

# **Expression of Interest (EOI) is invited for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at Various Locations in Telangana State.**

TNREDCL invites Expression of Interest (Eoi) from SWH system manufacturers , reputed suppliers/ installers (local) for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at various locations in Telangana State. Your proposal, in sealed Envelopes, should reach the following address before 10<sup>th</sup> April, 2017, by 3.00PM

**The VC & Managing Director,**  
**Telangana New and Renewable Energy Corporation Ltd (TNREDCL)**  
5-8-207/2, Pishgah Complex,  
Nampally,Hyderabad-500 001  
Telangana State.

Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
Tender reference No TNREDCL/SE/SWH- RC /EOI/2017-18

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**TENDER SCHEDULE**

**FOR**

**TENDER SCHEDULE**

**FOR**

**EMPANELMENT FOR Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at Various Locations in Telangana State.**

**TENDER NOTICE NO:**

**TNREDCL/SE/SWH- RC /EOI/2017-18      DATED 28-03-2017.**

**CLOSING DATE      : 10.04.2017 AT 3.00 PM**



**TELANGANA NEW AND RENEWABLE ENERGY CORPORATION LTD  
(TNREDCL)**

**5-8-207/2, PISGAH COMPLEX, NAMPALLY, HYDERABAD-500 001**

**PHONE : 040-23201502,23201503**

**FAX : 040-23201504**

**E-mail : [infotnredcl@gmail.com](mailto:infotnredcl@gmail.com), [se@tnredcl.telangana.gov.in](mailto:se@tnredcl.telangana.gov.in)**

**Web site: [www.tnredcl.telangana.gov.in](http://www.tnredcl.telangana.gov.in) (Telangana)**

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## PART – I

### GENERAL DETAILS

Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
Tender reference No TNREDCL/SE/SWH- RC /EOI/2017-18

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M/s.....  
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To,

VC & Managing Director,  
TNREDC Ltd,  
Hyderabad.

**Subject:** - Offer in response to Tender Notice No. TNREDCL/SE/SWH- RC  
EOI/2017-18, Dated: 28.03. 2017

Sir,

We hereby submit our offer in full compliance with terms & conditions of the attached tender. The tender is being submitted in sealed envelope marked as Offer in response to Tender Notice No. TNREDCL/SE/SWH- RC/EOI/2017-18, Dated: 28.03. 2017 for rate contract empanelment for Solar Water Heating Systems.

(Signature of Tenderer)

Seal

**PARTICULARS OF TENDER**

S. NO	PARTICULARS	DETAILS
1	Tender Notice No	TNREDCL/SE/SWH- RC/EOI/2017-18, Dated: 28.03. 2017
2	Name of the work	EMPANELMENT FOR Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at Various Locations in Telangana State
3	Minimum Eligibility Criteria	Registered SWHS Suppliers / MNRE approved manufacturers / System Integrators, empanelled with TNREDCL in the year 2016-17.
4	Period of Contract	Up to 31.03.2018.
5	Cost of tender document	Rs.25,000/- plus 5% ( VAT)
6	Last date & time of submission	10/04/2017 by 3.00 PM
7	Amount of EMD	Rs. 2,00,000/- by way of Demand Draft drawn in favour of TNREDC Ltd , payable at Hyderabad.
8	Validity of offer for acceptance	60 days from the date of opening of Tenders.
9	Bid Opening Date and Time	10/04/ 2017 at 3.30 PM at registered office of TNREDCL, Hyderabad
10	Rate Contract Rates Finalization date.	17/04/2017
11	Security Deposit	Rs. 2,00,000 by way of Demand Draft drawn in favour of TNREDC Ltd , payable at Hyderabad at the time of entering into rate contract agreement. <b>(The EMD amount will be refunded (or) converted).</b>

**Note:**

1. The Tender document can be downloaded from <http://www.tnredcl.telangana.gov.in>. **(Telangana)** and the cost of tender document shall be enclosed by way of demand draft of Rs. 25,000/-Plus 5% VAT drawn in favour of TNREDC Ltd, payable at Hyderabad and submitted along with the tender document.
2. All relevant required documents along with evidences are to be inserted in the bid document and only quoted rates (as per Format enclosed) is to be filled in the financial bid.
3. Industries exempted from payment of EMD shall enclose duly attested Photostat copy of their Registration Certificate showing the **materials (Solar)** they are permitted to manufacture/to do rendering services and the period of validity of the certificate as proof of eligibility for exemption from payment of EMD. **However at the time of entering Rate Contract Agreement with TNREDCL they have to deposit Rs.2.00 Lakhs as Security Deposit Compulsorily.**

## **PART - II**

### **INSTRUCTIONS TO TENDERERS**



## SECTION 1

### INTRODUCTION

#### ELIGIBLE TENDERERS

The Tenderer shall provide sufficient documentary evidences to satisfy the following conditions that the Tenderer:

(a) Is an indigenous manufacturer of the SWHS Systems or experienced contractor in the field of Solar Water Heating System installations (**Copy of the dealership letter from the Manufactures has to be enclosed**)

(b) The Tenderer fulfills the terms and conditions of eligibility as an indigenous MNRE approved manufacturer of Solar Water Heating Systems for the ETC Model and BIS approved Manufactures for FPC Model in accordance with the guidelines of Ministry of New and Renewable Energy, Government of India. (**Copy to be enclosed**)

(c) Has adequate plant and manufacturing capacity available, to perform the works properly and expeditiously within the time frame specified in the tender document.

(d) Has established quality assurance systems and organization designed to achieve high level of equipment reliability in manufacturing of the Solar Systems.

(e) Has adequate financial stability and status to meet the financial obligations Pursuant to the scope of work. **The firm must have cumulative annual turnover of minimum 100 Lakhs last three years i.e., from 2014-2015 to 2016-2017 financial years. Relevant documents certified by a chartered Accountant shall be enclosed.**

- (f) Has experience of manufacturing, supply installation, testing, installation / commissioning and maintenance/after sale services **in the field of Solar Water Heating Systems of more than 10,000 LPD cumulative capacities in the last three years period.**
- (g) Has adequate field service setup to provide good after sale services including necessary repair and maintenance in the state of Telangana.
- (h) Has provided good after sale services for the works done by him during past years.
- (i) Has Valid Test Certificates of the Solar Water Heating Systems.
- (j) Fulfills all requirements as per provisions under JNNSM, MNRE, GOI.
- (k) The bidder shall be required to have adequate post installation localized service facilities/ centers

The above stated requirements are compulsory to be fulfilled by the tenderer and TNREDCL may also ask for any additional information as may be deemed necessary in public interest.

## **SECTION 2**

### **THE TENDER DOCUMENT**

#### **2.1 CONTENT OF TENDER DOCUMENT**

2.1.1 The tender procedure and contract terms are prescribed in the tender document. In addition to the invitation of tender, the tender document includes the various other documents as given in the table of particulars of tender.

2.1.2 The tenderer is expected to examine all instructions, terms and conditions, specifications, forms and formats etc as mentioned/ enclosed in the tender document. Failure to furnish all information required in the tender document or submission of a tender not substantially responsive to the tender document in every respect will be at the tenderer's risk and is likely to result in out-right rejection of the tender.

#### **2.2 INFORMATION REQUIRED WITH THE PROPOSAL**

2.2.1 The tender must clearly indicate the name of the manufacturer, the types and model & make of each principal item of equipment proposed to be supplied. The tender may also contain details of specifications and other comprehensive descriptive materials in support of technical specifications.

2.2.2 The above information may be provided by the Tenderer in the form of separate sheets, specifications, catalogues etc.

2.2.3 Any tender not containing sufficient descriptive material to describe the proposed equipment may be treated as incomplete and hence may be rejected. Such descriptive materials and specifications submitted by the Tenderer will be retained by TNREDCL. Any deviations from these will not be permitted during the execution of contract, without specific written permission of TNREDCL.

## **2.3 CLARIFICATION OF TENDER DOCUMENT**

2.3.1 Any prospective tenderer requiring any clarification on the tender document regarding various provisions/requirements/preparation/ submission of the tender, may contact TNREDCL in writing by letter or fax/ email before 48 hours of closing time of the tender. Queries received later shall not be entertained.

2.3.2 Verbal clarifications and information shall not be entertained in any way.

## **2.4. AMENDMENTS IN TENDER DOCUMENT**

2.4.1 At any time prior to the due date for submission of the tender or even prior to the opening of the financial bid, TNREDCL may for any reason, whether at its own initiative or as a result of a request for clarification/ suggestion by a prospective tenderer, amend the tender document by issuing a notice.

2.4.2 The amendments will be notified on the website at least 2 days before the proposed date of submission of the tender. TNREDCL will bear no responsibility or liability arising out of non receipt of the information in time or otherwise. If any amendment is required to be notified within 2 days of the proposed date of submission of the tender, the last date of submission shall be extended for a suitable period of time.

2.4.3 In case amendments is notified after submission of the tender (prior to the opening of financial bids), all the tenders received by TNREDCL shall be returned in sealed condition to the concerned tenderers through registered post or courier, for getting their offer revised according to the amended terms and conditions.

All the notices related to this tender which are required to be publicized shall be uploaded only [on http://www.tnredcl.telangana.gov.in](http://www.tnredcl.telangana.gov.in) (Telangana).

### **SECTION 3**

#### **PREPARATION OF TENDER**

##### **3.1 LANGUAGE OF TENDER AND MEASURE**

The tender prepared by the tenderer along with all the related documents shall be in English. Unit measurements shall be metric in accordance with International System. All correspondence between the tenderer and TNREDCL shall also be in English.

##### **3.2 EARNEST AND SECURITY MONEY**

3.2.1 The tenderer shall furnish earnest money of Rs. 2,00,000/- as mentioned in the “Particulars of Tender” in the shape of DD in favour of, TNREDCL, payable at Hyderabad.

3.2.2 The earnest money may be forfeited:-

- a) If a Tenderer withdraws his tender during the specified period of validity of offer.
- b) If the successful Tenderer fails to sign the rate contract agreement within stipulated period after giving concern / acceptance for the RC rates finalized.

3.2.3 The earnest money of the successful Tenderer shall be released at the time of signing of the agreement with TNREDCL. At this time, the selected bidder shall have to deposit security money amounting to Rs. 2 Lakhs in the form of DD from any nationalized/scheduled bank in favour of “TNREDCL, Hyderabad”. No interest shall be paid by TNREDCL on the amount of security money deposit.

3.2.4 The earnest money of all the bidders not willing to participate in the rate contract programme shall be released soon after finalization of the rate contract rates against submission of their written intimation regarding acceptance of work and deposition of security deposit amount.

### **3.3 PERIOD OF VALIDITY OF TENDER**

3.3.1 Validity of the Rate Contract Programme will be up to **31-03-2018.**  
**(or) any extended date depending upon the programme**

3.3.2 In exceptional circumstances, TNREDCL may solicit the consent of the tenderers to an extension of the period of validity of offer. The request and the response there of shall be made in writing.

### **3.4 FORMATS AND SIGNING OF TENDER**

3.4.1 The tender must contain the name and places of business of the firm/person/persons participating in the tender and must be signed and sealed by the Tenderer with his usual signature. The name and designation of all persons signing the tender document should be written below every signature. Tender by a partnership firm must be furnished with full name of all partners with a copy of partnership deed.

3.4.2 The original copy of the tender should be typed or written in indelible ink and must be signed with the legal name of the corporation/ company by the President/ Managing Director/ Secretary of the firm or a person duly authorized to bid. In case of authorized person the letter of authorization by written power-of-attorney should be enclosed with the technical bid of the tender. The person or persons signing the tender shall initial all pages of the tender document.

3.4.3 The tender shall contain no interlink actions, erasers or overwriting except as necessary to correct the errors made by the tenderer in the preparation of tender. The person or persons signing the tender shall also sign at all such corrections.

### **3.5 PRICE AND CURRENCIES**

The tenderer shall have to submit their rates in Indian Rupees only including all latest applicable taxes & duties of Govt. of Telangana as well as Govt. of India. Moreover, TNREDCL will not be responsible for providing Road permits. It is to be obtained by the selected bidder only and necessary Entry Tax ( as admissible) will have to be borne by the selected bidder if any. The rate should be quoted on the prescribed format for Financial Bid (Part II) attached to this tender document.

## **SECTION 4 SUBMISSION OF TENDER**

### **4.1 SEALING AND MARKING OF TENDER**

4.1.1 The tender must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the tender document.

4.1.2 In the bid( sealed envelope) following documents are to be inserted:-  
(1). Copy of Registration 2) **cost of the tender document by way of DD is to be attached** 3) Copy of TS VAT/GRN, CST, PAN, Service Tax registration No. 4.) System Test certificates 5) Proof of Company's local office including contact telephone no. of local people. Requisite earnest money, brochures, literature and other documents regarding technical specifications. **It should be superscripted with "TENDER for Empanelment for Supply, Installation, and Commissioning of Solar Water Heating systems of Capacity 100 LPD to 2500 LPD for both FPC and ETC models at different locations in Telangana"**.

4.1.3 **The complete tender document in original (excluding financial bid) issued by TNREDCL or downloaded from the website should be submitted by the tenderer after furnishing all the required information on relevant pages. Each page of the tender document should be signed & stamped. Tenders with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers may be attached by the tenderer to furnish/ submit the required information.**

4.1.4 Any term/condition proposed by the tenderer in his bid which is not in accordance with the terms and conditions of the tender document or any financial conditions, payment terms, rebates etc. mentioned in financial bid shall be considered as a conditional tender and will make the tender invalid.



## **4.2 DEADLINE FOR SUBMISSION OF TENDER**

4.2.1 Tender must be received by TNREDCL till the date & time of submission as specified in tender document.

4.2.2 Any tender received after the specified date & time of submission will be rejected and returned unopened to the Tenderer.

## **SECTION 5**

### **TENDER OPENING AND EVALUATION**

#### **5.1 OPENING OF TENDER**

**The procedure of opening of the tender shall be as under:**

5.1.1 The Bid **TENDER for EMPANELMENT FOR Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at Various Locations in Telangana State** shall be opened by TNREDCL representatives at the time and date mentioned in the Particulars of Tender, in the presence of tenderers who choose to be present. The financial and technical suitability of offers will be examined by TNREDCL in detail. If required, clarifications regarding the suitability of the offers will be obtained.

#### **5.2 CLARIFICATIONS REGARDING THE SUBMITTED TENDERS**

5.2.1 During the process of evaluation of the tender, TNREDCL may at its discretion ask the tenderer for a clarification of their tender. The request for clarification and the response shall be in writing.

5.2.2 Any query regarding any clarification required by TNREDCL on the information submitted by the tenderer, must be replied by the tenderer within the following time schedule.

- Email/ fax query should be replied by Email/ fax within 2 days.
- Query by letter must be replied by letter within 7 days of receipt of the letter

### **5.3 PRICE BID EVALUATION**

#### 5.3.1

- (i) The Price evaluation will include all Duties and Taxes.
- (ii) In cases of discrepancy between the cost quoted in words and in figures, the lower of the two will be considered.
- (iii) In case of discrepancy between the actual total of price break up and the total mentioned in the bid, the lower of the two will be considered.

5.3.2 TNREDCL reserves the right to negotiate with the bidders for further reduction of prices.

5.3.3 Under no circumstances shall a tenderer increase his price during the validity period after tenders are opened. Any tenderer who does so shall not only lose his EMD but also run the risk of being Black listed by TNREDCL. TNREDCL also reserves the right under the law to recover damages resulting there from, in addition to forfeiture of EMD.

## **SECTION 6**

### **FINALISATION OF TENDERS**

6.1 Tenders/ RC rates will be finalized by the TNREDCL Tender evaluation committee, for the works along with bid evaluation for consideration and in accordance with the conditions stipulated in the tender document and in case of any discrepancy or non-adherence to the conditions, the same shall be communicated which will be binding both on the tender concluding authority and tenderer. In case of any ambiguity the decision taken by the VC & Managing Director, TNREDCL on tenders shall be final.

6.2 The successful tenderer has to sign an agreement within a period of 15 days from the date of receipt of communication of acceptance of his tender. On failure to do so, his tender will be cancelled duly forfeiting the E.M.D paid by him without issuing any further notice.

## **SECTION 7 TERMS OF CONTRACT**

### **7.1 EVALUATION CRITERION**

The whole work shall be on **Turnkey basis**. The empanelment of tenderer shall be finalized on the basis of total cost of Solar water heating system including supply, installation & commissioning as offered by the tenderer in his Financial Bid.

### **7.2 NOTIFICATION OF ENPANELMENT**

Prior to the expiry of validity period of offer, TNREDCL will notify the successful tenderer by registered Letter/Email/ Fax that he is empanelled as one of the tenderers accepted to install the solar water heating systems .

### **7.3 AWARD OF WORK CONTRACT**

7.3.1 Before empanelment as approved supplier, an agreement shall be signed between TNREDCL and the tenderer. The denial of the lowest bidder to undertake the whole work shall be treated as breach of contract and TNREDCL may forfeit EMD/ Security amount submitted by him.

### **7.4 RIGHT TO ACCEPT/REJECT ANY OR ALL TENDERS.**

TNREDCL reserves all the right to reject any or all the tenders, accept any tender in total or in part.

### **7.6 EXPENSES OF AGREEMENT**

The respective suppliers shall pay all the expenses of stamp duties and other requirements for signing the agreement with TNREDCL.

## **7.7 EXECUTION OF AGREEMENT OF EMPANELMENT**

- a) The Successful Bidder shall execute an agreement of empanelment in the INR 100 non-judicial stamp paper of Telangana Jurisdiction only in the name of the Tenderer, within 15 days from the date of Letter of Intimation about qualification by TNREDCL.
- b) The Successful Bidder shall not assign or make over the empanelment, the benefit or burden thereof to any other person or persons or body corporate for the execution of the contract or any part thereof without the prior written consent of TNREDCL. TNREDCL reserves its right to cancel the empanelment either in part or full, if this condition is violated.
- c) In case of the successful bidder fails to execute necessary agreements as prescribed, within the stipulated period, then his EMD shall be forfeited and his tender held as non responsive.

## **7.8 ISSUE OF LETTER OF EMPANELMENT**

After execution of the Agreement and payment of Security Deposit, the name of successful bidder(s) with price will be displayed in website of TNREDCL and a letter of empanelment will be sent to the qualified tenderer.

## **7.9 INSTALLATION & COMPLETION SCHEDULE**

The entire work involving Supply, Installation and Commissioning of Solar water heating systems power plants shall be completed within 90 days from the date of issue of work order.

### 7.13 WARRANTY

1.

- (a) The SWH SYSTEM AS A WHOLE shall carry a GUARANTEE of minimum 2 (TWO) years.
- (b) The SYSTEM COLLECTORS shall be warranted for A PERIOD OF 5 YEARS BY THE MANUFACTURER THROUGH THE TENDERER .

2. The above warranty shall take effect from the date on which the system is taken over by the purchaser after commissioning.

5. The successful bidder shall be liable to make good the loss by replacing the defective product during the warranty period for the entire system free of cost.

6. The warranty will cover all the materials and goods involved in the installation and commissioning of SPV rooftop systems by the successful Bidder.

### 7.14 PAYMENT TERMS

1. . Copies of invoices after inspection shall also be submitted to TNREDCL along with, Inspection Report, photographs and required documents. For release of payments. 90% payment will be released after successful commissioning of the system and handing over of the system and balance of 10% will be released after 2 years guarantee period

#### 4. SPECIAL ATTENTION

While preparing the Bid-Price the Bidders shall also take into account the following:

- i) Infrastructure & Construction Facilities, Preliminary, Enabling & Ancillary works whatsoever required by them for successful completion of the Project in the specified time schedule.
- ii) Indian Income Tax and Surcharge on Income Tax on Salaries of Expatriates etc.
- iii) Corporate Income Tax.

- iv) All Taxes, Duties and expenses such as Excise Duty, Sales Tax on Indian Supplies, Customs Duty and Custom Clearance on imported items, transportation and storage at site etc.
- v) All local duties, royalties, octroi etc.
- vi) All applicable taxes, cess charges etc., on works contract etc. in the State of Telangana.

**The following recoveries will be made towards Taxes.**

- VAT TDS at 5.00% or as applicable will be recovered.
- 1. Income Tax at 2.00 % or as applicable
- 2. 10% performance guarantee amount shall be deducted on the total supply order vale.
- 3. Service Tax @15 % or as applicable on I&C Component shall be deducted.
- 4. TNREDCL service charges @ 3% and Service Tax as applicable will be deducted.
- 5. 0.1% of the contract value shall be deducted towards corpus fund of National academy of construction.

**7.15 VALIDITY OF EMPANELMENT**

The validity of Empanelment and the price accepted shall be upto **31.03.2018.**

**7.16 TNREDCL RESERVES THE RIGHT TO;**

Negotiate with the Bidders for further reduction of prices.

**7.17 BANNING OF BUSINESS DEAL:**

The bidder/consortium will be banned from business with TNREDCL if any of the particulars produced by the bidder such as Auditor Certificate, Annual account, VAT Clearance Certificate, Test certificate, etc. are found to be incorrect, or if there is breach of any of the conditions in the contract

## **PART -III**

### **GENERAL TECHNICAL SPECIFICATIONS**



## **SECTION 1 TECHNICAL SPECIFICATIONS**

### **Minimum Technical Requirements laid down by MNRE for ensuring quality aspects of Solar Water Heating Systems being installed in Field**

The FPC based systems will be from BIS approved manufacturers and ETC/ Heat pipe based systems from MNRE approved manufacturers/suppliers. The Systems will have the following minimum requirements for installation under subsidy/ soft loan scheme of MNRE:

#### **General Requirements**

- i) System installed in high windy area will be well grouted/ clamped with collectors installed in a way that it is able to sustain the highest wind pressure of that area.
- ii) All the collectors will be south facing inclined at suitable angle to give best performance in winter
- iii) There will not be any shadow falling on the collectors from nearby structures or of other collectors in front or back row
- iv) Hot water pipe lines of any kind in colder regions will be fully insulated from the point of drawl of water from tank to delivery points. In other regions also care will be taken to avoid heat losses from pipelines.
- v) System will be installed nearest to the point of hot water usage to avoid longer pipeline & higher heat losses.
- vi) Where water quality is bad either FPC based systems with Heat Exchanger or ETC based systems will be installed.
- vii) The workmanship & aesthetics of the system will be good and it should be visible to anybody

viii) Air vent pipe, make up water and cold water tanks will be installed as required for smooth functioning of the system

ix) There won't be any leakage observed in the system from tanks/ collectors/ pipelines

x) No electric back up will be provided in hot water storage tank at places where electric geysers are already installed. At places where electric geysers are not installed, electric back up could be provided in upper portion of storage tank, if necessary. Other option is to have an instant/ small geyser in bathroom with outlet of solar hot water storage tank connected to its inlet and thermostat set at say 40 C. This will help consuming less amount of electricity during non-sunny days.

### **Technical Requirements**

**Flat Plate Collectors** : ISI mark (2 sq. m. absorber area for 100 liter tank capacity system in colder region and 125 liter for other regions)

### **Evacuated Tube Collectors/ Heat pipes:**

#### **Type of tubes:-**

3 layer solar selective (Inner layer of copper coating should be visible). Detailed specifications of tubes will be as per the guidelines laid down by MNRE for empanelment of manufacturers of ETC based systems & made available at MNRE website.

#### **No. of tubes/ Absorber Area:-**

1.50 sq. m. of absorber area for 100 liter tank capacity system. Absorber area will be calculated as follows:

Area in Sq. Meter =  $3.14 \times \text{No. of tubes} \times \text{Radius in Meter} \times \text{Length in Meter}$ .

Accordingly, 14 tubes of Dia : 47 mm & length : 1500 mm and 10 tubes of Dia 58 mm & length : 1800 mm will be required for each 100 lpd system. For higher capacity systems, the no. of tubes calculated as per above could be slightly less. However, the minimum absorber area will not be less than that given in MNRE Cicuklar No. 22/5/2009-10/ ST dated 02-03-2010.

**Procurement** : From reputed supplier (Details of supplier to be provided)

**Storage Tanks, Piping, Support structure etc** ( To be all indigenous & not imported)

**Inner tank material**: SS 304 or 316 grade min/ MS or any other material with anticorrosive coating for hard water with chlorine contents.

**Inner tank thickness** : For SS minimum thickness will be 0.5 mm when using argon arc or metal inert gas for welding & 0.8 mm when using other type of welding. For MS it will be 1.5 mm. No leakage under any kind of negative or positive pressure of water will be ensured.

**Inner tank welding** : TIG / Seam/ pressurized weld (Open arc weld not permitted )

**Storage tank capacity** : Not less than system capacity. In case of ETC based system, volume of tubes & manifold not to be included in tank capacity.

**Thermal insulation of storage tanks**: Minimum 50 mm thick CFC free PUF having density of 28-32 storage tanks kg/ cu.m for domestic systems and 100mm thick Rockwool of 48 kg per cu. m for other systems. For colder regions, it will be 1 ½ times atleast. In case of higher density insulations, the thickness may reduce proportionately.

**Thermal insulation of hot water pipes:** Minimum 50 mm thick rockwool or 25 mm thick PUF on GI pipes. hot water pipes For colder regions, it will be 1 ½ times atleast. In case of composite pipes, it will depend on region to region. For higher density insulations, the thickness may reduce proportionately.

**Outer cladding & Frames :** Al/ FRP or GI powder coated. MS may also be used with special anti-corrosive protective coatings. Thickness of sheets will be strong enough to avoid any deformation of the cladding.

**Valves, cold water tank :** Of ISI mark or standard make

**vent pipe, heat exchanger,**

**make up tank & instruments**

**Support structure for Collectors, piping, tanks etc :** Of non corrosive material or have corrosion resistant protective coating. They will be strong enough to sustain their pressure during the lifetime of system.

An undertaking will be given by the manufacturer/supplier confirming to above requirements while submitting proposals to MNRE/SNAs or claiming subsidy. The manufacturer will also provide the detailed specifications of each and every part of his system to the beneficiary along with O&M Manual. In case any manufacturer/supplier is found not sticking to above requirements, his name will be removed from MNRE list. These requirements will also be put on MNRE website for the knowledge of beneficiaries and other stakeholders. Salient features of the system will also be highlighted on a plate fixed on front surface of the tank along with name of manufacturer/ dealer & his contact No.

**PART -IV**

**TECHNICAL BID**

**TECHNICAL BID FORMAT (ENVELOPE-A)**

All pages of the Technical Bid shall be organised section-wise, annexed with proof documents, serially numbered and stitched/or spiral bound intact and submitted) **Loose pages shall not be accepted.**

**1. GENERAL PARTICULARS OF TENDERER**

<b>S. NO</b>	<b>PARTICULARS</b>	<b>TO BE FUNISHED BY THE TENDERER</b>
1	Name of Tenderer/Firm	
2	Postal Address	
3	E-mail address for communication	
4	Telephone/ Fax No.	
5	Name, designation, address, contact number and Email of the representative of the tenderer to whom all references shall be made.	
6	Nature of the firm (Individual/ Partnership/Consortium/ Pvt. Ltd /Public Ltd. Co. /Public Sector,etc.) Attach attested copy of Registration & Partnership deed/ Memorandum of Association	

Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
Tender reference No TNREDCL/SE/SWH- RC /EOI/2017-18

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7	Amount and particulars of the Earnest Money Deposited.	
8	Annual Turnover for last three years i.e 2014-2015(Attach balance sheets from CA in this regard)	
9	Name and address of the Indian/foreign collaboration if any.	
10	PAN NO (Copy of certificate to be enclosed)	
11	Service Tax Registration No., VAT/TIN/ GRN No. CST No. (copies of certificates to be attached)	
12	Has the Tenderer/firm ever been debarred by any institution for undertaking any work?	
13	Any other information attached by the Tenderer (Details of Annexure / page no. where its enclosed)	
14	Does Tenderer have any relative Working in TNREDCL? If yes state the Name and designation.	

## 2. DETAILS ABOUT THE COMPONENTS TO BE USED

S.No	Description	Name of Manufacturer	Manufacturing Plant address
1	Solar Collector type a) FPC Model b) ETC Model		
2	Storage Tank SS/ MS		

## 3. DETAILS OF EXPERIENCE

Please fill in information about Solar Water heating Systems installed in the last three years.

Details	YEAR		
	2014 – 15	2015 – 16	2016 – 17
SWHS Systems installed in LPD			
Total contract amount (Rs.)			

Enclose copies of related work orders along with proof for satisfactory completion of that work.

## 4. DETAILS ABOUT THE BLACKLISTING, IF ANY

Information on litigation history in which Bidder is involved.

- 1) Whether black listed/ Debarred/Suspended from execution of work.
- 2) Other litigations. If any including Court litigations. Arbitrations etc.



Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
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Department and concerned officer	Other party (ies)	Case of dispute.	Amount involved.	Remarks showing present status.
1	2	3	4	5

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

**CHECKLIST TO ACOMPANY THE TENDER**

S.No	Description	Submitted in Cover 'A'	Page No. (see Note below)
1	2	3	4
1	Copy of Contractors valid Registration certificate with TNREDCL 2016-17/ MNRE Channel Partner Certificate	Yes /No	
2	Demand draft toward requisite Earnest Money Deposit (issued by any Nationalized/Scheduled bank)	Yes /No	
3	Crossed demand draft towards Cost of tender document	Yes /No	
4	Copy of PAN card.	Yes /No	
5	Copy of latest Income Tax Clearance returns submitted along with proof of receipt (Latest SARAL form).	Yes /No	
6	Copies of VAT Registration Certificate.	Yes /No	
7	Latest VAT/ Sales Tax clearance certificate.	Yes /No	
8	Availability of local service centers/ technical personnel	Yes /No	
9	Information on litigation history in which Bidder is involved.		
9	Any other documents/certificate as specified in tender conditions	Yes /No	
10.	Experience Certificate	Yes /No	
11.	Test Certificates	Yes /No	

**Notes:**

1. All the statements copies of the certificates, documents etc., enclosed to the Technical bid shall be given page numbers on the right corner of each certificate, which will be indicated in column (4) against each item. The statements furnished shall be in the formats appended to the tender document.
- 2) The information shall be filled-in by the Tenderer in the check list, as applicable and shall be enclosed to the Technical bid for the purposes of verification as well as evaluation of the tenderer's Compliance to the qualification criteria as provided in the Tender document.

**The bidder shall on all the statements, documents, certificates by him, owning responsibility for their correctness/authenticity.**

### **DECLARATION**

I / WE ..... have gone through carefully all the Tender conditions and solemnly declare that I / we will abide by any penal action such as disqualification or black listing or determination of contract or any other action deemed fit, taken by, the Department against us, if it is found that the statements, documents, certificates produced by us are false / fabricated.

I / WE hereby declare that, I / WE have not been blacklisted / debarred / Suspended / demoted in any department in Telangana or in any State due to any reasons.

**Signature of the Tenderer**

### DECLARATION BY THE TENDERER

I/We .....

(Hereinafter referred to as Tenderer) being desirous of tendering for the work, under this tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document do hereby declare that

1. The tenderer is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.

2. The Tenderer is fully aware of all the relevant information for proper execution of the proposed work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.

3. The Tenderer is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The tenderer is sufficiently experienced and competent to perform the contract to the satisfaction of TNREDCL. The Tenderer gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.

4. The Tenderer has no collusion with other tenderers, any employee of TNREDCL or with any other person or firm in the preparation of the tender.

5. The Tenderer has not been influenced by any statement or promises by TNREDCL or any of its employees but only by the tender document.

6. The Tenderer is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.

7. The Tenderer has never been debarred from similar type of work by any Government Undertaking /Department. (An undertaking on Non-Judicial Stamp paper worth of Rs. 100/- in this regard shall be submitted)

8. The Tenderer accepts that the earnest money / security deposit may be absolutely forfeited by TNREDCL if the selected bidder fails to sign the contract or to undertake the work within stipulated time.

9. This offer shall remain valid for acceptance for 3 (Three) months from the proposed date of opening of Tender.

10. All the information and the statements submitted with the tender are true and correct to the best of my knowledge and belief.

**(Signature of Tenderer)**

**PART -V**

**FINANCIAL BID**

**THE PRICES FOR SOLAR WATER HEATING SYSTEMS FOR FPC BASED SYSTEM.**

S.No	Particulars	Rates to be Quoted		
		Collector	S.S. Storage Tank etc	Total
1	100 LPD System @60°C			
2	200 LPD <a href="#">System@60°C</a>			
3	300 LPD <a href="#">System@60°C</a>			
4	500 LPD <a href="#">System@60°C</a>			
5	1000 LPD System @60°C @80°C			
6	1500 LPD System @60°C @80°C			
7	2000 LPD System @60°C @80°C			
8	2500 LPD System @60°C @80°C			



**THE PRICES FOR SOLAR WATER HEATING SYSTEMS FOR FPC BASED SYSTEM.**

Sl. No	Particulars	Rates (In Rs.)
1	100 LPD System @60°C	
2	200 LPD System @60°C	
3	300 System @60°C	
4	500 LPD System @60°C	
5	1000 LPD System @60°C	
6	1500 LPD System @60°C	
7	2000 LPD System @60°C	
8	2500 LPD System @60°C	

**A. PROVISION OF ELECTRICAL BACK UP : FOR SOLAR WATER HEATING SYSTEMS**

Sl. No	Capacity of System	Capacity of Electrical Back up to be provided	Rate quoted including Taxes
1.	100 LPD	2 KW : Heater Coils	
2.	200 LPD	2 KW : Heater Coils	
3.	300 LPD	2 KW : Heater Coils	
4.	500 LPD	2 KW – 2 Nos	
5.	1000 LPD	3Kw/4Kw X – 4/3 Nos	
6.	1500 LPD	---Do---	
7.	2000 LPD	----Do---	
8.	2500 LPD	4Kw//6 KW X 3 / 2 Nos	

**B. CONTROL PANEL WITH FOLLOWING ACCESSORS TO BE PROVIDED FOR SYSTEMS OF 1000 LPD AND ABOVE AS DETAILED BELOW AND COST TOP BE ADDED TO THE HEATER COIL COST AS ABOVE.**

Sl. No.	Particulars	Amount
1.	Double Door with panel lock components	
2.	R.V.B indicators	
3.	Toggle Switch	
4.	M.C.B's 32 Amps x 3 Nos.	
5.	M.C.B 6 Nos.	
6.	Contractors 32 A	
7.	Timer Switches – 24 Lr L&T make - OPTIONAL-	
8.	Connector	
9.	Tags, switches, wires, etc	
<b>Total incl of all taxes</b>		

**C. Electrical cabling :**

- a) **Up to 500 LPD** : Electrical wiring of 2.5 Sqmm 3 core PVC insulated unarmored cable of Finolex / RR cable / fortunart or equivalent with 20mmPVC piping, laying etc complete from system to mains Rs /- per RMT
- b) **above 500 LPD** Electrical wiring of 4 Sqmm 3 core PVC insulated unarmored cable of Finolex / RR cable / fortunart or equivalent with 20mmPVC piping, laying etc complete from system to mains Rs 94/- per RMT

**PRICES PROPOSED FOR COLD WATER STORAGE TANKS & M .S. STRUCTURAL STANDS**

Sl. No.	Capacity of System	Storage Tank Capacity	Amount	M. S. Structural Stand based on Storage Tank capacity	Weight of steel	Amount
1.	Up to 300 LPD	500 Lts		35x35x5mm MS Angles	75 Kg	
2.	500 LPD	1000 Lts		50x50x5mm M S Angles	130Kg	
3.	1000 LPD	1500 Lts		50X50X5mm M S Angles	130Kg	
4.	1500 LPD	2000 Lts		60X60X5mm MS Angles	165Kg	
5.	2000 LPD	2500 LPD		ISJC100&50X50X5m m MS Angles	273 Kg	
6.	2500 LPD	3000 LPD		ISJC100&50x50x5m m MS Angles	273 Kg	

**RATES FOR TRANSPORT AND HANDING OF SWH SYSTEMS**

**RATES APPLICABLE UP TO 500 LPD AND BEYOND 500 LPD ACTUALS**

<b>Distance</b>	<b>Rates</b>
Up to 50 Kms	
50 to 100 Kms	
101 to 200 Kms	
201 to 300 Kms	
301 to 500 Kms	

**REVISED RATES FOR PIPELINE DISTRIBUTION SYSTEMS,**

Sl. No.	Particulars	Rates
1	<b>Supply &amp; Fixing GI Pipes 'B' Class ISI marked (without Insulation )incl specials</b>	
	½" φ - 'B' Class (15mm)	
	¾" φ - 'B' Class (20mm)	
	1" φ - 'B' Class (25mm)	
	1 ¼" φ B Class (32mm)	
	1½" φ - 'B' Class (40mm)	
	2" φ - 'B' Class (50mm)	
	2 ½" φ - 'B' Class (65mm)	
2	<b>Providing Rock wool insulation 50mm thick with 26 swg aluminum cladding. Incl Wire Mesh, for Hot Water Lines</b>	
	Up to 1" φ (25mm)	
	Above 1" φ (25mm)	
3	<b>Supply &amp; fixing of Gun Metal Gate Valve as per IS-Class I, Heavy Type</b>	
	½" (15mm)	
	¾" (20mm)	
	1" (25mm)	
	1 ¼" (32mm)	
	1 ½" (40mm)	
	2" (50mm)	
4	Supply & Fixing of 12.7mm Bib cock (Taps ) 400gms weight, Seiko or equivalent make ,Short body	
	Supply & Fixing of 12.7mm Bib cock (Taps ) 400gms weight, Seiko or equivalent make , Long body	

**Note:** In cases of discrepancy between the cost quoted in Words and in figures, the lower of the two will be considered. **(Total cost offered shall be both in figures and words)**

## **PART-VI**

## **ANNEXURES**

Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
Tender reference No TNREDCL/SE/SWH- RC /EOI/2017-18

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**BIDDERS UNDERTAKING COVERING**

(Letter shall be submitted on Bidder(s) Letter Head)

Ref No :

Date:

To

The V.C & Managing Director

Telangana New and Renewable Energy Development Corporation

Of Limited (TNREDCL)

5-8-207/2, Pishah Complex,

Yatrik Hotel Compound,

Nampally, HYDERABAD – 500 001

Dear Sir,

Sub: Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models at Various Locations in Telangana State.- reg.

Tender Reference: TNREDCL/SE/SWH- RC /EOI/2017-18

\*\*\*\*

1. We have examined the Tender for : Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models as specified in the Tender. We undertake to meet the requirements and services as required and as set out in the Tender document.
2. We attach our Technical Bid and Financial Bid as required by the Tender both of which together constitute our proposal, in full conformity with the said Tender.
3. We have read the provisions of Tender and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our response shall not be given effect to.
4. We undertake, if our Bid is accepted, to adhere to the requirements as specified in the Tender or such modified plan as may subsequently be agreed.
5. We agree to unconditionally accept all the terms and conditions set out in the Tender document and also agree to abide by this Bid response for a period as mentioned in the Tender from the date fixed for bid opening and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this Bid response, together with your written acceptance thereof in your notification of empanelment, shall constitute a binding contract between us and TNREDCL.
6. We affirm that the information contained in the Technical Bid or any part thereof, including its schedules, and other documents, etc., delivered or to be delivered to TNREDCL is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead TNREDCL as to any material fact.

Tender for empanelment for Supply, Installation and Commissioning of Solar Water Heating systems of Capacity 100LPD to 2500LPD for both FPC and ETC models  
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7. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.
  
8. It is hereby confirmed that I/We are entitled to act on behalf of our company/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.
  
9. We also declare that our Company/Organisation is not blacklisted by any of the State or Central Government and organisations of the State or Central Government.

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, certify that I am (Name) ..... (Designation) ....., and that (Name)..... who signed the above Bid has been duly authorized to sign the same on behalf of our Organisation.

Date:

Signature:

Seal: