

URANIUM CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISES)
CIN : U 12000 JH 1967 GOI 000806
JADUGUDA MINES, DIST: SINGHBHUM EAST
JHARKHAND - 832102

TENDER DOCUMENT

FOR

Supply, installation and commissioning of 25 KW & 15 KW Solar
Photovoltaic Power Plant at Jaduguda

URANIUM CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISES)
CIN : U 12000 JH 1967 GOI 000806
PO-JADUGUDA MINES, DISTT-SINGHBHUM (EAST)
JHARKHAND – 832 102.

TENDER DOCUMENT

FOR

Supply, installation and commissioning of 25 KW & 15 KW Solar
Photovoltaic Power Plant at Jaduguda

1. To be submitted on or before 3.00 PM on 05.08.2014 in the office of D.G.M. (Pers.) IRs.
2. Tenders shall be opened in presence of tenderers who may present at 3.30 PM on 05.08.2014 in the office of D.G.M. (Pers.) IRs.

Issued to M/s. _____
(Contractor)

Signature of officer issuing
the tender document : _____

Designation : _____

Date : _____

URANIUM CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)
CIN : U 12000 JH 1967 GOI 000806
P.O.: Jaduguda Mines, Dist: East Singhbhum
Jharkhand-832102

Ref: UCIL/Mill/311/461/2014

08th July, 2014

NOTICE INVITING TENDER

Sealed items rate tenders are invited in two parts (schedule of quantities in triplicate) from bonafide, resourceful, reliable, experienced and reputed local contractor for executing the following work at Jaduguda.

Sl. No	Name of the work	Earnest Money Deposit (Rs.)	Cost of Tender Document (Rs.)	Completion Time
1.	Supply & installation of Solar PV Power Plant at Jaduguda of the following ratings. a) 25 KW - 01 set. b) 15 KW - 01 set.	1,00,000/-	500/-	6 (Six) Months

Full details, terms and conditions and other specifications of the work will be available in the tender document, which can be had from the office of the DGM (Pers.) Irs. UCIL Jaduguda on all working days except Sunday and Holidays between 9.00AM to 12.00Noon and 2.00PM to 5.00PM from 14.07.14 to 24.07.14 on payment of cost of tender document (non-refundable) in cash by giving written request letter (in duplicate) for issue of tender documents along with latest sales tax, income tax clearance certificate, financial resources and past three years experience certificate.

The tenders shall be submitted in two parts. A. Part- (i) Techno-commercial part & B. Part-(ii) Price part in separate sealed envelopes, marking clearly. The earnest money shall be deposited with Part-I (Techno-commercial part). Finally both parts shall be inserted into a third cover and this third envelope shall also be sealed and properly superscribed as Name of work, NIT No. and address of the tenderer.

The NIT and tender document can be downloaded from our website: www.ucil.gov.in also. The downloaded tender document shall be accepted and the cost of tender shall be paid by the tenderers in form of demand draft drawn on SBI, Jaduguda in favour of Uranium Corporation of India Limited, Jaduguda. The same draft shall be submitted along with this tender. Fax or e-mail tenders will not be entertained.

The Last date of tender submission is 05.08.14 up to 3.00PM in the office of DGM (Pers.) Irs. UCIL, Jaduguda Mines. Only Part-I (Techno-commercial bid) will be opened on the same day at 3.30PM in the office of DGM (Pers.) Irs in presence of tenderers who may like to be present. Tenders received without Earnest Money Deposit will be summarily rejected. The qualified tenderers in Part-I will be informed accordingly for opening of Part-II (Price part) on later date.

If any of the above date is declared holiday, the event scheduled on that day will be automatically shifted on the next working day. The successful tenderer shall have to comply with provisions of contract labour (Regulation & Abolition) Act, 1970 and EPF & MP Act, 1952 and rules framed there under. The corporation reserves the right to accept or reject any or all tenders either in full or part or to spilt up the work, if necessary without assigning any reasons therefore.

For Chairman and Managing Director
Uranium Corporation of India Limited

Distribution:

Notice Boards: S.O (Mill)/Civil (Mill/Mines)/T.O (Mill/Mines)/Adm. Bldg. (Old)/Estate Office/
Narwapahar/Turamdih/Bhatin Mines/Relevant Subject File & Folder/File no.-501

D.G.M. (Accounts)/HOD(F) }
D.G.M.(Pers.) Irs. } For information and please depute your
Gen. Adm. } representative during tender opening

CC: Company Secretary – For display the NIT in the Company Website

URANIUM CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISES)
CIN : U 12000 JH 1967 GOI 000806
PO- JADUGUDA MINES, DIST.-SINGHBHUM (EAST)
JHARKHAND – 832102.

(I N D E X)

I	NOTICE INVITING TENDER
II	GENERAL CONDITIONS OF CONTRACT
III	SPECIAL CONDITIONS OF CONTRACT
IV	SCOPE OF WORK & TECHNICAL SPECIFICATION
V	CONTRACT LABOUR EMPLOYMENT ACT & RULES (ANNEXURE-A)
VI	SAFETY OF CONTRACTOR'S EMPLOYEES (ANNEXURE-B)
VII	FORMAT FOR PRICE PART

(I) Uranium Corporation of India Limited
PO - Jaduguda Mines,
Distt - Singhbhum (East),Jharkhand -832102

(GENERAL CONDITIONS OF CONTRACT)
Mill Division

1. Working Hours :-
From 7.00 A.M. to 5.00 P.M. on all working day(s) (excluding Sunday & Holidays). However, contractor shall be allowed to work beyond 5.00 P.M. or round the clock on working days or on Sunday & holidays depending upon the urgency but only after obtaining permission from the Engineer-Incharge, UCIL. For this contractor shall submit a letter in duplicate for permission to work beyond normal working hours. No extra claims shall be entertained for working beyond normal duty hours in such urgency.
2. Commencement of work :-
Work will commence within 2 (two) weeks from the date of issue of work order. Contractor will report to the Engineer Incharge, UCIL immediately on receipt of work order for further instructions for carrying out the job. A letter duly signed under contractor's official seal as a token of acceptance of all terms & conditions of work order must reach in the office within 2 (two) days of receipt of the order. Contractor shall submit work commencement letter in duplicate to the Engineer Incharge -UCIL within 2 (two) days of start of work at site as statutory requirement for onward transmission to the competent authority, Govt. of India, Ministry of Labour, Jharkhand. The work order no. & date as well as name of work must be quoted in all correspondences.
3. Completion period of contract :-
Period of contract will be applicable as mentioned in the N.I.T. / Enquiry Letter, special conditions of contract, scope of work, etc. of contract document (Date of commencement will be reckoned from the date of start of work at site).
4. Payment :-
Bill (s) will be paid as mentioned in clause "Payment Terms" of the special conditions of contract, scope of work etc. of contract document. Payment will be released after satisfactory completion of the work in all respect and certification by the Engineer Incharge, UCIL within 30 days of submission of clear bill(s) in 4 (Four) copies in tenderer's letter head. Contractor shall also mention work order no., date as well as name of work and actual date of commencement of work in their every bill (s). Final bill will be released only after submission of Labour Report / Annual Return (in prescribed format) (in the month of January & after completion of whole work) and work completion letter in duplicate by the contractor.
5. Earnest Money Deposit / Security Money Deposit :-
Earnest Money or Security Money shall be deposited by way of demand draft drawn in favour of "URANIUM CORPORATION OF INDIA LIMITED" payable at Jaduguda Branch of State Bank of India [Jaduguda Branch Code no 0227] or in cash in Accounts Department, UCIL, if applicable. Tenders received without E.M.D. will be summarily rejected. Earnest Money Deposit shall be converted and adjusted into Security Deposit in the case of successful tenderer. Security Money shall be deposited by the contractor (as mentioned in special conditions of contract) before commencement of work at site. E.M.D. and S.D. shall not bear any interest. The earnest money of unsuccessful tenderers will be refunded on written request (in duplicate) to the Engineer In-charge after commencement of work under this contract. Security Deposit will be refunded on written request in duplicate to the Engineer In-charge after satisfactory completion of the work or defect liability/guarantee period as applicable. Failure to carry out the awarded work shall entail forfeiture of the earnest money and security money entirely.

6. Insurance :-

The contractor shall ensure & maintain insurance against his liability for accident or injury to workmen or machineries used for the work and shall submit 2 (two) copies of the policy & receipt (s) of premiums paid or satisfactory evidence of insurance coverage at their own cost valid for whole contract period at a time for all the persons to be engaged to the Engineer In-charge, UCIL before the commencement of work. Contractor shall also submit the proof of renewal of the same policy at least 2 (two) days before the expiry date of the previous policy to the Engineer In-charge, UCIL. The contractor will not be allowed to carry out any activity without necessary insurance coverage (mentioning working height depend upon the job requirements and as per insurance rules) of their persons. Insurance policy shall also indemnify UCIL against any claim raised by the injured/affected workmen or his family.

7. Safety Rules & Regulations for contractor's employees :-

UCIL's Safety Rules & Regulations for contractor's employees as given in the Annexure-B will be complied strictly during the execution of various works at site. Contractor has to follow the Safety Rules & Regulations as per Indian Electricity Rules to do the electrical works. UCIL shall not provide any safety appliances and tools & tackles under any circumstances. Contractor shall ensure the use of safety appliances during the work at site. Contractor will take full safety measures and arrange the necessary safety gadgets / appliances, tools & tackles, helmet (Yellow colour), gumboot, safety belt, shockproof shoe, safety suit / uniform, goggles, gloves, apron, safety net, nose guard, ladders, trolley, wheel borrow etc. at their own expense approved by the Safety Officer (Mill), UCIL so as to ensure that no damage, loss or injury to corporation's personnel, contractors' personnel, third party or equipment are caused due to the work being carried out by contractor. Contractor must report in writing (duplicate) to the Engineer-In-charge or Safety Officer (Mill)-UCIL immediately on becoming aware of any accident at their site. Safety Officer(Mill) will be the competent authority to stop the work or remove the persons from job, if contractor fails to provide personal protective equipments before the commencement of work at their own cost during work execution period.

8. Security Rules & Regulations and Entry Passes :-

Contractor shall strictly abide by the prevailing security rules and regulations and also to be enforced by UCIL time to time. Entry to the works premises is strictly restricted and only bonafide pass (permission) holders are allowed. The contractor will have to submit the details of the persons to be employed for this work within two days of award of work. The contractor will be allowed to start the work only after submission of the details in prescribed verification forms (in duplicate) along with passport size photographs for each labourer separately to the Competent Authority, UCIL. Contractor will make necessary Entry Passes from concerned officials of CISF Unit, UCIL sufficiently in advance.

9. Safe Transportation / Storage of Materials : -

Contractor will have to make their own arrangement for to and fro transportation of men, material and machine, etc. including loading & unloading / lifting / shifting at their own expense under this contract. Contractor will also be responsible for safe keeping of materials at their own cost issued by UCIL either free of cost or chargeable basis. The contractor shall build a suitable stores at his own cost for safe keeping of materials as per instruction of the Engineer-In-charge -UCIL, if required or UCIL will provide the same subject to availability. In case contractor is allowed to construct any structure, contractor shall have to demolish and clear the same before handing over the completed work. On completion of work or during the course of work all materials issued to the tenderer should be accounted for. A statement of material issued / consumed during the month & record of job done during a day are to be submitted by the party to the Engineer-In-charge, UCIL.

For this contractor will maintain a register (record) at his own cost as per direction. Tenderer will issue & transport all material from UCIL–Stores / Godown to work site in safe custody. Contractor shall have to return / store all material including surplus / dismantled material from their work site to a specified place in UCIL premises and cut the unused dismantled materials in small pieces as per direction / instruction of the Engineer In-charge, UCIL and a material reconciliation statement to be submitted alongwith the final bill. If contractor fails to remove the scrap or materials within 7 (seven) days, it will be done through any other agency at contractor's risks & costs. And work place should be kept clean and all dismantled, left out material should be disposed properly every day as per instruction of the Engineer-In-charge, UCIL. Corporation have the right to retain the final bill till site clearance is completed.

10. Material (s) Supply by UCIL and Contractor :-

The corporation will not provide any accommodation, tools and tackles, men, material, machineries, transport, forklift, stationery (writing materials), scaffolding / shuttering etc. for this work. No facility / supply other than mentioned in special conditions of contract, scope of work and schedule of items will be provided by UCIL as free or on chargeable basis. *If any other materials / facilities that are not covered under this tender but are required to complete the work will have to be arranged by the contractor at their own expense.* No extra claim shall be entertained against the materials that are not covered under this contract. But contractor shall submit free samples (materials) for approval, if required and materials approved by the Engineer-In-charge, UCIL shall only be used. UCIL reserves the right to reject goods which are not as per specification and in case of rejection contractor shall have to replace material free of cost.

11. Tax & Duties :-

The quoted rate(s) should be inclusive of all taxes, duties, insurance charges and personnel protective equipments charges including service tax, if applicable. And imposition of any new taxes / duties by the State Govt. or Central Govt. during the contract execution period will also be paid by the contractor. Hence, no other taxes, duties and royalty, etc. would be paid extra. Offers with price variation clause will be outrightly rejected.

12. Price Escalation :-

No escalation on any account shall be payable and price quoted shall be firm till completion of the work under this contract.

13. Labour Licence :- Labour Licence for the workmen to be engaged for this work shall be obtained by the contractor as per provision of Contract Labour (Regulation and Abolition) Act,1970 as may be applicable and as amended from time to time.

14. License for engaging Inter-State Migrant Workmen :-Contractor shall obtain licence under the Inter - State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, if they engage on any day of the preceding 12 months (as defined under section 2 (e) of the said act), 5 or more inter state migrant workmen for execution of the contract. Contractor shall have to submit declaration also, in case they have not engaged inter state migrant workmen.

15. Labour Acts & Rules :-

The contractor shall (in respect of labourers employed by him) strictly comply with provisions of the following Act & Rules made thereunder in regard to all matters provided therein or any modifications thereof or any other law relating thereto from time to time.

- i) Workmen Compensation Act-1923,
- ii) Payment of wages Act-1936
- iii) Employees Liability Act,1938

- iv) Industrial Dispute Act, 1947
- v) Minimum Wages Act, 1948
- vi) Employees State Insurance Act, 1948
- vii) Mines Act, 1952
- viii) EPF & MP Act, 1952
- ix) Maternity Benefit Act, 1961
- x) Contract Labour (Regulations & Abolition) Act, 1970
- xi) Inter - State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979
- xii) All statutory provisions of Atomic Energy Regulatory Board

16. Annual Labour Return :-

Contractor shall have to submit a letter of work commencement / completion IMMEDIATELY *in duplicate* in prescribed format and shall also deposit labour report / annual return in Format No.-XXV in the first week of January every year (*Format to be obtained from Site Office - Mill*) to the Engineer-In-charge- UCIL as statutory requirement for onward transmission to the Competent Authority, Govt. of India, Ministry of Labour, Jharkhand.

17. Labour Employment Conditions for executing work :-

As given in clauses 1 to 13 in Annexure-A.

18. Work Measurement & Inspection / Work Instructions :-

It is to be done jointly as per schedule of items & scope of work etc. by the Engineer-In-charge, UCIL and the contractor or his authorised representative. The measurement thus taken will be final and acceptable to both parties. In case contractor's representative is not available for measurement, the concerned Engineer-In-charge-UCIL will carry out measurement and that will be binding to the contractor. Weighment recorded at UCIL weigh-bridge or estimated quantity duly certified before the start of work on daily basis by the Engineer-In-charge, UCIL will be final. Contractor will submit copy of weighment cards, slips, material gate passes etc. to the Engineer-In-charge on daily basis and maintain registers of record at their own cost and shall also submit record register on periodic basis for verification and signature. Time to time Engineer-In-charge, UCIL shall inspect the site, tools & tackles of the contractor and detailed work instructions will also be given by the Engineer-In-charge, UCIL.

19. Jurisdiction / Dispute :-

Any action / dispute arisen out of or from this work order shall be subject to the jurisdiction of court of law at Jamshedpur only, irrespective of anything to the contrary mentioned in the tender / quotation. Any statutory obligation has to be made by the contractor. Tenderer will extend all help.

20. Penalty (Liquidated Damage): -
If the progress of work is not found satisfactory or the contractor fails to complete the works within the time frame of completion, the corporation reserves the right to impose penalty / liquidated damage @ ½ % per week maximum upto 5% on the awarded / contract value for each complete week between the time for completion and actual date of completion. The amount of penalty / compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the corporation. And after ten week from the actual date of completion of whole work if the contractor fails to complete the work, corporation reserves the right to terminate the contract and get the balance work done through any other agency at contractor's risks and costs.
21. Force Majeure :-
In case of closure / breakdown / strike / lockout or any other causes beyond control of the corporation preventing normal operation, the corporation shall be at liberty to extend the time for completion or cancel the order without any financial liability whatsoever.
22. Visit of site and locality prior to quote rate (s) :-
Before submission of tender, the tenderers are advised to make themselves fully conversant with the SCHEDULE OF ITEMS, SCOPE OF WORK, SPECIAL CONDITIONS OF CONTRACT, GENERAL CONDITIONS OF CONTRACT, ANNEXURE-A (LABOURERS) & ANNEXURE-B (SAFETY OF CONTRACTOR'S EMPLOYEES), if any. Contractor shall keep one copy of this tender documents for reference purpose before submission of tender. They are also advised to physically visit the site to understand the site working conditions, nature of jobs prior to quote for the same. Also request to inspect the motor / machine / fans / AC and other equipments etc.
23. Submission and opening of Tender / Bid :-
Tender / quotation / bid shall be submitted in a manner asked strictly in accordance with the tender terms & conditions laid down in the Enquiry / Tender document giving full details necessary for assessing their offer. Contractor shall sign and stamp on each pages of this tender documents. Canvassing in any form is strictly prohibited and disqualify the tenderer for the tender submitted for. Tenders will be rejected, if sealed tender envelopes are not superscribed on the top as per instructions given. Tenders will not be received after due date and time. Tenders will not be accepted by Fax. Tenders submitted without earnest money deposit will be summarily rejected. If any of the date under this contract is declared holiday, the event scheduled on that day will be automatically shifted on the next working days. Sealed tenders / quotations in triplicate should be submitted in two parts / envelopes as given below (or as mentioned in our enquiry letter) to the Competent Authority- UCIL. The above envelopes shall be superscribed on the top as Part-I (Techno Commercial Bid and E.M.D.) and Part-II (Price Bid) respectively with NIT / Enquiry No. & Date / full name of the work / Tender Opening Date / Name & Address of the tenderer. No two or more concerns in which an individual as a proprietor or partner shall submit tender for the execution of the same works, if they do so, all such tenders shall be liable to be rejected.

1) *Part-I (Techno Commercial Bid and E.M.D.)* envelope shall contain papers / proof of earnest money deposit along with tenderer's covering letter (in duplicate) mentioning the acceptance of all terms & conditions of tender document for executing the subject work. Contractor shall also attach tender document in original (scope of work, special conditions of contract, general conditions of contract, UCIL's labour and safety rules), xerox copies of PAN Card, TIN (Tax Identification Number) Registration Certificate, work orders regarding previous three years experience, successful completion certificates, statement of present status mentioning the value of work in detail, list of tools & tackles, technical personnel, transports and other equipments, balance sheet, income tax clearance certificate for last three financial years, if any & any other documents as deemed necessary (*duly signed and stamped on each page*).

2) *Part-II (Price Bid)* envelope shall contain papers of duly signed and stamped price / rate proposal only in triplicate along with tenderer's covering letter in duplicate. Offers with price variation clause will be out rightly rejected. Tenderer shall quote rates(s) / price(s) as per price format (schedule of items and quantities) enclosed along with tender document. Otherwise, offers of parties quoting without this price format will be out rightly rejected.

The tenders after receipt shall be opened on the stipulated date and time by the Chairman and Managing Director or his representative in presence of the intending bidders. The price part of the tender will be opened only after evaluation and scrutiny of Techno-Commercial Bid & E.M.D, if required and incomplete offers are likely to be rejected.

24. Deviation :-

Any deviation from the tender shall be clearly mentioned in the Part-I (Techno Commercial Bid) under the heading "Deviation".

25. Rate (s) in figures and words :-

The tenderer should mention their price / item rates in figures as well as in words. In case of any dispute / ambiguity, the price / rate mentioned in words shall be considered as final. Insertions, postscripts, additions and alterations shall not be recognised unless confirmed by the tenderer's signature. Tenderer shall quote rates(s) / price(s) in triplicate duly signed and stamped on each page as per price format (schedule of items and quantities) enclosed alongwith tender document. Otherwise, offers of parties quoting without this price format will be outrightly rejected. Contractor shall have to submit price / rate proposal in a separate sealed cover marked Part-II (Price Bid).

26. Validity:-

The offer should remain valid for a minimum period of 3 (three) months from the date of opening of the final price part. The Tenderers shall not be allowed to increase, amend or withdraw his tender within this period and if he does so the earnest money deposit and security deposit may be forfeited.

27. Documents not transferable :-

Tender documents are not transferable. These tender documents are the property of corporation. Contractor shall keep one copy of this documents at site in good condition for inspection and use by the Engineer-In-charge, UCIL or his representative or by other inspecting officer. None of these documents shall be used by the contractor for any purpose other than that of this contract.

28. Variation in Quantity of items :-
The quantity mentioned under the “schedule of item (s) and quantities” of this tender is tentative. The actual quantity may vary from that indicated in the tender document due to actual conditions of the site or due to other reasons. The contractor shall carry out all additional work upto the total variation of $\pm 10\%$ of the awarded value. The other terms & conditions and rate (s) shall remain firm within this limit.
29. Indemnity :-
Contractor will fully indemnify the corporation against all responsibility and whatsoever arising out of accident / injury to contractor’s workmen, third party or to corporations’ personnel and properties.
30. Muster Roll :-
The contractor has to submit a copy of the muster roll every week to the Engineer- In-charge / Site-In-charge , UCIL after making minimum rate of wages payable to different categories of workmen covered under Minimum Wages Act,1948 in presence of the representative of UCIL & contractor will also make arrears payment if any, under intimation to the Engineer-In-charge-UCIL.
31. Temporary work closure :-
If the work site is required to be suspended for some days / period because of non-availability of shutdown or any reason, contractor may close the site temporarily under written intimation *in triplicate* to the Engineer–In-charge, UCIL. During the above period, the contractor will be in touch with the Engineer-In-charge- UCIL for further instructions, if any & contractor will provide their contact address with phone numbers. No extra claim against any idling of contractor’s site crew / staff & machineries, etc. will be entertained.
32. Welfare and Health of Contract Labour :-
The contractor shall have to provide the facilities under the provision of “Contract Labour (Regulation and Abolition) Act, 1970 – Section – 16,17,18 and 19,Chapter -V , Welfare and Health of Contract Labour”.
33. Contract Agreement :-
Contract Agreement should be executed in prescribed format on a non-judicial stamped paper within 2 (two) weeks from the date of issue of work order / L.O.I. However, no payment will be made without execution of contract agreement.
34. Training, etc. :-
Contractor shall have to bring all their labourers for necessary training & guidance in *Mill Training Centre* at their own cost before actual commencement of the work. The work shall be carried out with the help of experienced / skilled persons or ITI with NCVT certificate holders or equivalent, etc. And Supervisor having Supervisory Certificate of Competency is to be engaged for supervision or as per direction of the Engineer-In-charge. Persons holding H.T. Licence of relevant section as per I.S. will be allowed to do the job of electrical works. Contractor shall have to submit a letter of authorisation (in duplicate) in favour of his experience / qualified and responsible representative as “Site Supervisor” to look after the work site and receive official letters and instructions or to issue / receive materials from stores in absence of main contractor at site.

35. Award of Contract :-
The Corporation reserves the right to accept or reject any or all tender either in full or part or to split up the work, if necessary, without assigning any reasons therefore.
36. Medical facilities :-
The contractor shall be fully responsible for any first aid / emergency treatment or serious medical treatment to his employees. UCIL will provide medical facilities on chargeable basis to contractor's employees.
37. Defects Liability Period :-
The defect liability period / guarantee period for this job shall be from the certified date of handing over of job, if applicable. The contractor shall rectify the defects, if any, detected / reported during the guarantee period under this tender from the certified date of completion of work. The contractor shall be responsible to make good and remedy at his own expense within such period, as may be stipulated by the Engineer-In-charge before the expiry of the guarantee period.
38. NOTE - In addition to above conditions, the other terms & conditions shall be applicable as per enclosed special conditions of contract & scope of work under this tender document

SPECIAL CONDITIONS OF CONTRACT

Sub: Supply & installation of 25 KW & 15 KW
Solar PV Power Plant at Jaduguda

1. Completion Time :-06 (Six) months from the date of issue of work order.
2. Earnest Money/Security Money Deposit:-Security Deposit equivalent to 10% of the ordered value is required to be deposited under this contract. In which, the initial security deposit (including earnest money already deposited) equivalent to 5% of the ordered value is required to be deposited in Accounts Department-UCIL in cash or demand draft before the start of the work. In addition to the above, further balance security deposit (5%) will be deducted from the running account bills @ 10 % of the gross value of every R.A. Bills till the full amount of security deposit equivalent to 5% of the ordered value is recovered by the corporation. 50% Security Deposit will be refunded on written request in duplicate to the Engineer-In-Charge after satisfactory completion of the work & balance 50% will be refunded after completion of the defect liability period.
3. Payment Terms:
 - l) a) 80% of the supply value with 100% of taxes and duties will be paid after supply of material in good condition at site.
 - b) Balance 20% of supply value will be paid after successful commissioning.
 - c) Erection, testing and commissioning cost will be payable only after commissioning.
4. For external wiring the work shall be carried out with the help of skilled electricians / ITI with NCTVT or persons with wireman certificate.
5. Work may have to be carried at a height of 08 mtrs. from the floor.
6. The contractor has to strictly follow the "Vendor List" for make of the materials to be used in this job. Prior approval to be taken from UCIL for the items that are not covered in Vendor list.

Vendor list

1. PVC wire	Finolex / Havells.
2. Switch socket	Anchor
3. MCB	Havells / Anchor
4. Combined MCB and Metal clad plug socket	Anchor
5. Fuse / Fuse Base	EE / GE
6. Terminal block	Elmex

7. Defect Liability Period / Guarantee Period: The job shall be guaranteed for proper performance for 12(Twelve) months from the date of its handover. In case of failure within guarantee period the contractor will have to attend to the defect, free of cost and rectify it to the satisfaction of Engineer-in-Charge.
8. Transportation of man and material will have to be arranged by the contractor with his own mean / transport.
9. Any other material which is not mentioned in tender by UCIL but is required for completion of job will have to be arranged by contractor free of cost
10. The contract may further be extended depending upon discretion of the management.
11. The above terms & conditions shall be a part of the contract also and shall supersede all other stipulations / conditions to the contrary. Please refer enclosed general conditions of contract also.
12. WCT, IT, Service Tax and other taxes if applicable will be deducted from the contractors bill. Hence before quoting, the contractor must consider the above.
13. If in any case, fittings as per Cat. No. as mentioned in the schedule of items is not available in the market, then equivalent fittings of same make after due approval from UCIL, is to be supplied.
14. To get the subsidy amount from Central / State Government preparation of necessary documents, drawings & submission of the same to appropriate authority, follow up etc. shall be within the scope of the bidder. Only covering letter will be signed by UCIL.
15. The bidder must quote only in the Format given in the price part.
16. As an acceptance of terms and conditions, the tender document duly signed and sealed on every page should be submitted. Offers not satisfying the same will be liable for rejection.
17. Bidders should have well established network of service centres through out the state and should have adequately trained staff available at service station for repair and maintenance of Solar PV Systems.
18. Bidder will ensure that necessary spares are always available with their service centres to provide necessary after sales service to the customers during the service period.

19. Only those bidder who will satisfy one of the following conditions will only be considered for evaluation. Bids of other bidders are liable for rejection.
 - i) Only those bidders of solar lighting system who have either installed / received order for the installation of minimum 5 KW solar photovoltaic power plant in India.
 - ii) Bidders who have solar module manufacturing facility in India having minimum capacity of 100 MW & above.
20. Details of similar work done in last three years alongwith copies of the orders and certificates from the user agencies should be submitted alongwith the technical offer.
21. Offers received from only those parties having adequate infrastructure to market and provide after sales services to the state will be taken into consideration and offers received from others will be summarily rejected. Documentary evidences in support of the same should be enclosed with the offer.
22. The party should have sufficient technically qualified and well-experienced manpower for manufacturing, marketing, installation and after sales services of the systems. Brief Bio-data of the key personnel be enclosed with the offers

SCOPE OF WORK

Sub: Supply & installation of 25 KW & 15 KW Solar
PV Power Plant at Jaduguda

1. Supply, installation, testing & commissioning of 25 KW & 15 KW Solar Photovoltaic Power Plant as per enclosed Technical Specification.
2. The 25 KW SPV array to be installed at the roof of two storied AEC School building of UCIL at Jaduguda & 15 KW SPV array to be installed outside the R & M Shop of Jaduguda Mill at suitable height & where as Inverter/PCU to be installed at the ground floor & inside the school & R & M Shop. Hence, the supply & laying of required inter connecting cables shall also be within the scope of the bidder. The bidder must visit the site before quoting to have proper assessment for the materials required to complete the system.
3. Materials required to complete the system in all respect but not specifically mentioned in the specification shall be deemed to have been included in the specification.

TECHNICAL SPECIFICATIONS

SOLAR POWER GENERATING SYSTEM

I DEFINITION

The Solar Power Generating System consists of mainly three components viz. the solar photovoltaic (SPV) array, module mounting structure and the power conditioning unit (PCU)/ inverter. The SPV array converts the solar energy into DC electrical energy. The module mounting structure holds the modules in required position and the DC electrical energy is converted to AC power by the PCU, which is connected to the load. The AC power output of the inverter is fed to the AC distribution board through metering panel and isolation panel. The 415 V AC output-3Ø & N of the system can be utilized for running the load and during the absence of Solar power the load so connected shall run through the grid power available.

II PV MODULE (S)

- (i) The PV module bidder should have IEC 61215-2nd Edition and IEC 61730-2 qualification certification for PV modules. Copy to be provided with tender.
- (ii) The PV module(s) shall contain crystalline silicon solar cells.
- (iii) The power output of the system should be a minimum of 25 KW & 15 KW Modules of minimum 250 W output each or above output should be used. Photo / electrical conversion efficiency of SPV module shall be greater than 13.5%.
- (iv) All materials used shall have a proven history of reliable and stable operation in external applications. It shall perform satisfactorily in relative humidity up to 100% with temperatures between -10 Deg C and +85 Deg C and with stand gust up to 200km/h from back side of the panel. The terminal box on the module should have a provision for opening for replacing the cable, if required.
- (v) A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side.
 - a. Name of the Supplier or distinctive Logo
 - b. Model or Type No.
 - c. Serial No.
 - d. Year of make.

III EARTHING AND SURGE PROTECTIONS

- (i) The array structure of the PV modules shall be grounded properly using adequate numbers of earthing pits. All metal casing/ shielding of the plant shall be thoroughly grounded to ensure safety of the power plant. Only earthpit will be constructed by UCIL.
- (ii) The SPV power plant shall be provided with lightning & over voltage protection. The source of over voltage can be lightning, atmosphere disturbance etc.

IV MECHANICAL COMPONENTS

- (i) Metallic frame structure of galvanized steel with stands to be fixed on the roof of the building to hold the SPV module (s) one feet above roof level. The frame structure should have provision to adjust its angle of inclination to the horizontal between 0 and 45, so that it can be installed at the

specified tilt angle i.e. inclined at 25 degree to horizontal facing due south. All hardware, nuts, bolts should be cadmium passivated.

V OTHER FEATURES

- (i) The PV module (s) will be warranted for a minimum period of 10 years from the date of supply and the solar PV power plant will be warranted for a period of ten years from the date of supply.
- (ii) An Operation, Instruction and Maintenance Manual in English and the local language (Hindi) should be provided with the system.

The following minimum details must be provided in the Manual

- (a) About Photovoltaics
- (b) About solar PV system – its components and expected performance.
- (c) About PV module
- (d) Clear instructions about mounting of PV module (s)
- (e) About electronics
- (f) DO's and DONT's
- (g) Clear instructions on regular maintenance and trouble shooting of solar power plant.
- (h) Name and address of the person or service center to be contacted in case of failure or complaint.

VI The details of the Power Conditioning Unit are as given below:

PCU rating (NOMINAL)	25 KW & 15 KW, 415V AC, 3 Ph 4 W (3 Ph + N) grid interactive output
Purpose	The power conditioner unit shall convert DC produced by SPV array and adjust the voltage & frequency levels to suit the Grid.
Grid supervision	All three phases shall be supervised with respect to rise / fall in programmable threshold values of frequency & the power section of the plant. The plant shall get disconnected / connected from the grid in case of a grid fault / after normal grid conditions have resumed.
Type & technology	IGBT/THYRISTOR based. Utilize a circuit topology and components suitable for meeting the specifications.
Output voltage on AC side	415 +10%, - 15% V AC A dedicated isolation transformer housed in the PCU enclosure shall be supplied to match the PCU output voltage to the utility grid voltage.
Output voltage	415 V ,50 Hz AC, 3 Ph, 4 W (3 Ph + N)
Output Frequency	50 + 1.5Hz, - 3.5 Hz
DC system voltage	The electrical safety of the array installation is of the utmost importance. Array electrical configuration shall be in such a way that, the system shall operate with maximum efficiency, between the low and high temperature of the site.
Maximal Current ripple	5%
Power Factor	0.95 inductive to 0.95 capacitive

Ambient room temperature	5 to 55 deg C
Housing Cabinet	<p>a) PCU is housed in suitable switch cabinet, with min IP 21 degree of Ingress Protection.</p> <p>b) Weatherproof, rodents & insect proof</p> <p>c) Components and circuit boards mounted inside the enclosures clearly identified with appropriate permanent designations, which shall also serve to identify the items on the supplied drawings.</p> <p>d) All doors, covers, panels and cable exists shall be gasketed or otherwise designed to limit the entry of dust and moisture. All doors shall be equipped with locks. All openings shall be provided with grills or screens with openings no larger than 0.95 cm (about 3x8 inch).</p>

Other important features

<p>Electrical safety Protections</p> <p>a) General</p> <p>b) Over/under voltage</p> <p>c) Fool Proof Protection</p> <p>d) Accidental open circuit</p> <p>e) Internal Faults</p> <p>f) Galvanic Isolation</p>	<p>The PCU shall include appropriate self protective and self diagnostic feature to protect itself and the PV array from damage in the event of PCU component failure or from parameters beyond the PCU's safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging. Faults due to malfunctioning within the PCU, including commutation failure, shall be cleared by the PCU protective devices and not by the existing site utility grid service circuit breaker.</p> <p>a) Mains (Grid) over-under voltage and frequency protection.</p> <p>b) Over voltage protection against atmospheric lightning</p> <p>c) Protection against voltage fluctuations in the grid itself and internal faults in the power conditioner, operational errors and switching transients.</p> <p>Against ISLANDING. Note : surge arrestors on AC and DC terminals for over voltage protection from lightning-induced surges</p> <p>Full protection against accidental open circuit and reverse polarity at the input.</p> <p>Inbuilt protection for internal faults including excess temperature, commutation failure, overload and cooling fan failure is obligatory</p> <p>Galvanic isolation is provided to avoid any DC component being injected into the grid and the potential for AC components appearing at the array.</p>
--	--

g) Earth Fault Supervision	An integrated earth fault detection device is provided to detect eventual earth fault on DC side and shall send message to the supervisory system
h) Disconnection & Islanding	<p>Disconnection of the PV generator in the event of loss of the main grid supply is achieved by in built protection within the power conditioner. This may be achieved through rate of change of current, phase angle, unbalanced voltages, or reactive load variants.</p> <p>Operation outside the limits of power quality as described in technical data sheet shall cause the power conditioner to disconnect the grid. Additional parameters requiring automatic disconnection are:</p> <ul style="list-style-type: none"> • Neutral voltage displacement • Over current • Earth fault & • Reverse power <p>In each of the above cases, tripping time shall be less than 0.5 seconds. Response time in case of grid failure due to switch off or failure based shutdown should be well within 60 seconds.</p>
i) Automatic reconnection after the Grid failure is resorted.	PCU has facility to reconnect the Inverter automatically to the grid following restoration of grid, subsequent to grid failure condition.
Array Tracking	Included authentic tracking of the solar array's maximum power operation voltage
Array Ground fault	Provided
Operator interface	LCD and keypad operator interface, Menu driven.
Fault conditions	Automatic fault conditions reset for all parameters like voltage, frequency and /or black out.
Control Logic Failure detection	via watch dog timers.
Parameter access	All parameters accessible through an industry standard communication link.
DC-AC conversion efficiency	93% for output ranging from 20% to full load Idling current at no load shall not exceed 2% of the full load current.
DC isolation	Provided at the output by means of a suitable isolating transformer
Parallel operation with Grid	As applicable
Unbalanced output load	PCU is able to withstand an unbalanced output load to the extent of 30%.

Shut down / Standby mode	<p>Shut down / standby mode with its contact open under the following conditions before attempting an automatic restart after an appropriate time delay; in sufficient solar power output.</p> <p>a) Insufficient solar power input : When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to a standby/shutdown mode. The PCU control shall prevent excessive cycling during rightly shut down or extended periods of insufficient solar radiation.</p> <p>b) Utility -Grid over or under voltage : The PCU shall restart after an over or under voltage shutdown when the utility grid voltage has returned to within limits for a minimum of two minutes.</p> <p>c) Utility-Grid over or under frequency : The PCU shall restart after an over or under frequency shutdown when the utility grid voltage has returned to the within limits for minimum of two minutes.</p>
PCU generated harmonics	Shall not exceed a total harmonic current distortion of 5%, a single frequency current distortion of 3%, and single frequency current distortion of 1%, when the first through the fiftieth integer harmonics of 50Hz are considered.
Circuit separation	High voltage & power circuits separated from low voltage & control circuits.
Internal wiring	Standard Cu wiring, with flame resistant insulation .
Cabling practice	<p>a) Cables :PVC Cu cables as per relevant international Standards)</p> <p>b) Cable connections : suitable terminations</p> <p>c) PVC channel with covers to house the cables.</p>
High voltage test	PCU with stand high voltage test of 2000 Vrms between either the input or the output terminals and the cabinet (chassis).
EMI (Electromagnetic interface)	PCU shall not produce EMI which cause malfunctioning of electronic & electrical instruments including communication equipments which are located within the facility in which the PCU is housed.
Display on front panel & indicators	<p>a) instantaneous PCU ac power output and the DC voltage current and power input</p> <p>b) Accuracy of display : 3% of full scale factor or better</p> <p>c) Display visible from outside the PCU enclosure.</p> <p>d) Operational status of the PCU, alarms, trouble indicators and AC and DC disconnect switch positions shall also be communicated by appropriate messages or indicator lights on the front cover of the PCU enclosure.</p>
Emergency OFF	Emergency OFF button is located at an appropriate position on the unit
Grounding	PCU includes ground lugs for equipment and PV array groundings. The DC circuit ground is a solid single point ground

	connection.
Exposed surfaces	Exposed surfaces of ferrous parts are thoroughly cleaned, primed, and painted and suitably protected to survive a nominal 30 years design life of the unit.
Factory Testing	<p>a) Tested to demonstrate operation of its control system and the ability to be automatically switchover and connected with a utility service, prior to its shipment.</p> <p>b) Operation of all controls, protective and instrumentation circuits demonstrated by direct test if feasible or by simulation operation conditions for all parameters that can not be directly tested.</p> <p>c) Demonstration of utility service interface protection circuits and functions, including calibration and functional trip tests of faults and isolation protection equipment.</p> <p>d) Operation of start up , disconnect and shutdown controls also to be tested and demonstrated, stable operation of the PCU and response to control signals shall also be tested and demonstrated.</p> <p>e) Factory testing include measurement of phase currents, efficiencies, harmonic content and power factor. All tests shall be performed 25, 50, 75 and 100% of the rated nominal power.</p> <p>f) Factory test report (FTR) : Should be supplied with the unit after all tests. The FTR shall include detailed description of all parameters tested qualified and warranted.</p>
Operating Modes	<p>In case of inadequate solar power, the system shall automatically change over to grid power. No battery back up is required.</p> <p>Operational of MPP tracking mode: the control system continuously adjust the voltage of the generator to optimize the power available. The power conditioner shall automatically re- enter standby mode input power reduces below the standby mode threshold. Front panel display providing the status of the PCU, including AC power output & DC current voltage and power input, and unit fault indication.</p>
Codes & Standards	<p>The quality of equipment supplied shall be controlled to meet the guidelines for engineering design included in the standards and codes listed in the relevant ISI and other standards, such as :</p> <p>a) IEEE 928: Recommended Criteria for terrestrial PV power systems.</p> <p>b) IEEE 929 Recommended practice for utility interface of residential and intermediate PV systems.</p> <p>c) IEEE 519 Guide for harmonic control and reactive</p>

	<p>compensation of Static Power Controllers.</p> <p>d) National Electrical NFPA 70-1990 (USA) or equipment national standard.</p> <p>e) National Electrical Safety Code ANSI C2 (USA) or equipment national standard.</p>
Inverter / Array Size ratio	<p>The ratio of the Inverter continuous power rating and the array peak power rating shall be between 80 to 90% or any other value found suitable. This is because better overall annual yield can be obtained by allowing the Inverter to operate for longer periods closer to optimal efficiency. Inverter efficiency should exceed 90% except when operating at less than 10% of maximum output.</p>
MPPT	<p>Maximum power point tracker is integrated in the power conditioner unit to maximize energy drawn from the array. The MPPT shall be micro processor based to minimize power losses. The MPPT shall have provision (manual setting) for constant voltage operation.</p>
Metering	<p>a) PV array energy production: Meter to log the actual amount of AC energy generated / consumed by the PV system shall have to be provided.</p> <p>b) Solar irradiance :</p> <p>An integrating pyranometer (Class II or better) to be provided, with the sensor mounted in the plane of the array. Readout shall be integrated with data logging,</p>
Data Logging System	<p>a) All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and can be read on the digital front panel at any time the current values, previous values for up to a month and the average values. The following parameters shall be accessible via the operating interface display :</p> <p>AC voltage</p> <p>AC output current</p> <p>Output power</p> <p>DC input voltage</p> <p>DC input current</p> <p>Time active</p> <p>Time disabled</p> <p>Time Idle</p> <p>temperatures (C)</p> <p>Converter status</p> <p>Protective function limits (VIZ-AC over voltage, AC under voltage, Over frequency, under frequency, ground fault, PV starting voltage, PV stopping voltage, over voltage delay, under voltage delay over frequency, ground fault delay, PV starting delay, PV stopping delay.</p>

CABLES & ACCESSORIES

All the cables which shall be supplied shall be conforming to IS 1554 / 694 Part 1 of 1988 & shall be of 650 V/ 1.1 kV grade as per requirement. Only PVC copper cables shall be used. The size of the cables between array interconnections, array to junction boxes, junction boxes to PCU etc shall be so selected to keep the voltage drop and losses to the minimum.

SPARE PARTS

One set of essential spares for the PCU shall be provided and made available at the plant.

DOCUMENTATION

Two sets of installation manual / user manual shall be supplied along with the each power plant. The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc. Step by step maintenance and trouble shooting procedures shall be given in the manuals.

BILL OF MATERIAL

The bidder should provide the bill of materials for 25 kW & 15 KW SPV power plant mentioning the quantity of each of the item consisting in the system, along with the offer.

(ANNEXURE – A)

(IV) CONTRACT LABOURER EMPLOYMENT ACT & RULES

1. The contractor shall employ labourer in sufficient number to maintain required rate of progress and quality to ensure workmanship of the degree specified in the contract and the satisfaction of the Engineer–In-charge. The contractor shall not employ in connection with the works any person who has not attained the age of fifteen years.
2. Contractors should employ only the persons with established identity.
3. Dy. Commandant, CISF,UCIL will issue temporary identity cards to persons actually engaged in the work and may exercise checks as considered necessary to ensure that strangers are not permitted inside the work premises. Contractors are required to surrender the identity cards on completion of job to Dy. Commandment, CISF,UCIL.
4. CISF control room / Contractor will not allow any inter-state labourer as a contract labour in any case.
5. The contractor shall furnish to the Engineer–In-charge, a distribution return of the number description by trades of work people employed on the works. The contractor shall also submit on the 4th and 19th of every month to the Engineer-In-charge a true statement showing in respect of second half of the preceding month and the first half of current month (i) the accident that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (ii) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 or rules made thereunder and the amount paid to them.
6. The contractor shall pay to labourers employed by him wages not less than fair wages as defined in the Contract Labour (Regulation & Abolition) Act 1970 and rules made thereunder.
7. The contractor shall in respect of labour employed by him comply with or cause to be complied with the Contract Labour (Regulation & Abolition) Act ,1970 and Rules made there under in regard to all matters provided therein.
8. The contractor shall comply with the provisions of the payment of Wages Act 1936, Minimum Wages Act 1948, Employees Liability Act 1938, Workmen’s Compensation Act 1923, Industrial Disputes Act 1947, Maternity Benefit Act 1961, and Mines Act 1952 or any modifications thereof or any other law relating thereto and rules made thereunder from time to time.
9. The contractor shall be liable to pay his contribution and the employee’s contribution to the Employees State Insurance Scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision “The Employees State Insurance Act, 1948 as amended from time to time and as applicable in this case. In case the contractor fails to submit full details of his account of labour employed and the contribution payable, the Engineer-In-charge shall recover from the running bills of the contractor an amount of contribution as assessed by him. The amount so recovered shall be adjusted against the actual contribution payable under Employees State Insurance Scheme.

10. The Engineer-In-charge shall on a report having been made by an inspection staff as defined under the Contract Labour (Regulation & Abolition) Act 1970, and rules made thereunder have the power to deduct from the money due to the contractor any sum required or estimated to be required for making the good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the contract or non -observance of the said Act.
11. The contractor shall indemnify the Corporation against any payment to be made under and for observance of the Contract Labour (Regulation & Abolition)Act 1970, and the rules made thereunder without prejudice to his right to claim indemnity from his sub-contractors.
12. In the event of the contractor committing a default or breach of any of the provisions of aforesaid Act and Rules made thereunder / amended from time to time or furnishing any information or submitting or filling any Forms / Register / Slip under the provisions of the law which is materially incorrect, then on the report of the Inspecting Officer, the contractor shall without prejudice pay to the Corporation a sum not exceeding liabilities for such defaults including liquidated damages etc. For every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the Labour Department and the contractor should indemnify the Corporation against all such liabilities.
13. MODEL RULES FOR LABOUR WELFARE :-
 - (i) The Contractor shall at his own expenses comply with or cause to be complied with Model Rules for Labour Welfare as provided under the rules framed by the appropriate Government from time to time for protection of health and making sanitary arrangements for workers directly or indirectly on the works. In case the contractor fails to make arrangements as aforesaid, the Engineer-In-charge shall be entitled to do so and recover the cost thereof from the Contractor.
 - (ii) Failure to comply with Model Rules for Labour Welfare, Safety Code or the provisions relating to report on accidents and to grant Maternity Benefit to Female workers shall make the contractor liable to the Corporation as liquidated damages an amount not exceeding Rs. 50.00 for each default or materially incorrect statement. The decision of the Engineer Incharge in such matters based on reports from the Inspecting Officers shall be final and binding and deducting officers shall be final and binding and deductions for recovery of such liquidated damages may be from any amount payable to the contractor.

(V) SAFETY OF CONTACTORS' EMPLOYEES

1. The contractor shall at all times, take all reasonable precaution for the safety of employee, including those of sub – contractors in the performance of his contract and shall comply with all applicable provisions of both Central as well as the State Safety Laws. In addition to the safety provisions, the contracting officer shall include the safety requirements as recommended by the Health Physics Unit, Jaduguda for a specified contract.

In the event that contractor fails to comply with these provisions, the contracting officer may, without prejudice to any other legal or contractual rights, issue an order for stopping all or any part of the work, thereafter a start order for resumption of work may be issued at the sole discretion of the Contracting Officer. The contractor shall make no reason of or in connection with such stoppage.

2. Contractor shall have a full time Safety Officer / Engineer when the contractor employ 500 or more persons or when engaged specifically in hazardous work. In the case of contractors employing fewer than 500 persons, his safety representative shall be an employee in a high supervisory capacity and his safety duties may be in addition to his other technical/ administrative duties.
3. Contractor shall have at least one person fully trained in First Aid to be present at the site of work all time.
4. Contractor must report to the Safety Officer (Mill) – through their contracting officer every accident involving:-
 - Their personnel
 - UCIL property or personnel.
 - Property or personnel of other contractors working at the site.

- 4.1 Contractor must report to the Safety Officer (Mill) immediately on becoming aware of any accident of Type - A (see Appendix –1) giving the following information:-
- Name of the informant
 - Nature and location of incident being reported
 - Name of Supervisor / Engineer–In-charge, location and telephone no. where he can be reached.
- 4.1.1 Contractor shall submit their investigation reports, through their contracting officer, to the Safety officer (Mill) immediately but not later than 3 (three) working days after the occurrence of accident in the Form – A (see Appendix -
- 4.1.2 In the case of Type – B accidents (see Appendix – 1) , Contractors shall submit their investigating reports, through their contracting officer, to the Safety officer (Mill) immediately but not later than 3 (three) working days after the occurrence of accident in the Form – A .
- 4.2 Monthly summary of accidents and cases of fire shall be prepared by each contractor in Form – B (see Appendix – 3) and be sent to the Safety officer (Mill) by the 7th of the next month.
- 4.2.1 Prime contractor reports shall include the man days lost and occurrence of accident under the jurisdiction of the Sub-Contractors.
- 4.2.2 Contractors shall submit a narrative on safety activities and fire incidents for each month along with Form – B. The review should contain such items as personnel and programme change, major project started and major problem.

CLASSIFICATION OF ACCIDENTS

TYPE – A

1. Fatal injury.
2. Serious injuries such as fracture, dislocation, severe burns etc. necessitating hospitalisation.
3. Any injury to five or more persons.
4. Accidents resulting in damage by fire, explosion etc.

TYPE – B

1. Minor injuries which results in laceration, abrasion, contusion etc.
2. Disabling injuries but not requiring hospitalisation.

(FORM – A)

ACCIDENT INVESTIGATION REPORTS

Name of contractor and project :
Nature of contract :
Name of Engineer In-Charge :
Name of injured person :
Age :
Address :
Date and Time of accident :
Place where accident occurred :
Nature of job :
What was injured person doing :
at the time of accident
Description of accident (in detail) :
Nature of injuries :
What was defective or in wrong :
condition that was responsible
for the accident
What was wrong with working :
methods / instructions
What steps should be taken :
to prevent reoccurrence of
such accidents
Name of witness : 1.
2.
Safety representative's remarks
with signature and date :

(FORM –B)

SUMMARY OF ACCIDENT FOR THE MONTH OF

Name of the contractor :
Name of project :
Name of the sub – contractor :
Name of safety representative
of the project :
Total nos. of persons working in the project : Male Female
Engineers :
Supervisors :
Labours :
Total nos. of accidents
(including Type A & B) :
Disabling injuries :
Non – disabling injuries :

(Signature & stamp of Contractor)

cc: Engineer – In-charge
cc: Safety officer, Jaduguda Mill

VI. Important Instructions to Contractors

1. After getting work order, contractor will have to submit their Site In-charge contact number to the following officials of UCIL for better co-ordination.
 - a) Respective Section-In-charge,
 - b) Safety officer (Mill),
 - c) Respective Site In-charge and
 - d) Mill In-charge.
2. The contractors will have also to collect contact numbers of all above mentioned personnel for proper co-ordination during execution of any job.
3. Before starting up any work against work order issued by UCIL to the contractor, contractor will have to submit **medical fitness certificate** of their workmen to the Safety Officer (Mill).
4. After receiving medical fitness certificate, Safety officer shall sign the request letter for preparation of gate pass of their workers.
5. All workers of contractor shall report to the Mill Training Centre for their **safety induction training**.
6. Only after safety induction training, they shall be engaged for any job.
7. ***The contractor shall inform in writing to UCIL's Site-In-charge & a copy to Safety Officer (Mill) in one day advance about the work taken up next day & safety precautions taken up during execution of work and PPE's to be provided to their workmen.***
8. Before starting any job, a **safety pep-talk** shall be given by their experienced supervisor/site in-charge.
9. Before starting critical jobs, contractor shall have to fill Job Hazard Analysis form as per the format attached as **Annexure 'X'**. They shall have to prepare **Specific Safety Job Procedure** before starting any critical jobs such as dismantling & erection jobs at height etc. Also a checklist (**as Annexure 'Y'**) for the same shall be prepared and implemented.
10. For critical jobs they shall be given **Safety Work Permit**.
11. After issue of safety work permit, safety personnel shall check all the safety related aspect as per the checklist prepared by the contractor and then only allow them to carry out the work.
12. During execution of critical job, site in-charge / safety personnel of the contractor and site in-charge of UCIL shall be present.
13. For bigger contract, contractor will have to engage **Qualified Safety Personnel** (having qualification diploma in industrial safety) for assessment of safety related issues.
14. After completion of job safety permit shall be handed over to the respective section-in-charge.

**URANIUM CORPORATION OF INDIA LIMITED, JADUGUDA
JOB HAZARD ANALYSIS**

1. Description of Job: _____

2. Exact location of Job: _____

3. Job Performed by:

S.No.	Date	Name of allocated person (s)	Time	Sign (Supervisor)

4. Name of stand-by person (if req.): _____

5. Name of Fire person (if req.): _____

6. Name of competent person (if req.): _____

A. Atmosphere Monitoring required: Yes No N/A

If Yes, mention frequency: _____ Oxygen concentration reading: _____

B. Safety Checklist

B1. Access	B2. Electrical isolation	B3. Emergency Equipment Locations	B4. Hazards (Body)
Scaffold (properly inspected) <input type="checkbox"/>	Locked and tagged <input type="checkbox"/>	Fire extinguisher located <input type="checkbox"/>	Working surface condition <input type="checkbox"/>
Ladder (wooden/Aluminium) <input type="checkbox"/>	Disconnected <input type="checkbox"/>	Fire hydrant valve located <input type="checkbox"/>	Pinch point/ Sharp object <input type="checkbox"/>
Walkway & handrail <input type="checkbox"/>	Properly grounded <input type="checkbox"/>	First aid box located <input type="checkbox"/>	Flying particle <input type="checkbox"/>
Floor level <input type="checkbox"/>	Not required <input type="checkbox"/>	Eye wash located <input type="checkbox"/>	Electric shock <input type="checkbox"/>
		Safety shower located <input type="checkbox"/>	Housekeeping <input type="checkbox"/>
		Emergency phone no. _____	Thermal burns <input type="checkbox"/>
			Fall potential <input type="checkbox"/>

B5. hazard (Environment)	B6. Lifting device being used	B7. PPE to be used	B8. Hazards on body from work
Airborne particles <input type="checkbox"/>	TIL <input type="checkbox"/>	Helmet / Gumboot <input type="checkbox"/>	Skin contamination <input type="checkbox"/>
Heat stress <input type="checkbox"/>	Forklift <input type="checkbox"/>	Goggles / Hand gloves <input type="checkbox"/>	Hygiene <input type="checkbox"/>
Inadequate light <input type="checkbox"/>	Hoist / EOT Crane <input type="checkbox"/>	Ear plug / ear muff <input type="checkbox"/>	Chemical burn <input type="checkbox"/>
Noise <input type="checkbox"/>	Chain pulley. Rope pulley <input type="checkbox"/>	Face shield <input type="checkbox"/>	Skin / eyes <input type="checkbox"/>
Radiation <input type="checkbox"/>	Not required <input type="checkbox"/>	Respirator <input type="checkbox"/>	Flammable <input type="checkbox"/>
Not applicable <input type="checkbox"/>		Acid apron <input type="checkbox"/>	Inhalation <input type="checkbox"/>
		Safety belt <input type="checkbox"/>	

C. Permit required:

(Including electrical shut down) Work permit Confined space Height pass

Others (if any): _____

D. Potential Hazards:

E. Action taken to eliminate hazards & Pep Talk:

F. Tools, materials and safety equipments required:

G. Any other special precautions:

(Signature of supervisor / site –in-charge)

1.

2.

Check List for erection and dismantling job at height(Put a \checkmark mark)

S.No.	Particular	Yes : No :
1.	Job Hazard Analysis Done	Yes : No :
2.	Safety training given to workmen	Yes : No :
3.	All engineering aspect such as load assessment, support requirement, safety etc, done.	Yes : No :
4.	Safe Operating Procedure made	Yes : No :
5.	PPE has been provided to all workmen	Yes : No :
6.	Safety work permit issued.	Yes : No :
7.	Height pass is available with the workmen who will work at height.	Yes : No :
8.	Safety net is used if work is carried out above 15 m.	Yes : No :
9.	Medically fitness certificate has submitted by all workmen.	Yes : No :
10.	Engagement of qualified safety personnel.	Yes : No :
11.	Engagement of site supervisor	Yes : No :
12.	Double sling is available in case of use of hydra crane.	Yes : No :
13.	Hand over of permit after job is over.	Yes : No :

FORMAT FOR PRICE PART

Sl. No.	Description	Qty.	Rate (Rs.)	Amount (Rs.)
1 a)	Supply, installation, testing & commissioning of solar photovoltaic power plant as per enclosed Technical Specification and of the following rating & inclusive of all taxes & duties & other charges. i) 25 KW ii) 15 KW	1 Set 1 Set		
b)	Less: Subsidy available from Central/State Government for A. 1 a) (i) above B. 1 a) (ii) above			
			Total	
2 a)	Break-up of price mentioned in Cl. No.-1 (a) (i) above i) Supply value of 25 KW SPV power plant ii) P & F charges iii) Insurance charges iv) Transportation charges v) E.D vi) VAT vii) ST/CST viii) Service Tax ix) Any other duties etc. as applicable b) Break-up of price mentioned in Cl. No.-1 (a) (ii) above i) Supply value of 15 KW SPV Power Plant ii) P & F charges iii) Insurance charges iv) Transportation charges v) E.D vi) VAT vii) ST/CST viii) Service Tax ix) Any other duties etc. as applicable			

<p>c)</p> <p>i) Installation, testing & commissioning charges of 1 (a) (i) above Taxes & Duties i.e. Service Tax, etc. as applicable for Cl. No. © (i) above</p> <p>ii)</p> <p>d)</p> <p>i) Installation, testing & commissioning charges of 1 (a) (ii) above</p> <p>ii) Taxes & Duties i.e. Service Tax, etc. as applicable for Cl. No. (d) (i) above</p>				
			Total ₹ =	

Note: Total value of 2 (a), (b), (c) & (d) should match with the total value of 1 (a) (i) and 1 a (ii)

Signature of Contractor

