakhs.
- ii) In the case of turnkey work whose estimated value is more than Rs.100 lakhs a maximum of 10 % of the total contract value of work will be paid as mobilization advance subject to submission of Bank Guarantee equal to 110% of the advance amount. The mobilization advance shall be paid in two installments.
- iii) In case of other civil works valued more than Rs.100 lakhs mobilization advance will be paid upto 5% of the contract value subject to submission of Bank Guarantee equal to 110% of the advance amount. The mobilization advance shall be paid in two installments.
- iv) However, such mobilization advance will carry interest on the basis of CIL's borrowing rate under cash credit arrangement as varying from time to time.
- v) The mobilization advance shall be recovered from the bills of the contractor from the 2nd running account bill onwards @ 20% of the advance amount paid and full recovery would be ensured before or with the Final Bill.
- vi) The value of Bank Guarantee may be reduced to the extent such advance is recovered by the company subject to the conditions that the value of Bank Guarantee amount at any time is more than the recoverable outstanding advance. Bank Guarantee shall be irrevocable and from a Scheduled- Bank acceptable to the Company.

2. Application of Price Variation Clause.

No escalation shall be payable for the work on any account.

SAFETY CODE.

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding of staging more than 3.6 m (12ft). above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm (3ft) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft) above ground level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm (3ft).
5. Safety means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m (30ft) in length while the width between side rails in rung ladder shall in no case be less than 20 cm (11 $\frac{1}{2}$ ") for ladder upto and including 3 m (10ft) in length. For longer ladders, this width should be increased at least $\frac{1}{4}$ " for additional 30 cm (1ft.) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. Excavation and Trenching : All trenches 1.2 m (4ft) or more in depth, shall at all times be supplied with at least one ladder for each 30 m. (100 ft.) in length or fraction thereof. Ladder shall extend from bottom of the trench to at least 90 cm (3ft) above the surface of the ground. The side of the trenches which are 1.5 m (5ft) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m (5ft) of the edges

of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

7. Demolition : before any demolition work is commenced and also during the progress of the work,

i. All roads and open areas adjacent to the work site shall either be closed or suitably protected.

ii. No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

iii. All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned:- The following safety equipment shall invariably be provided.

i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.

iii) Those engaged in welding works shall be provided with welder's protective eye-shields.

iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measures are adhered to:-

a) Entry for workers into the line shall not be allowed except under supervision of the Engineering

Assistant or any other higher officer.

b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.

c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.

d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.

e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.

f) The area should be barricaded or condoned of by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.

g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.

h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.

i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.

j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.

k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

l) The workers engaged for cleaning the manholes / sewers should be properly trained before allowing to work in the manhole.

m) The workers shall be provided with Gumboots or non-sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary).

They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.

n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.

o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.

p) The extents to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.

vi) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:-

a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.

b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.

c) Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

d) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.

e) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.

f) Overall shall be worn by working painters during the whole of working period.

g) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.

9. When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:-

i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.

iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

iv) In case of departmental machines, the safe working load shall be notified by the Electrical

Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.

12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

14. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or

Engineer-in-Charge of the department or their representatives.

16. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

TECHNICAL SPECIFICATIONS

Technical Specifications to be followed

Civil Engineering Works

Latest CPWD specification shall be adopted. Presently CPWD specifications 2009 Vol. I & II is in vogue which may be followed. These specifications cover all type of Building Works. The specifications are available as a printed document issued by CPWD and also in soft copy PDF format in CPD website.

Electrical Engineering Works

Latest CPWD specification shall be adopted. Presently the following are in vogue:

| Part No. | Description Year Of Issue | Year Of Issue |
|----------|--|---------------|
| I | Internal | 2013 |
| III | Lifts And Escalators | 2003 |
| V | Wet Riser And Sprinklers System | 2006 |
| VI | Heating, Ventilation And Air Conditioning Works | 2005 |

*Roads And Bridges

Standard specifications issued by ministry of surface transport may be followed. Presently MORTH

Specifications on roads and bridges 2013 is available. These specifications cover exhaustively various roads and bridge works. (Applicable for important and major roads.)

*Delete if not applicable.

COMPLIANCE OF LABOUR LAWS

1. Labour

- 1.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, their payment, housing, feeding and transport.

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by contractor on the site and such information respecting contractor's equipment as the Engineer may require.

- 1.2 The work has to be carried out through regular employees as far as possible and the Wages thereof are to be made in their bank accounts

2. Compliance with Labour Regulations

- 2.1 During continuance of the contract, the contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law, including rules, regulations, bye laws that may be passed or notification that may be issued under any labour law in further either by the State or Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The contractor shall be held responsible in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications bye laws/acts/rules/regulations/including amendments, if any on the part of the contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the contractor and the sub-contractor in no case shall be treated as the employees of the Employer at any point of time.

- 2.2 SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENT ENGAGED IN BUILDING AND OTHER CONSTRUCTION / CIVIL WORKS.

- a) **Workmen Compensation Act, 1923 :-** The act provides for compensation in case of injury by accident arising out of and during the course of employment.

- b) **Payment of Gratuity Act, 1972 :-** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days' wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) **Employees PF and Miscellaneous Provisions Act, 1952 :-** The Act provides for monthly contributions by the employer and workers @ 12 % or as applicable. The benefits payable under the Act are :
 - i. Pension or family pension on retirement or death as the case may be.
 - ii. Deposit linked Insurance on the death in harness of the worker.
 - iii. Payment of PF accumulated on retirement/death etc.
- d) **Maternity Benefit Act, 1951 :-** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act, 1970 :-** The Act provides for certain welfare measures to be provided by the contractor to contract labour and in case the contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the contractor is required to take license from the designated Officer. The Act is applicable to the establishments or contractor of Principal Employer if they employ 20 or more contract labour.
- f) **Minimum Wages Act, 1948 :-** The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employment.
- g) **Payment of Wages Act, 1936 :-** It lays as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act, 1979 :-** The Act provides for payment of equal wages for work of equal nature of Male and Female workers and for not making discrimination against Female employee in the matters of transfers, training and promotion etc.
- i) **Payment of Bonus Act, 1965 :-** The Act is applicable to all establishments employing 20 or more workmen. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus to be paid to the employee getting Rs. 2500/- per month to about upto Rs. 3500/- per month, shall be worked out by taking wages as Rs. 2500/- per month only. The Act does not apply to certain establishments. Some of the State Governments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of the Act.
- j) **Industrial Disputes Act, 1947 :-** The Act lays down the machinery and procedure

for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

- k) **Industrial Employment (Standing Orders) Act, 1946 :-** It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) **Trade Union Act, 1926 :-** The Act lays down the procedure for registration of trade unions of workmen and employees. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act, 1986 :-** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building Industry.
- n) **Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act, 1997 :-** The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided, certain facilities such as Housing, Medical-Aid, Travelling expenses from home upto the establishment and back etc.
- o) **The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996 :-** All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as canteens, First-Aid facilities, Ambulance, Housing accommodation for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act, 1948 :-** The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.