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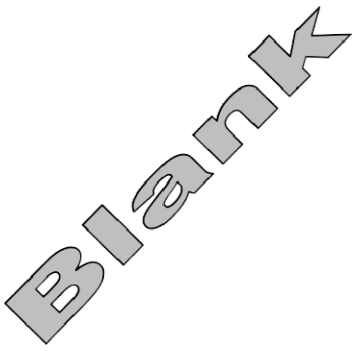
NAME OF WORK: SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

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Certified that this NIT contains *53* Pages marked as 1 to 53 excluding index sheet and file covers

Assistant Engineer (P)

Assistant Engineer (E)-IV
CPWD, Almora.


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के.लो.नि.वि./**C.P.W.D.- 6**

CPWD-6 FOR E-TENDERING

The Assistant Engineer(E)-IV, CPWD, Almora (Telephone- 05962-236718/ email ID: aeealmoracpwd@rediffmail.com) **[Ph. 05962- 236718]** on behalf of the President of India invites online percentage rate composite bids from approved and eligible contractors of CPWD registered in appropriate class in "Building & Road"/composite category for the following work:

Name of Work: SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

1. The work is estimated to cost **Rs. 3,58,355/-** This estimate, however, is given merely as a rough guide.

2. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Bankers Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn **in favor of Executive Engineer, Haldwani Central Division, CPWD, Haldwani** shall be scanned and uploaded to the e-tendering website within the period of bid submission. The original EMD/ should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. (The EMD document shall only be issued from the place in which the office of receiving division office is situated). The EMD receiving Executive Engineer shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT.

3. The EMD receiving Executive Engineer shall issue a receipt of deposition of Earnest Money deposit to the bidder in the following prescribed format (enclosed as Annexure- I) uploaded by tender inviting EE in the NIT. The receipt shall also be uploaded to the etendering website by the intending bidder upto the specified bid submission date and time.

4. The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

5. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD-7 which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

6. The site for the work shall be made available in phased manner.

7. The bid document consisting of plans, specifications, the schedule of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website https://etender.cpwd.gov.in or www.cpwd.gov.in or http://www.eprocure.gov.in free of cost.

8. After submission of the bid the contractor can re-submit revised bid any number of times or withdraw it before last date and time of submission of bid as notified. No post-tender modification is allowed by the tenderers except through negotiations. if required in case, any tenderer does so, the tender will be rejected and the tenderer will be debarred future tendering in CPWD for two years by the concerned enlisting authority (in case of CPWD enlisted contractor) and by the concerned CE/SE (in case of non-enlisted contractor).

9. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.

10. The time allowed for carrying out the work will be **2 months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

11. The Contractor, whose bid is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the estimated amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited alongwith bid shall be returned after receiving the aforesaid performance guarantee. **The contractor whose bid is accepted will also be required to furnish either copy of applicable license/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No., if applicable, and also ensure compliance of aforesaid provisions by the sub-contractors, if any, engaged by the contractor for the said work, within the period specified in Schedule F.**

12. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.

15. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

16. No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his

employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

17. The bid for the works shall remain open for acceptance for a period of 30 (Thirty) days from the date of opening of bids. Further
    (i) If any tenderer withdraws his tender within 7 days after last date and time (24 hours basis) fo submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
    (ii) If any tenderer withdraws his tender after expiry of 7 days after last date and time (24 hours basis) of submission of the bid, then the Government without prejudice to any othe rright or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
    (iii) Withdrawal of the tender, by the tenderer, shall only be made through e-tnder portal. Any other method i.e, through letter/e-mail etc. shall not be considered.
    (iv) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, bidders shall not be allowed to participate in the rebidding process of the same work.

18. This notice inviting bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
    (a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, ifany, forming part of the bid as uploaded at the time of Invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof togetherwith any correspondence leading thereto.
    (b) Standard C.P.W.D. Form-7 or other Standard C.P.W.D. Form as applicable.

19. For Bids:
    (i) The bidder must associate himself with agencies of the appropriate class eligible to bid for each of the minor component individually as per NIT conditions.
    (ii) The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
    (iii) Entire work under the scope of bid including all E&M items shall be executed under the agreement.
    (iv) Security Deposit will be worked out separately for each component corresponding to the Gross value of work done of the respective component of works.
    (v) The main contractor has to associate agencies for specialized component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer – in-Charge of relevant component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-Charge of relevant component(s).
    (vi) In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-Charge of relevant specialized component.
    (vii) The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
    (viii) The main contractor has to enter into MOU with agencies contractor(s) associated by him. Copy of such MOU shall be submitted to Executive Engineer in charge of each relevant component as well as to Executive Engineer in charge. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.
    (ix) Running payment shall be made by Executive Engineer to the main contractor.
    (x) The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be

recorded by Engineer- in- Charge of major component after record of completion certificate of all other components.

(xi) Final bill of whole work shall be finalized and paid by the Executive. Engineer(s)-in-Charge.

20. The intending bidders are required to update their profile in CPWD e-tender portal and to upload their bids well in advance of last date of submission of bid. Any issue related to updating profile/uploading tender can be resolved through concerned the Executive Engineer/Assistant Engineer or ERP helpline no. 18001803286 or e-mail Id cpwd.support@techmahindra.com. The e-tendering bidders are also advised not to wait

Assistant Engineer (E)-IV
CPWD, Almora, Uttarakhand-263601

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF BID DOCUMENT
(Applicable for inviting open bids)

The Assistant Engineer (E)-IV, CPWD, Almora- 263601 [Ph. 05962-236718] on behalf of President of India invites online **Percentage Rate Bids**, from **approved and eligible contractors of CPWD in appropriate class in Composite Category** for the following work:

Sl. No.	NIT No.	Name of work & location	Estimated cost put to tender	Earnest Money	Period of Completion	Last date & time of submission of bid, EMD, e-tender processing fee and other documents as specified in the press notice	Time and date of opening of Bid
1	2	3	4	5	6	7	8
1	26/AE(E)-IV/Almora/2026-27 (Recall-1)	SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)	Rs. 3,58,355/-	Rs. 7,167/-	2 months	02-11-2026 upto 17:00 hrs	02-11-2026 At 17:30 hrs

1. The Intending bidder must read the terms and conditions of CPWD-7/8 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

2. Information and instructions for bidder posted on website shall form of bid document.

3. The bid document consisting of plans, specifications, the schedule of quantities of various types of item to be executed and the set of terms conditions of the contract to be complied with the other necessary documents **can be seen and downloaded from website** www.etender.cpwd.gov.in **or** www.cpwd.gov.in **free of cost.**

4. But the bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Demand Draft or Pay Order or Bankers Cheque or Deposit-at-Call Receiot or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of Executive Engineer (including NIT issuing EE/AE), CPWD and other documents as specified.

5. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.

6. The intending bidder must have valid class-III digital signature to submit the bid.

7. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.

8. Contractor can upload documents in the form of **JPG format and PDF format.**

9. Contractor must ensure to quote rate in the prescribed column(s) meant for quoting rate in figures appears in pink colour and the moment rate is entered, it turns sky blue.S

   In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).

10. SC/ST contractors enlisted under class V category are exempted from processing fee payable to ITI.

List of Documents to be scanned and uploaded within the period of bid submission:

1. Scan Copy of Earnest Money Deposit / Treasury Challan/ Demand Daft/ Pay Order or Bankers Cheque / Deposit-at-Call Receipt/ FDR/ Bank Guarantee of any Scheduled Bank
2. Copy of Receipt of deposition of original Earnest Money Deposit
3. Copy of valid enlistment order of the contractor in CPWD composite work category in appropriate class
4. Copy of valid Electrical Contractor License OR undertaking that they will associate contractor having Valid Electrical Contractor License in appropriate class along-with MOU and willingness certificate as per Page 36 to 39 of the NIT.
5. Copy of ERP Training Certificate
6. GST registration certificate.
   If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents.
   "If the work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or any action taken by CPWD or GST department in this regard".

Note:

(i) If any document not scanned and uploaded while submitting bid, the bid submitted shall become invalid and will not be considered in e-Tender process and the bid shall be summarily rejected.

सहायक अभियन्ता (वै)–IV
के.लो.नि.वि. अल्मोड़ा

प्रतिलिपिः–

1- cpwdnr@gmail.com *Through e-mail.*
2- www.etender.cpwd.gov.in
3- सूचना पट्ट कार्यालय अधीक्षक द्वारा।

सहायक अभियन्ता (वै)–IV

के.लो.नि.वि. C.P.W.D.- 7

भारत सरकार GOVERNMENT OF INDIA
केन्द्रीय लोक निर्माण विभाग CENTRAL PUBLIC WORKS DEPARTMENT

शाखा BRANCH : **E & M** मंडल DIVISION : **EE(E)-Haldwani**

कार्यों के लिए मद दर निविदा एवं संविदा
Percentage Rate Bid & Contract for Works

(A)	कार्य के लिए निविदा **Bid for the work of**	:	**SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)**

1. Bids to be submitted online by **17:00 PM on 02-11-2026** To be opened on line in presence of bidders who may be present at **17:30 PM on 02-11-2026 in the office of the Assistant Engineer (E)-IV, CPWD, Almora, Uttrakhand**

निविदा T E N D E R

मैंने/हमने कार्य के लिए निविदा आमंत्रण सूचना, अनुसूची क,ख,ग,'ा, ड., और च, लागू विनिर्देश, नक्शे एवं डिजाइन, सामान्य नियम एवं निर्देश, ठेके के उपबंध, विशिमट शर्ते, दर अनुसूची एवं अन्य कागजात तथा ठेके की शर्तो में दिए गए नियम तथा निविदा कागजात में उल्लिखित अन्य बातों को पढ़ व जांच लिया है।

I/We have read and examined the notice inviting bid, schedule, A,B,C,D,E & F Specifications applicable. Drawings & Designs, General Rules and Directions, Conditions of Contract, clause of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the bid documents for the work.

मै/हम, एतत्द्वारा भारत के रामट्रपति के लिए अनुसूची 'च' में विनिर्दिमट समय के भीतर विनिर्दिमट कार्य, यथादृमात्राओं की अनुसूची तथा सभी संबंधित विनिर्देशों, डिजाइनों, नक्शों के अनुरूप तथा सामान्य नियमावली के नियमदृ1 और ठेके की शर्तो के खंडदृ11 में उल्लिखित लिखित अनुदेशों एवं ऐसी सामग्रियों, जो प्रदान की जाती है और उसके संबंध में, ऐसी शर्ते जो लागू हो, के अनुरूप निमपादन हेतु निविदा देता हूं/देते है।

I/We hereby bid for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the bid open for **30 (thirty) days** from the date of opening of bids in case of single bid system/ ~~75(Seventy Five) days from the date of opening of **technical bids** in case bids are invited on 2 or 3 bid system~~ (strike out as the case may be) **and** not to make any modifications in its terms and conditions.

रु0 7,167/-की धनराशि, धरोहर राशि के रुप में नकद/ट्रेजरी चालान रसीद/अनुसूचित बैंक की मॉग जमा रसीद/अनुसूचित बैंक की सावधी जमा रसीद/ अनुसूचित बैंक के डिमांड ड्राफट/अनुसूचित बैंक द्वारा जारी बैंक गारंटी के रुप में एतद्द्वारा अग्रेमित की जाती है। यदि मैं/हम निर्धारित निमपादन गारंटी को निर्धारित समय अवधि में प्रस्तुत करने में असफल रहते हैं तो मैं/हम यह मंजूर करते हैं कि भारत के उक्त रामट्रपति या उनके कार्यालय के उत्तराधिकारी किसी अन्य अधिकारी या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि जēत करने के लिए पूर्णतया स्वतंत्र होगें। इसके अलावा, यदि मैं/हम विनिर्दिमट कार्य प्रारम्भ करने के असफल रहते हैं तो मैं/हम यह मंजूर करते हैं कि भारत के रामट्रपति या उनके कार्यालय के उत्तराधिकारी कानून में उपलēध किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि, तथा निमपादन गारंटी जēत करने के लिए पूर्णतया स्वतंत्र होगें अन्यथा उक्त धरोहर राशि निविदा कागजात के अनुसार उसमें निहित शर्तों व निबंधनों के अनुसार कार्यों के निमपादन एवं आदिष्ट विचलनों को अनुसूची 'च' में वर्णित प्रतिशत से अनधिक व निविदा प्रपत्र के खण्डों 12.2 व 12.3 में निहित प्रावधानों के अनुसार निश्चित की जाने वाली दरों पर उस सीमा से अधिक के विचलनों के करने के लिए उनके द्वारा प्रतिभूतिदृनिक्षेप के रुप में रोक ली जायेगी। इसके अतिरिक्त मैं/हम सहमत हैं कि बयाना राशि या बयाना राशि तथा उपर्युक्त निमपादन गारंटी जēत हो जाने के मामले में

मुझे/हमें कार्य की पुनरू निविदा प्रकिया में भाग लेने से रोक दिया जाएगा।

A sum of **Rs. 7,167/-**Earnest Money Deposit is hereby forwarded in Receipt Treasury Challan /Deposit at call Receipt of a Scheduled Bank /fixed deposit receipt of schedule bank/demand draft of a Scheduled bank/Bank Guarantee issued by a schedule bank, as earnest money. If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail to commence work as specified, I/we agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the bid documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in clause 12.2 and 12.3 of the bid form. Further I/we agree that in case of forfeiture of Earnest money or both earnest money & Performance Guarantee as aforesaid, I/we shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for bidding in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

मैं/हम एतत्द्वारा 'ोमाणा करते है कि मै/हम निविदा कागजातों, नक्शों और कार्य से संबंधित अन्य अभिलेखा को गुप्त/गोपनीय कागजात के रूप में रखेगे और उनसे प्राप्त/ली गई जानकारी किसी अन्य को, जिन्हें मैं/हम सूचित करने के लिए प्राधिकृत हो, से भिन्न किसी को,नहीं बताएगें या जानकारी को किसी ऐसे रूप में प्रयोग नही करेंगे जो राज्य की सुरक्षा के लिए प्रतिकूल हो।

I/We hereby declare that I/we shall treat the bid documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived therefrom to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

तारीख **Dated:** ठेकेदार के हस्ताक्षर **Signature of Contractor**

डाक पता **Postal Address**

साक्षी **Witness : #**

पता **Address: #**

उपजीविका **Occupation :** #

स्वीकृति /ACCEPTANCE

मै भारत के रामट्रपति की ओर से तथा उनके लिए रु0रूदृ '..... (रूपये '.....
.....) की राशि के लिए उपर्युक्त निविदा (अधोलिखित पत्रों के अनुसार परिवर्तित) स्वीकार करता हूं।

The above bid (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs. *_____ (Rupees*_____).

नीचे दिए गए पत्र इस ठेका करार का हिस्सा होंगे।

The letters referred to below shall form part of this contract Agreement:-

i) *

ii) *

iii) *

भारत के रामट्रपति की ओर से तथा उनके लिए
For & on behalf of the President of India
हस्ताक्षर Signature .....
तारीख Dated *.....
पदनाम Designation .....

कार्यों' की अनुसूचियां SCHEDULES FOR WORK

अनुसूची 'क' SCHEDULE 'A'

मात्राओं की अनुसूची (संलग्न) : *Page 51-53*

Schedule of quantities (Enclosed)

अनुसूची 'ख' SCHEDULE 'B' :

ठेकेदार की निर्गत की जाने वाली सामग्रियों की अनुसूची

Schedule of materials to be issued to the contractor

क्रम. सं. **Sl. No.**	मद विवरण **Description of item**	मात्रा **Quantity**	जिस दर पर सामग्रियां ठेकेदार को प्रभावित होगी वह दर अंकों एवं भाब्दों में **Rates in figures & words at which the material will be charged to the contractor**	निर्गत स्थान **Place of issue**
1	2	3	4	5
	---------- *NIL* --------			

अनुसूची 'ग' SCHEDULE 'C' :

ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयत्र

Tools and plants to be hired to the contractor

क्रम. सं.**Sl. No.**	**विवरण Description**	भाड़ा प्रभार प्रतिदिन **Hire charges per day**	निर्गत स्थान **Place of issue**
1	2	3	4
	---------- *NIL* --------		

अनुसूची 'घ' SCHEDULE 'D'

कार्य के लिए विषेमा अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची : *Page 26-50*

General conditions and requirements / documents for the work, if any, specification of work, if any etc.

अनुसूची 'ड' SCHEDULE 'E'

1 ठेके की सामान्य शर्तो का संदर्भ : *General Conditions of Contract-2023 for Construction Works as amended/modified upto last date of submission of bid*

Reference to General Conditions of Contract

(i) **कार्य का नामः** : *SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)*

Name of Work:-

;पपद्ध कार्य की अनुमानित लागत : *Rs.3,58,355/-*

Estimated cost of work:

;पपपद्ध धरोहर राषि

Earnest money: : *Rs. 7,167/-*

;पअद्ध निमपादन गारंटी

Performance Guarantee : : *5% of Estimated Cost OR tendered amount whichever is higher & as per CPWD OM No. DG/Manual-2024/20 Dt. 27.02.2026 issued vide file no. CSQ/CM/16(1)/2026 e file 9212995 (DFA)/9365789 and latest Circular)*

(v) प्रतिभूति निक्षेपरू : *2.5% of Work Done*

Security Deposit:

अनुसूची 'च' SCHEDULE 'F'

सामान्य नियम एवं दिशानिर्देश:

General Rules & Directions

	निविदा आमंत्रण करने वाला प्राधिकारी Officer Inviting Bids	:	*Assistant Engineer (E)-IV CPWD, Almora*
	कार्य की मदों की मात्रा के लिए अधिकतम प्रतिषत जिससे अधिक निमपादित मदों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के अनुसार होगा Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	:	*See Clause 12 below*
	परिभाषायें:– Definitions:		
2(v)	भारसाधक इंजीनियर Engineer-in-Charge	:	*Assistant Engineer (E)-IV CPWD, Almora*
2(viii)	निविदा स्वीकार कर्ता प्राधिकारी Tender Accepting Authority	:	*Assistant Engineer (E)-IV CPWD, Almora*
2(x)	अतिरिक्त और लाभों को पूरा करने के लिए सामग्रियों की लागत पर प्रतिशतता Percentage on cost of materials and labour to cover all overheads and profits	:	*15% for all SITC Items and 7.5% on Supply Items*
2(xi)	दरों की मानक अनुसूची Standard Schedule of Rates	:	*DSR-2025 E&M (with amendments/ correction slip upto last date of receipt of bid) / Market Rate & 15.53% Cost Index on DSR Items-2025 Volume 2*
2(xii)	विभाग Department	:	*Central Public Works Department*
9(ii)	मानक के.लो.नि.वि. ठेका फार्म, और शोधित संशोधित के.लो.नि.वि. फार्म Standard CPWD contract form	:	*CPWD-7 as modified and corrected upto last date of submission of bid, GCC 2023 for Construction Works (with amendments/ correction slip upto last date of receipt of bid)*

खण्ड–1

Clause 1

(i)	स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय, दिनों में। Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance, in days	:	*7 Days*
(ii)	अनुमत समय के उपरान्त अधिकतम स्वीकार्य	:	*3 Days*
(iii)	एक्सटेंशन, निष्पादन गारंटी के 0.1रू प्रतिदिन की लेटफीस सहित, दिनों में। Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period provided in (i) above Date of Start shall be reckoned from Date of issue of Award Letter		

खण्ड–2

Clause 2

	खण्ड 2 के तहत प्रतिकर निश्चित करने वाला प्राधिकारी Authority for fixing compensation under	:	*Executive Engineer (E), CPWD Haldwani*

Clause 2

खण्ड–3 : *Applicable*

Clause 3

खण्ड–5

Clause 5

लक्ष्य मील–पत्थर। सारणी : लक्ष्य नीचे दी गई सारणी अनुसार

Table of Milestones: -- As per Table given below

Sl. No. of Mile Stone	Description of Milestone	Time Allowed (From date of start)	Amount to be withheld in case of non-achievement of milestone
1.	Submission of documents for specialized agencies	7 Days	1% of tendered amount
2.	Submission of drawings, TDS of all items for approval and Supply of material at site	15 Month	1% of tendered amount
3.	Installation, Testing and Commissioning of Electrical equipments	1 Months	1% of tendered amount
4.	Handing over to client department, defect rectification & site clearance.	2 months	2% of tendered amount

The contractor shall submit a Programme Chart (Time and Progress) for each mile stone along with performance guarantee and get it approved from the Department. The chart shall be prepared in direct relation to the time stated in the contract documents for completion of the items of the work. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-charge and the contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work. The contractor shall in all cases in which time allowed for any work exceeds one month (save for special jobs for which a separate program has been agreed upon) complete the work as per milestones given in Schedule 'F'
[Vide O.M. No. DG/MAN/320 dtd 04.06.2015]

कार्य निष्पादित करने के लिए अनुमत्य समय : *2 months*
Time allowed for execution of work

निर्णायक प्राधिकारी
Authority to Decide

1. समय विस्तार : *Assistant Engineer (E)-IV CPWD, Almora, Uttarakhand*
   Extension of time

2. उपलब्धियों का पुनः अनुसूचिकरण : *Not Applicable*
   Rescheduling of milestones

3. कार्य पूरा करने के लिए उचित और तार्किक समय वृद्धि देने वाला प्राधिकारी : *Assistant Engineer (E)-IV CPWD, Almora*
   Authority to give fair and reasonable extension of time for completion of work

खण्ड–6

Clause 6

खंड लागू– (6) / Clause applicable–(6) : *Yes, Computerized Measurement Book/ERP shall be applicable*

खण्ड–7

Clause 7

अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य Gross work to be done together with net payment/ adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment : *Rs. 1,50,000/-*

खण्ड–7ए

Clause 7A

No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable, are submitted by the contractor to the Engineer-in-charge. Whether Clause 7A shall be applicable. : *Applicable*

खण्ड–10(ग)

Clause 10C

श्रम 'टक को कार्य के मूल्य के प्रतिषत के रूप में अभिव्युक्त किया गया है।

Component of labour expressed as percent of value of work : *Not Applicable*

खण्ड–10(गक)

Clause 10CA

Whether clause 10CA shall be applicable : *No*

इस खण्ड में प्रावधित सामग्री **Materials covered under this clause**	सामग्री (सीमेन्ट, प्रबलन छडें तथा ढांचागत स्टील के सिवाय) जो अखिल भारतीय थोक मूल्य सूचकांक के सर्वाधिक अनुरूप है। Nearest Materials **(other than cement, reinforcement bars and structural steel)** for which All India Wholesale Price Index to be followed	खण्ड 10 ग क के अन्तर्गत समाविश्ट सभी सामाग्रियों की मूल कीमतें' **Base Price of all the materials covered under clause 10CA***
1.		
2.	**-------N/A-------**	
3.		

' खण्ड 10 ग क के अन्तर्गत समाविष्ट सभी सामाग्रियों की मूल्य कीमतों का वर्णन एन0आई0टी0 के अनुमोदन के समय किया जाना है।

* Base price of all the materials covered under clause 10CA is to be mentioned at the time of approval of NIT.

खण्ड.10 गग

Clause 10CC

खण्ड 10गग उन संविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शायी गई अवधि से अधिक अनुबंधित है।

Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in the next column : *Not Applicable*

मूल्य वृद्धि के लिए अन्य सामग्री, श्रम, पी.ओ.एल आदि के 'ाटकों की अनुसूची।
ैबीमकनसम वि बवउचवदमदज वि वजीमत डंजमतपंसेए स्ंइवनतए च्वस् मजबण वित चतपबम मेबंसंजपवद
निर्माण कार्य सामग्री के लिए सिविल 'ाटक (खंड 10 ग के अन्तर्गत शामिल सामग्रियों को छोड़कर)/वैधुत कार्य में कुल मूल्य के प्रतिषत के रूप में प्रदर्षित

(i)	Component of Civil	:	*Not Applicable*
(ii)	**(Except material covered under clause 10CA)** Electrical construction materials expressed as percent of total value of work	:	*Not Applicable*
(iii)	श्रम के 'ाटक के कुल मूल्य की प्रतिषत के रूप में प्रदर्षित Component of Labour expressed as percent of total value of work	:	*Not Applicable*
	पी.ओ.एल के 'ाटकदृकार्य के कुल मूल्य के प्रतिषत के रूप में प्रदर्षित Component of POL expressed as percent of total value of work	:	*Not Applicable*

खण्ड– 11
Clause 11

कार्य निमपादन के लिए अनुपालन किए जाने वाले विनिर्देश **Specifications to be followed:**	:	*C.P.W.D. General Specification for Electrical Works, Part-I (Internal), 2023, C.P.W.D. General Specification for Electrical Works, Part-II (External), Solar PV System; all amended upto date.*
खण्ड – 12 **Clause 12** विचलन सीमा, जिसके परे खण्ड भवन निर्माण कार्य के लिए लागू होंगे Deviation limit beyond which clause shall apply for Electrical work	:	*100%*
खण्ड – 14 **Clause 14-** Carrying out part work at risk & cost of contractor	:	*Applicable*
खण्ड–16 **Clause 16** घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी Competent Authority for Deciding Reduced Rates	:	*Executive Engineer-(E) CPWD, Haldwani*
खण्ड – 17 **Clause 17-** Contractor liable for damages, defects during defect liability period	:	*Applicable*
खण्ड – 18 ए एंव 18 बी **Clause 18 (A) & 18 (B)-**	:	*Applicable As per Additional Terms and Conditions of the Contract.*

Clause- 19	:	Applicable (All Parts)
Clause- 20	:	Applicable
खण्ड–25 **Clause-25 Settlement of Disputes and Arbitration**	:	As per GCC

खण्ड–32

Clause 32

Requirement of Technical Representative(s) and Recovery Rate

Cost of work	Minimum Qualification of Technical representative	Discipline Electrical / Mechanical	Designation (Principal Technical Representative / Technical Representative)	Minimum Experience (Years)	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)	
						Figures	Words
~~15 Lac to 1.5 Crore~~	~~Graduate Engineer~~ ~~Or~~ ~~Diploma Engineer~~	~~Electrical~~	~~Project Manager cum Planning/ Quality/Site/ Billing Engineer~~	~~02 or 05 respectively~~	~~1~~	~~Rs. 15000/- P.M. per person~~	~~Rs. Fifteen thousand only~~

NOTE: *Assistant Engineer retired from Govt. services that are holding Diploma will be treated at par with Graduate Engineer.*

Note: All other Clauses shall be applicable as per GCC 2023 for Construction Works work which is not attached here, but shall form part of the agreement with the First Lowest Bidder and it can be seen on www.cpwd.gov.in

FORM OF EARNEST MONEY (BANK GUARANTEE)

WHERAS, contractor …… (Name of contractor) (Herein after called "the Contractor") has submitted his tender dated …….. (Date) for the work "…… (Name of Work) (Hereinafter called "the Tender").

KNOW ALL PEOPLE by these presents that we……(Name of bank) having our registered office at…… (Hereinafter called "the Bank") are bound to ……..…….. (Name and division of Executive Engineer) (Hereinafter called "the Engineer-in-charge") for the sum of Rs. …….. (Rs. in words ……) only for which payment, well and truly, to be made to the said Engineer-in-Charge, the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this …….. day of …… 20….

THE CONDITIONS of this obligation are:

(1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender;

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:

(a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required;
OR
(b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor,
OR
(c) fails or refuses to start the work, in accordance with the provisions of the contract and Instructions to contractor, OR
(d) fails or refuses to submit fresh Bank Guarantee of an equal amount of the Bank Guarantee, against Security Deposit after award of contract.

We undertake to pay to the Engineer-in-Charge either upto the above amount or part thereof upon receipt of the first written demand, without the Engineer-in-Charge having to substantiates his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by his is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

The Guarantee will remain in force upto and including the date*……after the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may extended by the Engineer-in-Charge, notice of which extension (s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE ……. SIGNATURE OF THE BANK

WITNESS …… SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 7 months from last date or receipt of tender.

FORMAT OF RECEIPT OF DEPOSITION OF ORIGINAL EMD

RECEIPT OF DEPOSITION OF ORIGINAL EMD **(RECEIPT NO. ..... / DATE .....)**	
NAME OF WORK :-	**SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)**
NIT NO. :-	**26/AE(E)-IV/Almora/2026-27 (recall-1)**
ESTIMATED COST :-	**3,58,355/-**
AMOUNT OF EARNEST MONEY DEPOSIT :-	**7,167/-**
LAST DATE OF SUBMISSION OF BID:-	**02-11-2026**

(*To be filled by NIT approving authority / EE at the time of issue of NIT and uploaded along with NIT)

1. **NAME OF CONTRACTOR** ..... **#**
2. **FORM OF EMD** ..... **#**
3. **AMOUNT OF EARNEST MONEY DEPOSIT** ..... **#**
4. **DATE OF SUBMISSION OF EMD** ..... **#**

Signature, Name and Designation of EMD
Receiving officer (EE/AE(P)/AE/AAO)
Alongwith Office Stamp

(# To be filled by EMD receiving EE)

FORM OF PERFORMANCE SECURITY (GUARANTEE)
BANK GUARANTEE BOND

1. In consideration of the President of India (hereinafter called "the Government") having offered to accept the terms and conditions of the proposed agreement between……and …..…..…..……. (Herein after called "the said contractor(s)" for the work ……(Herein after called "the said agreement') having agreed to production of an irrevocable Bank Guarantee for Rs…….. (Rupees……only) as a security/ guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

   We …… *(Indicate the name of Bank)* ……(Hereinafter referred to as "Bank") hereby undertake to pay to the Government an amount not exceeding Rs…….. (Rupees……) only, on demand by the Government.

2. We……(indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor (s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs…… (Rs……) only.

3. We, the said bank, further undertake to pay the Government any money so demand notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.
   The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We ……..(indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till Engineer-in-Charge on behalf of the Government certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(s) accordingly discharges this guarantee.

5. We……..(indicate the name of Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We …… (Indicate the name of bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.

8. This guarantee shall be valid upto ……..unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs. …… (Rupees……) only and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee, shall stand discharged.

Dated, the ……Day of…….For……. (Indicate the name of the Bank)

Note: - Performance guarantee shall be valid upto three months after the time period allowed for the work.

INTEGRATY PACT	**CPWD**

To,

……..,
……..,
……..

Sub: NIT No. **26/AE(E)-IV/Almora/2026-27 (recall-1)**

Name of Work: SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

Dear Sir,

It is here by declared that CPWD is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the CPWD.

Yours faithfully

Assistant Engineer (E)-IV CPWD,
Almora, Uttrakhand

To,

Executive Engineer (E)-Haldwani
CPWD, Haldwani

Sub: Submission of Tender for the Work SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

Dear Sir,

I/We acknowledge that CPWD is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by CPWD. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, CPWD shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

INTEGRITY AGREEMENT

(To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of CPWD)

This Integrity Agreement is made at ..... on this..... Day of .....20.....

BETWEEN

President of India represented through *Assistant Engineer (E)-IV CPWD, Almora* -263601 (Hereinafter referred as the '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....(Name and Address of the Individual/firm/Company) through.....(Hereinafter referred to as the (Details of duly authorized signatory) "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No.....) (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for ..... (Name of work) ..... hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

   (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
   (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
   (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commit himself 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:

   a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other 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.

   b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) 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 tenders or any other actions to restrict competitiveness or to cartelize in the bidding process.

   c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

   d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

   e) The Bidder(s)/Contractor(s) 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.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/ Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/ Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his

reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**

2) **Forfeiture of EMD/Performance Guarantee/Security Deposit**: If the Principal/ Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 1 Months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

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

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters of the Division of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. .....
(Signature, name and address)

2. .....
(Signature, name and address)

Place:
Dated:

General Conditions of Contract - 2023 (Construction Works)

Corrected upto date, CPWD "General Conditions of Contract, 2023" is available with the *Assistant Engineer (E)-IV CPWD, Almora, SSB campus. NTD Almora Uttarakhand-263601. Phone No.& 05962-236718*, which will form part of the Agreement.

GENERAL TERMS & CONDITIONS OF CONTRACT

1.0 GENERAL

1.1 The department shall be at full liberty to get the installation inspected by the third party and the contractor shall have to make all modifications in the designing and installations as communicated to it by the department inter-alia advised by the third party.

1.2 The work shall be executed as per CPWD General Specifications for Electrical Works Part – I, II, IV & V as amended up to date, relevant I.E. Rules, BIS/IEC and as per directions of Engineer-in-charge. These additional specifications/ conditions are to be read in conjunction with above and in case of variations; specifications given in these Additional conditions shall apply. However, nothing extra shall be paid on account of these additional specifications and conditions, as the same are to be read along with schedule of quantities for the work. In any case the presidency of the documents shall be as per the following sequence:-

BOQ ⇨ List of Approved Makes ⇨ Technical Specification ⇨ CPWD General specifications ⇨ various IS/ IEC Codes

1.3 The bidder should, in his own interest, visit the site and get familiarized with the site conditions before bidding.

1.4 No T & P shall be issued by the Department and nothing extra shall be paid on account of this.

1.5 **Type of Contract:** The work to be awarded by this tender shall be treated as indivisible Works Contract.

2.0 COMMERCIAL CONDITIONS

2.1 **Submission and opening of tender**

The bidder shall be required to submit the tender through e-tendering. As no deviation from the tender specification shall be permitted, the firms shall quote their rates according to the tender documents without any deviation. The tender documents shall be available on the website www.etender.cpwd.gov.in and the firms shall tender their rates as per the instruction on the site itself.

2.2 The bidder will have to fill up their rates only in the Schedule of Work in the e-tendering put up on the website by the department. Tenders in whom the price bids are given in any other format are liable to be rejected. The abstract of cost will be required to be filled in.

2.3 In the tender bid, there shall be no conditions, whatsoever. In case any bidder mentions any condition including conditional rebates in their price bid the tender shall be rejected forth with.

A bidder will also not be allowed to withdraw or modify any condition and/ or rates after the opening of bids.

2.4 The department reserves the right to reject any or all the price bids and call for fresh prices/tenders as the case may be without assigning any reason.

3.0 TERMS OF PAYMENT

The following percentage of contract rates for the various items included in the contract shall be payable against the stage of work shown herein. The payment shall be released only after satisfactory completion of the activity in the contract to the entire satisfaction of the engineer-in-charge, on pro-rata basis, after deduction of Security Deposit, Taxes & Duties, Cess etc. as applicable at the time of payment and as per the Government directions, during the pendency of the contract. Payment shall be released quarterly subject to availability of Budget / Funds / LOC by Client Department.

a) **FOR THE WORK RELATED SUPPLY AND INSTALLATION**

- 70% of the contract value of the item of work, on supply of material at site in good condition
- 80% of the contract value of the item of work, on satisfactory installation of material at site to the entire satisfaction of engineer-in-charge
- 95% of the contract value of the item of work, on satisfactory testing and commissioning of item of work in the contract to the entire satisfaction of engineer-in-charge.
- 100% of the contract value of the item of work, on handing over of the complete work including inventory, tax invoices, completion plan, guarantee bond etc.

b) **FOR THE WORK RELATED SUPPLY OF LABOUR SERVICES**

- The payment for the supply of labour services shall be made in full amount on actual work done.
- In case of complaint received from the deployed labour , the payment shall not be made till resolving the labour complaint

4.0 SECURITY DEPOSIT

(a) The security deposit shall be collected by deductions from the running bills of the contractor at the rate mentioned below. The security deposit can also be accepted in cash or in the form of Government Securities, Fixed Deposit Receipts etc.

(b) A sum @ 2.5% of the gross amount of the bill shall be deducted from each running as well as final bill of the contractor. Such deductions shall be made unless the contractor has deposited the amount of security at the rate mentioned in cash or Government securities or Fixed Deposit Receipts. This is in addition to the performance guarantee that the contractor is required to deposit as per Clause no. 3.2.

(c) Security deposit can be released against Bank Guarantee issued by a scheduled bank in the specified format for the full value of the security deposit. The Bank Guarantee shall be kept valid till the expiry of the above guarantee/ Construction period. The security deposit shall be released after successful completion of the one year from the date of completion/commissioning or handing over whichever is later.

5.0 PERFORMANCE GUARANTEE

The successful bidder shall submit an irrevocable performance guarantee of 5% of the estimated amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement. This guarantee shall be in the form of Demand draft/Pay order or irrevocable bank guarantee bond of any scheduled bank or the State Bank of India in the specified format or in the form of Government security, fixed deposit receipt pledged in favour of Executive Engineer, Haldwani Central Division, CPWD, Haldwani or as specified in the letter of acceptance of tender. The performance guarantee shall be initially valid up to the stipulated date of completion plus 2 Months beyond. This bank guarantee shall be kept valid till the recording of completion certificate for the work by the competent authority.

6.0 Income tax, GST, Labour Cess & other statutory deductions etc. shall be made at source as per the prevalent laws of the Govt. Of India and the Govt. of Delhi. The deductions of Security Deposit, Income-Tax, and GST etc. shall be done after calculation of the above due payments as per clauses 3.1 to 3.3 and net payment shall be reduced accordingly. GST, as applicable, shall be deducted at source from the bills of the contractor.

7.0 RATES

The rates quoted by the bidder, shall be firm and inclusive of all taxes including GST etc., duties levies, octroi etc. and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site including temporary construction of storage, risks,

over head charges, general liabilities/obligations. The rates does not includes the ESI & EPF of the employer part.

The department will not issue octroi exemption certificate.

8.0 COMPLETENESS OF TENDER

All sundry equipments, accessories and ancillaries as recommended by the engineer-in-charge and other petty items which are useful and necessary for efficient working shall be deemed to have been included in the tender irrespective of the fact whether such items are specifically mentioned in the tender documents or not.

9.0 The work is to be executed at SIB Bageshwar, Distt Bageshwar (Uttarakhand). It shall be mandatory for the contractor to get proper verification of the work force employed for the work. Proper identification documents shall be submitted, as desired, with the engineer-in-charge or its authorized representative.

10.0 STORAGE AND CUSTODY OF MATERIALS

At present no storage facility is available at site that may be used for storage of sundry materials and erection equipments. The contractor has to make its own arrangements. No separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

11.0 CARE OF THE BUILDING AND OTHER STRUCTURES/ INSTALLATIONS

Care shall be taken by the contractor while handling and installing the various equipments and components of the work to avoid damage to the building and its surrounding roads, pavements, horticulture work, boundary wall, sewer and water lines etc. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work. All dismantled material received from site shall be returned to the Junior Engineer(E) at his stores at site.

12.0 SAFETY CODE & LABOUR REGULATIONS

In respect of all labour employed directly or indirectly on the work for the performance of contractor's part of the work, the contractor at his own cost will arrange for the safety provisions as per the statutory provision, BIS recommendations, CPWD code, general conditions of contract and instructions issued from time to time. In case of default the Engineer–in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the cost from the contractor.

13.0 COMPLETION PERIOD

The completion period indicated in the tender documents is for the entire work of planning, designing, approval of drawings etc., arrangement of materials & equipments, delivery at site including transportation, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

14.0 POWER SUPPLY/ WATER SUPPLY

Electric supply shall be provided by the Department for execution of work.

15.0 ACCEPTABLE MAKES OF VARIOUS EQUIPMENTS

The acceptable makes of various equipments/components/accessories have been indicated in "List of preferred makes". The bidder shall work out the cost of the offer on this basis. Alternate makes are not acceptable. All items for which the makes are not mentioned in the tender shall be got approved from the engineer in-charge before procurement & as per direction of engineer in charge, otherwise the same will be rejected outright.

16.0 VALIDITY

The bid shall remain valid for 30 days from the date of opening of Price Bid.

17.0 COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS

All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:

(i) Factories Act.
(ii) Indian Electricity Rules.
(iii) B.I.S. & other standards as applicable.
(iv) Workmen's compensation Act.
(v) Statutory norms prescribed by local bodies like CEA, Power Supply Co., etc.

Nothing in this specification shall be construed to relieve the successful bidder of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

18.0 INDEMNITY

The successful bidder shall at all times indemnify the department, consequent on this works contract. The successful bidder shall be liable, in accordance with the Indian law and regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful bidder in so far as the latter is responsible. Though not mandatory under the terms of these documents, the successful bidder is advised to take insurance including third party insurance for the men and material, as he may be necessary, to cover the risk in his own interest. No extra payment would be made to the successful bidder on account of the above.

19.0 ERECTION TOOLS

No tools and tackles either for unloading or for shifting the equipments for erection purposes would be made available by the department. The successful bidder shall make its own arrangement for all these facilities.

20.0 COOPERATION WITH OTHER AGENCIES

The successful contractor shall coordinate the work with other contractor(s)/ agencies engaged in the other construction/maintenance of building and it's installations, if any, and exchange freely all technical information so as to make the execution of this work/contract smooth. No remuneration should be claimed from the department for such technical cooperation. If any unreasonable hindrance is caused to other agencies and any completed portion of the work has to be dismantled and re-done for want of cooperation and coordination by the bidder during the course of work, such expenditure incurred will be recovered from the successful bidder if the restoration work to the original condition or specification of the dismantled portion of the work was not undertaken by the bidder himself.

The work shall be carried out with least disturbance during shifting & shut down taken in consultation with the client department.

21.0 MOBILIZATION ADVANCE

Mobilization advance is not admissible as per the "General Conditions of Contract".

22.0 INSURANCE AND STORAGE

The contractor may get all consignments duly insured upto the destination from warehouse in its own interest and at his cost. The insurance covers may be valid till the equipment is handed over

duly installed, tested and commissioned. All defective and deformed material shall be rejected outright.

23.0 VERIFICATION OF CORRECTNESS OF EQUIPMENT AT DESTINATION

The contractor shall have to produce all the relevant records to certify that the genuine equipments from the manufacturers has been supplied from origin of manufacturer.

24.0 INTERPRETING SPECIFICATIONS

In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:

(a) Schedule of quantities
(b) Technical specifications
(c) Drawing (If any)
(d) Additional conditions of the contract
(e) General conditions of the contract
(f) Relevant BIS or other international code in case BIS code is not available.

Assistant Engineer (E)-IV
CPWD, Almora, Uttarakhand-263601

ADDITIONAL TERMS & CONDITIONS OF CONTRACT

1) The work is to be carried as per the direction & satisfaction of Engineer-in-charge.
2) All the material brought at site shall have to be got approved from the Engineer-in-charge before use at site.
3) No T&P shall be issued by the department.
4) No claim for idle labour will be entertained by the department.
5) Any damage done to the existing structure shall be restored to its original shape & colour by the contractor for which nothing extra shall be paid.
6) The work shall be carried out in close co-ordination with other agencies like civil wing of this department / Client Department.
7) The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major luminaires and mounting equipment covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been specifically mentioned in bill of quantity in the tender document. However, major equipment not covered in the scope of the work and required subsequently as an additional feature, not covered in the contract specifications, shall be paid extra. The decision of the engineer-in-charge in the matter shall be final and binding upon the contractor.

8) The rates shall be inclusive of all taxes, levies, duties, cartage etc.

9) The contractor shall have to adopt all the safety precautions while executing the work, therefore no claim shall be entertained by the department in case of any accident, while carrying out the work.

10) It shall be deemed that contractor has satisfied himself about the nature and location of the work, general and local conditions, particularly those pertaining to transport, handling and storage of materials, general ground conditions and environment / temperature. before Biding. The department shall not be responsible for lack of such knowledge and also the consequences thereof. The information and site data shown in the drawings and mentioned herein and elsewhere in the Bid document are being furnished for general information and guidance only. The Engineer-in-Charge shall in no case be responsible for the accuracy there of or any interpretations/or conclusions drawn there from by the contractor and nothing extra shall be paid even if the site conditions/information are different or otherwise incorrect at it is presumed that the contractor has satisfied himself for all possible contingencies, situations, bottlenecks and acts of coordination which may be required between different agencies.

11) The Engineer-in-Charge will be at liberty to take respective sample(s) of each item of Schedule of Quantity in any approved laboratory as decided by him. The sample for testing will be provided by the contractor. All expenditure required to be incurred for taking sample, conveyance, packing and testing charges etc. will be borne by the contractor himself. In case any sample particular lot fails in testing, the contractor will be bound to replace the entire lot with fresh removal of prescribed specification and the rejected lot will be returned to the contractor only after fresh lot is supplied.

12) Removal of rejected materials: In case any materials/Substandard work are rejected by the Engineer in-Charge, the same shall be removed from the site within 48 hours, failing which the same may be got removed by the Engineer-in-charge at the risk and cost of the contractor. The decision of the Engineer-in-charge shall be final and binding in this regard.

13) In case of any dispute regarding rejection of quality of materials, the decision of the Engineer-in Charge will be final and binding upon the contractor.

14) All taxes applicable at prevalent rates shall have to be paid by the contractor himself and the rates quoted by him shall include these taxes and nothing extra on this account shall be payable.

15) The rates for different items of work shall apply for all heights and depths, leads and lifts including all labour & materials and other aspects involved in the execution of work unless otherwise specified in the agreement or specifications applicable to the agreement.

16) Any damage done by the contractor to any existing work during the course of execution of the work shall be made good by him at his own cost.

17) Articles manufactured by the reputed firms and approved by Engineer-in-Charge shall only be used. Only articles classified, as 'first quality' by the manufacturer shall be used unless otherwise specified. In case articles bearing ISI certification are not available in the market, quality of samples brought by the contractor shall be judged by standards laid down in the relevant CPWD specifications. For the items not covered by CPWD specifications relevant BIS standards shall apply. The sample of materials to be brought to site for use in work shall be got approved from the Engineer-in-Charge before actual execution of work.

18) The quantities of any item shall not be exceeded beyond the agreement quantities without prior permission of Engineer-in-Charge.

19) Statutory applicable recoveries such as on account of GST, Income tax, Surcharge, Construction Worker's Welfare Cess etc. as applicable from time to time shall be made from the gross amount of Running A/c Bill and Final Bill of the contractor.

20) The contractor shall make his own arrangement for getting the permission for entry of trucks carrying materials for the site from the traffic police / Client.

21) Payment to the contractor shall be made on quarterly basis after production of evidence (Record of paid ESIC, EPF & Salary electronically) for making payment to the staff. The rates tendered shall be inclusive of the GST, cartage, loading/unloading etc. and nothing additional shall be payable to the contractor. However, the employer contribution of ESI and EPF shall be reimbursed to the contractor upon submission of proof of actual deposition of the same with the concerned authorities. Contractor shall make the salary payments to the employees only through electronic transfer up-to 7th of every month.

22) The contractor have to pay the Salary of work done to the deployed staffs upto 7th day on the month, ESI & EPF upto 15th of every month. If contractor fail to pay and deposit ESI & EPF of Employee/employer part on time then penalty of Rs 50 Per staff per day shall be charged in coming bill. The penalty for delayed salary paid shall be 100 Rs per staff per day.

23) The firm shall have to make payment by cheque /ECS to the staff employed on the above work on monthly basis up to 7th of every month as per minimum wages act applicable on the date and the same should be ensured by JE every month the proof of payment have to be supplied by contractor during billing.

24) Any reference made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.

25) The contractor will not have any claim in case of any delay by the Engineer-in-Charge in removal of trees or shifting, removing of telegraph, telephone or

electric lines (overhead or underground), water and sewer lines and other structure etc., if any which may come in the way of the work. However, suitable extension of time can be granted to cover such delay.

26) The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipment's left out of his work and dress the site around the building to the complete satisfaction of the Engineer-in charge before the work is treated as completed.

27) The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fee and charges which may be liable. The contractor shall give due notices to municipality police and /or other authorities that may be required under the law/rules in force the area and obtain all requisites licenses for temporary obstructions/enclosures and pay all charges which may leviable on account of his execution of the work under the Agreement. Nothing shall be payable on this account.

28) No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall also not be allowed to erect any permanent / temporary set up for his staff in the campus.

29) Contractor has to provide drinking water facility at site.

30) The Contractor shall give due notices to Municipality, Police and/ or other authorities that may be required under the law/ rules under force and obtain all requisite licenses for temporary obstructions/ enclosures and pay all charges which may be leviable on account of his execution of the work under the agreement. Nothing extra shall be payable on this account.

31) The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, labour laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.

32) Any other inventory added during the contract period to any of the installations of these areas shall also be maintained within the scope of work without any extra cost.

33) The contractor shall provide necessary barriers, warning signals and other safety measures while executing the work or wherever necessary so as to avoid accidents. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accidents occurring due to any cause. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

34) Before start of work, the Contractor keeping in view that the space available is limited, shall inspect the site for material yard, other storage, steel fabrication yard, site laboratory and seek formal approval of the Engineer-in-charge. No space will be available at site of work for the fabrication of steel / aluminum work grating, railing, etc. The Contractor should make his own arrangement for the same in his workshop. Nothing shall be paid for the carriage of such manufactured items from workshop to site of work. The Contractor shall not stack building material / malba on local municipality land or road or on the land owned by any other authority and in case of failure to do so, he shall face penal action as per the rules, regulation and bye-laws of the said body or authority. The Engineer-in-Charge shall be at liberty to recover the amount due but not paid to the concerned authorities on account of the above from any amount due

to the Contractor including amount of the security deposit or retention money in respect of this Contractor or any other Contract.

35) In order to adhere to the Committed Program and requirement of client department, the work shall be carried out in more than one shift and Contractor will deploy the resources accordingly. No extra claim on this account shall be entertained. Contractor should give advance notice in writing to Engineer-in-charge for doing any work in odd hours and arrange permission accordingly

36) The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, streams and waterways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants/users of adjoining buildings.

37) All necessary test as per the NIT/CPWD specifications/ relevant BIS codes shall be carried out on all other materials whether ISI marked or otherwise, from CPWD lab or from approved lab as directed by Engineer-in-charge. Wherever NIT/CPWD specifications/ relevant BIS codes do not specify the frequency of tests the same shall be carried out as per the direction of the Engineer- incharge. Payment shall be borne by the contractor.

38) The contractor shall be responsible for the watch and ward of the building, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installation and thereafter till the building is physical completed and handed over. No Extra Payment Shall Be Made In This Account.

39) The contractor shall at his risk and cost, make all arrangements and provide all facilities as per Engineer-in-Charge may require for collecting and preparing the require number of samples for such test at such time and to such place or places as may be directed by the Engineer in charge and bear all charge.

40) No claims of the labourers shall be entertained by the Department including that of providing employment, regularization of services etc. & the contractor shall be responsible for any court case by his workers.

41) Safety codes and Labour Regulations
In respect of all labour employed directly or indirectly on the work for the performance of the contractor's part of work, the contractor at his own expense, will arrange for safety provision as per the statutory provisions, B.I.S. recommendations, factory act, workman's compensation act, CPWD code and instructions issued from time to time. Failure to provide such safety requirement would make the firm liable for penalty as decided by Engineer-in-charge. The agency will be solely responsible for any damages, mishap or injury/death of their staff deployed at the site.

42) The Contractor shall submit Technical Data Sheet & Drawings, Layout Drawings & Single Line Diagram for approval of the Department before supply of material at site. All drawings shall be drawn on CAD format and submit 2 sets on A-3 / A-2 size in hard copies, duly signed & stamped by the contractor, drawings submitted by email shall not be entertained & shall be rejected.

43) The contractor is advised to visit the site of work, to check location/ environment / accessibility of approach route etc. and read NIT thoroughly to assess quantum of work, Technical specifications items of work, and acceptable makes etc and inform Engineer-in-charge about any discrepancies if any, before submission of bid. No request of change in technical specifications/ makes / Item etc. shall be entertained after submission of bid and award of work.

44) The contractor shall provide proof of purchase of all major items Or as per direction of Engineer in charge, from OEM / Authorized dealer before claiming payment and shall submit Guarantee of a period of One Year from the Date of Completion, from OEM/ Authorized dealer in Uttarakhand

45) The contractor shall submit Technical Data Sheet, Drawings etc. & Make and Model No. etc. for approval by the department Or as per direction of Engineer in charge before supply of material at site.

46) In case of non availability of model no. as per agreement, available model no. with higher specification and price list etc. of the same make may be acceptable but lower model no. and price list shall not be acceptable.

47) Quality Assurance Programme / Inspection shall be as per CPWD Specification.

48) All the Solar PV equipments shall be guaranteed for a period of 5 Years as per Warranty / Guarantee letter by OEM / Authorized Dealer From Date of Completion failing which recovery @ 20,000/- affected from final bill.

49) The work involves earthing, cabling & conduiting, net metering i/c check meter, liasoning with UPCL, Solar PV Modules, Inverter, AC / DC box with surge protection, Lightening arrestor etc.

50) Bidder should comply order no. P-45021/2/2017-PP (BE-II) Dt. 4 June 2020 issued by Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade which is available on website (https://assets-bg.gem.gov.in/resources/pdf/ppp-mII-order-dated-04-06-2020.pdf) & CE- CSQ (E), New Delhi OM No. 113 Dt. 1 April 2022, however, the L1 Contractor shall submit undertaking after award of work and before supply of material (as per list of preferred make) that all the material used at site comply the above referred order.

Assistant Engineer (E)-IV
CPWD, Almora, Uttarakhand-263601

ITEMS WHICH ARE TO BE EXECUTED THROUGH SPECIALIZED AGENCIES

1. The main contractor shall have to associate other specialised agency(s) (Joint ventures are not accepted) for execution of each of the these specialized work(s), who fulfils the eligibility criteria as defined below, **within 7 days from the date of Start of the Work** and also after taking prior approval from the Engineer in-charge.

2. The agency shall submit the similar work experience documents in respect of experience of having satisfactory completed similar works as defined below during last seven years ending previous date to the last date of submission of the bid.

Sl. No.	Eligibility Criteria for approval of Specialized agency
1	Estimated Cost- Rs. 3,58,355/- **[SITC of Rooftop Solar PV System]** Three Similar works each costing not less than Rs. 1,43,342/- OR Two Similar works each costing not less than Rs. 2,15,013/- OR One Similar works each costing not less than Rs.2,86,684/-
2	Any other specialized work: As per the above specified qualification criteria with the approval of the engineer-in-charge

NOTE: The specialized agency shall be got approved from the Engineer-in-Charge well in advance.

MEMORANDUM OF UNDERSTANDING [M.O.U]

BETWEEN MAIN CONTRACTOR AND ASSOCIATE SPECIALIZED CONTRACTOR

1) M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:
[Henceforth called the main contractor]

And

2) M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:
[Henceforth, called Associated Electrical Contractor or Electrical Contractor]

FOR THE EXECUTION OF SPECIALIZED ELECTRICAL WORK: SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK) We state that M.O.U between us will be treated as an agreement and has legality as per Indian Contract Act [amended upto date] and the department [CPWD] can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. Both the parties shall be paid consequent to the execution as per agreement to the extent this MOU permits. In case of any dispute, either of us will go for mediation/arbitration by the Chief Engineer-Dehradun. Any of us may appeal against the mediation/arbitration to the ADG (Chandigarh). His decision shall be final and binding on both of us.

We have agreed as under:

1] The electrical contractor will execute all electrical works in the wholesome manner as per terms and conditions of the agreement. Payment of the associated electrical contractor shall be governed vide Para 19.1.11 & 19.1.12 of CPWD-6 & Clause-7 of GCC-2023.

2] The electrical contractor shall be liable for disciplinary action if he failed to discharge the action[s] and other legal action as per agreement besides forfeiture of the security deposit.

3] All the machinery and equipments, tools and tackles required for execution of the electrical works, as per agreement, shall be the responsibility of the electrical contractor.

4] The site staff required for the electrical work shall be arranged by the electrical contractor as per terms and conditions of the agreement.

5] Site order book maintained for the said work shall be signed by the main contractor as well as by the Engineer of the Associated Contractor or by Associated Contractor himself.

6] All the correspondence regarding execution of the electrical work shall be done by the Department with the Main Contractor with a copy to the associated contractor. In case of non-compliance of the provisions of agreement, the main contractor, as well as the associated contractor shall be responsible. The action under clauses 2 and 3 shall be initiated and taken against the main contractor.

[SIGNATURE OF MAIN CONTRACTOR]	**SIGNATURE OF ASSOCIATED ELECTRICAL CONTRACTOR**
[STAMP WITH ADDRESS]	**[STAMP WITH ADDRESS]**
Date:	Date:
Place	Place:

COUNTERSIGNED

Assistant Engineer (E)-IV
CPWD, Almora, Uttarakhand-263601

WILLINGNESS CERTIFICATE

NAME OF WORK: SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

I hereby give my willingness to work as electrical contractor for the specialized work of "_____" in the above mentioned work. I will execute the work as per specifications and conditions for the agreement and as per direction of the Engineer-in-Charge. Also, I will engage full time technically qualified supervisor/engineer for the works. I will attend inspections of officers of the department as and when required.

Date: _____

Place: _____

[Signature of the Associate Electrical Contractor]
[Stamp with Address]

TECHNICAL SPECIFICATIONS

The electrical work shall generally be carried out as per General Specifications for Electrical Works, Part-1 (Internal)-2023, Part-II (External)-2023 & Solar PV System.

Solar Meter and Net Meter

Solar Meter: A separate Energy Meter called Solar Meter shall be provided at the output of PCU to record the energy generation from the Solar System. (This energy meter should not be integrated with PCU). Solar energy meter means a unidirectional meter to be installed at the delivery point of the solar energy system to measure the solar electricity generated. This Energy Meter should be tested along with the Net Meter (Import-Export Meter).

Net Meter: As per requirement of On-Grid net metering system, net meter is to be provided at site as approved by the state distribution agency. Net meter means the bidirectional energy meter to be installed at the interconnection point of the consumer with the network of distribution licensee Energy meters shall be installed and maintained in accordance with the provisions of The Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time. The Contractor shall maintain the Metering System as per metering code and CEA guidelines. The defective meter shall be immediately tested and rectified/ replaced.

A solar meter and bi-directional energy meter suitable for the installed solar plant shall be supplied and installed by the contractor after testing and sealing from supply agency UPCL. Energy Meters must be provided with the necessary data cables if required.

The solar energy meter and net energy meter shall be of accuracy as given and CT and PT shall be utilized according to CEA metering regulations, 2006 and its amendment.

Capacity	Type of operation	Accuracy Class	
		Solar Meter	Net Meter
Upto 35 kWp	LT Whole current meter 10A-60A	1.0 (LT)	1.0 (LT)
Above 35kWp below 100kWp	CT operated meter	0.5s	0.5s
100kWp and above 100kWp	CT operated meter	0.5s (LT)	0.5s (HT)

Meters shall be microprocessor based conforming IEC 60687 / IEC 6205211 / IEC 62053-22 / IS 14697 and solar energy meter or its display shall be placed adjacent to net energy meter.

Display parameters: LCD test, kWh import, kWh export, MD in kW export, MD in kW import, Date & Time, AC current and voltages and power factor (Cumulative kWh will be indicated continuously by default & other parameters through push-button). The solar energy meters and net energy meters should be DLMS compliant and AMR compatible with RS485 communication port for measurement of specified electrical parameters.

The solar energy meters shall be provided with two ports for communication of the measured / collected data. One port compatible with RS 485 specifications, which shall be used for remote access through suitable GPRS modem (Technical specification of GPRS modem shall be submitted for approval). The other port shall be an optical port complying with hardware specifications detailed in IEC 62056-21.

Earthing

The Solar PV Plant should have a dedicated earthing system. The Earthing for array and LT power shall be made as per the provisions of IS:3043-2018 "Code of practice for earthing (Second Revision)" that governs the earthing practices of a PV system and IS: 732-2019 "Code of practice for electrical wiring installations (Fourth Revision)".

Earthing System shall connect all non–current carrying metal receptacles, electrical boxes, appliance frames, chassis and PV module mounting structures in one long run. The earth strips should not be bolted unless otherwise approved. Earthing GI strips shall be interconnected by proper welding and the welded surface should be protected through zinc based paint.

The earthing conductor should be rated for 1.56 times the maximum short circuit current of the PV array. The factor 1.56 considers 25 percent as a safety factor and 25 percent as albedo factor to protect from any unaccounted external reflection onto the PV modules increasing its current.

Masonry enclosure with the earth pit as per CPWD specification or of size not less than 400mm X 400 mm(depth) complete with cemented brick work (1:6) of minimum 150mm width, duly plastered with cement mortar (inside and top only)shall be provided. Hinged inspection covers of size not less than 300mm X 300mm with locking arrangement shall be provided. Suitable handle shall be provided on the cover top of the cover for future maintenance.

Earth resistance shall not be more than 5 ohms. Earthing system must be interconnected through GI strip to obtainequi-potential bonding. The size of the GI earth strip from the earth pits must not be less than25mm X 5mm unless otherwise required in the SOQ.

In compliance to Rule 11& 61 of Indian Electricity Rules,1956(as amended upto date), all non-current carrying metal parts shall be earthed with two separate and distinct earth continuity conductors to efficient earth electrodes.

The equipment grounding wire shall be connected to earth strip by proper fixing arrangement. Each strip shall be continued upto at least 500mm distance from the equipment.

Necessary provisions shall be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.
For each earth pit, a necessary test point shall be provided in the scope of the contractor.
Total number of Earth Pits required for Solar Plant are as follows:
Up to 50kWp: AC-02, DC-02, LA-02
Above 50kWp: AC-02, DC-02, LA-02 (or as per requirement by engineer-incharge)
The bidder shall submit the detailed specification and drawings for the Earthing arrangements as per CPWD specifications.

Lightning Protection

The SPV power plant should be provided with lightning and over voltage protection. The source of over voltage can be lightning or other atmospheric disturbance. The lightning conductors shall be made as per applicable Indian Standards in order to protect the entire array yard from lightning stroke. The design and specification shall conform to IS/IEC 62305, "Protection against lightning" govern all lightning protection-related practices of a PV system in the scope of the contractor.

The entire space occupying SPV array shall be suitably protected against lightning by deploying required number of lightning arresters. Lightning protection should be provided as per IS/ IEC 62305.

Lightning system shall comprise of air terminations, down conductors, test links, earth electrode etc. as per approved drawings.

The protection against induced high voltages shall be provided by the use of surge protection devices (SPDs) and the earthing terminal of the SPD shall be connected to the earth through the earthing system.

The Contractor / Company shall submit the drawings and detailed specifications of the PV array lightning protection equipment to Engineer-In-Charge for approval before installation of system.

Array Junction Box(AJB)/String Combiner Box(SCB)

AJB shall be provided as per the design requirement of the Inverter, if required. AJB comprises of an enclosure, copper bus-bars, Fuses, Surge Protection Device (SPD) and Isolator. DC generated by the solar modules is transmitted through the appropriate cables from Array Yard to Control facility. AJB bus & panel shall be provided for the incoming DC supply from array yard.

AJB, if required, should be equipped with an adequate capacity indoor DC circuit breaker along with control circuit, protection relays, fuses, etc.

AJB, if required, shall be made of GRP/FRP/ PC enclosure of dust and vermin proof construction suitable for IP65/66 protection and IK 8 rating, the bus-bar& cables shall be of annealed electrolytic grade copper in desired size.

The Array Junction Boxes shall be provided in the PV array for termination of connecting cables. The Array Junction Boxes shall be made of GRP/FRP/ PC with full dust, water& vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JBs shall be such that input & output termination can be made through suitable cable glands.

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.

Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP 65 standard to prevent water entry, Single/ Tech Specs of On-Grid PV Power Plants 19 double compression cable glands, provision of earthing. It should be placed at a height suitable for ease of accessibility.

Each Junction Box shall have high quality, suitable capacity Metal Oxide Varistors (MOVs)/ SPDs. The Surge Protective Device shall be of Type-2, as per IEC 60364-5-53

The junction Boxes shall have suitable arrangement for the followings (typical):

Combined groups of Modules into independent charging sub-arrays that will be wired into the controller. The Junction Boxes shall have arrangement for disconnection for each group(s) and at test point for sub-group for fault location. AJB/SCB shall be wired with optical fibre cables for enabling data collection for PV Plants from 100kWp onwards.

The current carrying ratings of the string combiner box/ junction box shall be suitable with adequate safety factor, to interconnect the Solar PV Arrays.

All fuses/MCB’s shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP65/66 enclosures with transparent covers.

Protection devices for both positive and negative inputs of each string, Fuse/Isolator or MCB, type-2SPD etc. shall be provided.

The surge arresters shall be type-2 (with reference to IEC 61643-1) rated at a continuous operating voltage of at least 125 percent of the open-circuit voltage of the PV string and a flash current of more than 5 kA.

Not more than two strings can be connected in parallel to a single input of SCB/AJB. One spare input terminal along with connector shall be provided for each SCB/AJB.

Every SCB/AJB input shall be provided with fuses/MCBs on both positive and negative side.

DC switch disconnector of suitable rating shall be provided at AJB/SCB output to disconnect both positive and negative side simultaneously.

AC Distribution Board

AC Distribution Board (ACDB) shall control the AC power from inverter and should have necessary surge arrestors. An ACDB panel shall be provided in between PCU and Utility grid. It shall have MCB/MCCB/ACB or circuit breaker of suitable rating for connection and disconnection of PCU from grid.

The connection between ACDB and Utility grid shall be of stranded conductor cable with suitable termination. It shall have provision to measure grid voltage, current and power.

The incomer shall be selected at required rating. The ACDB enclosure shall be of good protection and suitable for mounting on the trenches / on wall.

All the 415V AC or 230V AC devices/equipment like bus support insulators, circuit breakers, SFU isolators (if applicable), SPD, etc. mounted inside the switch gear shall be suitable for continuous operation.

Switches/ circuit breakers/ connectors meeting general requirements and safety measurements as per IS 60947 Part I, II, III and IEC 60947 part I, II and III.

Junction boxes, enclosures, panels for inverters/ Controllers shall meet IP 54 (for indoor)/ IP 65/66 (for outdoor) as per IEC 529.

AC/DC Cabling

Cabling is required for wiring from AC output of inverter/PCU to the Grid Interconnection point. It includes the DC cabling from Solar Array to AJB and from AJB to inverter input.

All cables of appropriate size to be used in the system shall have the following characteristic:

Shall conform to IEC 60227 / IS: 694 & IEC 60502 / IS: 1554 / IS: 7098 Part-1 Standards.
Temperature Range :: -10 degree Celsius to +80 degree Celsius
Voltage rating :: 660/1000V
Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
Flexible

Sizes of cables between any 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 (2%).

The power cable from Inverter to ACDB and to the Grid connection point shall be borne by the department and all other interconnecting cables shall be in the scope of the contractor.

For the DC cabling, XLPE or XLPO insulated and sheathed, UV stabilized single core flexible copper cables shall be used; Multi-core cables shall not be used.

For the AC cabling, PVC or XLPE insulated and PVC sheathed single or, multi-core flexible copper cables shall be used. However, for above 25kWp systems, XLPE insulated aluminium cable of suitable area of cross section can be used in the AC side. All LT XLPE cables shall conform to IS: 7098 Part I&II.

The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0% (two percent).

The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0% (two percent).

The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5 mm.

Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers.

All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50cm.The minimum DC cables size shall be 4.0 Sqmm copper conductor and the minimum AC cable size shall be 16 Sqmm copper / suitable rating of aluminum conductor. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires. All cable shall be with UV protected insulation whether specifically mentioned.

Cable Marking: All cable/wires are to be marked in proper manner by good quality ferule or by other means so that the cable can be easily identified. The following colour code shall be used for cable wires

DC positive: Red (the outer PVC sheath can be black with a red line marking
DC negative: Black
AC single phase: Phase: Red; Neutral: black
AC three phase: phases: Red, Yellow, Blue; Neutral: Black
Earth wires: Green

Cables and conduits that have to pass through walls or ceilings shall be taken through PVC pipe sleeve.

Cable conductors shall be terminated with tinned copper end ferrules to prevent fraying and breaking of individual wire strands. The termination of the DC and AC cables at the Solar Grid Inverter shall be done as per instructions of the manufacturer, which in most cases will include the use of special connectors.

All cables and connectors used for installation of solar field must be of solar grade which can withstand harsh environment conditions including high temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes' for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall solar grade copper (Cu) with XLPO insulation and rated for 1.1 kV as per relevant standards only.
Bending radii for cables shall be as per manufacturer's recommendations and IS:1255.
For laying/termination of cables latest BIS/IEC Codes/ standards shall be followed.

Civil Works

Existing shade-free roof-top space/ slope roof shall be used to install Solar PV array. While installing solar power pants on rooftops, the physical condition of the rooftop, chances of shading, chances water level rise in the rooftop during raining due improper drainage in the roof-top should be taken in to consideration.

PV array shall be installed in the terrace space free from any obstruction and/or shadow and to minimize effects of shadows due to adjacent PV panel rows.

PV array shall be oriented in the south direction in order to maximize annual energy yield of the plant.

The solar PV array must be installed on the rooftop in such a way that there is sufficient space on the rooftop for maintenance etc.

There should not be any damage what so ever to the rooftop due to setting up of the solar power plant so that on a later day there is leakage of rainwater, etc. from the rooftop.

Some civil works are inevitable for erecting the footings for the module mounting structure as discussed in Module Mounting Structure section, which are included in the scope of this contract and no additional payment shall be made for the same. The roof top may be given a suitable grading plaster with suitable leak proof compound so as to render the roof entirely leak proof.

Ample clearance shall be provided in the layout of the inverter and DC/AC distribution boxes for adequate cooling and ease of maintenance.

While cabling the array, care must be taken such that no loose cables lie on the rooftops.

The roof top should look clean and tidy after installation of the array.

Neatness, tidiness and aesthetics must be observed while installing the systems.

RCC Works: All RCC works shall be as per IS: 456 and the materials used viz. Cement reinforcement, steel etc. shall be as per relevant IS standards. Reinforcement shall be high strength TMT Fe-415 or Fe-500 conforming to IS: 1786-1985.

Brick Works (if any): All brick works shall be using 1st class bricks of approved quality as per IS: 3102.

Plastering: Plastering in cement mortar 1:5, 1:6 and 1:3 shall be applied to all.

Display of mandatory items: Single Line Diagram and layout diagram of modules and interconnection at installation site shall be provided near the inverter or at a location as desired by the engineer-incharge.

Painting in approved shade shall invariably be carried out on concrete, masonry and plastered surfaces with weather proof paint as per the requirement of the surface. For painting on concrete, masonry and plastered surface IS:2395 shall be followed. For distempering IS: 427 shall be followed. For synthetic enamel painting IS: 428 shall be followed. For cement painting IS: 5410 shall be followed.

All Civil works required for the installation of the PV Plant and other civil and electrical work in evacuation infrastructure, wherever necessary, shall be within the scope of the bidder.

The layout of Inverter accommodation shall be designed to enable adequate heat dissipation and availability. Mount within the existing infrastructure available in consultation with the Site in charge. String Inverters, if required to be installed in open, shall be installed with Canopy type structure over it, to protect it from frequent monsoon and weather changes.

Connectivity

The output of the Solar Power Conditioning Unit has to be connected to the Main ACDB in the building

Plant Capacity	Connecting Voltage
Up to 5 kWp	240V-single phase or 415V-three phase at the option of the consumer
Above 5kWp and up to 100 kWp	415V–Three Phase, 50 Hz or higher (as required by Engineer-In-Charge)
Above 100kWp (N.A.)	At HT/EHT level (11kV/33kV/66kV)

General Procedures for Projects

The following procedures are required regarding the installation of Grid Connected PV Plant:

There are different schemes of UPCL / State Govt. / Union of India regarding subsidy and respective guidelines of different programs initiated by UPCL / State Govt. / Union of India from time to time shall be complied to obtain whatever benefit available under the scheme. The programs may or may not have financial support or subsidy support from either State Government or Central Ministry (MNRE).

Also there might be specific provisions of procurement, installation, commissioning, inspection, warrantee and operation & maintenance of PV Plants, which shall invariably be complied with.

The documentation, inspection, commissioning tests shall confirm to IEC 62446-1: 2016 and its amendments.

Permission and Procedures for the Grid Connected Solar Power Plants

All liasoning work /formalities / documentation / pre-approvals for installing the On-Grid power project shall be completed by the contractor and department shall assist in finalization of necessary documentation on its part with Client dept.

The necessary fee, if any, shall be borne by the department.

The feasibility certificate, if required, shall have validity from competent authority in UPCL.

For LT feeder 75% of the transformer capacity will be permitted for connecting the Grid tied PV power plant whereas it is 80% for the 11kV feeder as per applicable (Renewable Energy and Net Metering) Regulations, as amended upto date.

Within the period of one month, application of the registration of installed PV power plant should be submitted by the contractor for onward submission with the distribution company of the state.

After submitting all the documents and clarification required for inking the contract with the supply agency, the applicable registration fee per kW, if any, shall be obtained. Although the fee shall be paid by the department yet the liasoning for the same shall be in the scope of work of this contract.

The application for testing of the installed PV power plant has to be submitted with the concerned authorities while applying for the Net Meter. The application must be submitted along with Energization Certificate/ clearance from Electrical Inspector.

The contractor shall make all arrangements for the inspection of the installation by the Electrical Inspector if required. All necessary invoices shall be supped by the contractor for completing the paper work. Necessary earth testing shall be carried out, along with any other test that the electrical inspector may desire on the date of inspection. All drawings including single line diagram, protection equipment, measuring instrumentation, automations, cable sized etc. shall also be arranged in advance.

The test will be carried out by department for parameters like:
Anti-Islanding
Harmonics Current Injection
Direct Current Injection and
Flicker

Test Certificate for Solar Plant installation will be issued by the contactor under the acceptance signatures of Assistant Engineer (E), once the PV plants is successfully performing as per the standards.

The tariff of rent will be as per UPCL. The applicant shall submit Test Certificates from NABL approved test lab for Solar Meter purchased.

The import and export shall be calculable based upon the Net meter installed at the site for which the reading will be taken on every month from the Net meter and Solar meter.

Warrantee: 5 year system warrantee should be provided by the contractor for the equipment and the components installed from the Manufacturer of the inverter& PV module on letter head of OEM.

The successful bidder should submit the copies of the Warrantee Certificates for the onsite warrantee provided by the OEM for the important components like PV Modules, Inverters, and Junction Boxes etc. The Warrantee/CMC modalities shall be between the department and the Contractor. The end user

shall also be entitled to directly communicate with the contractor for the performance of the system as per the contract and take remedial action under the authority of this contract during the Warrantee Period of 5 years.

Operation Manual

An Operation, Instruction and Maintenance Manual should be provided with the system. The following minimum details must be provided in the manual:

About solar power plant, its components and expected performance.
DO's and DON'T's
Cleaning of Solar PV Modules in regular intervals
Clear instructions on regular maintenance and troubleshooting of solar power plant
AS built Drawings for the Installation
OEM Warrantee Certificates of Inverters, PV Modules, Batteries etc.
Specification of PV Plant
Data Sheets of major equipment like PV Module, Inverter etc.
Name and address of the E.P.C Contractor and the contract person in case of nonfunctionality of the solar power plant.

Bill of Material

Once the work is awarded, the Contractor should provide the bill of material mentioning the quantity of each of the item consisting in the system, for the projects they are undertaking.
The format for the Bill of Materials is given below:

Sl. No.	Item	Make (if any)	Model & Individual Capacity (If any)	Quantity (Nos)	Rating/ Capacity
1.	PV Module				
2.	PCU/Inverter				
3.	DC Cables				
4.	AC Cables				
5.	AJB/SCB				
6.	Module Mounting Structure (MMS)				
7.	ACDB				
8.	Lightning Arrester				
9.	Earthing System				
10.	Details and No. of Earth pits				
11.	Data Acquisition System				

Drawings And Documents

Once the work is awarded, the contractor must submit drawings/documents required by statutory authorities and obtain the approval before the installation.

Schematic drawing showing the PV panels, Power conditioning Unit(s)/Inverter, Array Junction Boxes (AJBs)/String Combiner Boxes (SJB), AC and DC Distribution Box, Net meters, MSB etc.
Layout of Solar Array
Single Line Diagram (SLD) with specification of all components
Design documents for Module Mounting Structure (MMS) including certificate showing wind speed withstanding capacity of the structure (STAAD/ Equivalent)
Module Mounting Structure (MMS) drawing alongwith foundation details for the Structure
Sizes and specifications of cables for PV Module interconnections, PV Array to Array Junction Boxes, Array Junction Boxes to Inverter, Inverter to ACDB/ Grid Connection point etc.

The contractor shall submit a PV System report for PV power Plant. All PV plant design should contain the following details which should be approved by the engineer-incharge before installation.

Design of strings including the number of PV Modules in series and number of strings
AC Protection (Circuit Breaker, Switches, Fuses, SPDs)
AJB / SCB details
DC cable size and length from point to point
AC cable size and length from point to point
Earthing system details and number of Pits
Lightning protection details / specifications
PV System Simulation Report.

LIST OF PREFERED MAKES FOR EQUIPMENT & MATERIALS

Details of material/equipment	Manufacturer`s name/make
MCB, MCCB, Isolator, Industrial Plug Socket, RCCB, RCBO`s, MCBDB & Loose wire Box	Schneider Electric/ Legrand/ Hager/LAURITZ KNUDSEN (Formerly L&T)/ ABB/ Siemens/Havells/Schneider
Change Over Switch	LAURITZ KNUDSEN (FORMERLY L&T)/ Havells/ HPL/ Hager
Automatic Transfer switch(ATS)	Asco/ Russel/ Socomac/ Hager/ ABB/LAURITZ KNUDSEN (Formerly L&T)/Havells/HPL
FRLS PVC ins. Copper cond. Single core cable for wiring (ISI marked)	Finolex/ RR Kabel/ Grandlay / Havells/ Polycab/ KEI / Rallison/ AKG / Plaza/ HPL / PI Square
Armoured/ Unarmoured telephone cable, coaxial cable	Delton/Finolex/Elektron/ Grandlay / RR Kabel/ Havells/Bonton/ KEI/ Rallison/ Plaza / PI Square
MS Conduit with heavy duty MS Conduit pipe accessories. (ISI marked)	BEC/ NIC/ AKG/ RMCON/Steel Kraft/Polycab (Note:- the make of accessories shall be same that of conduit pipe & will comply to IS/14768 part2 2003)
PVC Conduit (ISI marked) with heavy duty PVC Conduit pipe accessories.	AKG/ norpack/ BEC/ Polypack/ Precision/Anchor / Polycab/
Modular Switch, Socket/Telephone socket/ cable TV Socket/ Data outlet socket/ Fan Regulator/ G I Boxes Etc (Wiring Accessories).	Legrand(Arteor)/ Schneider Electric(Zencilo)/ Wipro(North West-Platia/Hager(Insyta)/MK(blenze)/Havells(Murano)/ anchor(vision)
XLPE insulated PVC Sheathed Alum. / Copper conductor Armored cable of 1.1 KV grade / Submersible Cable	Finolex/ RR Kabel/ Havells/ Polycab/ Grandlay/ KEI / Paragon/ Plaza /AKG/ Rallison
PVC Trunking	MK/Schneider Electric / Legrand.
GI pipe	Tata / Jindal(Hissar)/ Prakash Surya
Paints	ICI/ Asian/Berger

HDPE pipe	Rex/ Duraplast/ Triputi/ Duraline/SFMC
Solar Photovoltic System	Tata Power Solar/MoserBaer/Jackson solar/BEL/CEL/Havells Solar/ Vikram solar/ Varee / Indosolar/ Warree
Junction Box	VNT/Sun Garner/OEM of SPV Modules
SPV Inverter	Delta/Seimens/ABB/Havells/GE/SMA/ Sungrow/Waree
Module Mounting Structure	As per MNRE/Manufacturer's Standard
Solar Cable (DC)	RRKabel/Polycab/Finolex/ Havells
Any other Items	As approved by the Engineer-In-charge

Note :

* The Tenderer / bidder shall use one of the make from the above list of preferred makes of materials. In case make of any item is not available in the above list then make shall be decided and approved by the Engineer-in-charge.
* In case required quantity is more than 1 then all the quantity of that item shall be of same make

SCHEDULE OF WORK

Name of Work:- SITC of rooftop solar Photo Voltaic power system at existing OCR building of SIB at Bageshwar (UK)

Sl. No.	Description	Qty	Unit	Rate	Amount
1	Solar Photovoltaic Power Plant				
	Supplying Installation, Testing and Commissioning of on-grid Solar Photovoltaic Power Plant conforming to various applicable standards BIS, IEC, MNRE guidelines, the Central Electricity Authority Regulations and CPWD Specifications as amended up to date, consisting of Mono/Poly Crystalline silicon solar cells module, net metering facility, necessary control, protections, earthing, cabling, mounting structure, junction boxes, power conditioning units, Real time online web interfaced Data Monitoring System, Distribution panels, grid connecting arrangement, conduits, pipes, cable trays and other accessories etc. as required				
	a) High Energy Efficiency Solar Photovoltaic Module of capacity 330 Wp or above, manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 23% at STC with temperature coefficient of Pmax better than -0.30% per °C. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. Solar Modules shall be designed to operate in relative humidity upto 100% with temperature between -10 °C and +85 °C. Further, each PV module used in any solar power project must have Radio frequency identification tag with information such as name of manufacturer, month and year of manufacturing, country of origin (separately for Solar cell and module), I-V curve, Unique Serial No and Model No of the module, Wattage, Im, Vm and FF, name of test lab issuing IEC certificate.				

	b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz ± 2.5 Hz, output voltage suitable to generate AC with a variation of 10% at nominal voltage. Power with efficiency not less than 97%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 °C, Minimum IP-65 for outdoor and Minimum IP 21 for indoor, Built-in meter and data logger, MPPT, switching devices IGBT/MOSFETs and controller Microprocessor /DSP. PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown. The PCU shall be able to withstand unbalanced load conforming to IEC standard with shutdown/standby mode. It must be provided with grid islanding along with manual disconnect pole isolation switch besides automatic disconnection. Minimum protections: Mains Under / Over Voltage, Over current, Over/Under grid frequency, Over temperature, Surge voltage induced at output due to external source, Short-circuit, Lightening, Anti Islanding (for grid synch. Mode) and other protections as per applicable standards. LCD/LED display of minimum parameters: DC input voltage, DC current, AC Voltage and current (all 3 phases, in case of 3 phase), Instantaneous & cumulative AC output power, Daily DC energy produced and other parameters applicable standard. Communication interface RS 485 / RS 232.				
	c) Module mounting structure: The roof top solar plant generation units shall be installed by using supporting Aluminium/Galvanized MS structure (mass of zinc coating shall be as per IS4759) having minimum head room clearance of 2.4 meter above the terrace level / ground level. The mounting structure would be designed to sustain wind load and seismic parameter of the site of installation. All the structure shall be design as per applicable BIS code and the material shall also confirm the applicable BIS Code. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. The suitable arrangements for maintenance and cleaning shall be provided.				

	d) Real time online web interfaced Data Monitoring System complete with accessories for various parameters such as Solar Irradiance, temperature, AC Output Voltage and current, Output Power, Power factor, DC Input Voltage and Current, Time Active, Time disabled, Time Idle, Power produced and other parameters as per standard practices.				
	e) Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. Each junction box shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement with High quality Suitable capacity Metal Oxide Varistors (MOVs) (semiconductor diode with resistant applied voltage)/ surge arrestors and suitable Reverse Blocking Diodes, isolation switches isolate the DC input to Inverter, copper bus bar etc.				
	f) Lightning, surge voltage protection, earthing protection and grid islanding.				
	g) Cables: Connections & Interconnections by required size IR/UV protected XLPE insulated copper conductor 1.1 kV grade armored power and control cables (ISI Marked) along with supplying & fixing of necessary channel/conduit, GI cable trays, supports, lugs, thimble and other accessories etc. as required.				
	h) DC Distribution Board And AC Distribution Panel Board: IP65, free standing, metal cladded, having copper bus bar, having required protection and control gears, connection-interconnection, etc. as required.	5.00	Kwp	71,671	3,58,355
	TOTAL				**3,58,355**

ASSISTANT ENGINEER (E)-IV