

**ZORAM ENERGY DEVELOPMENT AGENCY (ZEDA)  
ZEDABUILDING, ABOVE 132KV SUB-STATION,  
ZUANGTUI, AIZAWL  
P.O. ZEMABAWK - 796017**

**TENDER DOCUMENT  
Tender No 1 of 2018-19 Dated 26<sup>th</sup> September 2018**

**Tender Document for Supply, installation  
& commissioning and operation &  
maintenance for a period of consecutive  
five years of 8 numbers of SPV power  
plants with aggregate capacity of 80kWp  
at 8 District Courts in the state of  
Mizoram**

**Rs. 1000.00**

**SHORT TENDER NOTICE**  
**Tender No: 1 of 2018 – 19**

**Dated Aizawl : 26<sup>th</sup> September, 2018**

**No. T-11055/8/2018-ZEDA/76** : Sealed tenders are invited by the Director, ZEDA from eligible Firms/Company for 'Supply, installation & commissioning and operation & maintenance for a period of consecutive five years of 8 numbers of SPV power plants with aggregate capacity of 80kWp at 8 District Courts in the state of Mizoram'

Tender documents containing detailed specification may be obtained from ZEDA Office during Office hours OR, may be downloaded from [www.zeda.mizoram.gov.in](http://www.zeda.mizoram.gov.in).

-Sd/-  
(DAVID RAMNUNSANGA)  
DIRECTOR, ZEDA

**Memo No.T-11055/8/2018-ZEDA/76      Dated Aizawl, the 26<sup>th</sup> September, 2018**

Copy to:

- 1) The Principal Secretary to the Hon'ble Chief Minister, Mizoram for favour of information.
- 2) The Secretary to the Govt' of Mizoram, P&E Department cum Chairman, ZEDA Managing Committee, for favour of information.
- 3) Pu Liansangzuala, Central Project Co-ordinator, E- Court Project, for favour of information.
- 4) The Editor, The Aizawl Post, with a request to publish Tender Notice in one issue only.
- 5) The Editor, The Zozam Times, with a request to publish Tender Notice in one issue only

-Sd/-  
(Director, ZEDA)

**CHECK LIST**

<b>Sl. No.</b>	<b>Description</b>	<b>Attached</b>	<b>Not Attached</b>
1	Earnest Money		
2	Tender Document Free, if applicable		
3	The original document duly signed & sealed on each page, as a confirmation of acceptance of Terms & Conditions (T&C)		
4	Proof of Eligibility and Experience		
5	A Copy of registration of GST		
6	A Copy of PAN Card		
7	Details of similar work done in last three years along with copies of the orders and certificates from the customers; their address phone/fax is per the Tender Evaluation Criteria.		
8	Details of technical staff available (Brief Bio-data of key personnel be given) as per Annexure II of the tender document		
9	Whether validity of your tender is confirmed as per the document		

**Details of EMD & Tender Document Fee Attached.**

<b>Sl. No.</b>	<b>Description</b>
1.	<u>Earnest Money Deposit</u> Earnest Money Deposit of Rs. 2,00,000/- submitted in the form of Demand draft drawn on .....Bank..... Branch, bearing DD No.....dated.....is attached herewith.
2.	Tender Document Fee Tender Document Fee of Rs 1,000.00, submitted in the form of Demand Draft drawn.....on .....Bank ..... Branch, Bearing DD..... dated ..... is attached herewith.

(Sign & Seal of the Tenderer)

## UNDERTAKING OF THE TENDERER

I/We have read carefully and examined the notice inviting tender, schedule, General Rules and terms and conditions of the contract, special conditions, Schedule of Rates and other documents and Rules referred to in the tender document for the supply.

I/We hereby tender my rates for the execution of the work for ZEDA as specified within the time stipulated in the schedule in accordance with all aspects with the specifications, designs, drawings and instructions with such conditions so far as applicable.

I/We agree to keep the tender open for 365 days from the due date of submission thereof and not to make any modifications in its terms and conditions. A sum of Rs..... Lacs is hereby forwarded as earnest money in the form of crossed demand draft payable to ZEDA at Aizawl. If I/We, fail to commence or complete the work ordered in specified time I/We agree that the ZEDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money absolutely. The said Earnest Money shall be retained by ZEDA towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be required by ZEDA.

I/We hereby declare that I/We shall treat the tender documents, specifications and other records connected with the work as secret/confidential and shall not communicate information derived there-from to any person other than a person to whom I/We have authorized to communicate the same or use the information in any manner prejudicial to the safety of ZEDA/the State Govt.

I/We shall abide to all the laws and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. Departments.

Our GST registration no. is \_\_\_\_\_ and PAN No. under the Income Tax Act is \_\_\_\_\_. I/We shall be responsible for the payment of the respective taxes to the appropriate authorities and should I/we fail to do so, I/we hereby authorize ZEDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

Dated: Signature

Place: Name of Tenderer with seal

Witness

Signature:

Name:

Postal Address:

## SECTION – I

### INSTRUCTIONS TO BIDDERS

1. Sealed Tender must reach the office of the Director (ZEDA), latest by 12:00 P.M. on 9/10/2018. Tenders received after the time and date shall not be considered. The tenders should be submitted using three Envelopes.
  - (i) Envelope No.(1) should contain only (i) EMD (ii) Tender Fees in the form of Demand Draft payable to ZEDA, Aizawl / Money receipt of the tender fees (iii) TENDER DOCUMENT: This should contain the original tender document, duly signed & seal on each page of the document. This envelope should be super scribed as 'Eligibility Documents'. **This envelope should also contain the technical proposal of the Solar Power Plants to be installed.** All rest of the documents excluding rate sheets (price bids) should be placed in this **Envelope No.(1)** marked as '**Eligibility Documents**'.
  - (ii) The Envelope No.(2) should contain the completely filled price bids only, marked as PRICE BIDS
  - (iii) Both these two sealed envelopes should be placed in the Envelope No.(3) {bigger one} which should invariably be super-scribed "NIT No.T.11055/8/2018-ZEDA/76 Dt 26.09.2018 – Tender for Supply, Installation and commissioning of 8 number of SPV power plants with an aggregate capacity of 80 kWp". Tenderer should put their name & address on each of the three envelopes. The tenders will be opened at 1:00 P.M. on 9/10/2018. Tenders not submitted in the above manner shall be subject to rejection.
2. Tenderer must be, at least a manufacturer of SPV Cells/Modules or Battery or PV Electronics/ Luminaires (conforming to relevant National and International Standards) OR System Integrators having requisite experience in the field.
3. The Tenderer must have credential of satisfactory execution for design, supply, installation and commissioning of SPV power plants in Mizoram. Copy of work orders along with satisfactorily working certificate for the project executed must be submitted along with the tender.
4. The Tenderer must establish their Office/Service Centre in Mizoram for proper operation and maintenance of the systems.
5. Tenderer must have valid ISO 9001:2008 or ISO 14001 & OHSAS 18001 Certification.
6. SPV Modules and PCU / Batteries should be of required specification and warranties as per Ministry of New & Renewable Energy (MNRE), Govt of India, guidelines.

7. Bidder shall submit copies of GST registration number, TAN, PAN and service tax registration numbers issued by the appropriate authority.
8. The documentary evidence for meeting the eligibility criteria must be mandatorily submitted along with tender in **envelope no. 1**.
9. Each offered solar module should have RFID & IV curve measured with a reputed sun simulator with record of suitable calibration reference, as per guidelines of MNRE.
10. Tenderers must enclose the organization chart of the company clearly showing the details of Technical Personnel, Installation & Commissioning Capability, Training set up etc.
11. Tenderer should quote their rates considering wide variation of site conditions, variation in price of different components and keeping the quantum and quality of work in mind. If ZEDA anticipates that rate is abnormally low or high, tender may be rejected.
12. When tenders are delivered by messenger, it should be deposited in the tender box kept in the office of the Director, ZEDA, Aizawl on or before 8<sup>th</sup> October 2018 between 11:00 A.M. to 3.00 P.M. Nobody is authorized to receive or grant receipt for tender delivered.
13. **VALIDITY:**  
Tender or the approved rates shall be valid for a period of One year (365 days) from the date of opening the tender.
14. The terms, conditions and specifications mentioned in tender document shall be binding on the tenderers and no condition or stipulation contrary to the conditions shall be acceptable. It may please be noted that the tenderers who do not accept terms and conditions stipulated in this tender documents, their offers shall be liable to be rejected out rightly without assigning any reason thereof.
15. Each page of tender document & enclosures shall be signed by the tenderer and seal affixed. All the pages of the documents issued must be submitted along with the offer. In case of any corrections / alterations in the tender, the tenderer should attest the same; otherwise tenders may not be considered.
16. ZEDA reserves the right to reject or accept any or all tenders wholly or partly without assigning any reason on the grounds considered advantageous to ZEDA, whether it is the lowest tender or not.
17. ZEDA reserves the right to distribute the works amongst the tenderers,

with the approved rate of ZEDA Managing Committee if it is felt necessary for early completion of the work or on the grounds considered advantageous to ZEDA and the Beneficiary.

18. Offers through Telegraph / Fax / Email or Open offers etc. received shall be summarily rejected.
19. All the tenderers shall essentially indicate the break-up of prices as shown in Rate List. In case any of the charges are not included in the quoted prices, the same shall be clearly shown as extra, indicating specifically the rate/scale of such charges. The lowest prices quoted shall be considered. The tenderer who had quoted the lowest price shall be preferred for placing order. ZEDA can place order for part of tender items.
20. **EARNEST MONEY:**  
Each tenderer should submit an earnest money of Rs. **2,00,000.00** (Rupees Two Lakhs only) in a separate envelope along with the tender. The tenders not accompanied with earnest money or accompanied with inadequate earnest money will summarily be rejected and returned unopened.
21. **FORM OF EARNEST MONEY DEPOSIT:**  
The earnest money deposit can be furnished in the form of **Demand Draft** only from any Scheduled Bank made payable to "Director ZEDA" at Aizawl. Cash or Cheque shall not be accepted.
22. **EXEMPTION FROM PAYMENT OF EARNEST MONEY:**  
Fully owned State Government/ and Central Govt. manufacturing units will be exempted only if the State/ Central Govt. holds 100% shares for which documentary evidence must be made available. The joint ventures/subsidiary companies of any Government Department/company shall not be treated as a fully owned government company for this purpose.
23. **FORFEITURE OF EARNEST MONEY DEPOSIT:**  
It should be clearly understood that in the event of tenderer failing to enter into the agreement in the prescribed format on their quoted rates and also fails to execute work ordered, within stipulations, if he is so communicated within the validity period of the offer, the full amount of earnest money will be forfeited and ZEDA's decision in this respect will be final and binding on the tenderer.
24. **PRICE:**  
The prices quoted should be firm and F.O.R. destination inclusive of all taxes and duties, packing, forwarding freight, insurance and any other incidental charges.
25. **SAMPLES**  
Samples of the components shall be submitted if desired for ZEDA's

approval and the consignment shall be delivered/ accepted as per the approved samples only.

**26. TAX OBLIGATIONS:**

TDS shall be recovered under Income Tax Act/VAT Act and deposited with the appropriate authority.

**27. INSPECTION:**

Inspection of the materials will be carried out by the Director or his representatives at factory/manufacturing plant before dispatch to the destination, and the cost of the inspection will be borne by the contractor.

**28** Tender must be accompanied with tender fee. If tender is downloaded from the website the tenderer must enclose tender fee in the form of demand draft payable to Director, ZEDA

**29. JURISDICTION OF THE COURT:**

Any dispute arising out of the contract shall be subject to the jurisdiction of Guwahati High Court, Aizawl Bench.



**SECTION – II**  
**SCOPE OF THE WORK**

1. Supply, installation and commissioning and operation and maintenance for a period of five years of Solar Photovoltaic (SPV) Power Plants with aggregate capacity of 80 kWp at 8 District Courts in the State of Mizoram, with five years operation and maintenance. The project will be executed on turnkey basis.
  
2. The scope of work shall also includes the followings:
  - Submission of site clearance certificate, where the SPV Power Plant is to be installed. A layout plan of the site should also be submitted clearly indicating the identified location for installation of SPV Modules & Control Room, where batteries & control panels shall be installed. Work order shall be issued only after receipt of site clearance certificate.
  - Detailed planning of time bound smooth execution of project.
  - Performance testing of the complete system.
  - Warranty of the system for Five year faultless operation, assure inventory maintenance.
  - After sales service will be done by the contractor, either directly or through local contractual arrangement.
  - Risk liability of all personnel associated with implementation and realization of the project
  - Training of at least two persons each to be nominated by user at every location and ZEDA, on the various aspects of design and maintenance of the offered system after commissioning of the system.
  - The contractor shall maintain sufficient inventory of the spares to ensure that the system can be made functional within seventy two hours from the communication of breakdown of the system during currency of the warrantee period.
  - The contractor shall run the system on trial basis and shall closely monitor the performance of the system before handing over the system, so that the assured annual power generation can be estimated for monitoring of the performance of the system. ZEDA shall examine the data of generation and ascertain if the generation is adequate with reference to the capacity of the power plant.
  - Performance Guarantee Test: Successful performance guarantee test to demonstrate the rated capacity of solar power plant as per ZEDA's norms shall have to be conducted by tenderer in presence of representatives of ZEDA, if required.
  
3. Comprehensive Annual Operation & Maintenance Contract of the complete system at every location, from the day of the commissioning of installed SPVPP has to be performed by the tenderer. Comprehensive Annual Operation & Maintenance Contract shall be for minimum five consecutive years from the date of commissioning of SPVPP, with a provision for further extension on mutual agreement.

**SECTION - III**  
**GENERAL CONDITIONS OF CONTRACT**

1. **DEFINITIONS:** In writing General Conditions of Contract, the specifications and bill of quantity, the following words shall have the meanings hereby indicated; unless there is something in the subject matter or content inconsistent with the subject.

"ZEDA" shall mean the Zoram Energy Development Agency represented through the Director.

"Work" shall mean any work entrusted to the tenderer as mentioned in the scope of work and work order.

The "Engineer in charge" shall mean the Engineer or Engineers authorized by Director, ZEDA for the purpose of this contract. Inspecting Authority shall mean any Engineering person or personnel authorized by ZEDA to supervise and inspect the erection of the SPV Power Plant.

"The Contractor/Tenderer" shall mean the tenderer awarded with the contract or their successors and permitted assigns. Contract Price shall mean the sum named in or calculated in accordance with the provisions of the contract as the contract price. General Conditions shall mean the General conditions of Contract.

"Specifications" shall mean the specifications annexed to these General Conditions of contract and shall include the schedules and drawings attached thereto or issued to the contractor from time to time, as well as all samples and pattern, if any,

"Month" shall mean calendar month. "Writing" shall include any manuscript, typewritten, printed or other statement reproduced in any visible form whether under seal or written by hand.

2. **CONTRACT DOCUMENT:**

The term "Contract" shall mean and include the General conditions, specifications, schedules, drawings, and work orders etc., issued against the contract schedule of price or their final general conditions, any special conditions applying to the particular contract specification and drawings and agreement to be entered into. Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian contract Act or any other Act in vogue or by any person of common knowledge and prudence.

3. **MANNER OF EXECUTION:**

Execution of work shall be carried out in an approved manner as outlined in the technical specifications or where not outlined, in accordance with

relevant MNRE/BIS/Indian Standard Specifications, to the reasonable satisfaction of the Engineer.

- i) The contractor shall start work within 20 days after the date of handing over of the site.
- ii) If at any time it should appear to the Engineer that the actual progress of works does not confirm to the programme to which consent has been given under sub-clause 3(i), the contractor shall produce at the advice of the Engineer a revised programme showing the modification to such programme necessary to ensure completion of the works within the time of completion.
- iii) All the materials required for the installation of SPV Power Plant as per Work Order issued shall be kept at site in the custody of the contractor. ZEDA shall not be responsible for any loss or damage of any material during the installation

**4. VARIATIONS, ADDITIONS & OMISSIONS:**

ZEDA shall have the right to alter, amend, omit, split or otherwise vary the quantum of work, by notice in writing to the contractor. The contractor shall carry out such variation in accordance with the rates specified in the contract so far as they may apply and where such rates are not available; those will be mutually agreed between ZEDA and the contractor.

**5. INSPECTION DURING ERECTION:**

The Engineer in Charge or his authorized representative (s) shall be entitled at all reasonable times to inspect and supervise and test during installation and commissioning. Such inspection will not relieve the contractor from their obligations under this contract. Material can be inspected before dispatch by the authorized representatives of ZEDA / beneficiary at the factory at the cost of the contractor, if desired.

**6. COMPLETION OF WORK:**

Time being the essence of contract, the installation of the SPV Power Plant shall be completed within 3 months time or as prescribed in the Work Order.

**7. CONTRACTORS DEFAULT LIABILITY:**

ZEDA may by written notice of default to the contractor, terminate the contract in circumstances detailed hereunder:

- (a) If in the opinion of the ZEDA, the contractor fails to complete the work within the time specified in the work order or within the period for which extension has been granted by ZEDA to the contractor.
- (b) If in the opinion of ZEDA, the contractor fails to comply with any of the provisions of this contract

- (c) In the event of ZEDA terminating the contract in whole or in part as provided in paragraph (a) above, ZEDA reserves the right to engage another contractor or agency upon such terms and in such a manner as it may deem appropriate and the contractor shall be liable to ZEDA for any additional costs or any losses caused to
- (d) In the event ZEDA does not terminate the contract as provided in paragraph (a) the contractor shall continue performance of the contract, in which case he shall be liable to ZEDA for penalty for delay as set out in this tender document until the work is completed.

**8. FORCE MAJEURE:**

The contractor shall not be liable for any penalty for delay or for failure to perform the contract for reasons of FORCE MAJEURE such as, acts of public, enemy, acts of government, cyclone, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes provided that the contract, shall within 10 (ten) days from the beginning of such delay notice the ZEDA in writing of the cause of delay. ZEDA shall verify the facts and grant such extension as facts justify.

**9. REJECTION OF WORKS:**

In the event of any of the material supplied/ work done by the contractor is found defective in material or workman ship or otherwise not in conformity with the requirements of this contract specifications, ZEDA shall either reject the materials/work(s) or advise the contractor to rectify the same. The contractor on receipt of such notices shall rectify or replace the defective material and rectify the work, free of cost. If the contractor fails to do so, the following actions may be taken by ZEDA.

- a) At its option, ZEDA may replace or rectify such defective materials or work, and recover the extra cost so involved from the contractor, plus fifteen percent service charges of the cost of such rectification from the contractor and/ or terminate the contract for balance work/ supplies with enforcement of penalty as per contract
- b) Defective materials/ workmanship will not be accepted under any conditions and shall be rejected outright without compensation. The contractor shall be liable for any loss/ damage sustained by ZEDA due to defective work.

**10. EXTENSION OF THE TIME:**

If the completion of installation is delayed due to any reason beyond the control of the contractor, the contractor shall without delay give notice to the ZEDA in writing of his claim for an extension of time. ZEDA on receipt of such notice may agree to extend the contract/delivery date of the SPV Power Plant as may be reasonable but without prejudice to other terms and conditions of the contract.

**11. MAKES OF EQUIPMENTS TO BE USED IN THE WORKS:**

The contractor has to ensure that equipments are complied with the Technical Requirements of MNRE guidelines No.30/11/12-13/NSM dated 26<sup>th</sup> May 2014. For ready reference Annexure-3 of the MNRE guidelines is attached herewith so that approved makes are procured and installed. The material/works for which MNRE or BSI or ISI specification is not available, engineer-in-charge of the works will examine and approve the material/works, preferably of all makes on which ZEDA has report of satisfactory performance. Test certificates for all major equipments should be submitted to the engineer-in-charge of the works before installation of the same.

**12. WARRANTEE PERIOD:**

The work done/ material supplied by the contractor should be warranted for satisfactory operation and against any defect in material and workmanship including Batteries & Power Conditioning Units and other balance of equipments, at least for a period of 5(five) years, from the date of commissioning of the SPV Power Plant including other works as per scope of work. Warrantee on SPV Modules shall be for 10 (ten) years from the date of commissioning of the SPV Power Plant. 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 12 years and not less than 80% at the end of 25 years. The above warrantee certificates shall be furnished to the ZEDA for approval. Any defect noticed during this period should be rectified by the supplier free of cost upon written notice from ZEDA provided such defects may be due to bad workmanship or bad materials used. The warrantee period shall be extended by the period during which the plant remains non operative due to reasons within control of the contractors. Care should necessarily be taken to make the SPV Power plant operational, once the reporting of the fault/non operational status is done, within a week. If the Power Plant is not made operational within fifteen days ZEDA may rectify the same at the cost of tenderer.

**13. TERMS OF PAYMENT:**

Subject to any deduction which the Purchaser may be authorized to make under this contract, and or to any additions or deductions provided for in this contract, the contractor shall be entitled to payment as follows:

- All payments shall be made in Indian Rupees, and will be govern by the availability of fund from MNRE and the beneficiary.
- 50% of the contract value shall be paid to the contractor after complete and successful delivery of materials to the site. Balance 50% shall be paid after commissioning of the power plants
- An amount equivalent to 5% (five percent) of contract value (excluding O & M charges) minus the earnest money (if already

deposited) shall be recovered from each payment which shall be kept as security deposit against performance guarantee.

- As per relevant Act of Mizoram State Professional Tax amount shall be deducted from any of the aforesaid payment for one year if so charged, and other taxes/charges too shall be deducted if necessary.
- Any other local taxes, if admissible, also will be deducted as per norms.
- In the event of contractor not being able to supply or to carry out the work or a part of the work assigned to him in accordance with the terms of this contract, the Purchaser shall have the right to recover any sums advanced, from the contractor from his/its assets/amount due against Performance Guarantee.

**14. PENALTY FOR DELAY IN COMPLETION OF CONTRACT:**

If the contractor fails to complete the erection, testing and commissioning etc, within the phased time schedule specified in the work order or any extension granted there to, ZEDA will recover from the contractor as penalty a sum of two percent (2.0%) at the contract price of the uncompleted portion of the work for each calendar week of delay or part thereof. For this purpose, the date of taking over shall be reckoned as the date of completion. The total penalty shall not exceed 10% (ten percent) of the contract price.

**15. SECURITY DEPOSIT (SD):**

5% of the contract value excluding O&M charges shall be retained as SD during the warrantee period. No interest shall be payable on the Security Deposit. The amount deposited as EMD may also be converted into SD after agreement is done with ZEDA. Half of the security deposit for each site will be release after the expiry of two years from the date of commissioning and another half will be release after the completion of O&M period.

**16. INSURANCE:**

The contractor shall arrange insurance coverage for the materials at his custody for the work under execution as per the conditions laid down in the relevant clause of the technical specification. The contractor shall take up insurance or such other measures for the manpower so as to cover the claim for damage arising under workmen's compensation Act and other applicable State/ Central laws. ZEDA shall not bear any responsibility on this account

**17. PENALTY DUE FROM THE CONTRACTOR:**

All costs of damages for which the contractor is liable to the ZEDA will be deducted from any money due to the contractor including the security deposit.

**18. CONTRACTOR'S RESPONSIBILITY:**

Notwithstanding anything mentioned in the specifications of subsequent approval or acceptance of the SPV Power Plant by ZEDA, if any, the ultimate responsibility for satisfactory performance of the entrusted work/ plant shall rest with the contractor.

**19. RESPONSIBILITY TO RECTIFY THE LOSS AND DAMAGE:**

If any loss or damage occurs to the work or any part thereof or materials/ plant/ equipments for incorporation therein the period for which the contractor is responsible for the cause thereof or from any cause whatsoever, the contractor shall at his own cost rectify/ replace such loss or damage, so that the permanent work confirms in every respect with the provision of the contract to the satisfaction of the Engineer. The contractor shall also be liable for any loss or damage to the work/equipments occasioned by him in course of any operation carried out to him during performing the contract.

**20. RESPONSIBILITY TOWARDS THE WORKMAN OR OUTSIDERS:**

ZEDA, will, in no case be responsible for any accident fatal or non-fatal, caused to any workman or outsider in course of transport or execution of work. All the expenditure including treatment or compensation will be entirely borne by the contractors. The contractor shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations.

**21. NON-ASSIGNMENTS:**

The contractor shall not assign or transfer the work orders issued as per this contract or any part thereof without the prior approval of ZEDA.

**22. CERTIFICATES NOT TO AFFECT RIGHTS OF ZEDA:**

The issuance of any certificate by ZEDA or any extension of time granted by ZEDA shall not prejudice the rights of ZEDA in terms of the contract nor shall they relieve the contractor of his obligations for due performance of the contract.

**23. SETTLEMENT OF DISPUTES THROUGH ARBITRATION:**

- i. Except as otherwise specifically provided in the contract, all disputes concerning questions of fact arising under the contract shall be

decided by the Managing Committee of ZEDA provided a written appeal by the contractor is made to ZEDA. The decision of the Managing Committee, ZEDA shall be final and binding to the all concerns.

- ii. Any dispute or difference including those considered as such by only of the parties arising out of or in connection with the contract shall be to the extent possible be settled amicably between the parties. If amicable settlement cannot be reached then all disputed issues shall be settled by arbitration.

**24. LAWS GOVERNING CONTRACT:**

The contract shall be constituted according to and subject to the Laws of India and jurisdiction of the Guwahati High Court, Aizawl Bench.

**25. LANGUAGE AND MEASURES:**

All documents pertaining to the Contract including specifications, schedules, notice correspondences, operating and maintenance instructions, drawings or any other writings shall be written in English OR Mizo language. The metric system of measurement shall be used in this contract.

**26. CORRESPONDENCE:**

- i. Any notice to the contractor under the terms of the contract shall be served by registered mail to the registered office of the contractor or by hand to the authorized local representative of the contractor and copy by post to the contractor's principal place of business.
- ii. Any notice to ZEDA shall be served to the Director, ZEDA, Aizawl in the same manner.

**27. SECRECY:**

The contractor shall treat the details of the specifications and other documents as private and confidential and they shall not be reproduced without written authorization from ZEDA.

**28. AGREEMENT:**

The successful contractor shall have to enter into an agreement with the concerned Engineer in charge in the approved contract agreement form within 7 days of the receipt of call from ZEDA.

**29. TENDER EVALUATION CRITERIA:**

Offer of only those parties who are found qualifying based on Technical



Evaluation Criteria will be taken into further consideration and prices of only those parties qualifying based of these criterion will be opened. Other things being equal, the lowest rates shall normally be preferred.

**30. COMMERCIAL:**

Earnest Money Deposit and Tender Document Fee (if the tender document is downloaded from website) in the prescribed form should be submitted along with the tender.

**31. TECHNICAL:**

- 1) Only Channel Partners of MNRE as mentioned in Section-I are eligible to participate in the Tender. During the approval of engineering documents, contractor will have to submit the copy of all the required certificates from the concerned manufacturers, whose materials shall be used in the SPV power Plants. If considered necessary, a team of MNRE official and/or ZEDA may visit the facilities of the manufacturers for verification
- 2) ZEDA shall carry out inspection of the manufacturing facilities to ascertain the claims made by the manufacturers at the expense of the manufacturer. The contractor should have service unit or office at Aizawl or any part of the Mizoram.
- 3) Details of similar work done in last three years along with copies of the orders and certificates from the user agencies should be submitted along with the "Eligibility Document".
- 4) The party should have sufficient technically qualified and well experienced manpower for execution of the project and after sales service of the systems. Brief bio data of the key personnel shall also be enclosed with the offers.

**SECTION - IV**  
**TECHNICAL SPECIFICATIONS**

**1. SPV MODULES**

1.1 Type and Quality

The total Solar PV array capacity shall be as specified in price schedule and shall be assembled with minimum 300 Wp (with minimum of 24V) Multi/Mono Crystalline/ with 72 cells. The modules should be tested and certified by a Govt. of India authorized test centers or should conform to relevant IEC standard as per MNRE guidelines. Offered module shall have a power output warranty of 90% of the rated power for 12 years. The rated output power of any supplied module shall not vary less than 1% from the specified power rating of the modules, in any case. Every module should have suitable bypass diode at its terminal box. The SPV Modules must be installed in such a way so as to deliver proper voltage and current to ensure desired power output as per specifications of CREDA for the size of SPVPP ordered. The size of Module Frame and the thickness of Glass, Back Sheet and EVA Sheet must be of the maximum size with only positive tolerance of applicable IEC standards.

1.2 The PV modules must conform to the latest edition of any of the following IEC / equivalent BIS Standards for PV module design qualification and type approval: Crystalline Silicon Terrestrial PV Modules IEC 61215 / IS14286

1.3 In addition, the modules must conform to IEC 61730 Part 1 requirements for construction & Part 2 requirements for testing, for safety qualification or equivalent IS.

1.4 Each PV module must use a RF identification tag (RFID), which must contain the following information. The RFID can be inside or outside the module laminate, but must be able to withstand harsh environmental conditions.

- (i) Name of the manufacturer of PV Module
  - (ii) Name of the Manufacturer of Solar cells
  - (iii) Month and year of the manufacture (separately for solar cells and module)
  - (iv) Country of origin (separately for solar cells and module)
  - (v) IV curve for the module
  - (vi) Peak Wattage,  $I_m$ ,  $V_m$  and FF for the module
  - (vii) Unique Serial No and Model No of the module
  - (viii) Date and year of obtaining IEC PV module qualification certificate
  - (ix) Name of the test lab issuing IEC certificate
- Other relevant information on traceability of solar cells and module as per ISO 9000 series

The total capacity of the Solar Photovoltaic Power Plants mentioned in the Rate Sheets is the minimum capacity in wattage of the total SPV modules

to be installed in the Power Plant with reference to the Voltage at which the SPV Power Plant is designed. Capacities mentioned are the minimum name plate value of the SPV Power Plant. Tenderer should submit the drawing of the Steel structures which they shall supply & install along with the array support structure for mounting of SPV modules, as per scope of work. Prior approval of ZEDA for drawing & specification of module mounting structures (MMS) is required.

**2. MECHANICAL STRUCTURE : MODULE MOUNTING STRUCTURE (MMS):**

Tenderer should submit the drawing of the MMS which they shall supply. MMS should be installed along with the hot dipped galvanized (minimum 80 microns) array support structure for mounting of SPV modules at site. The panel frame structure should be capable of withstanding a minimum wind load of 150 Km per hour, after grouting and installation. MMS should be sturdy & designed to assist SPV Modules to render maximum output. The hardware (fasteners) used for installation of SPV Modules & MMS should be of suitable Stainless Steel (SS 304). Prior approval of drawing & specification of module mounting structures is required to be taken from ZEDA. If tenderer submits any design of MMS along with the tender document it may not be considered as approved design but may be considered as sample. This shall not be considered as base for evaluation of tender. Each MMS should be with four legs grouted on pedestals of minimum 300x300x300 mm. Foundation bolts of stainless steel should be at least 200 mm long.

**(i) Foundation:**

The PCC foundation shall have to be designed on the basis of the weight of the structure with module and minimum wind speed of the site, i.e. 150 Km/hour. Each MMS should be with four legs grouted on pedestals of minimum 300x300x300 mm size.

**(ii) Junction Boxes for Cables from Solar Array:**

The junction boxes shall be made up of FRP (Hensel or equivalent make)/PP/ABS (with prior approval of ZEDA) with dust, water and vermin proof. It should be provided with proper locking arrangements.

- (a) Array Junction Box (AJB): All the arrays of the modules shall be connected to MJB/DCDB through AJB. AJB shall have terminals of bus bar arrangement of appropriate size Junction boxes shall have suitable cable entry with suitable glanding arrangement for both input and output cables. Suitable markings on the bus bars shall have to be provided to identify the bus bars etc. **suitable ferrules shall also have to be identify interconnections. Every AJB should have suitable arrangement Reverse Blocking diodes(Schottky diode of suitable rating with respect to the capacity of array) connected in such a manner that the diode is mounted on a prpopor heat sink so as to increase the life of diode. Suitable MOV has to be installed in AJB for protection purposes.** If, in any case Schottky diode & MOV are installed in the PCU, then also it should be installed in AJB. Each AJB

should preferably not have more than four array inputs. Cable interconnection arrangement shall be within conduit pipe on saddles installed properly as per ZEDA's instructions. Cable connection should be done in such a manner that fault findings if any, can be identified easily. AJB should also be marked as A1, A2, & so on. Wherever conduits are laid on roof or ground, then it should be installed on cable tray or appropriate civil structure which should be at least four inches above roof / ground level.

- (b) Main Junction Box (MJB) (Required in systems of capacity more than 2KW): In MJB the terminals shall be of copper bus-bar arrangement of appropriate size Junction boxes shall have suitable cable entry with suitable glanding arrangement for both input and output cables. Suitable markings on the bus bars shall have to be provided to identify the bus bars etc. **suitable ferrules shall also have to be provided to identify interconnections.** Cable interconnection arrangement shall be such that the faulty array, if any, could be identified easily. MJB shall be installed at suitable place near Array. **Inter connections from AJBs to MJB should be clearly marked, for example "from A1" & so on. Appropriate crimping tools should be used for crimping of lugs/ connectors to the cables.**

### **3. POWER CONDITIONING UNIT (PCU):**

#### **3.1 Main Features of the PCU:**

PCU should be a combined unit comprising of inverter, charge controller, visual display and necessary protections.

- It should be Industrial grade bidirectional Inverter
- It should have Integrated P V Charger Controller.
- It should be rated for continuous operation at full load.
- It should have Programmable battery management parameters.
- It should have Temperature compensated battery charging.
- It should have solar priority grid charging.
- It should Automatic restart after over load triggered shutdown.
- It should have Continuous battery life and state of health monitoring.
- It should have Integrated data and fault logging
- It should have Communication with external SCADA/network/PC
- It should All parameters are software configurable
- It should have facilities like Remote diagnostics, monitoring and reporting via Internet and GSM.
- The PCU should be equipped with a data logger for collecting & recording the hourly data of grid status particular voltage & frequency.
- PCU should have provision for PCU bypass arrangement so as to cater load directly through grid, in case of PCU failure.
- There should be emergency stop switch on the front panel of PCU

### 3.2 Specification:

Switching elements	IGBT (for > 6KVA)/MOSFET(for <16 KVA)
Type of Charger	MPPT
Nominal Inverter Capacity	10 KVA
Nominal Array Capacity	10 kWp
MPPT Range	AS APPLICABLE
Battery nom Volt	Site specific
Inverter Surge Rating @ 40 deg C	105 % > 60 sec
	150 % > 30 sec
	200 % > 5 sec
Inverter Output Voltage	230V +/-2% for single phase / 415V+/-2% for three phase
Inverter Output Frequency	50 +/-0.5%
Grid Voltage	230 V +/-5%
Grid Frequency	50 Hz ( Range 48 to 51 Hz)
Inverter THD	<3%
DC Ripple	<3%
Dielectric strength	1.1 KV between input/output and ground with EMI protections removed.
Inverter Efficiency @ 40 deg C, nominal load	>90%
Operating Ambient Temperature	0 to 50 deg C
Humidity	95% max. Non condensing
Enclosure	Free standing, IP 21 , Epoxy powder coated
Cooling	Temperature controlled fan forced

Protections	1. Short Circuit 2. Overload 3. Over Temperature 4. Over Voltage 5. Lightning 6. Phase imbalance (in case of three phase output) 7. Reverse polarity
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### 3.3 OPERATION

The MPPT Charger should be a PWM DCDC converter which should power the DC bus from the PV array. The microprocessor control circuit should automatically adjust the DCDC converter to ensure that it should always match to the PV array under varying conditions and transfers the maximum

possible power. The battery bank should get charged from this DC bus, the charging rate and other parameters being controlled by the supervisory circuit. A bidirectional inverter should sit between the DC and the AC bus. The DC power should be converted to AC. The PCU should have the provision for connecting to a dedicated load. If the grid is absent or goes out of range the inverter should not interrupt supply. If PV power is available it should be directed to the load and the excess power shall be used for charging the batteries. So the power from the Solar is not wasted. The Inverter should be programmed for solar priority mode of operation. This means that the maximum use be made of the solar energy. Grid power should be used only when the batteries are over discharged or sufficient solar energy is not available from the PV array. If disengaged from the grid battery should keep supplying the power to the dedicated load, ensuring uninterrupted supply. The PCU should have following feature:

- If the load connected to PCU is more than the solar power being generated at any instance, during sunny hours then the load should first consume maximum solar power & balance power required by the connected load should be drawn from the grid power.
- There should be emergency stop switch on front panel.
- There should be provision of bypass arrangement available in PCU. Bypass means that power supply from the grid to the connected load can be bypassed from the PCU, in case PCU goes out of order.

### **3.4 PROTECTION & SAFETY:**

Specifically the inverter should be a single/three phase static solid state type power conditioning unit. Both AC & DC lines shall have suitable MCB/MCCB and contractors to allow safe start up and shut down of the system. PCU should have protections for overload, surge current, high Temperature, over/ under voltage and over/ under frequency & reverse polarity. The complete operation process & safety instructions should printed on the sticker & suitably pasted on the PCU.

The inverter shall have provision for input & output isolation (automatic & manual). Separate price should be quoted for Spare Control Cards (for inverter as well as solar charge controller) & other necessary parts as recommended by the manufacturer which can be purchased for any immediate requirement. Each solid state electronic device shall have to be protected to ensure long life of the inverter as well as smooth functioning of the inverter. Inverter should have safety measures to protect inverter from reverse short circuit current due to lightening or line faults of distribution network.

### **4. BATTERY BANK:**

- i) The battery bank capacity shall consist of 60 numbers of 2V 400AH tubular lead acid type or VRLA Gel Battery. The general specifications shall be as under:

- (A) The battery bank shall consist of required number of deep discharge electrochemical storage cells, suitably interconnected as required. Parallel connections of storage cells will be discouraged.
- (B) The cells shall be capable of deep discharge and frequent cycling with long maintenance intervals and high coulombic efficiency. Automotive or car batteries shall not be accepted.
- (C) The nominal voltage and capacity of the storage bank shall be selected and specified by the supplier in the bid.
- (D) The self discharge rate of the battery bank or individual cell shall not exceed four (4) percent per month.
- (E) The permitted maximum depth of discharge (DOD), shall be specified by the supplier in the bid. Supplier should also specify the expected life of the Battery bank.
- (F) The cells shall include explosion proof safety events.
- (G) The cells shall include the required number or corrosion resistant inter-cell required chemicals electrolyte packed in separate containers. Full instructions and technical details shall be provided for electrolyte filling and battery recharging at site for the first time.
- (H) The cells shall preferably be supplied in dry charged condition, complete with all required chemicals electrolyte packed in separate containers. Full instructions and technical details shall be provided for electrolyte filling and battery recharging at site for the first time.
- (I) If the cells are supplied in uncharged conditions, then the supplier shall provide full instructions for first time charging including, but not limited to, the following:

A checklist of all items required:

- Minimum specification with possible alternatives of the required battery charger for first time charging.
  - Instruction of electrolyte filling, battery charging etc. and instructions on the transportation of charged batteries, if required.
- J) Suitable number of corrosion resistant and acid proof storage racks shall be supplied to accommodate the cells. The rack design shall be such that minimum space is required, without any way obstructing the maintenance requirements. For metallic racks, standards specified for control panel enclosures and other metallic shall govern.
  - K) All the connectors should be insulated except for the end portions.

- (L) All technical and other details pertaining to the storage cells shall be supplied including but not limited to the following:
- 1 Rated voltage and ampere hour capacity of each storage cell as the rated discharge rate.
  - 2 Permitted maximum DOD.
  - 3 Self discharge rate.
  - 4 Cycle life of the storage cell and the anticipated life (in years) of the battery bank.
  - 5 Total number of storage cells in use.
  - 6 Details on cell interconnections, if any. All the connectors should be insulated except at both ends from where the connectors are connected to battery terminals.

Every cell should have proper numbering marked clearly for its identification. Only pre-insulated connectors should be used.

- ii) Battery Rack: Battery rack should be of matured treated salwood, single tier or two tier (if required), duly painted. Placement of battery should be such that maintenance of the battery could be carried out easily. **The non - reactive acid proof mat should be provided to cover the entire floor space covering the battery rack. Battery rack should compulsorily be placed on the appropriate rubbers pads to avoid the contact of wooden racks with the floor, to protect wooden rack particularly from termite.**

## 5. **LIGHTNING AND OVER VOLTAGE PROTECTION:**

The SPV Power Plant should be provided with lightning and over voltage protection. The principal aim in this protection is to reduce the over voltage to a tolerable value before it reaches the PV or other subsystems components. The source of over voltage can be lightning or any other atmospheric disturbance. The Lightning Arrestor (LA) is to be made of 1¼" diameter (minimum) and 12 feet long GI spike on the basis of the necessary meteorological data of the location of the projects. Necessary foundation for holding the LA is to be arranged keeping in view the wind speed of the site and flexibility in maintenance in future. Each LA shall have to be earthed through suitable size earth bus with earth pits. The earthing pit shall have to be made as per IS 3043. LA should be installed to protect the array field, all machines and control panels installed in the control rooms. Number of LA shall vary with the capacity of SPV Power Plant & location. The LA installations should be got approved from ZEDA prior to installation.



**6. EARTHING PROTECTION:**

Each array structure of the PV yard should be grounded properly. In addition the lightning arrestor/masts should also be provided inside the array field. Provision should be kept for shorting and grounding of the PV array at the time of maintenance work. All metal casing/shielding of the plant should be thoroughly grounded in accordance with Indian Electricity Act/IE rules as amended up to date. Each Resistance should be tested in presence of the representative of ZEDA after earthing by calibrated earth tester. The tenderer shall make testing arrangements.

**7. DC DISTRIBUTION BOARD (DCDB):**

This shall consist of suitable powder coated metal casting. In this box a separate arrangement which shall consist of MCCBs of suitable specifications & which can withstand respective flow of current, with the purpose of providing the option for isolating the battery bank & SPV arrays should be made. There shall be copper bus bars of suitable rating. Proper rating HRC fuse & MCCB/Isolator for DC application should be suitably installed in DCDB as battery bank isolator. Best quality Ah meter has to be installed to measure the cumulative charging & discharging status of battery bank. In DC circuits AC MCB or MCCB shall not be permitted.

**8. AC DISTRIBUTION BOARD (ACDB):**

This shall consist of box of suitable powder coated metal casting. One feeder per phase shall be provided in ACDB with MCB of suitable capacity installed at each feeder in the ACDB. One Electronic Energy Meter, ISI make, Single / Three Phase, of good quality shall also be installed in ACDB suitable placed to measure the consumption of power from SPV Power Plant. Proper rating MCB shall be installed at every feeder (in case of single phase output also, there shall be three feeders) to protect feeders from the short circuit current as per the requirement of the site & instructions of ZEDA. A separate dedicated feeder from conventional line to PCU as well as ACDB should also be installed, as per ZEDA's instruction. A separate change over switch of proper rating should also be suitably installed in the ACDB to isolate the existing connected load from the Solar System & cater the power to the existing load from conventional power (Mains), in case of emergency. ACDB should be connected between PCU & Load. Separate Electronic Energy Meters should be installed for incoming and outgoing circuits of ACDB for each of the SPVPPs.

**9. BATTERY PROTECTION PANNEL (BPP):**

This shall consist of box of suitable powder coated metal casting. BPP should be installed to make provision to isolate the battery bank. Proper rating HRC fuse & MCCB/Isolator for DC application should be suitably installed. BPP should be connected between Battery Bank & DCDB.

**10. DANGER BOARDS:**

Danger boards should be provided as and where necessary as per IE Act/IE Rules as amended up to date, as per the instructions of ZEDA & affixed at various appropriate locations.

**11. CABLES/WIRE:**

All cables should be of copper as per IS and should be of 650V/1.1 KV grade as per requirement. All connections should be properly made through suitable lug/terminal crimped with use of suitable proper cable glands. The size of cables/wires should be designed considering the line losses, maximum load on line, keeping voltage drop within permissible limit and other related factors. The cable/wire should be of ISI/ISO mark for overhead distribution, with prior approval of ZEDA. For normal configuration the minimum suggested sizes of cables are:

Module to module/SJB/AJB	4 sq mm (single core)
AJBs to MJBs/DCDB	10/16 sq mm (two cores) wrt current rating
MJBs to DCDB	Minimum 25 sq mm (single core) or as per design and rating
DCDB to PCU	Minimum 25 sq mm (single core) or as per design and rating
Battery to BPP if any	Minimum 25 sq mm (single core) or as per design and rating
BPP to DCDB if any	Minimum 25 sq mm (single core) or as per design and rating
PCU to ACDB	As per design & ratings

**12. JUNCTION BOXES:**

Junction Boxes (SJB / AJB) shall be mounted on poles of array support structure. The junction boxes should be made of FRP (Hensel or equivalent make, with prior approval of ZEDA). It should be provided with proper locking arrangements.

**13. COMPREHENSIVE ANNUAL OPERATION & MAINTENANCE:**

Comprehensive Annual Operation & Maintenance contract of SPV Power Plants along with the Power Distribution Network system of solar system installed at various sites for a period of five years have to be done. Terms & conditions of the rates quoted should be specifically mentioned otherwise the rates quoted shall be considered on the terms & conditions of ZEDA.

## SCHEDULE – I

### SCHEDULE OF THE QUESTIONNAIRE

#### PART 'A' : GENERAL INFORMATION

(Strike off whichever is not applicable. Separate sheets should be used, wherever necessary)

01. Name & Address of the Tenderer
02. PAN No \_\_\_\_\_ under income Tax Act and GST No \_\_\_\_\_  
TAN No \_\_\_\_\_
03. Name of contact person authorized to take decisions on behalf of the tenderer and execute the work
04. Name & Address of the firm / company etc :  
a) Registered Office :  
b) Factory / works address :  
c) Fax Nos. :  
d) Telephone Nos. :  
e) Mobile No. :
05. Address of Office in Mizoram :  
Address of Service Center in Mizoram :  
Office in Mizoram since (Month & year) :  
Name of Contact Official & his contact details :
06. Whether tenderer is Manufacturer : Yes / No  
If yes, name the product
07. Only manufacturer to give following particulars :  
a) Address of factory :  
b) Year of starting manufacture :  
c) Whether same/similar materials :  
Manufactured earlier :  
(if yes, give reference)  
d) Yearly/monthly production capacity :  
e) Maximum yearly production :  
Achieved so far
08. Whether the firm is SSI Unit of Mizoram State: Yes/No  
a) If yes, write registration NO. :  
b) Whether documentary evidence  
Regarding registration enclosed :  
c) Items for registration :  
d) Period of registration :

- e) Whether latest copy competency / Certificate furnished : Yes/No
09. Whether the firm is 100% owned by  
 a) State Government : Yes/No  
 b) Central Government : Yes/No  
 If yes, Notification/certificate issued from : Yes/No  
 The competent authority to this effect is Enclosed.
10. Whether the tenderer has previously participated : Yes/No  
 With ZEDA
11. Any other information that tenderer may like : Yes/No  
 To give in order to highlights his bid.

PLACE :

SIGNATUR OF TENDERER

DATE :

NAME IN FULL  
 DISIGNATION / STATUS  
 FIRM / COMPANY SEAL

## SCHEDULE – II

### PART 'B' : COMMERCIAL INFORMATION

(Strike off, whichever is not applicable, Separate sheets should be used. Wherever necessary)

01. i) Earnest Money Details : Bank draft/Bankers cheque of .....Bank  
For Rs .....payable to, ZEDA, Mizoram.
- ii) Amount of EMD & full details : Rs.....
- iii) If exempted, state whether : SSI Unit of C.G., Small scale  
the bidder is Unit registered with NSIC/Fully  
Owned / State / Central Govt. Unit
- iv) Reference of documentary : Yes / No  
evidence regarding valid  
exemption enclosed.
02. Whether the offer is valid for 4 months: Yes / No.  
From the date of opening of commercial/ (If no, state, validity period)  
Technical bid.
03. A) Concessional Sales Tax is : a) Concessional Central Sales  
Applicable to ZEDA Tax against declaration form.
- b) Concesional State Sales  
Tax/Commercial tax against  
Declaration form.
- A) Rate of Sales tax included : ..... %  
In the price bid, if any.
04. DISCOUNT :
- a) Whether any rebate/discount : Yes / No  
is offered.
- b) If yes, whether the rebate is  
Unconditional / conditional
05. PAYMENT TERMS :  
Whether ZEDA's terms of payment is : Yes / No  
Acceptable to the tenderer  
(If no state condition)
06. COMPLETION PERIOD OF WORK :  
Whether tenderer is agreeable for completion : Yes / No  
Period of work as specified in the tender

07. PENALTY CLAUSE :  
Whether Penalty Clause has been understood: Yes / No
08. Whether agreeable to ZEDA's clause of Warrantee period. : Yes / No
09. SECURITY DEPOSIT :  
Whether Security Deposit clause is understood: Yes / No
10. Indicate State, Central Sales Tax Registration Number (Please Note that in Case of non-registration with Sales Tax Department Purchase Tax as admissible Shall be deducted by the Purchaser from the Bills of the supplier) : State  
: Central
11. Whether photocopy of Return / clearance from The Income Tax & Sales Tax Deptt. And Profit & loss Account and Turn over for Last 3 years up to the last financial year have been enclosed. : Yes / No  
(If no give details)
12. Please mention whether rates offered are Applicable for part quantities. : Yes / No

PLACE :

SIGNATUR OF TENDERER

DATE :

NAME IN FULL

DISIGNATION / STATUS  
FIRM / COMPANY SEAL

### SCHEDULE – III

#### PART 'C' : TECHNICAL INFORMATION

(Strike off, whichever is not applicable, Separate sheets should be used. Wherever necessary)

01. Whether material offered is exactly as per Technical specification : Yes / No
02. Whether the copies of orders received during Last 3 years from other State Nodal Agency or from other Organization for similar Materials enclosed. : Yes / No  
Give details
03. Whether performance certificate from such Organization regarding supplies enclosed. Give details.
04. Whether pamphlets/technical details literatures Along with drawing etc. furnished with the Offer. : Yes / No  
Give details
05. Whether the tenderer agrees to furnish material Test certificates from MNRE / MNRE approved lab With each batch of supplies. : Yes / No
06. Whether the tenderer has furnished details of Manufacturing equipments and short history Of plant, (if not manufacturer then of those Companies with whom they have tie – ups) : Yes / No  
Give details
07. Whether all testing facilities are available If so, give details and in case of non – availability Of facilities indicate approved lab. Available in surrounding areas where tests Are proposed to be conducted. : Yes / No

PLACE :

SIGNATUR OF TENDERER

DATE :

NAME IN FULL  
DISIGNATION / STATUS  
FIRM / COMPANY SEAL

**SCHEDULE – IV**

**PAST EXPERIENCE**

From :  
Tenderer's Name & Address –  
To,

The Director  
ZEDA  
Mizoram Aizawl.

Subj : Performance / past experience.

Dear Sir,

We furnish herewith the record of our performance and experience as follows :-

Sl. No.	Purchaser's Order No.	Ordered	Qty. supplied	Value of
Order	Name & Address	& Date	Quantity	(Nos)

PLACE :

SIGNATUR OF TENDERER

DATE :

NAME IN FULL  
DISIGNATION / STATUS  
FIRM / COMPANY SEAL

NOTE : Photocopy of the orders & performance reports received from other State Agencies / Govt. Undertakings etc. should be produced, if required.



Sl. No.	GENERAL INFORMATION ABOUT THE TENDERER	
1.	Name of the Company/ Firm	
1.a	Postal Address	
1.b	Telephone/Fax no	
1.c	E-mail address & URL	
2.	Type of Company	
	Attached Proof of Company Registration along with a copy of the Partnership Deed / Article of Association and Memorandum of Understanding Proprietorship / Partnership/ Private Limited / Public Limited	
3.	Name and designation of the representative of the tenderer to whom all reference shall be made to expedite technical coordination	
4.	Name and address of the Indian / Foreign Collaborator(s) if any.	
5.a	Details of Technical Staff available	
5.b	Details of workmen on muster roll Skilled / semi-skilled / unskilled.	
6.	List of components sourced from outside / other agencies	
7.	Details of Marketing network of the company	
	* No. of marketing personnel	
	* No. of dealers in the state	
	(A list with contact information be enclosed)	
8	Details of previous work experience with ZEDA, if any	
	* Systems supplied/installed under ZEDA/MNRE scheme	
	* Systems supplied / installed without ZEDA/MNRE Scheme	
	Details be appended with the application)	
9,	Has the company/firm to pay arrear of income tax? If yes up to hat amount	
10.	Has any Govt. Dept./Under-taking ever debarred the company / firm from executing any work?	
11.	Reference of any other information attached by the company (give details of attachment)	

(Sign. &amp; Seal of the Tenderer)

**Annexure – II**

Details of Technical Staff available with the company for execution of work  
(Information to be attached with the Technical Offer)

<b>Sl. No.</b>	<b>Name</b>	<b>Qualification</b>	<b>Additional Certification, if any</b>	<b>Total Experience No. of years</b>	<b>Remarks</b>

- Copies of Resumes and appropriate certifications should be attached with this information.
- If necessary, separate sheet may be used to submit the information.

(Sign & Seal of the Tenderer)

**DRAFT OF AGREEMENT**

This agreement made on this day \_\_\_\_\_ of month \_\_\_\_\_ (year) 2018 between M/s \_\_\_\_\_ (NAME OF COMPANY) herein after called as "**Contractor**" ( Which expression shall unless excluded by or repugnant to the context , include its successors, heir, executors, administrative representative and assignee) through Shri ..... son of Shri ....., duly authorized by the contractor to sign this agreement on its behalf, of the one part & **Zoram Energy Development Agency, Aizawl** hereinafter referred to as the "**ZEDA**" , through Shri \_\_\_\_\_ son of Shri \_\_\_\_\_ of other part on the following covenants:

Whereas the contractor has offered to enter into contract with the said ZEDA for the Design, Supply installation, commissioning & 5 years on site warrantee of Solar Power Plants of capacity 80 kWp, vide Tender No ..... on the terms and conditions herein contained and the rates approved by the ZEDA (copy of Rates annexed hereto) have been duly accepted and where as the necessary security deposit shall be furnished in accordance with the provisions of the tender document and whereas no interest will be claimed on the security deposits.

Now these presents witness and it is hereby agreed and declared by and between parties to these presents as follows.

- 1) The Contractor shall, during the period of this contract, that is to say from .....to .....or completion thereof, until this Contract shall be determined by such notice as is hereinafter mentioned, safely carryout, by means of labors employed at his own expenses and by means of tools, implements and equipment etc. to be supplied by him to his labour at his own expenses, for installation of " Solar Power Plant and other associated works" as described in tender documents. (Annexed to the agreement).
- 2) The NIT (Notice Inviting Tender), Corrigendum to NIT, Bid documents (Qualifying and Financial), approved rates annexed hereto and such other additional particulars, instructions, engineering documents & drawings, so far they relate to the Tender No ..... as may be found requisite to be given during execution of the work shall be deemed and taken to be an integral part of the contract and shall also be deemed to be included in the expression "The Agreement or "The Contract "wherever herein used.
- 3) The contractor shall also supply the requisite number of workmen with means & materials as well as tools, appliances, machines, implements, vehicles for transportation, cartage etc. required for the proper execution of work within the time prescribed in the work orders and /or as per the tender conditions.
- 4) Contractor shall render a warrantee of five years towards SPV Power Plants and its components from the date of commissioning, as per the terms & conditions prescribed in the Tender No .....
- 5) The contractor hereby declares that nobody connected with or in the employment of ZEDA is not/shall not ever be admitted as partner in the contract.

6) The contractor shall abide by the terms and conditions, rules, guidelines, construction practices, safety precautions etc. stipulated in the tender document including any correspondence between the contractor and the ZEDA having bearing on execution of work and payments of work to be done under the contract.

7) The contractor shall be responsible to follow all the laws including Workmen Compensation Act and all other laws in force & shall be responsible for all the obligations towards labour including EPF, ESI, etc.

8) The contractor shall be liable to clear payments of their vendors/ staff and other associates engaged for the works assigned by ZEDA to the contractor. In case of disputes ZEDA can release payments to the vendors/ staff and other associates engaged directly from the due payments of the contractor.

8) All the taxes deductible at source as per Acts in vogue shall be recovered by ZEDA and deposited with the appropriate authorities

In witness whereof the parties present today has hereby entered into agreement.

Signed & sealed on behalf of the above

Signed on behalf of ZEDA

Name contractor.

Name:- (.....)

Designation:- .....

Name :-

Designation

Witness:

1. Name:- .....

Address:- .....

2. Name:- .....

Address:- .....

**SECTION V****PRICE BID**

<b>Sl. No</b>	<b>Item Description</b>	<b>Cost in INR</b>	<b>Qty</b>	<b>Amount in INR</b>
1	Supply of 10kWp capacity Mono/Multi crystalline SPV Modules with a minimum of 250 Wp single Module		8	
2	Supply of hot dip galvanized module mounting structure as required at site for holding modules on structure including design & construction of PCC/RCC foundation base for holding the above structures.		8	
3	Supply of Junction Boxes, Cables, lightning & over-voltage protection, earthing protection etc		8	
4	Supply of LML Battery bank of 120V/400Ah @C <sub>10</sub> . (2V,400AH X60Nos)		8	
5	Supply of charge controller cum inverter (PCU) of 10KVA, full sine wave 120V DC input and 230V single phase 50Hz AC output suitable for both stand alone and hybrid mode of operation along with all protection, controlling arrangement.		8	
6	Control Panel for 10kW SPV Power Plant		8	-
7	Integration, installation of various equipments and commissioning of the power plant.		8	
8	Operation & Maintenance (O&M) charges for a period of 5 years		8	
<b>TOTAL</b>				

(In words.....)

(Sign & Seal of the Tenderer)