

**EXPRESSION OF INTEREST FOR EMPANELMENT OF PROJECT
EXECUTANTS**

FOR

Supply, Installation, Commissioning and Maintenance of
Grid-interactive roof top Solar PV Power Plants in the state

Through Standard Rate Contract

Under

Off-grid and Decentralised Solar Application of JNSM, MNRE, GOI

2016-17

EOI CALL NOTICE NO-5794 Dt-02/05/2016

ISSUED BY

ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY

S-59, MIE, BHUBANESWAR-751010

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ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY
Under the Department of Science & Technology
Government of Odisha
(ISO 9001:2008 / ISO 14001:2004)
S/59,MANCHESWAR INDUSTRIAL ESTATE
BHUBANESWAR-751010, ODISHA
Website : www.oredaorissa.com E-mail : ceoreda@oredaorissa.com

5794 /OREDA
VII/SSD/SL-003/2016
Dated.02/05/2016

EXPRESSION OF INTEREST

Sealed E O I are invited from interested reputed manufacturers / systems integrators / EPC firms of solar PV systems in the country having valid test certificates from MNRE accredited test centres for Supply Installation, Commissioning and 5 years Comprehensive Maintenance of roof top Solar PV Power Plants in the range of 1 to 100 Kwp capacity through Standard Rate under off-grid and decentralised solar application of MNRE, GOI. The last date of submission of EOI is 25.5.2016

For details please visit our web site www.oredaorissa.com.

Chief Executive

Memo No.5795/OREDA

Dated:02/05/2016

Copy forwarded to the Additional Secretary to Govt, Science and Technology Deptt, Govt of Odisha, Bhubaneswar for information and necessary action.

Chief Executive

Memo No.5796/OREDA

Dated:02/05/2016

Copy forwarded to the PSO & Head, Regional Office(ER), MNRE, Govt. of India, Plot No.N-2/176, Ground Floor, I R C village,Nayapalli,Bhubaneswar-751 015 for favour of information and necessary action.

Chief Executive

Memo No.5797/OREDA

Dated:02/05/2016

Copy to Director (Admn), OREDA for information and necessary action . The E O I call notice may be published in the “The Samaj /The Dharitri and all editions of “The Indian Express”

Chief Executive

Memo No.5798/OREDA

Dated:02/05/2016

Copy to all divisional heads of OREDA for information and wide circulation.
Copy to Notice Board / website, OREDA for circulation.

Chief Executive

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DETAILS OF EXPRESSION OF INTEREST

NO 5794

Dated-02.05.2016

Sealed E O Is are invited from reputed eligible manufacturers / system integrator / EPC firm of solar PV systems in the country having valid test certificates from MNRE authorized test centres for their products for supply, installation, commissioning and maintenance for 5 years in the range of 1 to 100 Kwp grid-interactive roof top Solar PV power plants in different places of Odisha as per table below under off-grid and decentralised solar application of MNRE, GOI.

Sl. No	Particulars	Place of installation	Capacity	quantity	EMD for the composite work in Rs in shape of DD
1	Supply, installation, commissioning and maintenance of SPV grid interactive power plant for a period of 5 years as per technical specifications in the bid document .	Anywhere in the state as per work order	1 to 100 Kwp	As per work assigned by OREDA	5,00,000

Bid document for the above work can be had from OREDA, S-3-59, Mancheswar Industrial Estate, Bhubaneswar-10 on all working days in between 11.00 A.M. to 4.00 P.M. till Dt.24.5.16 A.N only after Dt-17.5.16 on payment of Rs. 10,500/- (Rupees Ten Thousand Five Hundred) only. Payment can be made in cash at OREDA cash counter or through Account payee Demand Draft in favour of Chief Executive ,OREDA Payable at Bhubaneswar. The bid documents can also be downloaded from OREDA Website. In case of downloaded documents the cost of bid document may be paid in shape of Demand Draft drawn on any Nationalised bank in favour of Chief Executive, OREDA payable at Bhubaneswar. The cost of the bid document in shape of Demand draft has to be submitted along with the technical bid only. Bids will be received up to 1.00 P.M of Dt. 25.5.16 and the technical bid will be opened on the same day at 3.00 P.M in presence of the bidders or their authorized representatives.

CHIEF EXECUTVE
OREDA

Disclaimer

Kindly Note:

1. This document is not transferable
2. Though adequate care has been taken for preparation of this document, the bidder shall satisfy himself that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any bidder within ten days from the date of issue of the bid document, it shall be considered that bid document is complete in all respects and has been received by the bidder.
3. The Odisha Renewable Energy Development Agency (OREDA) reserves the right to modify, amend or supplement this bid document.
4. While the bid has been prepared in good faith, neither OREDA nor their employees or advisors make any representation, warranty, express or implied or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability and completeness of this bid document, even if any loss or damage is caused by any act or omission on their part.

Preamble:

This expression of interest is invited as compliance of the following missions, policies and guidelines issued or to be issued by the Govt of India, Govt of Odisha and Regulatory Commissions for promotion, propagation and development of renewable energy as a support of conventional energy.

1. Off Grid and Decentralised solar application under JNNSM,MNRE, Govt of India
2. Renewable Energy Policy, Govt of Odisha
3. Order issued by OERC from time to time
4. Climate change action plan, Govt of Odisha

OREDA invites the Expression of Interest to **standardise the product / services and lowest rate (in Inr / Kwp in the respective category) for empanelling**, for a period till the next such EOI to be invited, qualified and agreed Renewable Energy Operators (REO) / Project Implementing Agencies (PIAs) for supply, installation, commissioning and 5 years maintenance of the SPV on-grid roof top power plants as per technical specification and relevant IEC / MNRE / BIS compliant in the feasible sites in the state.

The works of any installation will be assigned according to the gradation of the empanelled bidder basing on the quoted rate to execute as per the lowest rate arrived at the bidding process. This will proceed with the continuous evaluation of completion of assigned jobs.

OREDA also intends to remotely monitor all the installed systems on a single dashboard for which the empanelled entities will have to cooperate and agree to share their remote monitoring protocols with OREDA.

OREDA will have the discretion to allow local solar / electrical / electronics firms / start ups firms of state only, not covered under this EOI in selective small applications (1 to 10 kwp) to operate through L1 rate only discovered in the competitive basis on random trial basis purely through registration process in OREDA to be adopted.

Important Dates

1	Uploading of bid documents on web site	3.5.16
2	Pre bid meeting to be held	13.5.16, 11.30 AM
3	Revised final Bid documents after pre bid discussion for download / sale	17.5.16
4	Last date of receipt of bids in hard bound copy	25.5.16 at 1.00 PM
5	Date of opening of technical bids	25.5.16 at 3.00 PM
6	Date of opening of price bid of tech-commercial qualified bidders	To be intimated

Check list of documents to be submitted along with the bid as serialised below

Sl no	Particulars	Complied	Page-no / Flag
1	Bank draft for Rs.10,500/- or original money receipt issued by OREDA as proof of purchase of E O I paper or exempt as admissible with proof	Bank No Dt	Envelope
2	Bank draft for Rs.5,00,000/- towards Earnest Money deposit or exempt as admissible with proof.	Bank No Dt	Envelope
3	Forwarding letter duly signed and stamped by the bidder & notarised self certificate as per eligibility clause.		
4	Undertaking duly signed and stamped by the bidder. Undertaking to unconditionally accept all terms and conditions of the bid document with copy of Board Resolution		
5	Valid document registering the status of the bidder as manufacturer /systems integrator / EPC		
6	Organizational profile containing the original documents defining the constitution or legal status, place of registration / branches, annual off-grid and on-grid wise capacity of solar power plants installed for last 3 years (list of clients with capacity) .		
6	Copy of the PAN card of the bidder's firm		
7	Copy of the TIN card of the bidder's firm		
8	Copies of Tax returns, VAT/ e-filing		
9	Document stating no loss certificate duly signed and stamped by a registered chartered accountant on the letter head of the chartered accountant for last 3 years.		
10	Proof of installation of 500 Kwp Solar power plants in the range of 5 Kwp and above in Govt / PSU /Govt Agencies. Copies of certificates given by the concerned government agencies to be enclosed		
12	Declaration /Original Board resolution to undertake the work under the jurisdiction of the local office, if qualified		
13	Valid Test reports of components of solar power plant/ component from MNRE accredited test lab		

14	Willingness to open service centre in the state of Odisha and Local registered office for total execution		
15	Undertaking for Indigenouness of the supplied items		
16	Filled in bid document duly signed and stamped at the bottom of each page except the price bid format.		
17	Price bid in separate single sealed envelope and no other content		

Forwarding Letter
(to be submitted in the letter head of the bidder)

To,

The Chief Executive
Odisha Renewable Energy Development Agency (OREDA)
S.59. MIE, Bhubaneswar -751010
Odisha

Subject: Submission of E O I for the supply / installation of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance of **grid –interactive roof top SPV power plants** vide E O I call **Notice No 5794 / OREDA, dtd –2.5.2016**

Sir,

Having studied the E O I document carefully L/we, the undersigned, offer to submit our E O I for the supply / installation of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance for **grid – interactive roof top SPV power plants** in conformity of the E O I document.

I/We have also read the various provisions of the E O I and confirm that the same are acceptable to us including the provision of CMC. We further declare that any additional conditions, variations, deviations, if any, found in our E O I offer shall not be given effect to. We further understand that **any deficiency / illegibility in documents shall make our E O I liable for rejection.**

I/we submit our E O I understanding fully well that

- (a) The bid and other documents submitted along with the same will be subject to verification by appropriate authorities.
- (b) OREDA reserves the right to accept or reject any application or the bid process itself without assigning any reasons thereof and shall not be held liable for any such action.
- (c) Any genuine changes made by OREDA in the interest of the supply / installation with respect to the technical requirement during the course of project implementation will be acceptable.
- (d) All acts, rules, regulations, norms and conditions of Govt of India and Govt of Odisha shall be applicable during the process of E O I and during the period of execution of project including CMC period.

We hereby declare that all the information and statements made in this proposal are complete, true and correct and also accept that any misinterpretation contained in it may lead to our disqualification.

We hereby declare that our E O I is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Yours faithfully,

Signature of bidder

UNDERTAKING BY THE BIDDER

I/we here by undertake that

1. We have thoroughly read and examined the notice inviting E O I and the E O I document along with all its schedules, annexure etc.
2. The rates quoted by us are firm and final and are meant for execution of the allotted supply / installation within the time frame stipulated in the E O I/supply / installation order.
3. All terms and conditions of the E O I including the rates quoted by us shall remain valid for a period of one year or as may be agreed upon from the date of opening of the technical bids.
4. In case our E O I is incomplete in any respect or we violate any of the prescriptions given in the E O I for submission of the same OREDA shall , without prejudice to any other right or remedy , be at liberty to forfeit the earnest money deposited by us.
5. In case of award of supply / installation in our favour OREDA shall have the right to convert the EMD deposited by us in to full or part (as the case may be) of the security deposit to be deposited by us against award of the supply / installation.
6. In case we fail to commence or complete the supply / installation as per the time schedules or fail to fulfill any of the terms and conditions given in the E O I OREDA shall , without prejudice to any other right or remedy , be at liberty to forfeit the security deposit made by us against the award of the supply / installation.
7. I/We hereby declare that I/We shall treat the E O I documents, specifications and other records connected with the supply / installation as secret/confidential and shall not communicate information derived therefrom to any person other than a person to whom I/We have authorized to communicate the same or use the information in any manner prejudiced to the safety of OREDA/the State Govt.
8. I/We shall abide by all the laws prevailing at the time of the execution of the supply / installation and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.
9. The entire E O I document has been discussed in the Board meeting and a resolution has been concurred for participation in the E O I (copy enclosed)
10. We are not involved in any litigation that may have an impact of affecting or compromising the delivery of services as required under this E O I
11. We are not blacklisted / defaulted in any manner by any Central / State Government / Public Sector Undertaking in India.
12. In case any false documents submitted and found any time in future the firms shall be liable to be proceeded against as per prevailing laws.
10. 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 OREDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

Signature of bidder with stamp & date

Letter of Authorization

(to be submitted in the letter head of the bidder)

To,
Chief Executive
Odisha Renewable Energy Development Agency
S-59, MIE, Bhubaneswar-751010
Odisha

Sub: Submission of E O I for the supply / installation of Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance of **grid –interactive roof top SPV power plants.**

Ref: E O I Call Notice No. **5794/ OREDA, dtd –2.5.2016**

Sir,

I/we hereby authorise Ms. /Mr. _____, Designationof our company to sign all relevant documents on behalf of the company/firm in dealing with the above E O I. She / He is also authorized to attend all meetings and submit technical and commercial information as may be required by OREDA in the course of processing of the E O I.

We further authorise Ms. /Mr. _____ designation..... of our company to make technical presentation on behalf of the company.

Signature of the authorise persons

1. _____
2.

Signature attested

Name and designation of the attesting officer with stamp.

Yours faithfully

Head of the organization

1. Eligibility Criteria

In order to be eligible to participate in the E O I, the bidder must fulfill the following eligibility criteria. Any discrepancy or deviation from the same shall make the bidder ineligible for participating in the E O I and such E O I documents shall be rejected.

- a) The bidder must be a company registered under the Indian Companies Act 1956 or a firm registered under VAT / CST.
- b) The bidder must be a manufacturer of any component of solar system or a system integrator or EPC firm of the same. A copy of the registration certificate (DIC, NSIC, MSME, Register of Companies) to that effect is to be attached.
- c) The firm must have installed solar PV power plants for an aggregate capacity of at least 500 Kwp in the range of 5 Kwp and above in Government / PSUs / Govt Institute buildings in any part of the country during last 3 years under JNNSM. **The certificates only to that effect from the authorised officers are to be attached.**
- d) The bidder company must not have incurred losses during last three years (2012-13 to 2014-15). **A Chattered Accountant certificate is to be attached to that effect.**
- e) The firm must not have been debarred / blacklisted / defaulted by any Govt. Dept, agency, PSUs / institution / agencies / autonomous organisations. **A self-certificate by an authorized person of the bidder's company/firm duly notarised is to be attached.**
- f) Notwithstanding of the all above clauses i,e b,c,d ; the PV module manufacturer having annual production capacity of more than 20 Mw will be eligible to apply.

2. Scope of the work

The Bidder should act for providing an End-to-End solution for the identified locations including but not limited to design, supply providing of the required Solar Photo Voltaic power plant, with accessories, grid tied inverter, **a bidirectional meter**, peripherals like cables, junction boxes, earthing, etc. and installation, performance testing, commissioning adhering to the technical specification, warranty, annual maintenance, etc. The bidders have to ensure planning and smooth execution of the project as per the time schedules provided work order

On issue of work order the allotted REO /PIA has to

- 2.1 Facilitate the application to the DISCO for NOC and obtain the approval for drawing, net-meter or certification of the net-meter to be provided by the firm.
- 2.2 A clear understanding of the logistics and other feasible features of the sites.
- 2.3 Storage facility to be provided by the vendor for pre-installation inspection at intermediate points for facilitating inspection by the designated official of OREDA, if necessary.
- 2.4 Supply of complete systems (BOQ) as per technical specifications given in this document and as specified in the work order depending upon the demand of the job **duly through electrical contractor with licence for appropriate voltage grade.**
- 2.5 Installation of the supplied systems and commissioning of the same as per the prevailing electrical norms of the competent authority on the rooftops or on ground within the premises of the users, as the case may be as directed by the designated officials of OREDA in consultation.
- 2.5 Comprehensive Maintenance Contract (CMC) of the complete system for five years warranty period. The date of commencement of CMC shall be reckoned from the date of commissioning of the system.
- 2.6 Training at least two designated persons from each for the Govt. office as well as all designated technical persons of OREDA in day to day maintenance and upkeep of the system.
- 2.8 The successful bidder shall after completion and commissioning of the systems submit all details as per the online format of the installed systems like site details, systems details, installation report, etc. in the formats supplied by OREDA from time to time.
- 2.9 Installation of all necessary protection devices to protect the power plant from lightening, sudden surges in voltage and current and to ensure safety of the grid to which the plant is connected. The bidder should also ensure protection of life and property likely to be endangered due to the installed solar power plant
- 3.0 Opening of service centre/keeping servicing personnel and making available all essential spares in the vicinity of the plant such that the power plants will give the desired performance with least interruption

3.1 Submission of periodic reports and returns as per the MIS prescribed by OREDA

3.2. Other compliances

- a) While installing solar power plants on rooftops the physical condition of the roof should be taken in to consideration.
- b) There should not be any damage whatsoever to the roof top due to setting up of the solar power plant so that on a later day there is leakage of rain water, etc. from the roof top.
- c) In case small damages are inevitable for erecting the footings for the module mounting structure etc. the roof top may be given a suitable grading plaster with suitable leak proof compound so as to render the roof entirely leak proof. .
- d) The solar PV array must be installed on the roof top in such a way that there is sufficient space on the roof top for maintenance etc.
- e) If the roof top does not have any access such as stairs or Ladder, a proper and safe ladder must be provided to ensure easy access to the roof top mainly for the purpose of maintenance and inspection.
- f) 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. Display board is to be fixed in a prominent place.
- g) Collect and Compile the Customer's Information and hand it over to the CRM Dept of OREDA for assignment of Customer ID and building up of master Consumer Database.
- h) Extend both periodic and on call maintenance services through the CRC of OREDA as detailed elsewhere in this document.

3. Instructions to Bidders

Intending bidders are requested to carefully study the instructions contained hereunder before preparing their bid documents for submission.

1. A Bidder shall submit a single offer-bid only.
2. Bidders must submit their bids for all items as stated in this bid document above in a **single hard bound book form** properly page numbered and Indexed. **No loose or separate papers or spiral bound documents will be accepted. Submission of loose papers or spiral bound documents shall lead to the rejection of the same.**
3. Demand Drafts towards cost of document and EMD should be submitted in a separate envelop placed inside the envelope containing the technical bid.
4. Bids must be submitted in English language only.
5. Incomplete, telegraphic or conditional bids shall not be accepted.
6. Prices quoted must be firm and fixed. No price variation / escalation shall be allowed during the validity of the EOI.
7. The bidders must sign at the bottom of each page of the bid documents at the time of submission in token of unconditional acceptance of the departmental terms and conditions, technical specifications etc.
8. Valid TIN / VAT / CST / E-filing submission document must be submitted along with the bid. **All rules and circulars of Finance Department, Govt of Odisha issued from time to time will be applicable during project period from issue of E O I / E O I to the completion of 5 years CMC period.**
9. Deviations in terms and conditions, Specification of material, Inspection clause etc. will not be accepted under any condition.
10. The bidders should furnish the information on all past supplies and satisfactory performance.
11. The bidder shall submit copies of documents defining the constitution or legal status, place of registration and principle place of business of company or firm.
12. The bidder shall furnish a brief write up backed with adequate data, explaining capacity and experience (both technical and commercial) for the manufacture and supply of the required systems, equipments within the specified time of completion after meeting all their commitments.
13. Earnest money as specified in bid may be deposited in cash at OREDA cash counter or in shape of Demand Draft drawn in favour of Chief Executive, OREDA payable at Bhubaneswar from any nationalized bank. Bids without E.M.D will not be accepted unless exempt.
14. Bids received late due to postal delay or otherwise **will not be considered.**

15. The bidders are required to furnish their offers in the price bid both in words & figures neatly computer typed. Any correction shall liable the document to be rejected. In case of any conflict between figures and words, the latter shall prevail.
16. Since timely execution of supply / installations is of paramount importance, requests for extension of time shall not be ordinarily entertained.
17. Canvassing in any manner shall not be entertained and will be viewed seriously leading to rejection of the bid.
18. Certificate to the effect that the systems to be supplied are indigenous & not fully imported must be furnished.
19. Power of attorney to sign the agreement on behalf of bidders & partnership deed articles, if any, should be enclosed along with original bid documents.
20. Notice inviting E O I, bid documents, prescribed Technical bid, price bid, terms & conditions will form the part of the E O I.
21. All pages of the bid documents must be signed & sealed by the authorized person on behalf of the bidders.
22. Bids will be accepted & will be opened as per information mentioned in the notice-inviting E O I. No receipt against submission of bid shall be issued by OREDA.
- 23. A pre bid meeting will be convened on 13.5.16 at 11.30 A.M. in the conference hall of OREDA. After discussion, deliberation and written statement / suggestions of the representative, the final E O I document revised and approved by the technical committee will be uploaded on the website replacing the previous one.**
24. The last date of receipt of the bid is 25.5.16 at 1.00 PM. Sealed E O Is (**revised and final**) shall only be dropped in the specified E O I box kept in the Support Service Division, OREDA during office hours on working days. Bids received after due date & time will not be considered. The bids of such firms shall only be considered who have purchased the bid documents from the Agency by depositing the prescribed fee of the bid document (Non refundable) / downloaded from the website and submitted along with cost of the E O I paper in shape of cash / DD drawn in favour of Chief Executive OREDA from any nationalised bank. If due to any reason the due date is declared as a holiday the bid will be opened on next working day at the same time.
25. The technical bid shall be opened on 25.5.16 at 3.00 PM in the OREDA office, Bhubaneswar in presence of such bidders or their authorized representatives, who may like to be present at the time of opening.
26. Any clarification on the technical specification and commercial terms and conditions may be clarified in writing from OREDA.
27. Deviation of any commercial terms and condition and technical specification shall not be entertained under any circumstances
28. OREDA will not be responsible for any incidental or consequential losses of the firms while execution and till expiry of the period of maintenance.
29. All the bidders shall essentially indicate the break-up of prices as shown in Price bid.
30. If qualified, the bidder must open a local office at Bhubaneswar before commencement of the supply / installation for coordination of all jobs and service centres fully equipped with technical person and spare parts at cluster level in the district where solar pumps

installed. Such facility must have proper mailing address with contact person detail from time to time for all documents. **All supply / installation orders shall be placed with the state local registered office of the qualified empanelled bidders having valid Odisha TIN/ OVAT as per the FD circular no 5439 dtd 25.2.14.**

31. On award of contract the qualified bidder shall be termed as Renewable Energy Operator / Project Implementing agency.

32. Submission of bids:

The bid document should be submitted in two parts as detailed below:

- i) Bids should be submitted in two separate sealed envelope as mentioned below & addressed to the Chief Executive, OREDA, Bhubaneswar -5, inside a sealed envelope super-scribed "Bid for Design, Manufacturing, Testing, Supply, Installation, Commissioning & Maintenance for a period of five years for -----".
- ii) First sealed envelope should contain Technical Bid (Annexure-A) , prescribed test certificate, Earnest Money, Technical Specification, valid VAT / Sales tax clearance certificate, Commercial terms & conditions, other bid documents duly signed & sealed, Indigenous Certificate, organizational profile, balance sheets and profit & loss accounts for last three years, certificate and proof as per qualification criteria as well as brochure, literature etc. It should be super-scribed with **Part-1 Technical Bid "**. All the papers of bid documents except the price bid duly signed should be submitted in the first envelope. Required earnest money deposit in the form of Demand draft in favour of Chief Executive, OREDA payable at Bhubaneswar should be attached. If the bid document has been downloaded from the website, the bank draft towards cost of bid document should be submitted in a separate envelop super scribed "cost of bid document" and kept in the main envelop.
- iii) Second sealed envelope (part-II) should contain Price bid as per Annexure-B in a separate sealed envelop. It should be super-scribed with **"PART II Price Bid only and no other document"**. Any condition in regard to financial aspects, payments, terms of rebate etc beyond the prescribed financial terms of OREDA will make the bid invalid. Therefore it is in the interest of the bidders not to write anything extra in the Price Bid in Annexure- except price.

33. Opening of the bids:

The procedure of opening of the bid shall be as under

- i) First envelope **"PART-1 Technical Bid"** shall be opened at the time & date mentioned in the bid notice by OREDA representative in the presence of bidders, who choose to be present.
- ii) Second envelope (part-II) containing Price bid shall be opened after evaluation of technical-commercial suitability of the offer by assessing responsiveness in line with the requirements mentioned in the bid document. The date for opening of second envelope (Price bid) shall be communicated subsequently. Second envelope of price bid of only those bidders shall be opened who qualify in the technical bid. If necessary, the firms may be called for Technical Presentation of their product as per the time intimated by OREDA.

Acceptance/ Rejection of the bid documents:

Chief Executive, OREDA reserves the right to reject or accept any bid or annul the bidding process at any time prior to award of contract, without having prejudice of incurring any liability to the affected bidders or any obligation to inform the bidders.

Chief Executive

I/we have carefully read & understood the above terms & conditions of the bid & agree to abide by them.

Signature of Bidder with Seal

5. Commercial Terms & Conditions

The Chief Executive, OREDA shall award the contract to the successful bidders whose bids shall be qualified after evaluation in terms of the responsiveness and lowest standardised rate determined on the basis of price bids.

5.1 Rate :

The offer should indicate the unit cost of the system, Installation & Commissioning charges, CMC Charges and taxes & duties separately. The unit cost must be inclusive of packing, forwarding, loading & unloading charges, cost of insurance and transportation FOR destination where the system as per the technical spec will be installed as per the requisition /work order from the user / consumer.

5.2 Tax & Duties etc

i) As works contract, the contractor will submit the execution certificate under clause a) of sub-section (5) of section 54 of Odisha Value Added Tax Act-2004 from the competent authority before payment before prepare the bill otherwise 4% towards WCT / OVAT (TDS) will be deducted from each bill and certificate for such deduction will be issued. This will be subject to bifurcation of supply of materials, installation & commissioning and CMC.

5.3 Earnest Money Deposit

- 5.3.1 Earnest money deposit as specified in Table-1 is required to be deposited along with the bid without which the bid will not be accepted. No interest will be payable for the EMD amount under any circumstances.
- 5.3.2 Earnest money can be deposited in shape of a Demand Draft in favour of Chief Executive, OREDA from any Nationalised Bank Payable at Bhubaneswar and the proof of deposits should be attached to the bid.
- 5.3.3 E.M.D would be refunded to the unsuccessful Bidders after finalization of the bid without any interest.
- 5.3.4 EMD would be refunded to successful bidder(s) after submission of security deposit as detailed at clause 5.4 once S D / PGF amount exceeds the EMD amount.
- 5.3.5 E. M. D would be forfeited in case of non- compliance of the purchase order by the successful bidder.
- 5.3.6 In case of claim for exemption from deposition of Earnest money sufficient proof in support of claim for exemption of EMD as prescribed in Govt. of India Notification is to be attached with the bid.

5.4. Security Deposit/ Performance Guarantee Fees

The successful bidder must deposit the Security amount / Performance Guarantee fees @ 10% of the system value with the Chief Executive, OREDA, Bhubaneswar-10 at the time of acceptance of the work order in shape of Bank Guarantees valid from the date of acceptance of the work order till the completion of respective warranty periods. The said deposit would be forfeited, if the supplies are not made as per the Terms & Conditions of the purchase order. Security deposit & PGF amount will be refunded after the expiry of the Warranty period and CMC period (ref. clause 2 of Scope of Work) of the systems, subject to satisfactory execution / performance of the systems. Balance 50% of the Security deposit shall be released after expiry of warranty period of 10 years provided for the SPV modules subject to the successful performance.

5.5. Programme Execution Schedule

1. Delivery of systems at sites: 1 month from the date of issue of the work order
2. Installation & Commissioning 1 month from the date of preliminary inspection, physical verification and handing over of systems for installation
3. Upon intimation about commissioning of the systems by the executing firm a joint inspection will be carried out by the representatives of the executing firm, OREDA and the user. Following such inspection a joint commissioning report / installation report shall be brought out in the prescribed format, which shall form a part of the documents for release of payments.
4. The issuance of a JCC shall, in no way relieve the executing firm of its responsibility for satisfactory operation of the SPV systems.

5.6 Quantity

There is no specific quantity of work order. As per the option and choice of the user or allotment received, OREDA may place order to the respective empanelled REO/PIA basing on the gradation of the qualified bidders as per the price bid offer and neatness of execution of job progressively.

5.7 Validity of offer

The offer must be kept valid for a period of one year from the date of opening of the technical bid. No escalation clause except the admissible tax component under the period of consideration would be accepted. The validity can be further extended with mutual consent.

5.8 STCC

The bidders must submit a copy of valid up to date sales Tax / VAT/ E-return along with the bid. The bid would not be considered without this document. The original certificate would be produced at the time of opening of the bid, or, before placement of purchase order, if required.

5.9 Warranty

The SPV Modules and the Balance of Systems (BOS) should be warranted against any manufacturing defect or bad workmanship for a period of 10 (Ten) and 5 (five) years respectively from the date of commissioning of the systems.

Warranty certificate to the above effect must be furnished along with the commissioning reports.

Any defect noticed during warranty period should be rectified/replaced by the supplier free of cost upon due intimation by the concerned VEC/District Renewable energy Cell of OREDA. The warranty period shall be extended by the period during which the systems remain non-operative due to reasons within the control of the executants. Care should be necessarily taken to make the system operational within a week of reporting of defect. If the system is not made operational within fifteen days, OREDA may rectify the same and charge all expenses incurred on the said account to the vendor. The defects should not be ordinarily

attributed to tempering by the users. The firm has to devise suitable mechanism to ensure non-tempering of systems.

5.10 Penalty and termination of contract

The systems shall be supplied, installed and commissioned within the scheduled time. If the supplier fails to adhere to the schedule, OREDA shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 1% of the delivery price of the delayed goods or unperformed services for each week of delay until actual delivery or installation/commissioning up to a maximum

deduction of 10% of the contract price for delayed goods or installation and commissioning. Once the maximum is reached (i.e 10 weeks of delay) OREDA may consider termination of the contract and forfeit the security deposit without prejudice to the other remedies of the contract along with recovery of mobilization advance by forfeiture of bank guarantee.

However, Chief Executive, OREDA may at his own discretion allow reasonable time extension upon written application of the supplying firm. If the delay is considered intentional or due to negligence of the vendor extension can be allowed with imposition of penalty. If the delay is considered to be genuine time extension can be allowed without imposition of penalty.

5.11 Force Majeure

The supplier of the SPV system shall not be charged with liquidated damages nor shall his security for performance be forfeited when failure of the supplier in making delivery is due to any event beyond the control of the supplier and could not have been foreseen, prevented or avoided by a prudent person. These include, but are not restricted to acts of God, acts of public enemy, acts of Government, fires, floods, epidemics, strikes, freights, embargoes and unusually severe weather.

5.12 Inspection

All tests and inspections shall be made at the place of delivery unless otherwise specifically agreed upon by the bidder and OREDA at the time of purchase. Authorized OREDA Officer shall be entitled at all reasonable time to inspect and supervise and test during erection and commissioning. Such inspection will not relieve the executing firm of their obligation in the contract.

OREDA has the right to have the tests carried out at its own cost by an independent agency at any point of time. Pre- delivery inspection at the factory site if necessary will be carried out by OREDA.

5.13 Payment

Payment will be made against the total price of the system installed out of the total supply / installation order issued against the respective executants in the following manner

- i) Total value of systems with full taxes / duties (excluding CMC charges) will be made after commissioning of the project. The check list of documents to be submitted along with the bills for release will be as per the purchase order issued.

For processing of the payment the indicative documents are to be submitted like all technical detail of the installed system, inspection, testing report and function report, location map of the System, GPS based photograph wherever available, System handing over report,

Warranty certificate, Joint commissioning certificate or any other documents as may be required.

- ii) The CMC amount will be paid annually as admissible from time to time on receipt of servicing reports endorsed by the user agency / OREDA authorised personnel.

5.14 Execution

Execution of work shall be carried out in an approved manner as outlined in the technical specification or where not outlined, in accordance with relevant Indian Standard Specification, to the reasonable satisfaction of the Authorized OREDA Officer..

5.15 Comprehensive Maintenance Contract

CMC will be applicable on expiry of the warranty period. The bidder must enter into a Comprehensive maintenance contract for the specified period at the time of execution of the order with the use. Offer without such CMC shall not be considered. The scope of CMC must cover supply of spare parts services during the contract in force. Order shall be placed on bidders who agree to offer such CMC. The CMC charges quoted by the bidder must be realistic in view of actual rendering of after sale services. The payment of annual maintenance charges under the Comprehensive Maintenance Contract shall depend upon the functionality of the system duly certified by the concerned Authorized officials of OREDA. Upon receipt of such certificates CMC amount as applicable shall be paid at the end of 1st, 2nd, 3rd, 4th and 5th years.

5.16 Limitation of Liability

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

5.17 Dispute

For adjudication of any dispute between OREDA and the bidders arising in this case, reference can be made to any Law courts under the jurisdiction of Orissa High court only. The Chief Executive, OREDA reserves the right to accept or reject any or all bids without assigning any reason thereof.

Chief Executive

OREDA

I/We have carefully read and understood the above terms and conditions of the bid and agree to abide by them.

SIGNATURE OF BIDDER WITH SEAL

6. TECHNICAL SPECIFICATION

Annexure-A

The general scope under this contract includes to design, manufacture, testing ,inspection, packing and forwarding, transportation up to project site, loading & unloading, storage in safe custody, erection, carrying out preliminary tests at site, commissioning, performance testing, operation and maintenance for 5 years & handing over to all the equipment of SPV Power plant on the respective sites / as per instruction from time to time. The illustrative Schedule of requirements is in accordance with the specifications contained in this document

System Detail:

Sl. No.	Brief Description	Units	Make
1	SPV modules for a as per specifications.	1 Set	Indigenous, compliant to bid document specification, IEC/ MNRE
2	SPV module mounting structure suitable for accommodating capacity SPV modules including foundation as per specifications on rooftop	1 Set	As per IEC / BIS
3	PCUs as per specifications	As per spec	SMA / OPS/Schneider/KACO Siemens / ABB / Emerson / Refusol / Delta /equivalent
4	Array Junction Boxes	1 Set	Tyco / Hensel/ spelberg / equivalent
5	Main Junction Boxes	1 Set	Tyco / Hensel/ spelberg / equivalent
6	Data Logging system with remote monitoring as per specification	1 Set	system as per specifications
7	DC Distribution units as per specifications	1 Set	Siemens / ABB / Schnieder Electric/ L&T / equivalent
8	AC Distribution units as per specifications	1 Set	Siemens / ABB / Schnieder Electric/ L&T / equivalent
9	Cables requirement as per design	Mtrs. As required at site for full plant commissioning	Finolex / Polycab / Havells /equivalent

10	Fire extinguisher in accordance with BIS codes for electrical short circuit fires along with sand buckets	1 Set	
11	Lightning arrester complete set as per specification	1 Set	As per BIS compliant
12	Earthing complete set as per specification	1 Set	As per BIS compliant
13	Spares, tools and plant for 5 years operation and maintenance	As per list	
14	Fuses, Transfer switches, Printed Circuit boards required for power plant	1 Set	
15	Providing training to engineers and site staff for operating Maintenance and trouble shooting skills		
16	Operation and maintenance of the SPV Power Plant for a period of 5 years from date of commissioning of the power plant.		
17	Engineering, electrical drawings and installations and O&M manuals	1 Sets	
18	Any other equipment required to complete the installation		

All the items against which no make has been mentioned must confirm to ISI standards and not below IEC specifications.

Specification of Solar PV Modules

Solar PV modules shall be of the crystalline silicon type, manufactured in India. Detailed specifications of the solar PV modules are given below:

<i>Type</i>	Crystalline silicon
<i>Origin</i>	Manufactured in India
<i>Efficiency</i>	>13%
<i>Fill factor</i>	>70%
<i>Degradation</i>	>=90% of design nominal power after 10 years.
<i>Warranty</i>	>=80% of design nominal power after 20 years.
<i>Module frame</i>	Non-corrosive and electrolytic compatible with the mounting structure material.
<i>Termination box</i>	Thermo-plastic, IP 65, UV resistant
<i>Blocking diodes</i>	Schottky type
<i>Module minimum rated power</i>	The nominal power of a single PV module shall not be less than 74Wp.
<i>RF Identification tag for each solar Module</i>	Yes. Must be able to withstand environmental conditions and last the life of the solar module and shall be kept inside the module. As per guidelines issued for off-grid and decentralized applications programme under JNNSM, the RFID tag must be inside of the module from 01.07.2013 onwards.
<i>RF Identification tag Data</i>	a) Name of the manufacturer of PV Module b) Name of the Manufacturer of Solar cells c) Month and year of the manufacture (separately for solar cells and module) d) Country of origin (separately for solar cells and module) e) I-V curve for the module f) Wm, Im, Vm and FF for the module g) Unique Serial No and Model No of the

	<p>Module</p> <p>h) Date and year of obtaining IEC PV module qualification certificate</p> <p>i) Name of the test lab issuing IEC certificate</p> <p>j) Other relevant information on traceability of solar cells and module as per ISO 9000</p>
<i>Power output rating</i>	To be given for standard test conditions (STC). I_V curve of the sample module should be submitted.
<i>Compliance with standards and Codes</i>	IEC 61215 / IS 14286 IEC 61730 Part 1 and 2
<i>Salt Mist Corrosion Testing</i>	As per IEC 61701

Solar PV Module Mounting Structure

The PV modules shall be mounted on fixed metallic structures of adequate strength and appropriate design, which can withstand the load of the modules and high wind velocities up to 150 km per hour. The support structure shall be hot dip galvanized steel or aluminium.

Detailed specifications for the mounting structure are given below:

<i>Wind velocity withstanding Capacity</i>	150 km / hour
<i>Structure material</i>	Hot dip galvanised steel with galvanisation thickness of min 120 micron or aluminium alloy.
<i>Bolts, nuts, fasteners, panel mounting clamps</i>	Stainless steel SS304
<i>Mounting arrangement for flat Roofs</i> <i>Mounting arrangement for metal</i>	With Removable concrete ballast made of Pre-fabricated PCC (1:2:4), M15 Mounting directly on the sheet metal,

<i>sheet roofs</i>	ensuring stability and wind withstanding capacity, or penetrating the sheet metal and fixing to the substructure, ensuring that the roof remains water proof and ensuring stability and wind withstanding capacity.
<i>Mounting arrangement for elevated structures</i>	The elevated structure has to be securely anchored to the supporting surface. Concrete foundations of appropriate weight and depth for elevated structures mounted directly on the ground; Bolted with anchor bolts of appropriate strength for elevated structures mounted on RCC surfaces.
<i>Mounting arrangement for ground installations</i>	With removable concrete ballast made of pre-fabricated PCC (1:2:4), M15; assuring enough ground clearance to prevent damage of the module through water, animals and other environmental factors.
<i>Installation</i>	The structures shall be designed for simple mechanical on-site installation.
<i>Minimum distance between roof edge and mounting structure (Horizontal Clearance)</i>	≥ 0.60 m
<i>Minimum clearance between</i>	Shall not be less than 100mm
<i>Access for panel cleaning and Maintenance</i>	All solar panels must be accessible from the top for cleaning and from the bottom for access to the junction box.
<i>Panel tilt angle</i>	North – south orientation with a fixed tilt angle of 30degrees (depending on location) south facing.

Solar Array Fuse

The cables from the array strings to the solar grid inverters shall be provided with DC fuse protection. Fuses shall have a voltage rating of 1,000V DC, current rating as required and shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers

Solar Grid Inverter

The solar grid inverter converts the DC power of the solar PV modules to grid-compatible AC power.

The detailed specification of the solar grid inverter is given below.

<i>Total output power (AC)</i>	To match solar PV plant capacity while achieving optimum system efficiency
<i>Input DC voltage range</i>	As required for the solar grid inverter DC input
<i>Maximum power point (MPPT) Tracking</i>	Yes
<i>Number of independent MPPT Inputs</i>	1 or more
<i>Output AC voltage</i>	Single phase 230V or Three phase 415V (+ 12.5%, -20%)
<i>Operating Frequency range</i>	47.5 – 52.5 Hz
<i>Nominal frequency</i>	50 Hz
<i>Power factor of the inverter</i>	>0.98 at nominal power
<i>Total harmonic distortion</i>	Less than 3%
<i>Built-in Protection</i>	AC high / low voltage; AC high /low Frequency
<i>Anti-islanding protection</i>	As per VDE 0126-1-1 or IEC 60255.5 or IEC 62116 or equivalent standards

<i>Operating ambient temperature range</i>	-10 oC - +60 oC
<i>Humidity</i>	0 – 95% Rh
<i>Inverter efficiency</i> <i>weighted efficiency</i>	:>=95% :94%
<i>Protection degree</i>	IP 65 for outdoor mounting, IP 54 for indoor mounting
<i>Communication interface</i> RS 485 / RS 232 and RJ45 <i>Safety compliance</i>	IEC 62103, IEC 62109-1, IEC 62109-2 Galvanic Isolation
<i>Cooling Convection</i> <i>Display type</i>	LCD for data display. LCD / LED for status display
<i>Display parameters to include</i>	Output power (W), cumulative energy (Wh), DC voltage (V), DC current(A), AC voltage(V), AC frequency(Hz), AC current(A); cumulative hours of operation,
<i>Compliance with standards and codes</i>	IEC6163 / IS 61683 & IE 60068 -2(1,2,14,30)

DC Distribution Box

A DC distribution box shall be mounted close to the solar grid inverter. The DC distribution box shall be of the thermo plastic IP65 DIN rail mounting type and shall comprise the following components and cable terminations:

- Incoming 2 core(Positive and negative DC) cables from the DC Combiner Box;
- DC circuit breaker, 2 pole (the cable from the DC Combiner Box will be connected to this circuit breaker on the incoming side);
- DC surge protection device (SPD), class 2 as per IEC 60364-5-53;
- Outgoing 2 core cable(Positive and negative DC) to the solar grid inverter.

As an alternative to the DC circuit breaker a DC isolator may be used inside the DC Distribution Box or in a separate external thermoplastic IP 65 enclosure adjacent to the DC Distribution Box. If a DC isolator is used instead of a DC circuit breaker, a DC fuse shall be

installed inside the DC Distribution Box to protect the DC cable that runs from the DC Distribution Box to the Solar Grid Inverter.

AC Distribution Box

An AC distribution box shall be mounted close to the solar grid inverter. The AC distribution box shall be of the thermo plastic IP65 DIN rail mounting type and shall comprise the following components and cable terminations:

- Incoming 3 core / 5 core cable from the solar grid inverter
- AC circuit breaker, 2 pole / 4 pole
- AC surge protection device (SPD), class 2 as per IEC 60364-5-53
- Outgoing cable to the building electrical distribution board.

Connection to Building Electrical System

- a. The AC output of the solar grid inverter shall be connected to the building's electrical system after the DISCOM service connection meter and main switch on the load side. The solar grid inverter output shall be connected to a dedicated module in the Main Distribution Board (MDB) of the building. It shall *not* be connected to a nearby load or socket point of the building.
- b. For buildings or loads with diesel generator backup, the wiring of the solar grid inverter shall be such that the solar grid inverter *cannot* run in parallel with the diesel generator. This implies that the solar grid inverter must be connected to a distribution board on the grid side of the automatic or manual change-over switch or as per the requirement of DISCOM.

Cables

All cables shall be supplied conforming to IEC 60227/ IS 694 & IEC60502/ IS 1554 Voltage rating: 1,100V AC, 1,500V DC

For the DC cabling, XLPE insulated and PVC sheathed, UV stabilised 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. Outdoor AC cables shall have a UV-stabilised outer sheath.

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

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

The DC cables from the SPV module array shall run through a UVstabilised

PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.

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

All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm.

The minimum DC cable size shall be 4.0 mm² copper. The minimum AC cable size shall be 4.0 mm² copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires. The following colour coding 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
- 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.

Earthing

The PV module structure components shall be electrically interconnected and shall be grounded.

Earthing shall be done in accordance with IS 3043-1986, provided that earthing conductors shall have a minimum size of 6.0 mm² copper, 10 mm² aluminium or 70 mm² hot dip galvanised steel . Unprotected aluminium or copper-clad aluminium conductors shall not be used for final underground connections to earth electrodes.

A minimum of two separate dedicated and interconnected earth electrodes must be used for the earthing of the solar PV system support structure with a total earth resistance not exceeding 5 ohm.

The earth electrodes shall have a precast concrete enclosure with a removable lid for inspection and maintenance. The entire earthing system shall comprise non-corrosive components.

Surge Protection

Surge protection shall be provided on the DC side and the AC side of the solar system.

The DC surge protection devices (SPDs) shall be installed in the DC distribution box adjacent to the solar grid inverter.

The AC SPDs shall be installed in the AC distribution box adjacent to the solar grid inverter.

The SPDs earthing terminal shall be connected to earth through the above mentioned dedicated earthing system. The SPDs shall be of type 2 as per IEC 60364-5-53

Junction Boxes

Junction boxes and solar panel terminal boxes shall be of the thermo plastic type with IP 65 protection for outdoor use and IP 54 protection for indoor use. Cable terminations shall be taken through thermo-plastic cable glands. Cable ferrules shall be fitted at the cable termination points for identification.

Caution Signs

The standard caution and danger boards or labels as per Indian Electricity Rules, the AC distribution box near the solar grid inverter and the building distribution board to which the AC output of the solar PV system is connected shall be provided with a noncorrosive caution label.

Metering

The existing service connection meter needs to be replaced with a bidirectional (import kWh and export kWh) service connection meter for the purpose of net-metering.

Installation of the Solar Service Connection Meter will be carried out by DISCOM.

It is mandatory that the Solar Rooftop PV system shall be connected to the Grid as per the guidelines of DISCOMs along with necessary protection devices.

1.17 Documentation

The Installer shall supply the following documentation:

- a) System description with working principles.
- b) System single line diagram.
- c) Solar PV array lay-out.
- d) Routing diagram of cables and wires.
- e) Data sheets and user manuals of the solar PV panels and the solar grid inverter.
- f) A system operation and maintenance manual.
- g) Name, address, mobile number and email address of the service centre to be contacted in case of failure or complaint.
- h) Warranty cards.
- i) Maintenance register.

Test Certificates and Reports to be Furnished

Test Certificates / Reports from IECQ / NABL accredited laboratory for relevant IEC / equivalent BIS standard for quoted components shall be furnished. Type Test Certificates shall be provided for the solar modules and the solar grid inverter to provide evidence of compliance with standards as specified by Ministry of New and Renewable Energy (MNRE). OREDA reserves the right to ask for additional test certificates or (random) tests to establish compliance with the specified standards.

1.19 CONFIRMATION TO MNRE TECHNICAL SPECIFICATIONS AND STANDARDS

The E O Ier should ensure that all components and systems used under this Scheme shall strictly adhere to the Technical Specifications and Guidelines issued by MNRE vide Notice no: 30/11/2012-13/NSM dated 26th May 2014, as

“Operational Guidelines for Implementation of Off-Grid and Decentralized Solar Applications Sub Scheme – “Off-Grid and Decentralized Solar PV Applications” during 12th Plan Period”, and as amended from time to time.

PRICE BID**Annexure-B**

Design, supply, installation, commissioning & comprehensive maintenance for five years of SPV grid interactive power plant anywhere in the state as per the technical specification and scope of work.

Sl no	Capacity and configuration of SPV power plant	Basic System cost inclusive of taxes Per Kwp	Cost of Installation & commissioning inclusive of taxes Per Kwp	Rates for 5 years comprehensive maintenance Per Kwp	Total cost Per Kwp
1	1-5 Kwp grid interactive (1 ph), Module make ---- Grid Inverter make-----				
2	6-10 Kwp grid interactive (3 ph) Module make ---- -- Grid Inverter make----- ---				
3	11-20 Kwp grid interactive (3ph) Module make ----- Grid Inverter make-----				
4	21-30 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				
5	31-40 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				
6	41-50 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				
7	51-60 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				
8	61-70 kwp grid interactive (3ph) Module make ----- Grid Inverter make-----				

9	71-85 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				
10	85-100 Kwp grid interactive (3 ph) Module make ----- Grid Inverter make-----				

The above rates are FOR anywhere in the state inclusive of packing, loading, unloading and all incidental expenses inclusive of taxes and duties.

Signature of the bidder with seal and date